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## Osteoporosis



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# Osteoporosis

January 1995 through December 1999

2449 Citations

Prepared by

Martha Glock, M.L.S., National Library of Medicine

Kathleen A. Shanahan, M.P.I.A., M.L.I.S., National Library of Medicine

Joan A. McGowan, Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases

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Karen Patrias, Editor  
Current Bibliographies in Medicine  
Reference Section  
National Library of Medicine  
Bethesda, MD 20894  
Phone: 301-496-6097  
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## INTRODUCTION

Osteoporosis is a major threat for millions of Americans. In the U.S. today, 10 million individuals already have osteoporosis, and 18 million more have low bone mass, placing them at increased risk for this disease. Osteoporosis is characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures—especially of the hip, spine, and wrist. It is the most prevalent of the bone diseases that affect Americans, and women are four times more likely to develop osteoporosis than men.

Osteoporosis, once acknowledged as a natural part of aging, does not need to be a consequence of aging any longer. It is largely a preventable disease due to the remarkable progress that has been made in the scientific understanding of its causes, diagnosis, and treatment.

This bibliography was prepared in support of the National Institutes of Health (NIH) Consensus Development Conference on Osteoporosis Prevention, Diagnosis, and Therapy, held in Bethesda, Maryland on March 27-29, 2000.

The conference addressed the following key questions:

- \* What is osteoporosis and what are its consequences?
- \* How do risks vary among different segments of the population?
- \* What factors are involved in building and maintaining skeletal health throughout life?
- \* What is the optimal evaluation and treatment of osteoporosis and fractures?
- \* What are the directions for future research?

The bibliography lists selected journal article citations from NLM's MEDLINE and other online databases from January 1995 through December 1999. It has been limited to human studies published in English. In general, reviews, letters, case reports, and editorials have been omitted. The bibliography is arranged in 14 subject categories that address the questions posed by the consensus development conference including: guidelines and consensus statements; epidemiology; assessment; therapy; bone growth; health care (including burden of illness and cost effectiveness); models and definitions; nutrition and bone health; osteoporosis in men; oral bone and osteoporosis; pathophysiology; quality of life; rehabilitation and fracture treatment; and secondary osteoporosis. In general, only articles that report clinical research studies or review comprehensively a particular topic are included. Citations are listed in only one category. Within each category, arrangement is alphabetical by author.

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## SAMPLE CITATIONS

Citations in this bibliographic series are formatted according to the rules established for *Index Medicus*<sup>7\*</sup>. Sample journal and monograph citations appear below. For journal articles written in a foreign language, the English translation of the title is placed in brackets; for monographs, the title is given in the original language. In both cases the language of publication is shown by a three letter abbreviation appearing at the end of the citation.

### Journal Article:

| <i>Authors</i>                      | <i>Article Title</i>                        |
|-------------------------------------|---|
| Ruocco V, Florio M.                 | Fish-odor syndrome: an olfactory diagnosis. |
| Int J Dermatol 1995 Feb;34(2):92-3. |   |

### Monograph:

| <i>Authors/Editors</i>                      | <i>Title</i>  |
|---|---|
| Shehin-Johnson SE.                          | Molecular characterization of flavin-containing monooxygenases in rabbit. |
| Detroit (MI): Wayne State University; 1996. | 106 p.  |

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\*For details of the formats used for references, *see* the following publication:

Patrias, Karen. *National Library of Medicine recommended formats for bibliographic citation*. Bethesda (MD): The Library; 1991 Apr. Available from: NTIS, Springfield, VA; PB91-182030.

## Guidelines and Consensus Statements

AACE Clinical Practice Guidelines for the Prevention and Treatment of Postmenopausal Osteoporosis. *J Fla Med Assoc* 1996 Oct;83(8):552-66.

ACOG educational bulletin. Nutrition and women. *Int J Gynecol Obstet* 1997;56(1):71-81.

ACOG educational bulletin. Osteoporosis. Number 246, April 1998 (replaces No. 167, May 1992). American College of Obstetricians and Gynecologists. *Int J Gynaecol Obstet* 1998 Aug;62(2):193-201.

ACR recommendations target prevention and treatment of glucocorticoid-induced osteoporosis. Task Force on Osteoporosis, American College of Rheumatology. *Am Fam Physician* 1997 Mar;55(4):1450, 1453.

American College of Sports Medicine position stand. Osteoporosis and exercise. *Med Sci Sports Exerc* 1995 Apr;27(4):i-vii.

Andersson GB, Bostrom MP, Eyre DR, Glaser DL, Hu SS, Lane JM, Melton LJ 3rd, Myers ER, Seeger LL, Weinstein JN. Consensus summary on the diagnosis and treatment of osteoporosis. *Spine* 1997 Dec 15;22(24 Suppl):63S-65S.

Au SY, Leung MF, Chan CS, Choi SH, Leung PC, Haines C, Tang GWK, Tang LCH, Kung AWC, Ma J, Lam TP, Lee A, Lau EMC. Clinical management guidelines for osteoporosis in Hong Kong. *Hong Kong Med J* 1998;4(4):423-31.

Baran DT, Faulkner KG, Genant HK, Miller PD, Pacifici R. Diagnosis and management of osteoporosis: guidelines for the utilization of bone densitometry. *Calcif Tissue Int* 1997 Dec;61(6):433-40.

Clinical practice guidelines for the diagnosis and management of osteoporosis. Scientific Advisory Board And Osteoporosis Society Of Canada. *CMAJ* 1996;155(8):1113-29.

Compston JE, Papapoulos SE, Blanchard F. Report on osteoporosis in the European Community: current status and recommendations for the future. Working Party from European Union Member States. *Osteoporos Int* 1998;8(6):531-4.

Dalsky GP. Guidelines for diagnosing osteoporosis. *Physician Sportsmed* 1996;24(7):96-100.

Diagnostics: the correlation of bone mineral density and biochemical markers to fracture risk --where do we go from here? Clinical practice guidelines for the

prevention and treatment of osteoporosis and osteopenia. Indianapolis, Indiana, September 7 -8, 1995. The Osteoporosis Global Medical Conference. *Calcif Tissue Int* 1996;59 Suppl 1:S1 -37.

Eastell R, Reid DM, Compston J, Cooper C, Fogelman I, Francis RM, Hosking DJ, Purdie DW, Ralston SH, Reeve J, Russell RG, Stevenson JC, Torgerson DJ. A UK Consensus Group on management of glucocorticoid-induced osteoporosis: an update. *J Intern Med* 1998 Oct;244(4):271-92.

Eddy DM, Johnston CC Jr, Cummings SR, Dawson-Hughes B, Lindsay R, Melton LJ 3rd, Slemenda CW. Osteoporosis: Review of the evidence for prevention, diagnosis, and treatment and cost-effectiveness analysis. Status report. *Osteoporos Int* 1998;8 Suppl 4:S3-82.

European consensus development conference on menopause. European Menopause Society. *Hum Reprod* 1996 May;11(5):975-9.

Fujita T. Clinical guidelines for the treatment of osteoporosis in Japan. *Calcif Tissue Int* 1996;59 Suppl 1:34-7.

Genant HK, Cooper C, Poor G, Reid I, Ehrlich G, Kanis J, Nordin BEC, Barrett-Connor E, Black D, Bonjour JP, Dawson-Hughes B, Delmas PD, Dequeker J, Eis SR, Gennari C, Johnell O, Johnston CC Jr, Lau EMC, Liberman UA, Lindsay R, Martin TJ, Masri B, Mautalen CA, Meunier PJ, Miller PD, Mithal A, Morii H, Papapoulos S, Woolf A, Yu W, Khaltaev N. Interim report and recommendations of the World Health Organization Task -Force for Osteoporosis. *Osteoporos Int* 1999;10(4):259-64.

Genant HK, Lang TF, Engelke K, Fuerst T, Gluer C, Majumdar S, Jergas M. Advances in the noninvasive assessment of bone density, quality, and structure. *Calcif Tissue Int* 1996;59 Suppl 1:S10 -5.

Gluer CC. Quantitative ultrasound techniques for the assessment of osteoporosis: expert agreement on current status. The International Quantitative Ultrasound Consensus Group. *J Bone Miner Res* 1997 Aug;12(8):1280-8.

Hanley DA, Josse RG. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 1. Introduction. *CMAJ* 1996 Oct 1;155(7):921-3. Published erratum appears in *CMAJ* 1997 Jan 1;156(1):23.

Hochberg MC, Prashker MJ, Greenwald M, Hannan MT, Lane NE, Lindsey SM, Lovell DJ, Tindall EA. Recommendations for the prevention and treatment of

- glucocorticoid- induced osteoporosis. *Arthritis Rheum* 1996;39(11):1791-801.
- Hodsman A, Adachi J, Olszynski W. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 6. Use of bisphosphonates in the treatment of osteoporosis. *CMAJ* 1996 Oct 1;155(7):945-8.
- Johnston CC Jr. Development of clinical practice guidelines for prevention and treatment of osteoporosis. *Calcif Tissue Int* 1996;59 Suppl 1:S30-3.
- Jones G, Hogan DB, Yendt E, Hanley DA. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 8. Vitamin D metabolites and analogs in the treatment of osteoporosis. *CMAJ* 1996 Oct 1;155(7):955-61.
- Joseph P, Hughes D. Osteoporosis. Guidelines for general practitioners. *Osteoporosis Australia. Aust Fam Physician* 1997 Oct;26(10):1181 -5, 1188-91, 1194-6.
- Josse RG. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 3. Effects of ovarian hormone therapy on skeletal and extraskeletal tissues in women. *CMAJ* 1996 Oct 1;155(7):929-34. Comment in: *CMAJ* 1997 Jun 1;156(11):1530, 1532.
- Kanis JA, Delmas P, Burckhardt P, Cooper C, Torgerson D. Guidelines for diagnosis and management of osteoporosis. *The European Foundation for Osteoporosis and Bone Disease. Osteoporos Int* 1997;7(4):390-406.
- Kanis JA, Devogelaer JP, Gennari C. Practical guide for the use of bone mineral measurements in the assessment of treatment of osteoporosis: a position paper of the European foundation for osteoporosis and bone disease. *The Scientific Advisory Board and the Board of National Societies. Osteoporos Int* 1996;6(3):256-61.
- Kaufman JM, Devogelaer JP, Raeman F, Rozenberg S, Body JJ, Westhovens R, Reginster JY. Prevention and treatment of postmenopausal osteoporosis. National Consensus of the "Belgian Bone Club", November 1996. *Clin Rheumatol* 1997 Jun;16(4):343-5.
- Meunier PJ, Delmas PD, Eastell R, McClung MR, Papapoulos S, Rizzoli R, Seeman E, Wasnich RD. Diagnosis and management of osteoporosis in postmenopausal women: clinical guidelines. International Committee for Osteoporosis Clinical Guidelines. *Clin Ther* 1999 Jun;21(6):1025 -44.
- Miller PD, Bonnick SL, Rosen C. Guidelines for the clinical utilization of bone mass measurement in the adult population. *Society for Clinical Densitometry. Calcif Tissue Int* 1995 Oct;57(4):251 -2.
- Miller PD, Bonnick SL, Rosen CJ. Consensus of an international panel on the clinical utility of bone mass measurements in the detection of low bone mass in the adult population. *Calcif Tissue Int* 1996 Apr;58(4):207-14.
- Morii H, Genant HK. Statement on the diagnosis and management of osteoporosis from the Consensus Development Conference at the Second International Conference on Osteoporosis, Osaka 1997. *J Bone Miner Metab* 1998;16(4):206-14.
- Murray TM. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 4. Calcium nutrition and osteoporosis. *CMAJ* 1996 Oct 1;155(7):935-9. Comment in: *Can Med Assoc J* 1997 May 1;156(9):1269.
- Murray TM, Ste-Marie LG. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 7. Fluoride therapy for osteoporosis. *CMAJ* 1996 Oct 1;155(7):949-54.
- [Osteoporosis 1995. Basic diagnosis and therapeutic elements for a national consensus proposal. Sao Paulo, Brazil May 12 -13 1995]. *Rev Paul Med* 1995 Jul-Aug;113(4 Suppl):1-64. (Por).
- Osteoporosis: review of the evidence for prevention, diagnosis and treatment and cost -effectiveness analysis. Executive summary. *Osteoporos Int* 1998;8 Suppl 4:S3-6.
- Otis CL, Drinkwater B, Johnson M, Loucks A, Wilmore J. American College of Sports Medicine position stand. The Female Athlete Triad. *Med Sci Sports Exerc* 1997 May;29(5):i-ix. Comment in: *Med Sci Sports Exerc* 1997 Dec;29(12):1669-71.
- Prince RL. Practice guidelines for the treatment of osteoporosis. *Calcif Tissue Int* 1996;59 Suppl 1:S20-3.
- Prior JC, Barr SI, Chow R, Faulkner RA. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 5. Physical activity as therapy for osteoporosis. *CMAJ* 1996 Oct 1;155(7):940-4.

Reginster JL. Harmonization of clinical practice guidelines for the prevention and treatment of osteoporosis and osteopenia in Europe: a difficult challenge. *Calcif Tissue Int* 1996;59 Suppl 1:S24 -9.

Report from the Danish Medical Research Council and the Danish Hospital Institute. Consensus statement on osteoporosis. *Int J Technol Assess Health Care* 1996 Summer;12(3):524 -5.

Sambrook PN, Cummings SR, Eisman JA, Genant HK, Eastell R, Reginster JY, Dequeker J, Silverman S, Adachi JD, Tugwell P. Guidelines for osteoporosis trials. *J Rheumatol* 1997;24(6):1234 -6.

Scott PJ. Consensus viewpoint on the treatment of postmenopausal osteoporosis. The Ad Hoc Group on Osteoporosis. *N Z Med J* 1997 Oct 24;110(1054):397-9.

Siminoski K, Josse RG. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 9. Calcitonin in the treatment of osteoporosis. *CMAJ* 1996 Oct 1;155(7):962-5.

Sturridge W, Lente B, Hanley DA. Prevention and management of osteoporosis: consensus statements from the Scientific Advisory Board of the Osteoporosis Society of Canada. 2. The use of bone density measurement in the diagnosis and management of osteoporosis. *CMAJ* 1996 Oct 1;155(7):924-9.

The prevention and management of osteoporosis. Consensus statement. Australian National Consensus Conference 1996. *Med J Aust* 1997 Jul 7;167 Suppl:S1-15.

Thompson DD, Simmons HA, Pirie CM, Ke HZ. FDA Guidelines and animal models for osteoporosis. *Bone* 1995 Oct;17(4 Suppl):125S-133S.

Who are candidates for prevention and treatment for osteoporosis? *Osteoporos Int* 1997;7(1):1-6.

## Epidemiology

### Bone Density

Arlot ME, Sornay-Rendu E, Garnero P, Vey-Marty B, Delmas PD. Apparent pre - and postmenopausal bone loss evaluated by DXA at different skeletal sites in women: the OFELY cohort. *J Bone Miner Res* 1997 Apr;12(4):683-90.

Barrett-Connor E, Goodman-Gruen D. Gender differences in insulin -like growth factor and bone mineral density association in old age: the Rancho Bernardo Study. *J Bone Miner Res* 1998 Aug;13(8):1343-9.

Blanchet C, Dodin S, Dumont M, Giguere Y, Turcot-Lemay L, Beauchamp J, Prud'homme D. Bone mineral density in French Canadian women. *Osteoporos Int* 1998;8(3):268-73.

Chittacharoen A, Theppisai U, Sirisriro R, Thanantaseth C. Pattern of bone loss in surgical menopause: a preliminary report. *J Med Assoc Thai* 1997 Nov;80(11):731-7.

del Puente A, Heyse SP, Mandes MG, Mantova D, Carpinelli A, Nutile G, Oriente P. Epidemiology of osteoporosis in women in southern Italy. *Aging (Milano)* 1998 Feb;10(1):53-8.

Donne B, Kelly M, Kelly A, Barniville G, O'Brien M, Corlett L. Bone density profiles and osteoporosis incidence in Irish females. *Ir Med J* 1996 May-Jun;89(3):92-4.

Fujiwara S, Fukunaga M, Nakamura T, Chen JT, Shiraki M, Hashimoto T, Yoh K, Nakamura T, Mizunuma H, Tomomitsu T, Kasagi F, Masunari N, Orimo H. Rates of change in spinal bone density among Japanese women. *Calcif Tissue Int* 1998 Sep;63(3):202-7.

Guthrie JR, Ebeling PR, Hopper JL, Barrett-Connor E, Dennerstein L, Dudley EC, Burger HG, Wark JD. A prospective study of bone loss in menopausal Australian-born women. *Osteoporos Int* 1998;8(3):282-90.

Haddock L. Prevalence of osteopenia and osteoporosis in a normal female Puerto Rican population. *P R Health Sci J* 1997 Sep;16(3):241-4.

Hadjidakis D, Kokkinakis E, Giannopoulos G, Merakos G, Raptis SA. Bone mineral density of vertebrae, proximal femur and os calcis in normal Greek subjects as assessed by dual-energy X-ray absorptiometry: Comparison with other populations. *Eur J Clin Invest* 1997;27(3):219 -27.

- Hansen MA, Overgaard K, Christiansen C. Spontaneous postmenopausal bone loss in different skeletal areas--followed up for 15 years. *J Bone Miner Res* 1995 Feb;10(2):205-10.
- Hui SL, Zhou L, Evans R, Slemenda CW, Peacock M, Weaver CM, McClintock C, Johnston CC Jr. Rates of growth and loss of bone mineral in the spine and femoral neck in white females. *Osteoporos Int* 1999;9(3):200-5.
- Kroger H, Lunt M, Reeve J, Dequeker J, Adams JE, Birkenhager JC, Diaz Curiel M, Felsenberg D, Hyldstrup L, Kotzki P, Laval-Jeantet A, Lips P, Louis O, Perez Cano R, Reiners C, Ribot C, Ruegsegger P, Schneider P, Braillon P, Pearson J. Bone density reduction in various measurement sites in men and women with osteoporotic fractures of spine and hip: the European quantitation of osteoporosis study. *Calcif Tissue Int* 1999 Mar;64(3):191 -9.
- Lehmann R, Wapniarz M, Randerath O, Kvasnicka HM, John W, Reincke M, Kutnar S, Klein K, Allolio B. Dual-energy X-ray absorptiometry at the lumbar spine in German men and women: a cross -sectional study. *Calcif Tissue Int* 1995 May;56(5):350-4.
- Leong KH, Feng PH. Bone mineral density measurements using the Hologic QD2000 in 175 Singaporean women aged 20-80. *Singapore Med J* 1997 Jan;38(1):25-6.
- Lethbridge-Cejku M, Tobin JD, Scott WW Jr, Reichle R, Roy TA, Plato CC, Hochberg MC. Axial and hip bone mineral density and radiographic changes of osteoarthritis of the knee: data from the Baltimore Longitudinal Study of Aging. *J Rheumatol* 1996 Nov;23(11):1943-7.
- Lofman O, Larsson L, Ross I, Toss G, Berglund K. Bone mineral density in normal Swedish women. *Bone* 1997;20(2):167-74.
- Looker AC, Orwoll ES, Johnston CC Jr, Lindsay RL, Wahner HW, Dunn WL, Calvo MS, Harris TB, Heyse SP. Prevalence of low femoral bone density in older U.S. adults from NHANES III. *J Bone Miner Res* 1997;12(11):1761-8.
- Looker AC, Wahner HW, Dunn WL, Calvo MS, Harris TB, Heyse SP, Johnston CC Jr, Lindsay R. Updated data on proximal femur bone mineral levels of US adults. *Osteoporos Int* 1998;8(5):468-89.
- Luisetto G, Bottega F, Nardi A, Ziliotto D. Decrease of bone formation in adult women with fragility fractures. *Maturitas* 1997 Sep;28(1):59-67.
- Lunt M, Felsenberg D, Adams J, Benevolenskaya L, Cannata J, Dequeker J, Dodenhof C, Falch JA, Johnell O, Khaw KT, Masaryk P, Pols H, Poor G, Reid D, Scheidt-Nave C, Weber K, Silman AJ, Reeve J. Population-based geographic variations in DXA bone density in Europe: the EVOS Study. *European Vertebral Osteoporosis. Osteoporos Int* 1997;7(3):175-89.
- Mazess RB, Barden HS, Eberle RW, Denton MD. Age changes of spine density in posterior -anterior and lateral projections in normal women. *Calcif Tissue Int* 1995;56(3):201-5.
- Mizuno K, Suzuki A, Ino Y, Asada Y, Kikkawa F, Tomoda Y. Postmenopausal bone loss in Japanese women. *Int J Gynaecol Obstet* 1995 Jul;50(1):33-9.
- Nordin BE, Chatterton BE, Schultz CG, Need AG, Horowitz M. Regional bone mineral density interrelationships in normal and osteoporotic postmenopausal women. *J Bone Miner Res* 1996 Jun;11(6):849-56.
- Osteoporosis among estrogen-deficient women--United States, 1988-1994. *MMWR Morb Mortal Wkly Rep* 1998 Nov 20;47(45):969-73.
- Petley GW, Cotton AM, Murrills AJ, Taylor PA, Cooper C, Cawley MI, Wilkin TJ. Reference ranges of bone mineral density for women in southern England: the impact of local data on the diagnosis of osteoporosis. *Br J Radiol* 1996 Jul;69(823):655-60. Comment in: *Br J Radiol* 1997 Jan;70:109 -10.
- Pouilles JM, Tremolieres F, Ribot C. Effect of menopause on femoral and vertebral bone loss. *J Bone Miner Res* 1995 Oct;10(10):1531-6.
- Pouilles JM, Tremolieres F, Ribot C. Variability of vertebral and femoral postmenopausal bone loss: a longitudinal study. *Osteoporos Int* 1996;6(4):320-4.
- Reeve J, Pearson J, Mitchell A, Green J, Nicholls A, Justice J, Hudson E, Klenerman L. Evolution of spinal bone loss and biochemical markers of bone remodeling after menopause in normal women. *Calcif Tissue Int* 1995 Aug;57(2):105-10.
- Reeve J, Walton J, Russell LJ, Lunt M, Wolman R, Abraham R, Justice J, Nicholls A, Wardley -Smith B, Green JR, Mitchell A. Determinants of the first decade of bone loss after menopause at spine, hip and radius. *QJM* 1999 May;92(5):261 -73.
- Schneider DL, Barrett-Connor EL, Morton DJ. Timing of postmenopausal estrogen for optimal bone mineral density: The Rancho Bernardo study. *J Am Med Assoc* 1997;277(7):543-7.
- Shipman AJ, Guy GW, Smith I, Ostlere S, Greer W, Smith R. Vertebral bone mineral density, content and

area in 8789 normal women aged 33 -73 years who have never had hormone replacement therapy. *Osteoporos Int* 1999;9(5):420-6.

Smeets-Goevaers CG, Lesusink GL, Papapoulos SE, Maartens LW, Keyzer JJ, Weerdenburg JP, Beijers LM, Zwinderman AH, Knottnerus JA, Pols HA, Pop VJ. The prevalence of low bone mineral density in Dutch perimenopausal women: the Eindhoven perimenopausal osteoporosis study. *Osteoporos Int* 1998;8(5):404-9.

Szejnfeld VL, Atra E, Baracat EC, Aldrighi JM, Civitelli R. Bone density in white Brazilian women: rapid loss at the time around the menopause. *Calcif Tissue Int* 1995 Mar;56(3):186-91.

Taechakraichana N, Angkawanich P, Panyakhamlerd K, Limpaphayom K. Postmenopausal osteoporosis: what is the real magnitude of the problem in the Thai population? *J Med Assoc Thai* 1998 Jun;81(6):397-401.

Taechakraichana N, Limpaphayom K, Jaisamarn U, Poshyachinda M. Bone loss in oophorectomized Thai women. *J Med Assoc Thai* 1997 Jun;80(6):384-90.

Tsai KS, Tai TY. Epidemiology of osteoporosis in Taiwan. *Osteoporos Int* 1997;7 Suppl 3:S96-8.

Tsunenari T, Yamada S, Kawakatsu M, Negishi H, Tsutsumi M. Menopause-related changes in bone mineral density in Japanese women: A longitudinal study on lumbar spine and proximal femur. *Calcif Tissue Int* 1995;56(1):5-10.

Wasnich RD. Epidemiology of osteoporosis in the United States of America. *Osteoporos Int* 1997;7 Suppl 3:S68-72.

Yang RS, Chieng PU, Tsai KS, Liu TK. Symmetry of bone mineral density in the hips is not affected by age. *Nucl Med Commun* 1996 Aug;17(8):711 -6.

Yang RS, Liu TK, Dorey FJ, Chieng PU. Bone mineral density in Chinese elderly women with hip fracture. *Calcif Tissue Int* 1996;58(6):385 -9.

Yang RS, Tsai KS, Liu TK, Chieng PU, Dorey FJ. Risk of underestimation of the bone mineral density of proximal femur. *Bone* 1997;20(3):295 -300.

Young R, May H, Murphy S, Grey C, Compston JE. Rates of bone loss in peri- and postmenopausal women: a 4 year, prospective, population-based study. *Clin Sci (Colch)* 1996 Sep;91(3):307 -12.

Zimmerman SI, Girman CJ, Buie VC, Chandler J, Hawkes W, Martin A, Holder L, Hebel JR, Sloane PD, Magaziner J. The prevalence of osteoporosis in

nursing home residents. *Osteoporos Int* 1999;9(2):151-7.

## Falls

- Allander E, Gullberg B, Johnell O, Kanis JA, Ranstam J, Elffors L. Circumstances around the fall in a multinational hip fracture risk study: a diverse pattern for prevention. MEDOS Study Group). Mediterranean Osteoporosis Study. *Accid Anal Prev* 1998 Sep;30(5):607-16.
- Aoyagi K, Ross PD, Davis JW, Wasnich RD, Hayashi T, Takemoto T. Falls among community -dwelling elderly in Japan. *J Bone Miner Res* 1998 Sep;13(9):1468-74.
- Dargent-Molina P, Favier F, Grandjean H, Baudoin C, Schott AM, Hausherr E, Meunier PJ, Breart G. Fall-related factors and risk of hip fracture: the EPIDOS prospective study. *Lancet* 1996 Jul 20;348(9021):145-9. Published erratum appears in *Lancet* 1996 Aug 10;348(9024):416.
- Davis JW, Nevitt MC, Wasnich RD, Ross PD. A cross-cultural comparison of neuromuscular performance, functional status, and falls between Japanese and white women. *J Gerontol A Biol Sci Med Sci* 1999 Jun;54(6):M288-92.
- Davis JW, Ross PD, Nevitt MC, Wasnich RD. Incidence rates of falls among Japanese men and women living in Hawaii. *J Clin Epidemiol* 1997 May;50(5):589-94.
- Davis JW, Ross PD, Nevitt MC, Wasnich RD. Risk factors for falls and for serious injuries on falling among older Japanese women in Hawaii. *J Am Geriatr Soc* 1999 Jul;47(7):792-8.
- Delmas PD, Bjarnason NH, Mitlak BH, Ravoux AC, Shah AS, Huster WJ, Draper M, Christiansen C. Effects of raloxifene on bone mineral density, serum cholesterol concentrations, and uterine endometrium in postmenopausal women. *N Engl J Med* 1997 Dec 4;337(23):1641-7. Comment in: *N Engl J Med* 1997 Dec 4;337(23):1686-7 and *N Engl J Med* 1998 Apr 30;338(18):1313; discussion 1313-4.
- Durward G, Non PC, Ogunremi L, Wills R, Cottie M, Patel S. Detection of risk of falling and hip fracture in women referred for bone densitometry. *Lancet* 1999 Jul 17;354(9174):220-1.
- Goh JC, Bose K, Das De S. Pattern of fall and bone mineral density measurement in hip fractures. *Ann Acad Med Singapore* 1996 Nov;25(6):820-3.
- Greenspan SL, Myers ER, Kiel DP, Parker RA, Hayes WC, Resnick NM. Fall direction, bone mineral density, and function: Risk factors for hip fracture in frail nursing home elderly. *Am J Med* 1998;104(6):539-45.
- Grisso JA. Prevention of falls in patients with osteoporosis. *Rev Rhum Engl Ed* 1997 Jun 30;64(6 Suppl):75S-77S.
- Hayes WC, Myers ER. Biomechanical considerations of hip and spine fractures in osteoporotic bone. *Instr Course Lect* 1997;46:431-8.
- King MB, Tinetti ME. A multifactorial approach to reducing injurious falls. *Clin Geriatr Med* 1996;12(4):745-59.
- Lotz JC, Cheal EJ, Hayes WC. Stress distributions within the proximal femur during gait and falls: implications for osteoporotic fracture. *Osteoporos Int* 1995;5(4):252-61.
- Schwendner KI, Mikesky AE, Holt WS Jr, Peacock M, Burr DB. Differences in muscle endurance and recovery between fallers and nonfallers, and between young and older women. *J Gerontol A Biol Sci Med Sci* 1997 May;52(3):M155-60.

## Fractures

- al-Nuaim AR, Kreml M, al -Nuaim M, Sandkgi S. Incidence of proximal femur fracture in an urbanized community in Saudi Arabia. *Calcif Tissue Int* 1995 Jun;56(6):536-8.
- Baron JA, Barrett JA, Karagas MR. The epidemiology of peripheral fractures. *Bone* 1996 Mar;18(3 Suppl):209S-213S.
- Baron JA, Karagas M, Barrett J, Kniffin W, Malenka D, Mayor M, Keller RB. Basic epidemiology of fractures of the upper and lower limb among americans over 65 years of age. *Epidemiology* 1996;7(6):612-8.
- Barrett-Connor E, Gore R, Browner WS, Cummings SR. Prevention of osteoporotic hip fracture: global versus high-risk strategies. *Osteoporos Int* 1998;8 Suppl 1:S2-7.
- Barrett JA, Baron JA, Karagas MR, Beach ML. Fracture risk in the U.S. Medicare population. *J Clin Epidemiol* 1999;52(3):243-9.
- Cauley JA, Seeley DG, Ensrud K, Ettinger B, Black D, Cummings SR. Estrogen replacement therapy and fractures in older women. Study of Osteoporotic Fractures Research Group. *Ann Intern Med* 1995 Jan 1;122(1):9-16.
- Center JR, Nguyen TV, Schneider D, Sambrook PN, Eisman JA. Mortality after all major types of osteoporotic fracture in men and women: an observational study. *Lancet* 1999 Mar 13;353(9156):878-82. Comment in: *Lancet* 1999 May 15;353(9165):1707.
- Cumming RG, Nevitt MC, Cummings SR. Epidemiology of hip fractures. *Epidemiol Rev* 1997;19(2):244-57.
- Davies KM, Stegman MR, Heaney RP, Recker RR. Prevalence and severity of vertebral fracture: the Saunders County Bone Quality Study. *Osteoporos Int* 1996;6(2):160-5.
- Delmas PD, Balena R, Confravreux E, Hardouin C, Hardy P, Bremond A. Bisphosphonate risedronate prevents bone loss in women with artificial menopause due to chemotherapy of breast cancer: a double-blind, placebo-controlled study. *J Clin Oncol* 1997 Mar;15(3):955-62.
- Dirsch DR, Henderson RC, Oakley WC. Accelerated bone mineral loss following a hip fracture: a prospective longitudinal study. *Bone* 1997 Jul;21(1):79-82.
- Downs RW Jr, Bone HG, McIlwain H, Baker MZ, Yates AJ, Lombardi A, Krupa D, Harning R. An open-label extension study of alendronate treatment in elderly women with osteoporosis. *Calcif Tissue Int* 1999 Jun;64(6):463-9.
- Dubey A, Koval KJ, Zuckerman JD. Hip fracture prevention: a review. *Am J Orthop* 1998 Jun;27(6):407-12.
- Elffors L. Are osteoporotic fractures due to osteoporosis? Impacts of a frailty pandemic in an aging world. *Aging (Milano)* 1998 Jun;10(3):191-204.
- Gullberg B, Johnell O, Kanis JA. World-wide projections for hip fracture. *Osteoporos Int* 1997;7(5):407-13.
- Hochberg MC, Williamson J, Skinner EA, Guralnik J, Kasper JD, Fried LP. The prevalence and impact of self-reported hip fracture in elderly community-dwelling women: The Women's Health and Aging Study. *Osteoporos Int* 1998;8(4):385-9.
- Honkanen K, Honkanen R, Heikkinen L, Kroger H, Saarikoski S. Validity of self-reports of fractures in perimenopausal women. *Am J Epidemiol* 1999;150(5):511-6.
- Honkanen R, Kroger H, Tuppurainen M, Alhava E, Saarikoski S. Fractures and low axial bone density in perimenopausal women. *J Clin Epidemiol* 1995;48(7):881-8.
- Honkanen R, Tuppurainen M, Kroger H, Alhava E, Saarikoski S. Relationships between risk factors and fractures differ by type of fracture: A population-based study of 12,192 perimenopausal women. *Osteoporos Int* 1998;8(1):25-31.
- Hove LM, Fjeldsgaard K, Reitan R, Skjeie R, Sorensen FK. Fractures of the distal radius in a Norwegian city. *Scand J Plast Reconstr Surg Hand Surg* 1995 Sep;29(3):263-7.
- Huang C, Ross PD, Fujiwara S, Davis JW, Epstein RS, Kodama K, Wasnich RD. Determinants of vertebral fracture prevalence among native Japanese women and women of Japanese descent living in Hawaii. *Bone* 1996 May;18(5):437-42.
- Huang C, Ross PD, Lydick E, Davis JW, Wasnich RD. Contributions of vertebral fractures to stature loss among elderly Japanese-American women in Hawaii. *J Bone Miner Res* 1996 Mar;11(3):408-11.
- Huang C, Ross PD, Wasnich RD. Vertebral fractures and other predictors of back pain among older women. *J Bone Miner Res* 1996 Jul;11(7):1026-32.

- Ismail AA, Cooper C, Felsenberg D, Varlow J, Kanis JA, Silman AJ, O'Neill TW. Number and type of vertebral deformities: epidemiological characteristics and relation to back pain and height loss. European Vertebral Osteoporosis Study Group. *Osteoporos Int* 1999;9(3):206-13.
- Ismail AA, O'Neill TW, Cooper C, Finn JD, Bhalla AK, Cannata JB, Delmas P, Falch JA, Felsch B, Hoszowski K, Johnell O, Diaz-Lopez JB, Lopez Vaz A, Marchand F, Raspe H, Reid DM, Todd C, Weber K, Woolf A, Reeve J, Silman AJ. Mortality associated with vertebral deformity in men and women: results from the European Prospective Osteoporosis Study (EPOS). *Osteoporos Int* 1998;8(3):291-7.
- Jacobsen SJ, Sargent DJ, Atkinson EJ, O'Fallon WM, Melton LJ 3rd. Contribution of weather to the seasonality of distal forearm fractures: a population-based study in Rochester, Minnesota. *Osteoporos Int* 1999;9(3):254-9.
- Jacobsen SJ, Sargent DJ, Atkinson EJ, O'Fallon WM, Melton LJ 3rd. Population-based study of the contribution of weather to hip fracture seasonality. *Am J Epidemiol* 1995 Jan 1;141(1):79 -83.
- Jequier V, Burnand B, Vader JP, Paccaud F. Hip fracture incidence in the Canton of Vaud, Switzerland, 1986-1991. *Osteoporos Int* 1995;5(3):191-5.
- Johnell O, Gullberg B, Kanis JA. The hospital burden of vertebral fracture in Europe: a study of national register sources. *Osteoporos Int* 1997;7(2):138-44.
- Johnell O, Melton LJ 3rd, Nilsson JA. Are annual fluctuations in hip fracture incidence dependent upon the underlying mortality rate? *Osteoporos Int* 1998;8(2):192-5.
- Jones G, White C, Nguyen T, Sambrook PN, Kelly PJ, Eisman JA. Prevalent vertebral deformities: Relationship to bone mineral density and spinal osteophytosis in elderly men and women. *Osteoporos Int* 1996;6(3):233-9.
- Kannus P, Palvanen M, Niemi S, Parkkari J, Jarvinen M, Vuori I. Increasing number and incidence of osteoporotic fractures of the proximal humerus in elderly people. *BMJ* 1996 Oct 26;313(7064):1051-2.
- Kannus P, Parkkari J, Niemi S, Palvanen M. Epidemiology of osteoporotic ankle fractures in elderly persons in Finland. *Ann Intern Med* 1996 Dec 15;125(12):975-8.
- Kannus P, Parkkari J, Niemi S, Pasanen M, Jarvinen M, Vuori I. The number and incidence of minor trauma knee fractures are increasing in elderly women but not in elderly men. *Osteoporos Int* 1997;7(2):149-54.
- Karagas MR, Lu-Yao GL, Barrett JA, Beach ML, Baron JA. Heterogeneity of hip fracture: Age, race, sex, and geographic patterns of femoral neck and trochanteric fractures among the US elderly. *Am J Epidemiol* 1996;143(7):677 -82.
- Lashas L, Masanauskaitė D, Lashene D, Masanauskienė E. Rate of characteristics for osteoporotic fractures in the elderly population of Kaunas region, Lithuania. *Scand J Rheumatol Suppl* 1996;103:16-20; discussion 21 -3.
- Levy AR, Mayo NE, Grimard G. Rates of transcervical and pertrochanteric hip fractures in the province of Quebec, Canada, 1981-1992. *Am J Epidemiol* 1995;142(4):428 -36.
- Melton LJ 3rd, Amadio PC, Crowson CS, O'Fallon WM. Long-term trends in the incidence of distal forearm fractures. *Osteoporos Int* 1998;8(4):341-8.
- Melton LJ 3rd, Atkinson EJ, Madhok R. Downturn in hip fracture incidence. *Public Health Rep* 1996 Mar-Apr;111(2):146-50; discussion 151.
- Melton LJ 3rd, Crowson CS, O'Fallon WM. Fracture incidence in Olmsted County, Minnesota: comparison of urban with rural rates and changes in urban rates over time. *Osteoporos Int* 1999;9(1):29-37.
- Melton LJ 3rd, Therneau TM, Larson DR. Long-term trends in hip fracture prevalence: the influence of hip fracture incidence and survival. *Osteoporos Int* 1998;8(1):68-74.
- Memon A, Pospula WM, Tantawy AY, Abdul-Ghafar S, Suresh A, Al-Rowaih A. Incidence of hip fracture in Kuwait. *Int J Epidemiol* 1998;27(5):860 -5.
- Norton R, Butler M, Currie R, Lee-Joe T, Campbell AJ, Reid IR, Gray H. Hip fracture incidence among older people in Auckland: A population-based study. *N Z Med J* 1995;108(1010):426-8.
- O'Neill TW, Felsenberg D, Varlow J, Cooper C, Kanis JA, Silman AJ. The prevalence of vertebral deformity in European men and women: the European Vertebral Osteoporosis Study. *J Bone Miner Res* 1996 Jul;11(7):1010-8.
- O'Neill TW, Marsden D, Matthis C, Raspe H, Silman AJ. Survey response rates: national and regional differences in a European multicentre study of vertebral osteoporosis. *J Epidemiol Community Health* 1995 Feb;49(1):87-93.

- O'Neill TW, Marsden D, Silman AJ. Differences in the characteristics of responders and non -responders in a prevalence survey of vertebral osteoporosis. European Vertebral Osteoporosis Study Group. *Osteoporos Int* 1995;5(5):327-34. Comment in: *Osteoporos Int* 1996;6(3):262.
- Oden A, Dawson A, Dere W, Johnell O, Jonsson B, Kanis JA. Lifetime risk of hip fractures is underestimated. *Osteoporos Int* 1998;8(6):599-603.
- Palvanen M, Kannus P, Niemi S, Parkkari J. Secular trends in the osteoporotic fractures of the distal humerus in elderly women. *Eur J Epidemiol* 1998 Feb;14(2):159-64.
- Palvanen M, Kannus P, Niemi S, Parkkari J, Vuori I. Epidemiology of minimal trauma rib fractures in the elderly. *Calcif Tissue Int* 1998;62(3):274 -7.
- Parkkari J, Kannus P, Niemi S, Pasanen M, Jarvinen M, Luthje P, Vuori I. Secular trends in osteoporotic pelvic fractures in Finland: number and incidence of fractures in 1970-1991 and prediction for the future. *Calcif Tissue Int* 1996 Aug;59(2):79 -83.
- Pasco JA, Henry MJ, Gaudry TM, Nicholson GC, Kotowicz MA. Identification of incident fractures: The Geelong osteoporosis study. *Aust N Z J Med* 1999;29(2):203-6.
- Paspali I, Galanos A, Lyritis GP. Hip fracture epidemiology in Greece during 1977 -1992. *Calcif Tissue Int* 1998;62(6):542-7.
- Peach HG, Bath NE. Hospital separation rates from osteoporotic and non-osteoporotic fractures in metropolitan and rural Australia. *Injury* 1999 Mar;30(2):101-3.
- Riggs BL, Melton LJ 3rd. The worldwide problem of osteoporosis: insights afforded by epidemiology. *Bone* 1995 Nov;17(5 Suppl):505S-511S.
- Ross PD, Fujiwara S, Huang C, Davis JW, Epstein RS, Wasnich RD, Kodama K, Melton LJ 3rd. Vertebral fracture prevalence in women in Hiroshima compared to Caucasians or Japanese in the US. *Int J Epidemiol* 1995 Dec;24(6):1171-7.
- Sanders KM, Nicholson GC, Ugoni AM, Pasco JA, Seeman E, Kotowicz MA. Health burden of hip and other fractures in Australia beyond 2000. Projections based on the Geelong Osteoporosis Study. *Med J Aust* 1999 May 17;170(10):467-70. Comment in: *Med J Aust* 1999 May 17;170(10):459-60.
- Sanders KM, Pasco JA, Ugoni AM, Nicholson GC, Seeman E, Martin TJ, Skorci B, Panahi S, Kotowicz MA. The exclusion of high trauma fractures may underestimate the prevalence of bone fragility fractures in the community: the Geelong Osteoporosis Study. *J Bone Miner Res* 1998 Aug;13(8):1337-42.
- Sanders KR, Seeman E, Ugoni AM, Pasco JA, Martin TJ, Skorci B, Nicholson GC, Kotowicz MA. Age- and gender-specific rate of fractures in Australia: A population-based study. *Osteoporos Int* 1999;10(3):240-7.
- Saraux A, Valls I, Guedes C, Baron D, Le Goff P. Insufficiency fractures of the sacrum in elderly subjects. *Rev Rhum Engl Ed* 1995 Oct;62(9):582-6.
- Schott AM, Cormier C, Hans D, Favier F, Hausherr E, Dargent-Molina P, Delmas PD, Ribot C, Sebert JL, Breart G, Meunier PJ. How hip and whole-body bone mineral density predict hip fracture in elderly women: the EPIDOS Prospective Study. *Osteoporos Int* 1998;8(3):247-54.
- Schroder HM, Andreassen MD, Villadsen I, Sorensen JG, Erlandsen M. Increasing age -specific incidence of hip fractures in a Danish municipality. *Dan Med Bull* 1995;42(1):109-11.
- Schwartz AV, Kelsey JL, Maggi S, Tuttleman M, Ho SC, Jonsson PV, Poor G, Sisson de Castro JA, Xu L, Matkin CC, Nelson LM, Heyse SP. International variation in the incidence of hip fractures: Cross-national project on osteoporosis for the World Health Organization program for research on aging. *Osteoporos Int* 1999;9(3):242-53.
- Tuppurainen M, Kroger H, Honkanen R, Punttila E, Huopio J, Saarikoski S, Alhava E. Risks of perimenopausal fractures --a prospective population-based study. *Acta Obstet Gynecol Scand* 1995 Sep;74(8):624-8.
- Varennna M, Binelli L, Zucchi F, Betrametti P, Gallazzi M, Sinigaglia L. Is the metatarsal fracture in postmenopausal women an osteoporotic fracture? A cross-sectional study on 113 cases. *Osteoporos Int* 1997;7(6):558-63.
- Visentin P, Ciravegna R, Usello L, Molaschi M, Fabris F. Site-specific relative risk of fractures in the institutionalized elderly. *Gerontology* 1995;41(5):273-9.
- Wasnich RD. Vertebral fracture epidemiology. *Bone* 1996 Mar;18(3 Suppl):179S-183S.

## Genetics

- Alahari KD, Lobaugh B, Econos MJ. Vitamin D receptor alleles do not correlate with bone mineral density in premenopausal Caucasian women from the southeastern United States. *Metab Clin Exp* 1997;46(2):224-6.
- Ames SK, Ellis KJ, Gunn SK, Copeland KC, Abrams SA. Vitamin D receptor gene Fok1 polymorphism predicts calcium absorption and bone mineral density in children. *J Bone Miner Res* 1999;14(5):740 -6.
- Arden NK, Baker J, Hogg C, Baan K, Spector TD. The heritability of bone mineral density, ultrasound of the calcaneus and hip axis length: a study of postmenopausal twins. *J Bone Miner Res* 1996 Apr;11(4):530-4.
- Arden NK, Keen RW, Lanchbury JS, Spector TD. Polymorphisms of the vitamin D receptor gene do not predict quantitative ultrasound of the calcaneus or hip axis length. *Osteoporos Int* 1996;6(4):334-7.
- Arden NK, Spector TD. Genetic influences on muscle strength, lean body mass, and bone mineral density: A twin study. *J Bone Miner Res* 1997;12(12):2076-81.
- Bank RA, Robins SP, Wijmenga C, Breslau -Siderius LJ, Bardoe AF, van der Sluijs HA, Pruijs HE, TeKoppele JM. Defective collagen crosslinking in bone, but not in ligament or cartilage, in Bruck syndrome: indications for a bone-specific telopeptide lysyl hydroxylase on chromosome 17. *Proc Natl Acad Sci U S A* 1999 Feb 2;96(3):1054-8.
- Barger-Lux MJ, Heaney RP, Hayes J, DeLuca HF, Johnson ML, Gong G. Vitamin D receptor gene polymorphism, bone mass, body size, and vitamin D receptor density. *Calcif Tissue Int* 1995 Aug;57(2):161-2.
- Barthe N, Basse-Cathalinat B, Meunier PJ, Ribot C, Marchandise X, Sabatier JP, Braillon P, Thevenot J, Sutter B. Measurement of bone mineral density in mother-daughter pairs for evaluating the family influence on bone mass acquisition: a GRIO survey. *Osteoporos Int* 1998;8(4):379-84.
- Berg JP, Falch JA, Haug E. Fracture rate, pre- and postmenopausal bone mass and early and late postmenopausal bone loss are not associated with vitamin D receptor genotype in a high -endemic area of osteoporosis. *Eur J Endocrinol* 1996 Jul;135(1):96-100.
- Boschitsch E, Suk EK, Mayr WR, Land T, Schwartz WM, Panzer S. Genotypes of the vitamin-D-receptor gene and bone mineral density in caucasoid postmenopausal females. *Maturitas* 1996;24(1-2):91-6.
- Cauley JA, Zmuda JM, Yaffe K, Kuller LH, Ferrell RE, Wisniewski SR, Cummings SR. Apolipoprotein E polymorphism: A new genetic marker of hip fracture risk--The Study of Osteoporotic Fractures. *J Bone Miner Res* 1999 Jul;14(7):1175-81.
- Civitelli R, Ziambaras K. Does vitamin D receptor gene polymorphism affect bone mineral density and calcium absorption? *Curr Opin Gastroenterol* 1998;14(2):164-72.
- Danielson ME, Cauley JA, Baker CE, Newman AB, Dorman JS, Towers JD, Kuller LH. Familial resemblance of bone mineral density (BMD) and calcaneal ultrasound attenuation: the BMD in mothers and daughters study. *J Bone Miner Res* 1999 Jan;14(1):102-10.
- Dawson-Hughes B, Harris SS, Finneran S. Calcium absorption on high and low calcium intakes in relation to vitamin D receptor genotype. *J Clin Endocrinol Metab* 1995 Dec;80(12):3657-61.
- Deng HW, Li J, Li JL, Johnson M, Gong G, Davis KM, Recker RR. Change of bone mass in postmenopausal Caucasian women with and without hormone replacement therapy is associated with vitamin D receptor and estrogen receptor genotypes. *Hum Genet* 1998 Nov;103(5):576-85.
- Deng HW, Stegman MR, Davies KM, Conway T, Recker RR. Genetic determination of variation and covariation of peak bone mass at the hip and spine. *J Clin Densitom* 1999 Fall;2(3):251 -63.
- Devoto M, Shimoya K, Caminis J, Ott J, Tenenhouse A, Whyte MP, Sereda L, Hall S, Considine E, Williams CJ, Tromp G, Kuivaniemi H, Ala -Kokko L, Prockop DJ, Spotila LD. First-stage autosomal genome screen in extended pedigrees suggests genes predisposing to low bone mineral density on chromosomes 1p, 2p and 4q. *Eur J Hum Genet* 1998 Mar-Apr;6(2):151-7.
- Diaz MN, O'Neill TW, Silman AJ. The influence of family history of hip fracture on the risk of vertebral deformity in men and women: the European Vertebral Osteoporosis Study. *Bone* 1997 Feb;20(2):145-9.
- Dohi Y, Iki M, Ohgushi H, Gojo S, Tabata S, Kajita E, Nishino H, Yonemasu K. A novel polymorphism in the promoter region for the human osteocalcin gene: The possibility of a correlation with bone mineral density in postmenopausal Japanese women. *J Bone Miner Res* 1998 Oct;13(10):1633-9.

- Eisman JA. Genetics, calcium intake and osteoporosis. *Proc Nutr Soc* 1998 May;57(2):187-93.
- Eisman JA. Vitamin D polymorphisms and calcium homeostasis: a new concept of normal gene variants and physiologic variation. *Nutr Rev* 1998 Feb;56(2 Pt 2):s22-9; discussion s54-75.
- Eisman JA. Vitamin D receptor gene variants: implications for therapy. *Curr Opin Genet Dev* 1996 Jun;6(3):361-5.
- Eisman JA, Morrison NA, Kelly PJ, Sambrook PN, Howard G, Qi J, Tokita A, Crofts L, Nguyen TV, Birmingham J. Genetics of osteoporosis and vitamin D receptor alleles. *Calcif Tissue Int* 1995;56 Suppl 1:S48-9.
- Ensrud KE, Stone K, Cauley JA, White C, Zmuda JM, Nguyen TV, Eisman JA, Cummings SR. Vitamin D receptor gene polymorphisms and the risk of fractures in older women. For the Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1999 Oct;14(10):1637-45.
- Ferrari S, Rizzoli R, Bonjour JP. Genetic aspects of osteoporosis. *Curr Opin Rheumatol* 1999 Jul;11(4):294-300.
- Ferrari S, Rizzoli R, Chevalley T, Slosman D, Eisman JA, Bonjour JP. Vitamin -D-receptor-gene polymorphisms and change in lumbar -spine bone mineral density. *Lancet* 1995 Feb 18;345(8947): 423-4. Comment in: *Lancet* 1995 Apr 15;345(8955): 990; *Lancet* 1995 Apr 15;345(8955):990-1; *Lancet* 1995 May 13;345(8959):1238; discussion 1239 and *Lancet* 1995 May 13;345(8959):1238-9.
- Ferrari S, Rizzoli R, Manen D, Slosman D, Bonjour JP. Vitamin D receptor gene start codon polymorphisms (FokI) and bone mineral density: Interaction with age, dietary calcium, and 3' -end region polymorphisms. *J Bone Miner Res* 1998;13(6):925-30.
- Ferrari S, Rizzoli R, Slosman D, Bonjour JP. Familial resemblance for bone mineral mass is expressed before puberty. *J Clin Endocrinol Metab* 1998;83(2):358-61.
- Ferrari SL, Rizzoli R, Slosman DO, Bonjour JP. Do dietary calcium and age explain the controversy surrounding the relationship between bone mineral density and vitamin D receptor gene polymorphisms? *J Bone Miner Res* 1998 Mar;13(3):363-70.
- Fleet JC, Harris SS, Wood RJ, Dawson-Hughes B. The BsmI vitamin D receptor restriction fragment length polymorphism (BB) predicts low bone density in premenopausal black and white women. *J Bone Miner Res* 1995 Jun;10(6):985-90.
- Fox KM, Cummings SR, Powell-Threets K, Stone K. Family history and risk of osteoporotic fracture. Study of Osteoporotic Fractures Research Group. *Osteoporos Int* 1998;8(6):557-62.
- Francois S, Benmalek A, Guaydier -Souquieres G, Sabatier JP, Marcelli C. Heritability of bone mineral density. *Rev Rhum Engl Ed* 1999 Mar;66(3):146 -51.
- Garnero P, Arden NK, Griffiths G, Delmas PD, Spector TD. Genetic influence on bone turnover in postmenopausal twins. *J Clin Endocrinol Metab* 1996 Jan;81(1):140-6.
- Garnero P, Borel O, Sornay-Rendu E, Arlot ME, Delmas PD. Vitamin D receptor gene polymorphisms are not related to bone turnover, rate of bone loss, and bone mass in postmenopausal women: the OFELY Study. *J Bone Miner Res* 1996 Jun;11(6):827-34.
- Garnero P, Borel O, Sornay-Rendu E, Delmas PD. Vitamin D receptor gene polymorphism do not predict bone turnover and bone mass in healthy premenopausal women. *J Bone Miner Res* 1995;10(9):1283-8.
- Gennari L, Becherini L, Mansani R, Masi L, Falchetti A, Morelli A, Colli E, Gonnelli S, Cepollaro C, Brandi ML. FokI polymorphism at translation initiation site of the vitamin D receptor gene predicts bone mineral density and vertebral fractures in postmenopausal Italian women. *J Bone Miner Res* 1999 Aug;14(8):1379-86.
- Gennari L, Becherini L, Masi L, Gonnelli S, Cepollaro C, Martini S, Mansani R, Brandi ML. Vitamin D receptor genotypes and intestinal calcium absorption in postmenopausal women. *Calcif Tissue Int* 1997 Dec;61(6):460-3.
- Gennari L, Becherini L, Masi L, Mansani R, Gonnelli S, Cepollaro C, Martini S, Montagnani A, Lentini G, Becorpi AM, Brandi ML. Vitamin D and estrogen receptor allelic variants in Italian postmenopausal women: evidence of multiple gene contribution to bone mineral density. *J Clin Endocrinol Metab* 1998 Mar;83(3):939-44.
- Geusens P, Vandevyver C, Vanhoof J, Cassiman JJ, Boonen S, Raus J. Quadriceps and grip strength are related to vitamin D receptor genotype in elderly nonobese women. *J Bone Miner Res* 1997;12(12):2082-8.
- Gilsanz V. Phenotype and genotype of osteoporosis. *Trends Endocrinol Metab* 1998 Jul;9(5):184 -90.

- Gong G, Johnson ML, Barger-Lux MJ, Heaney RP. Association of bone dimensions with a parathyroid hormone gene polymorphism in women. *Osteoporos Int* 1999;9(4):307-11.
- Gong G, Stern HS, Cheng SC, Fong N, Mordeson J, Deng HW, Recker RR. The association of bone mineral density with vitamin D receptor gene polymorphisms. *Osteoporos Int* 1999;9(1):55-64.
- Gough A, Sambrook P, Devlin J, Lilley J, Huissoon A, Betteridge J, Franklyn J, Nguyen T, Morrison N, Eisman J, Emery P. Effect of vitamin D receptor gene alleles on bone loss in early rheumatoid arthritis. *J Rheumatol* 1998 May;25(5):864-8. Comment in: *J Rheumatol* 1999 Jun;26(6):1416-7.
- Graafmans WC, Lips P, Ooms ME, van Leeuwen JP, Pols HA, Uitterlinden AG. The effect of vitamin D supplementation on the bone mineral density of the femoral neck is associated with vitamin D receptor genotype. *J Bone Miner Res* 1997 Aug;12(8):1241-5.
- Grant SF, Reid DM, Blake G, Herd R, Fogelman I, Ralston SH. Reduced bone density and osteoporosis associated with a polymorphic Sp1 binding site in the collagen type I alpha 1 gene. *Nat Genet* 1996 Oct;14(2):203-5.
- Grant SFA, Ralston SH. Genes and osteoporosis. *Trends Endocrinol Metab* 1997;8(6):232-6.
- Han K, Choi J, Moon I, Yoon H, Han I, Min H, Kim Y, Choi Y. Non-association of estrogen receptor genotypes with bone mineral density and bone turnover in Korean pre-, peri-, and postmenopausal women. *Osteoporos Int* 1999;9(4):290-5.
- Han KO, Moon IG, Hwang CS, Choi JT, Yoon HK, Min HK, Han IK. Lack of an intronic Sp1 binding -site polymorphism at the collagen type I alpha1 gene in healthy Korean women. *Bone* 1999 Feb;24(2):135-7.
- Han KO, Moon IG, Kang YS, Chung HY, Min HK, Han IK. Nonassociation of estrogen receptor genotypes with bone mineral density and estrogen responsiveness to hormone replacement therapy in Korean postmenopausal women. *J Clin Endocrinol Metab* 1997;82(4):991-5.
- Hansen TS, Abrahamsen B, Henriksen FL, Hermann AP, Jensen LB, Horder M, Gram J. Vitamin D receptor alleles do not predict bone mineral density or bone loss in Danish perimenopausal women. *Bone* 1998 May;22(5):571-5.
- Hauache OM, Lazaretti-Castro M, Andreoni S, Gimeno SGA, Brandao C, Ramalho AC, Kasamatsu TS, Kunii I, Hayashi LF, Dib SA, Vieira JGH.
- Vitamin D receptor gene polymorphism: Correlation with bone mineral density in a Brazilian population with insulin -dependent diabetes mellitus. *Osteoporos Int* 1998;8(3):204-10.
- Ho YV, Brigandt EM, Duan Y, Buchanan R, Hall S, Seeman E. Polymorphism of the vitamin D receptor gene and corticosteroid-related osteoporosis. *Osteoporos Int* 1999;9(2):134-8.
- Hopper JL, Green RM, Nowson CA, Young D, Sherwin AJ, Kaymakci B, Larkins RG, Wark JD. Genetic, common environment, and individual specific components of variance for bone mineral density in 10- to 26-year-old females: A twin study. *Am J Epidemiol* 1998;147(1):17-29.
- Hosoi T, Miyao M, Inoue S, Hoshino S, Shiraki M, Orimo H, Ouchi Y. Association study of parathyroid hormone gene polymorphism and bone mineral density in Japanese postmenopausal women. *Calcif Tissue Int* 1999 Mar;64(3):205-8.
- Houston LA, Grant SF, Reid DM, Ralston SH. Vitamin D receptor polymorphism, bone mineral density, and osteoporotic vertebral fracture: studies in a UK population. *Bone* 1996 Mar;18(3):249-52.
- Hustmyer FG, Liu G, Johnston CC, Christian J, Peacock M. Polymorphism at an Sp1 binding site of COL1A1 and bone mineral density in premenopausal female twins and elderly fracture patients. *Osteoporos Int* 1999;9(4):346-50.
- Johnson ML, Gong G, Kimberling W, Recker SM, Kimmel DB, Recker RB. Linkage of a gene causing high bone mass to human chromosome 11 (11q12-13). *Am J Hum Genet* 1997 Jun;60(6):1326-32. Comment in: *Am J Hum Genet* 1997 Jun;60(6):1309-11.
- Jorgensen HL, Scholler J, Sand JC, Bjuring M, Hassager C, Christiansen C. Relation of common allelic variation at vitamin D receptor locus to bone mineral density and postmenopausal bone loss: cross sectional and longitudinal population study. *BMJ* 1996 Sep 7;313(7057):586-90.
- Jouanny P, Guillemin F, Kuntz C, Jeandel C, Pourel J. Environmental and genetic factors affecting bone mass: Similarity of bone density among members of healthy families. *Arthritis Rheum* 1995;38(1):61-7.
- Kannus P, Palvanen M, Kaprio J, Parkkari J, Koskenvuo M. Genetic factors and osteoporotic fractures in elderly people: Prospective 25 year follow up of a nationwide cohort of elderly Finnish twins. *Br Med J* 1999;319(7221):1334-7.

- Keen RW, Hart DJ, Arden NK, Doyle DV, Spector TD. Family history of appendicular fracture and risk of osteoporosis: A population-based study. *Osteoporos Int* 1999;10(2):161-6.
- Keen RW, Hart DJ, Lanchbury JS, Spector TD. Association of early osteoarthritis of the knee with a Taq I polymorphism of the vitamin D receptor gene. *Arthritis Rheum* 1997 Aug;40(8):1444 -9.
- Keen RW, Woodford-Richens KL, Grant SF, Ralston SH, Lanchbury JS, Spector TD. Association of polymorphism at the type I collagen (COL1A1) locus with reduced bone mineral density, increased fracture risk, and increased collagen turnover. *Arthritis Rheum* 1999 Feb;42(2):285-90.
- Keen RW, Woodford-Richens KL, Lanchbury JS, Spector TD. Allelic variation at the interleukin -1 receptor antagonist gene is associated with early postmenopausal bone loss at the spine. *Bone* 1998 Oct;23(4):367-71.
- Kiel DP, Myers RH, Cupples LA, Kong XF, Zhu XH, Ordovas J, Schaefer EJ, Felson DT, Rush D, Wilson PW, Eisman JA, Holick MF. The BsmI vitamin D receptor restriction fragment length polymorphism (bb) influences the effect of calcium intake on bone mineral density. *J Bone Miner Res* 1997;12(7):1049-57.
- Kikuchi R, Uemura T, Gorai I, Ohno S, Minaguchi H. Early and late postmenopausal bone loss is associated with BsmI vitamin D receptor gene polymorphism in Japanese women. *Calcif Tissue Int* 1999 Feb;64(2):102-6.
- Kobayashi S, Inoue S, Hosoi T, Ouchi Y, Shiraki M, Orimo H. Association of bone mineral density with polymorphism of the estrogen receptor gene. *J Bone Miner Res* 1996 Mar;11(3):306-11.
- Kobayashi T, Sugimoto T, Kobayashi A, Chihara K. Vitamin D receptor genotype is associated with cortical bone loss in Japanese patients with primary hyperparathyroidism. *Endocr J* 1998 Feb;45(1):123 -5.
- Koller DL, Rodriguez LA, Christian JC, Slemenda CW, Econo MJ, Hui SL, Morin P, Conneally PM, Joslyn G, Curran ME, Peacock M, Johnston CC, Foroud T. Linkage of a QTL contributing to normal variation in bone mineral density to chromosome 11q12-13. *J Bone Miner Res* 1998 Dec;13(12):1903-8.
- Krall EA, Dawson-Hughes B. Soft tissue body composition: familial resemblance and independent influences on bone mineral density. *J Bone Miner Res* 1995 Dec;10(12):1944-50.
- Krall EA, Parry P, Lichter JB, Dawson-Hughes B. Vitamin D receptor alleles and rates of bone loss: influences of years since menopause and calcium intake. *J Bone Miner Res* 1995 Jun;10(6):978 -84.
- Kung AW, Yeung SS, Lau KS. Vitamin D receptor gene polymorphisms and peak bone mass in southern Chinese women. *Bone* 1998 Apr;22(4):389 -93.
- Kurabayashi T, Tomita M, Matsushita H, Yahata T, Honda A, Takakuwa K, Tanaka K. Association of vitamin D and estrogen receptor gene polymorphism with the effect of hormone replacement therapy on bone mineral density in Japanese women. *Am J Obstet Gynecol* 1999 May;180(5):1115-20.
- Langdahl BL, Knudsen JY, Jensen HK, Gregersen N, Eriksen EF. A sequence variation: 713 -8delC in the transforming growth factor -beta 1 gene has higher prevalence in osteoporotic women than in normal women and is associated with very low bone mass in osteoporotic women and increased bone turnover in both osteoporotic and normal women. *Bone* 1997 Mar;20(3):289-94.
- Langdahl BL, Ralston SH, Grant SF, Eriksen EF. An Sp1 binding site polymorphism in the COLIA1 gene predicts osteoporotic fractures in both men and women. *J Bone Miner Res* 1998 Sep;13(9):1384-9.
- Liden M, Wilen B, Ljunghall S, Melhus H. Polymorphism at the Sp 1 binding site in the collagen type I alpha 1 gene does not predict bone mineral density in postmenopausal women in sweden. *Calcif Tissue Int* 1998 Oct;63(4):293-5.
- Lim SK, Park YS, Park JM, Song YD, Lee EJ, Kim KR, Lee HC, Huh KB. Lack of association between vitamin D receptor genotypes and osteoporosis in Koreans. *J Clin Endocrinol Metab* 1995 Dec;80(12):3677-81. Comment in: *J Clin Endocrinol Metab* 1996 Nov;81(11):4179-81.
- Looney JE, Yoon HK, Fischer M, Farley SM, Farley JR, Wergedal JE, Baylink DJ. Lack of a high prevalence of the BB vitamin D receptor genotype in severely osteoporotic women. *J Clin Endocrinol Metab* 1995 Jul;80(7):2158-62.
- Lucotte G, Mercier G, Burckel A. The vitamin D receptor FokI start codon polymorphism and bone mineral density in osteoporotic postmenopausal French women. *Clin Genet* 1999 Sep;56(3):221 -4.
- Mangino M, Torrente I, De Luca A, Sanchez O, Dallapiccola B, Novelli G. A single -nucleotide polymorphism in the human bone morphogenetic protein-4 (BMP 4) gene. *J Hum Genet* 1999;44(1):76-7.

- Marc J, Prezelj J, Komel R, Kocjancic A. VDR genotype and response to etidronate therapy in late postmenopausal women. *Osteoporos Int* 1999;10(4):303-6.
- Masi L, Becherini L, Colli E, Gennari L, Mansani R, Falchetti A, Becorpi AM, Cepollaro C, Gonnelli S, Tanini A, Brandi ML. Polymorphisms of the calcitonin receptor gene are associated with bone mineral density in postmenopausal Italian women. *Biochem Biophys Res Commun* 1998 Jul 9;248(1):190-5.
- Masi L, Becherini L, Gennari L, Colli E, Mansani R, Falchetti A, Cepollaro C, Gonnelli S, Tanini A, Brandi ML. Allelic variants of human calcitonin receptor: Distribution and association with bone mass in postmenopausal Italian women. *Biochem Biophys Res Commun* 1998 Apr 17;245(2):622-6.
- Miyao M, Hosoi T, Inoue S, Hoshino S, Shiraki M, Orimo H, Ouchi Y. Polymorphism of insulin-like growth factor I gene and bone mineral density. *Calcif Tissue Int* 1998 Oct;63(4):306-11.
- Nakajima T, Ota N, Shirai Y, Hata A, Yoshida H, Suzuki T, Hosoi T, Orimo H, Emi M. Ethnic difference in contribution of Sp1 site variation of COLIA1 gene in genetic predisposition to osteoporosis. *Calcif Tissue Int* 1999;65(5):352-3.
- Nakamura T. The importance of genetic and nutritional factors in responses to vitamin D and its analogs in osteoporotic patients. *Calcif Tissue Int* 1997 Jan;60(1):119-23.
- Nguyen TV, Howard GM, Kelly PJ, Eisman JA. Bone mass, lean mass, and fat mass: same genes or same environments? *Am J Epidemiol* 1998 Jan 1;147(1):3-16. Comment in: *Am J Epidemiol* 1998 Jan 1;147(1):1-2.
- Niu T, Chen C, Cordell H, Yang J, Wang B, Wang Z, Fang Z, Schork NJ, Rosen CJ, Xu X. A genome-wide scan for loci linked to forearm bone mineral density. *Hum Genet* 1999 Mar;104(3):226-33.
- Ogawa S, Urano T, Hosoi T, Miyao M, Hoshino S, Fujita M, Shiraki M, Orimo H, Ouchi Y, Inoue S. Association of bone mineral density with a polymorphism of the peroxisome proliferator-activated receptor gamma gene: PPARgamma expression in osteoblasts. *Biochem Biophys Res Commun* 1999;260(1):122-6.
- Papiha SS, Allcroft LC, Kanan RM, Francis RM, Datta HK. Vitamin D binding protein gene in male osteoporosis: Association of plasma DBP and bone mineral density with (TAAA)(n)-Alu polymorphism in DBP. *Calcif Tissue Int* 1999;65(4):262-6.
- Ralston SH. Do genetic markers aid in risk assessment? *Osteoporos Int* 1998;8 Suppl 1:S37-42.
- Ramalho AC, Lazaretti-Castro M, Hauache O, Kasamatsu T, Brandao C, Reis AF, Takata E, Cafalli F, Tavares F, Gimeno SG, Vieira JG. Fractures of the proximal femur: correlation with vitamin D receptor gene polymorphism. *Braz J Med Biol Res* 1998 Jul;31(7):921-7.
- Raymond MH, Schutte BC, Torner JC, Burns TL, Willing MC. Osteocalcin: genetic and physical mapping of the human gene BGLAP and its potential role in postmenopausal osteoporosis. *Genomics* 1999 Sep 1;60(2):210-7.
- Riggs BL, Nguyen TV, Melton LJ 3rd, Morrison NA, O'Fallon WM, Kelly PJ, Egan KS, Sambrook PN, Muhs JM, Eisman JA. The contribution of vitamin D receptor gene alleles to the determination of bone mineral density in normal and osteoporotic women. *J Bone Miner Res* 1995 Jun;10(6):991-6.
- Rosen CJ, Kurland ES, Vereault D, Adler RA, Rackoff PJ, Craig WY, Witte S, Rogers J, Bilezikian JP. Association between serum insulin growth factor-I (IGF-I) and a simple sequence repeat in IGF-I gene: implications for genetic studies of bone mineral density. *J Clin Endocrinol Metab* 1998 Jul;83(7):2286-90.
- Rubin LA, Hawker GA, Peltekova VD, Fielding LJ, Ridout R, Cole DE. Determinants of peak bone mass: clinical and genetic analyses in a young female Canadian cohort. *J Bone Miner Res* 1999 Apr;14(4):633-43.
- Sainz J, Van Tornout JM, Sayre J, Kaufman F, Gilsanz V. Association of collagen type 1 alpha gene polymorphism with bone density in early childhood. *J Clin Endocrinol Metab* 1999;84(3):853-5.
- Salamone LM, Ferrell R, Black DM, Palermo L, Epstein RS, Petro N, Steadman N, Kuller LH, Cauley JA. The association between vitamin D receptor gene polymorphisms and bone mineral density at the spine, hip and whole-body in premenopausal women. *Osteoporos Int* 1996;6(1):63-8. Published erratum appears in *Osteoporos Int* 1996;6(3):187-8.
- Salamone LM, Glynn NW, Black DM, Ferrell RE, Palermo L, Epstein RS, Kuller LH, Cauley JA. Determinants of premenopausal bone mineral density: the interplay of genetic and lifestyle factors. *J Bone Miner Res* 1996 Oct;11(10):1557-65.
- Sano M, Inoue S, Hosoi T, Ouchi Y, Emi M, Shiraki M, Orimo H. Association of estrogen receptor dinucleotide repeat polymorphism with osteoporosis.

- Biochem Biophys Res Commun 1995 Dec 5;217(1):378-83.
- Seeman E, Hopper JL. Genetic and environmental components of the population variance in bone density. *Osteoporos Int* 1997;7 Suppl 3:S10-6.
- Seeman E, Hopper JL, Young NR, Formica C, Goss P, Tsalamandris C. Do genetic factors explain associations between muscle strength, lean mass, and bone density? A twin study. *Am J Physiol Endocrinol Metab* 1996 Feb;270(2 Pt 1):E320-7.
- Sigurdsson G, Magnusdottir DN, Kristinsson JO, Kristjansson K, Olafsson I. Association of BsmI vitamin -D receptor gene polymorphism with combined bone mass in spine and proximal femur in Icelandic women. *J Intern Med* 1997 Jun;241(6):501-5.
- Slemenda CW, Turner CH, Peacock M, Christian JC, Sorbel J, Hui SL, Johnston CC. The genetics of proximal femur geometry, distribution of bone mass and bone mineral density. *Osteoporos Int* 1996;6(2):178-82.
- Spector TD, Keen RW, Arden NK, Morrison NA, Major PJ, Nguyen TV, Kelly PJ, Baker JR, Sambrook PN, Lanchbury JS, Eisman JA. Influence of vitamin D receptor genotype on bone mineral density in postmenopausal women: A twin study in Britain. *BMJ* 1995;310(6991):1357-60.
- Taboulet J, Frenkian M, Frendo JL, Feingold N, Jullienne A, de Verneuil MC. Calcitonin receptor polymorphism is associated with a decreased fracture risk in post-menopausal women. *Hum Mol Genet* 1998 Dec;7(13):2129-33.
- Tamai M, Yokouchi M, Komiya S, Mochizuki K, Hidaka S, Narita S, Inoue A, Itoh K. Correlation between vitamin D receptor genotypes and bone mineral density in Japanese patients with osteoporosis. *Calcif Tissue Int* 1997 Mar;60(3):229-32.
- Thiry-Blaise LM, Taquet AN, Reginster JY, Nusgens B, Franchimont P, Lapierre CM. Investigation of the relationship between osteoporosis and the collagenase gene by means of polymorphism of the 5'upstream region of this gene. *Calcif Tissue Int* 1995 Jan;56(1):88-91.
- Tokita A, Matsumoto H, Morrison NA, Tawa T, Miura Y, Fukamauchi K, Mitsuhashi N, Irimoto M, Yamamori S, Miura M, Watanabe T, Kuwabara Y, Yabuta K, Eisman JA. Vitamin D receptor alleles, bone mineral density and turnover in premenopausal Japanese women. *J Bone Miner Res* 1996;11(7):1003-9.
- Tsai KS, Hsu SH, Cheng WC, Chen CK, Chieng PU, Pan WH. Bone mineral density and bone markers in relation to vitamin D receptor gene polymorphisms in Chinese men and women. *Bone* 1996 Nov;19(5):513-8.
- Tsukamoto K, Yoshida H, Watanabe S, Suzuki T, Miyao M, Hosoi T, Orimo H, Emi M. Association of radial bone mineral density with CA repeat polymorphism at the interleukin 6 locus in postmenopausal Japanese women. *J Hum Genet* 1999;44(3):148-51.
- Uitterlinden AG, Burger H, Huang Q, Yue F, McGuigan FE, Grant SF, Hofman A, van Leeuwen JP, Pols HA, Ralston SH. Relation of alleles of the collagen type Ialpha1 gene to bone density and the risk of osteoporotic fractures in postmenopausal women. *N Engl J Med* 1998 Apr 9;338(15):1016-21. Comment in: *N Engl J Med* 1998 Apr 9;338(15):1061-2.
- Vandevyver C, Vanhoof J, Declerck K, Stinissen P, Vandervorst C, Michiels L, Cassiman JJ, Boonen S, Raus J, Geusens P. Lack of association between estrogen receptor genotypes and bone mineral density, fracture history, or muscle strength in elderly women. *J Bone Miner Res* 1999 Sep;14(9):1576-82.
- Vandevyver C, Wylin T, Cassiman JJ, Raus J, Geusens P. Influence of the vitamin D receptor gene alleles on bone mineral density in postmenopausal and osteoporotic women. *J Bone Miner Res* 1997 Feb;12(2):241-7.
- Willing M, Sowers M, Aron D, Clark MK, Burns T, Bunten C, Crutchfield M, D'Agostino D, Jannausch M. Bone mineral density and its change in white women: estrogen and vitamin D receptor genotypes and their interaction. *J Bone Miner Res* 1998 Apr;13(4):695-705.
- Yamada Y, Hosoi T, Makimoto F, Tanaka H, Seino Y, Ikeda K. Transforming growth factor beta-1 gene polymorphism and bone mineral density in Japanese adolescents. *Am J Med* 1999;106(4):477-9.
- Yamada Y, Miyauchi A, Goto J, Takagi Y, Okuzumi H, Kanematsu M, Hase M, Takai H, Harada A, Ikeda K. Association of a polymorphism of the transforming growth factor-beta1 gene with genetic susceptibility to osteoporosis in postmenopausal Japanese women. *J Bone Miner Res* 1998 Oct;13(10):1569-76.
- Yeap SS, Beaumont M, Bennett A, Keating NA, White DA, Hosking DJ. Genetic and environmental factors affecting bone mineral density in large families. *Postgrad Med J* 1998 Jun;74(872):349-54.

Zhao J, Zhou X, Meng X, Liu G, Xing X, Liu H, Xu L. Polymorphisms of vitamin D receptor gene and its association with bone mineral density and osteocalcin in Chinese. *Chin Med J (Engl)* 1997;110(5):366 -71.

Zmuda JM, Cauley JA, Danielson ME, Theobald TM, Ferrell RE. Vitamin D receptor translation initiation codon polymorphism and markers of osteoporotic risk in older African -American women. *Osteoporos Int* 1999;9(3):214-9.

Zmuda JM, Cauley JA, Danielson ME, Wolf RL, Ferrell RE. Vitamin D receptor gene polymorphisms, bone turnover, and rates of bone loss in older African-American women. *J Bone Miner Res* 1997;12(9):1446-52.

Zmuda JM, Cauley JA, Ferrell RE. Recent progress in understanding the genetic susceptibility to osteoporosis. *Genet Epidemiol* 1999;16(4):356-67.

Zmuda JM, Eichner JE, Ferrell RE, Bauer DC, Kuller LH, Cauley JA. Genetic variation in alpha 2HS-glycoprotein is related to calcaneal broadband ultrasound attenuation in older women. *Calcif Tissue Int* 1998 Jul;63(1):5-8.

### Racial / Ethnic / Gender Differences

Aloia JF, Mikhail M, Pagan CD, Arunachalam A, Yeh JK, Flaster E. Biochemical and hormonal variables in black and white women matched for age and weight. *J Lab Clin Med* 1998 Nov;132(5):383 -9. Comment in: *J Lab Clin Med* 1998 Nov;132(5):358 -9.

Aloia JF, Vaswani A, Delerme -Pagan C, Flaster E. Discordance between ultrasound of the calcaneus and bone mineral density in black and white women. *Calcif Tissue Int* 1998;62(6):481 -5.

Aloia JF, Vaswani A, Mikhail M, Badshah M, Flaster E. Cancellous bone of the spine is greater in black women. *Calcif Tissue Int* 1999 Jul;65(1):29 -33.

Aloia JF, Vaswani A, Yeh JK, Flaster E. Risk for osteoporosis in black women. *Calcif Tissue Int* 1996 Dec;59(6):415-23.

Aspray TJ, Prentice A, Cole TJ, Sawo Y, Reeve J, Francis RM. Low bone mineral content is common but osteoporotic fractures are rare in elderly rural Gambian women. *J Bone Miner Res* 1996 Jul;11(7):1019-25.

Bell NH. Bone and mineral metabolism in African Americans. *Trends Endocrinol Metab* 1997;8(6):240-5.

Bell NH, Gordon L, Stevens J, Shary JR. Demonstration that bone mineral density of the lumbar spine, trochanter, and femoral neck is higher in black than in white young men. *Calcif Tissue Int* 1995 Jan;56(1):11-3.

Bohannon AD. Osteoporosis and African American women. *J Womens Health Genet Based Med* 1999;8(5):609-15.

Bohannon AD, Hanlon JT, Landerman R, Gold DT. Association of race and other potential risk factors with nonvertebral fractures in community -dwelling elderly women. *Am J Epidemiol* 1999 Jun 1;149(11):1002-9.

Cauley JA, Danielson ME, Gregg EW, Vogt MT, Zmuda J, Bauer DC. Calcaneal ultrasound attenuation in older African -American and Caucasian-American women. *Osteoporos Int* 1997;7(2):100-4.

Cosman F, Morgan DC, Nieves JW, Shen V, Luckey MM, Dempster DW, Lindsay R, Parisien M. Resistance to bone resorbing effects of PTH in black women. *J Bone Miner Res* 1997;12(6):958-66.

- Daniels ED, Pettifor JM, Schnitzler CM, Russell SW, Patel DN. Ethnic differences in bone density in female South African nurses. *J Bone Miner Res* 1995 Mar;10(3):359-67.
- Davis JW, Novotny R, Wasnich RD, Ross PD. Ethnic, anthropometric, and lifestyle associations with regional variations in peak bone mass. *Calcif Tissue Int* 1999 Aug;65(2):100-5.
- Dawson-Hughes B, Harris SS, Finneran S, Rasmussen HM. Calcium absorption responses to calcitriol in black and white premenopausal women. *J Clin Endocrinol Metab* 1995 Oct;80(10):3068-72.
- Dennison E, Yoshimura N, Hashimoto T, Cooper C. Bone loss in Great Britain and Japan: a comparative longitudinal study. *Bone* 1998 Oct;23(4):379-82.
- Dibba B, Prentice A, Laskey MA, Stirling DM, Cole TJ. An investigation of ethnic differences in bone mineral, hip axis length, calcium metabolism and bone turnover between West African and Caucasian adults living in the United Kingdom. *Ann Hum Biol* 1999 May-Jun;26(3):229-42.
- Ettinger B, Sidney S, Cummings SR, Libanati C, Bilek DD, Tekawa IS, Tolan K, Steiger P. Racial differences in bone density between young adult black and white subjects persist after adjustment for anthropometric, lifestyle, and biochemical differences. *J Clin Endocrinol Metab* 1997 Feb;82(2):429-34.
- From the Centers for Disease Control and Prevention. Osteoporosis among estrogen-deficient women--United States, 1988-1994. *JAMA* 1999 Jan 20;281(3):224-6.
- Gilsanz V, Skaggs DL, Kovanlikaya A, Sayre J, Loro ML, Kaufman F, Korenman SG. Differential effect of race on the axial and appendicular skeletons of children. *J Clin Endocrinol Metab* 1998;83(5):1420-7.
- Han ZH, Palnitkar S, Rao DS, Nelson D, Parfitt AM. Effects of ethnicity and age or menopause on the remodeling and turnover of iliac bone: implications for mechanisms of bone loss. *J Bone Miner Res* 1997 Apr;12(4):498-508. Published erratum appears in *J Bone Miner Res* 1999 Apr;14(4):660.
- Harris SS, Eccleshall TR, Gross C, Dawson-Hughes B, Feldman D. The vitamin D receptor start codon polymorphism (FokI) and bone mineral density in premenopausal American black and white women. *J Bone Miner Res* 1997 Jul;12(7):1043-8.
- Harris SS, Wood MJ, Dawson-Hughes B. Bone mineral density of the total body and forearm in premenopausal black and white women. *Bone* 1995 Apr;16(4 Suppl):311S-315S.
- Ho SC. Body measurements, bone mass, and fractures. Does the East differ from the West? *Clin Orthop* 1996 Feb;(323):75-80.
- Ho SC, Lau EM, Woo J, Sham A, Chan KM, Lee S, Leung PC. The prevalence of osteoporosis in the Hong Kong Chinese female population. *Maturitas* 1999 Aug 16;32(3):171-8.
- Ito M, Lang TF, Jergas M, Ohki M, Takada M, Nakamura T, Hayashi K, Genant HK. Spinal trabecular bone loss and fracture in American and Japanese women. *Calcif Tissue Int* 1997 Aug;61(2):123-8.
- Kao PC, Peng FK. How to reduce the risk factors of osteoporosis in Asia. *Chung Hua I Hsueh Tsa Chih (Taipei)* 1995 Mar;55(3):209-13.
- Khosla S, Melton LJ 3rd, Riggs BL. Osteoporosis: gender differences and similarities. *Lupus* 1999;8(5):393-6.
- Larcos G, Baillon LG. An evaluation of bone mineral density in Australian women of Asian descent. *Australas Radiol* 1998;42(4):341-3.
- Lau EM. The epidemiology, treatment and prevention of osteoporosis in Hong Kong Chinese. *Hong Kong Med J* 1995;1(1):31-7.
- Luckey MM, Wallenstein S, Lapinska R, Meier DE. A prospective study of bone loss in African-American and white women--a clinical research center study. *J Clin Endocrinol Metab* 1996 Aug;81(8):2948-56.
- Maggio D, Pacifici R, Cherubini A, Aisa MC, Santucci C, Cucinotta D, Senin U. Appendicular cortical bone loss after age 65: sex-dependent event? *Calcif Tissue Int* 1995 May;56(5):410-4.
- Mikhail MB, Vaswani AN, Aloia JF. Racial differences in femoral dimensions and their relation to hip fracture. *Osteoporos Int* 1996;6(1):22-4.
- Nelson DA, Jacobsen G, Barondess DA, Parfitt AM. Ethnic differences in regional bone density, hip axis length, and lifestyle variables among healthy black and white men. *J Bone Miner Res* 1995;10(5):782-7.
- Nicholson WK, Brown AF, Gathe J, Grumbach K, Washington AE, Perez-Stable EJ. Hormone replacement therapy for African American women: missed opportunities for effective intervention. *Menopause* 1999 Summer;6(2):147-55.

Perry HM 3rd, Bernard M, Horowitz M, Miller DK, Fleming S, Baker MZ, Flaherty J, Purushothaman R, Hajjar R, Kaiser FE, Patrick P, Morley JE. The effect of aging on bone mineral metabolism and bone mass in Native American women. *J Am Geriatr Soc* 1998 Nov;46(11):1418-22.

Pratt JH, Manatunga AK, Peacock M. A comparison of the urinary excretion of bone resorptive products in white and black children. *J Lab Clin Med* 1996 Jan;127(1):67-70.

Ross PD, He Y, Yates AJ, Coupland C, Ravn P, McClung M, Thompson D, Wasnich RD. Body size accounts for most differences in bone density between Asian and Caucasian women. The EPIC (Early Postmenopausal Interventional Cohort) Study Group. *Calcif Tissue Int* 1996 Nov;59(5):339-43.

Tsai KS, Cheng WC, Sanchez TV, Chen CK, Chieng PU, Yang RS. Bone densitometry of proximal femur in Chinese subjects: gender differences in bone mass and bone areas. *Bone* 1997 Apr;20(4):365-9.

Tsai KS, Pan WH, Hsu SH, Cheng WC, Chen CK, Chieng PU, Yang RS, Twu ST. Sexual differences in bone markers and bone mineral density of normal Chinese. *Calcif Tissue Int* 1996;59(6):454 -60.

Villa ML, Marcus R, Delay RR, Kelsey JL. Factors contributing to skeletal health of postmenopausal Mexican-American women. *J Bone Miner Res* 1995;10(8):1233-42.

Xu L, Lu A, Zhao X, Chen X, Cummings SR. Very low rates of hip fracture in Beijing, People's Republic of China the Beijing Osteoporosis Project. *Am J Epidemiol* 1996 Nov 1;144(9):901-7.

Xu SZ, Huang WM, Ren JY. The new model of age-dependent changes in bone mineral density. *Growth Dev Aging* 1997 Spring;61(1):19-26.

Yoshimura N, Hashimoto T, Morioka S, Sakata K, Kasamatsu T, Cooper C. Determinants of bone loss in a rural Japanese community: the Taiji Study. *Osteoporos Int* 1998;8(6):604-10.

## Risk Factors

Adachi JD, Arlen D, Webber CE, Chettle DR, Beaumont LF, Gordon CL. Is there any association between the presence of bone disease and cumulative exposure to lead? *Calcif Tissue Int* 1998 Nov;63(5):429-32.

Albala C, Yanez M, Devoto E, Sostin C, Zeballos L, Santos JL. Obesity as a protective factor for postmenopausal osteoporosis. *Int J Obes Relat Metab Disord* 1996 Nov;20(11):1027-32.

Alekel DL, Mortillaro E, Hussain EA, West B, Ahmed N, Peterson CT, Werner RK, Arjmandi BH, Kukreja SC. Lifestyle and biologic contributors to proximal femur bone mineral density and hip axis length in two distinct ethnic groups of premenopausal women. *Osteoporos Int* 1999;9(4):327-38.

Allolio B. Risk factors for hip fracture not related to bone mass and their therapeutic implications. *Osteoporos Int* 1999;9 Suppl 2:S9-16.

Aloia JF, Flaster ER. Estimating the risk of fracture in osteopenic patients. *Endocrinologist* 1995;5(6):397-402.

Arden NK, Griffiths GO, Hart DJ, Doyle DV, Spector TD. The association between osteoarthritis and osteoporotic fracture: the Chingford Study. *Br J Rheumatol* 1996 Dec;35(12):1299-304.

Arden NK, Nevitt MC, Lane NE, Gore LR, Hochberg MC, Scott JC, Pressman AR, Cummings SR. Osteoarthritis and risk of falls, rates of bone loss, and osteoporotic fractures. Study of Osteoporotic Fractures Research Group. *Arthritis Rheum* 1999 Jul;42(7):1378-85.

Arnold CM, Bailey DA, Faulkner RA, McKay HA, McCulloch RG. The effect of water fluoridation on the bone mineral density of young women. *Can J Public Health* 1997;88(6):388-91.

Barengolts EI, Berman M, Kukreja SC, Kouznetsova T, Lin C, Chomka EV. Osteoporosis and coronary atherosclerosis in asymptomatic postmenopausal women. *Calcif Tissue Int* 1998 Mar;62(3):209 -13.

Bauer DC, Orwoll ES, Fox KM, Vogt TM, Lane NE, Hochberg MC, Stone K, Nevitt MC. Aspirin and NSAID use in older women: effect on bone mineral density and fracture risk. Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1996 Jan;11(1):29-35.

Bauman WA, Spungen AM, Wang J, Pierson RN Jr, Schwartz E. Continuous loss of bone during chronic

- immobilization: A monozygotic twin study. *Osteoporos Int* 1999;10(2):123-7.
- Beardsworth SA, Kearney CE, Steel SA, Newman J, Purdie DW. Premature greying of the hair is not associated with low bone mineral density. *Osteoporos Int* 1999;10(4):290-4.
- Becker AR, Handick KE, Roberts WE, Garetto LP. Osteoporosis risk factors in female dental patients. A preliminary report. *J Indiana Dent Assoc* 1997 Summer;76(2):15-9; quiz 20.
- Bennell KL, Malcolm SA, Wark JD, Brukner PD. Skeletal effects of menstrual disturbances in athletes. *Scand J Med Sci Sports* 1997 Oct;7(5):261-73.
- Bererhi H, Kolhoff N, Constable A, Nielsen SP. Multiparity and bone mass. *Br J Obstet Gynaecol* 1996;103(8):818-21.
- Bettica P, Bevilacqua M, Vago T, Norbiato G. High prevalence of hypovitaminosis D among free -living postmenopausal women referred to an osteoporosis outpatient clinic in Northern Italy for initial screening. *Osteoporos Int* 1999;9(3):226-9.
- Bidoli E, Schinella D, Franceschi S. Physical activity and bone mineral density in Italian middle -aged women. *Eur J Epidemiol* 1998 Feb;14(2):153-7.
- Blaauw R, Albertse EC, Hough S. Body fat distribution as a risk factor for osteoporosis. *S Afr Med J* 1996 Sep;86(9):1081-4.
- Black DM. Screening and treatment in the elderly to reduce osteoporotic fracture risk. *Br J Obstet Gynaecol* 1996 May;103 Suppl 13:2-7; discussion 7-8.
- Black DM, Arden NK, Palermo L, Pearson J, Cummings SR. Prevalent vertebral deformities predict hip fractures and new vertebral deformities but not wrist fractures. Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1999 May;14(5):821-8.
- Boonen S, Aerssens J, Breemans S, Dequeker J. Fractures of the proximal femur: Implications of age-related decline in muscle function. *J Orthop Rheumatol* 1995;8(3):127-33.
- Boonen S, Lesaffre E, Dequeker J, Aerssens J, Nijs J, Pelemans W, Bouillon R. Relationship between baseline insulin -like growth factor-I (IGF-I) and femoral bone density in women aged over 70 years: potential implications for the prevention of age-related bone loss. *J Am Geriatr Soc* 1996 Nov;44(11):1301-6.
- Boonen S, Nicholson PH, Lowet G, Cheng XG, Verbeke G, Lesaffre E, Aerssens J, Dequeker J. Determinants of age-associated changes in os calcis ultrasonic indices in elderly women: potential involvement of geriatric hyposomatropism in bone fragility. *Age Ageing* 1997 Mar;26(2):139 -46.
- Brot C, Jensen LB, Sorensen OH. Bone mass and risk factors for bone loss in perimenopausal Danish women. *J Intern Med* 1997 Dec;242(6):505-11.
- Browner WS, Pressman AR, Nevitt MC, Cummings SR. Mortality following fractures in older women. The study of osteoporotic fractures. *Arch Intern Med* 1996 Jul 22;156(14):1521-5.
- Burger H, de Laet CE, van Daele PL, Weel AE, Witteman JC, Hofman A, Pols HA. Risk factors for increased bone loss in an elderly population: the Rotterdam Study. *Am J Epidemiol* 1998 May 1;147(9):871-9.
- Burger H, De Laet CED, Weel AEA, Hofman A, Pols HAP. Added value of bone mineral density in hip fracture risk scores. *Bone* 1999;25(3):369-74.
- Burger H, Van Daele PLA, Odding E, Valkenburg HA, Hofman A, Grobbee DE, Schutte HE, Birkenhager JC, Pols HAP. Association of radiographically evident osteoarthritis with higher bone mineral density and increased bone loss with age: The Rotterdam study. *Arthritis Rheum* 1996;39(1):81-6.
- Burman KD, Mazzaferri EL. Thyroid disease and osteoporosis. *Hosp Pract* 1997;32(12):71-3, 78-86.
- Burr DB. Muscle strength, bone mass, and age-related bone loss. *J Bone Miner Res* 1997 Oct;12(10):1547-51.
- Busacchi P, Gnudi S, Ripamonti C, Scagliarini G, Tallarini A, Gentile G, Flamigni C. Effects of breast-feeding on bone structure: A study by ultrasound. *Ital J Gynaecol Obstet* 1995;7(3):115-9.
- Calbet JAL, Moysi JS, Dorado C, Rodriguez LP. Bone mineral content and density in professional tennis players. *Calcif Tissue Int* 1998;62(6):491 -6.
- Cappuccio FP, Meilahn E, Zmuda JM, Cauley JA. High blood pressure and bone-mineral loss in elderly white women: a prospective study. Study of Osteoporotic Fractures Research Group. *Lancet* 1999 Sep 18;354(9183):971-5.
- Caraballo PJ, Gabriel SE, Castro MR, Atkinson EJ, Melton LJ 3rd. Changes in bone density after exposure to oral anticoagulants: a meta-analysis. *Osteoporos Int* 1999;9(5):441-8.

- Caraballo PJ, Heit JA, Atkinson EJ, Silverstein MD, O'Fallon WM, Castro MR, Melton LJ 3rd. Long -term use of oral anticoagulants and the risk of fracture. *Arch Intern Med* 1999 Aug 9-23;159(15):1750-6.
- Carroll J, Testa MA, Erat K, LeBoff MS, Fuleihan G el-H. Modeling fracture risk using bone density, age, and years since menopause. *Am J Prev Med* 1997 Nov-Dec;13(6):447-52.
- Cauley JA, Lucas FL, Kuller LH, Vogt MT, Browner WS, Cummings SR. Bone mineral density and risk of breast cancer in older women: the study of osteoporotic fractures. Study of Osteoporotic Fractures Research Group. *JAMA* 1996 Nov 6;276(17):1404-8. Comment in: *JAMA* 1996 Nov 6;276(17):1430-2 and *JAMA* 1997 May 21;277(19):1515; discussion 1516-7.
- Cauley JA, Murphy PA, Riley TJ, Buhari AM. Effects of fluoridated drinking water on bone mass and fractures: the study of osteoporotic fractures. *J Bone Miner Res* 1995 Jul;10(7):1076-86.
- Chan HHL, Lau EMC, Woo J, Lin F, Sham A, Leung PC. Dietary calcium intake, physical activity and the risk of vertebral fracture in Chinese. *Osteoporos Int* 1996;6(3):228-32.
- Chin K, Evans MC, Cornish J, Cundy T, Reid IR. Differences in hip axis and femoral neck length in premenopausal women of Polynesian, Asian and European origin. *Osteoporos Int* 1997;7(4):344-7.
- Clark P, de la Pena F, Gomez Garcia F, Orozco JA, Tugwell P. Risk factors for osteoporotic hip fractures in Mexicans. *Arch Med Res* 1998 Autumn;29(3):253-7.
- Cohen O, Rais T, Lepkifker E, Vered I. Lithium carbonate therapy is not a risk factor for osteoporosis. *Horm Metab Res* 1998 Sep;30(9):594-7.
- Cooper C. Epidemiology of osteoporosis. *Osteoporos Int* 1999;9 Suppl 2:S2-8.
- Cooper GS, Sandler DP. Long-term effects of reproductive-age menstrual cycle patterns on per i- and postmenopausal fracture risk. *Am J Epidemiol* 1997 May 1;145(9):804-9.
- Corazza GR, Benati G, Di Sario A, Tarozzi C, Strocchi A, Passeri M, Gasbarrini G. Lactose intolerance and bone mass in postmenopausal Italian women. *Br J Nutr* 1995 Mar;73(3):479-87.
- Cornuz J, Feskanich D, Willett WC, Colditz GA. Smoking, smoking cessation, and risk of hip fracture in women. *Am J Med* 1999;106(3):311-4.
- Coupland CA, Cliffe SJ, Bassey EJ, Grainge MJ, Hosking DJ, Chilvers CE. Habitual physical activity and bone mineral density in postmenopausal women in England. *Int J Epidemiol* 1999 Apr;28(2):241 -6.
- Cuddihy MT, Gabriel SE, Crowson CS, O'Fallon WM, Melton LJ 3rd. Forearm fractures as predictors of subsequent osteoporotic fractures. *Osteoporos Int* 1999;9(6):469-75.
- Cuesta A, Revilla M, Villa LF, Hernandez ER, Rico H. Total and regional bone mineral content in Spanish professional ballet dancers. *Calcif Tissue Int* 1996;58(3):150-4.
- Cummings SR. Treatable and untreatable risk factors for hip fracture. *Bone* 1996 Mar;18(3 Suppl):165S-167S.
- Cummings SR, Browner WS, Bauer D, Stone K, Ensrud K, Jamal S, Ettinger B. Endogenous hormones and the risk of hip and vertebral fractures among older women. Study of Osteoporotic Fractures Research Group. *N Engl J Med* 1998 Sep 10;339(11):733-8. Comment in: *N Engl J Med* 1998 Sep 10;339(11):767-8.
- Cummings SR, Nevitt MC, Browner WS, Stone K, Fox KM, Ensrud KE, Cauley J, Black D, Vogt TM. Risk factors for hip fracture in white women. Study of Osteoporotic Fractures Research Group. *N Engl J Med* 1995 Mar 23;332(12):767-73. Comment in: *N Engl J Med* 1995 Mar 23;332(12):814-5.
- Dai LY. The relationship between osteoarthritis and osteoporosis in the spine. *Clin Rheumatol* 1998;17(1):44-6.
- Daniel M, Martin AD. Bone mineral density and adipose tissue distribution in young women: Relationship to smoking status. *Ann Hum Biol* 1995;22(1):29-42.
- Dargent-Molina P. Risk factors and prevention of fractures in the elderly. *Curr Opin Orthop* 1999;10(5):388-92.
- Dargent-Molina P, Schott AM, Hans D, Favier F, Grandjean H, Baudois C, Meunier PJ, Breart G. Separate and combined value of bone mass and gait speed measurements in screening for hip fracture risk: results from the EPIDOS study. *Epidemiologie de l'Osteoporose*. *Osteoporos Int* 1999;9(2):188-92.
- Davis JW, Novotny R, Ross PD, Wasnich RD. Anthropometric, lifestyle and menstrual factors influencing size -adjusted bone mineral content in a multiethnic population of premenopausal women. *J Nutr* 1996 Dec;126(12):2968-76.

- De Rosa G, Testa A, Maussier ML, Calla C, Astazi P, Albanese C. A slightly suppressive dose of L-thyroxine does not affect bone turnover and bone mineral density in pre - and postmenopausal women with nontoxic goitre. *Horm Metab Res* 1995;27(11):503-7.
- Dequeker J. Inverse relationship of interface between osteoporosis and osteoarthritis. *J Rheumatol* 1997 Apr;24(4):795-8.
- Dequeker J, Mokassa L, Aerssens J. Bone density and osteoarthritis. *J Rheumatol Suppl* 1995 Feb;43:98-100.
- Difiori JP. Menstrual dysfunction in athletes: How to identify and treat patients at risk for skeletal injury. *Postgrad Med* 1995;97(3):143-6, 149-50, 155-6.
- Douketis JD, Ginsberg JS, Burrows RF, Duku EK, Webber CE, Brill-Edwards P. The effects of long-term heparin therapy during pregnancy on bone density. A prospective matched cohort study. *Thromb Haemost* 1996 Feb;75(2):254-7.
- Earnshaw SA, Cawte SA, Worley A, Hosking DJ. Colles' fracture of the wrist as an indicator of underlying osteoporosis in postmenopausal women: a prospective study of bone mineral density and bone turnover rate. *Osteoporos Int* 1998;8(1):53-60.
- Earnshaw SA, Hosking DJ. Clinical usefulness of risk factors for osteoporosis. *Ann Rheum Dis* 1996 Jun;55(6):338-9.
- Earnshaw SA, Keating N, Hosking DJ, Chilvers CE, Ravn P, McClung M, Wasnich RD. Tooth counts do not predict bone mineral density in early postmenopausal Caucasian women. EPIC study group. *Int J Epidemiol* 1998 Jun;27(3):479-83.
- Eastell R. Forearm fracture. *Bone* 1996 Mar;18(3 Suppl):203S-207S.
- Eaton-Evans J, McIlrath EM, Jackson WE, McCartney H, Strain JJ. Copper supplementation and the maintenance of bone mineral density in middle-aged women. *J Trace Elem Exp Med* 1996;9(3):87-94.
- Egger P, Duggleby S, Hobbs R, Fall C, Cooper C. Cigarette smoking and bone mineral density in the elderly. *J Epidemiol Community Health* 1996 Feb;50(1):47-50.
- Egol KA, Koval KJ, Kummer F, Frankel VH. Stress fractures of the femoral neck. *Clin Orthop* 1998 Mar;(348):72-8.
- Elliot JR, Gilchrist NL, Wells JE. The effect of socioeconomic status on bone density in a male Caucasian population. *Bone* 1996;18(4):371-3.
- Emslander HC, Sinaki M, Muhs JM, Chao EY, Wahner HW, Bryant SC, Riggs BL, Eastell R. Bone mass and muscle strength in female college athletes (runners and swimmers). *Mayo Clin Proc* 1998 Dec;73(12):1151-60.
- Ensrud KE, Black DM, Harris F, Ettinger B, Cummings SR. Correlates of kyphosis in older women. The Fracture Intervention Trial Research Group. *J Am Geriatr Soc* 1997 Jun;45(6):682-7.
- Ensrud KE, Cauley J, Lipschutz R, Cummings SR. Weight change and fractures in older women. Study of Osteoporotic Fractures Research Group. *Arch Intern Med* 1997 Apr 28;157(8):857-63.
- Ensrud KE, Lipschutz RC, Cauley JA, Seeley D, Nevitt MC, Scott J, Orwoll ES, Genant HK, Cummings SR. Body size and hip fracture risk in older women: a prospective study. Study of Osteoporotic Fractures Research Group. *Am J Med* 1997 Oct;103(4):274-80.
- Ensrud KE, Palermo L, Black DM, Cauley J, Jergas M, Orwoll ES, Nevitt MC, Fox KM, Cummings SR. Hip and calcaneal bone loss increase with advancing age: longitudinal results from the study of osteoporotic fractures. *J Bone Miner Res* 1995 Nov;10(11):1778-87.
- Ettinger B, Pressman A, Sklarin P, Bauer DC, Cauley JA, Cummings SR. Associations between low levels of serum estradiol, bone density, and fractures among elderly women: the study of osteoporotic fractures. *J Clin Endocrinol Metab* 1998 Jul;83(7):2239-43.
- Falch JA, Mowe M, Bohmer T. Low levels of serum ascorbic acid in elderly patients with hip fracture. *Scand J Clin Lab Invest* 1998 May;58(3):225-8.
- Farrerons J, Rodriguez de la Serna A, Guanabens N, Armadans L, Lopez-Navidad A, Yoldi B, Renau A, Vaque J. Sodium fluoride treatment is a major protector against vertebral and nonvertebral fractures when compared with other common treatments of osteoporosis: a longitudinal, observational study. *Calcif Tissue Int* 1997 Mar;60(3):250-4.
- Fazzalari NL, Parkinson IH. Femoral trabecular bone of osteoarthritic and normal subjects in an age and sex matched group. *Osteoarthritis Cartilage* 1998 Nov;6(6):377-82.
- Felson DT, Zhang Y, Hannan MT, Kannel WB, Kiel DP. Alcohol intake and bone mineral density in

- elderly men and women. The Framingham Study. Am J Epidemiol 1995 Sep 1;142(5):485-92.
- Ferrini RL, Barrett-Connor E. Caffeine intake and endogenous sex steroid levels in postmenopausal women: The Rancho Bernardo study. Am J Epidemiol 1996;144(7):642-4.
- Feskanich D, Owusu W, Hunter DJ, Willett W, Ascherio A, Spiegelman D, Morris S, Spate VL, Colditz G. Use of toenail fluoride levels as an indicator for the risk of hip and forearm fractures in women. Epidemiology 1998 Jul;9(4):412-6.
- Feskanich D, Weber P, Willett WC, Rockett H, Booth SL, Colditz GA. Vitamin K intake and hip fractures in women: A prospective study. Am J Clin Nutr 1999;69(1):74-9.
- Feskanich D, Willett WC, Stampfer MJ, Colditz GA. Milk, dietary calcium, and bone fracture in women: A 12-year prospective study. Am J Public Health 1997;87(6):992-7.
- Feskanich D, Willett WC, Stampfer MJ, Colditz GA. A prospective study of thiazide use and fractures in women. Osteoporos Int 1997;7(1):79-84.
- Feskanich D, Willett WC, Stampfer MJ, Colditz GA. Protein consumption and bone fractures in women. Am J Epidemiol 1996 Mar 1;143(5):472-9.
- Fox KM, Cummings SR. Is tubal ligation a risk factor for low bone density and increased risk of fracture? Am J Obstet Gynecol 1995 Jan;172(1 Pt 1):101-5.
- Fox KM, Kimura S, Powell-Threets K, Plato CC. Radial and ulnar cortical thickness of the second metacarpal. J Bone Miner Res 1995 Dec;10(12):1930-4.
- Franceschi S, Schinella D, Bidoli E, Dal Maso L, La Vecchia C, Parazzini F, Zecchin R. The influence of body size, smoking, and diet on bone density in pre- and postmenopausal women. Epidemiology 1996 Jul;7(4):411-4.
- Fujiwara S, Kasagi F, Yamada M, Kodama K. Risk factors for hip fracture in a Japanese cohort. J Bone Miner Res 1997;12(7):998-1004.
- Ganry O, Peng J, Dubreuil A. Is there a reduced risk of breast cancer among women with hip fractures? Eur J Epidemiol 1999 Apr;15(4):313-5.
- George GH, MacGregor AJ, Spector TD. Influence of current and past hormone replacement therapy on bone mineral density: a study of discordant postmenopausal twins. Osteoporos Int 1999;9(2):158-62.
- Ghannam NN, Hammami MM, Bakheet SM, Khan BA. Bone mineral density of the spine and femur in healthy Saudi females: Relation to vitamin D status, pregnancy, and lactation. Calcif Tissue Int 1999;65(1):23-8.
- Gilsanz V, Loro ML, Roe TF, Sayre J, Gilsanz R, Schulz EE. Vertebral size in elderly women with osteoporosis. Mechanical implications and relationship to fractures. J Clin Invest 1995 May;95(5):2332-7.
- Glauber HS, Vollmer WM, Nevitt MC, Ensrud KE, Orwoll ES. Body weight versus body fat distribution, adiposity, and frame size as predictors of bone density. J Clin Endocrinol Metab 1995 Apr;80(4):1118-23.
- Gnudi S, Ripamonti C, Gualtieri G, Malavolta N. Geometry of proximal femur in the prediction of hip fracture in osteoporotic women. Br J Radiol 1999 Aug;72(860):729-33.
- Goemaere S, Zegels B, Toye K, Cremer S, Demuynck R, Daems M, Dobbelaere K, Sedrine WB, Albert A, Dewe W, Kaufman JM, Reginster JY. Limited clinical utility of a self -evaluating risk assessment scale for postmenopausal osteoporosis: Lack of predictive value of lifestyle -related factors. Calcif Tissue Int 1999;65(5):354-8.
- Goto S, Shigeta H, Hyakutake S, Yamagata M. Comparison between menopause-related changes in bone mineral density of the lumbar spine and the proximal femur in Japanese female athletes: A long - term longitudinal study using dual -energy x-ray absorptiometry. Calcif Tissue Int 1996;59(6):461-5.
- Goulding A, Gold E, Walker R, Lewis-Barned N. Women with past history of bone fracture have low spinal bone density before menopause. N Z Med J 1997 Jun 27;110(1046):232-3.
- Goulding A, Taylor RW, Keil D, Gold E, Lewis-Barned NJ, Williams SM. Lactose malabsorption and rate of bone loss in older women. Age Ageing 1999 Mar;28(2):175-80.
- Grainge MJ, Coupland CA, Cliffe SJ, Chilvers CE, Hosking DJ. Cigarette smoking, alcohol and caffeine consumption, and bone mineral density in postmenopausal women. The Nottingham EPIC Study Group. Osteoporos Int 1998;8(4):355-63.
- Grainger DJ, Percival J, Chiano M, Spector TD. The role of serum TGF-beta isoforms as potential markers of osteoporosis. Osteoporos Int 1999;9(5):398-404.
- Grant DJ, McMurdo ME, Mole PA, Paterson CR. Is previous hyperthyroidism still a risk factor for

- osteoporosis in post-menopausal women? *Clin Endocrinol (Oxf)* 1995 Sep;43(3):339-45.
- Greendale GA, Barrett-Connor E, Edelstein S, Ingles S, Haile R. Lifetime leisure exercise and osteoporosis. The Rancho Bernardo study. *Am J Epidemiol* 1995 May 15;141(10):951-9.
- Greendale GA, Barrett-Connor E, Ingles S, Haile R. Late physical and functional effects of osteoporotic fracture in women: the Rancho Bernardo Study. *J Am Geriatr Soc* 1995 Sep;43(9):955-61.
- Greenspan SL, Greenspan FS. The effect of thyroid hormone on skeletal integrity. *Ann Intern Med* 1999 May 4;130(9):750-8.
- Gregg EW, Cauley JA, Seeley DG, Ensrud KE, Bauer DC. Physical activity and osteoporotic fracture risk in older women. *Ann Intern Med* 1998;129(2):81-8.
- Grey AB, Stapleton JP, Evans MC, Reid IR. Accelerated bone loss in post-menopausal women with mild primary hyperparathyroidism. *Clin Endocrinol (Oxf)* 1996 Jun;44(6):697-702.
- Gunnes M, Lehmann EH. Dietary calcium, saturated fat, fiber and vitamin C as predictors of forearm cortical and trabecular bone mineral density in healthy children and adolescents. *Acta Paediatr* 1995;84(4):388-92.
- Gunnes M, Lehmann EH, Mellstrom D, Johnell O. The relationship between anthropometric measurements and fractures in women. *Bone* 1996 Oct;19(4):407-13.
- Gunnes M, Mellstrom D, Johnell O. How well can a previous fracture indicate a new fracture? A questionnaire study of 29,802 postmenopausal women. *Acta Orthop Scand* 1998 Oct;69(5):508-12.
- Hadjidakis D, Kokkinakis E, Sfakianakis M, Raptis SA. The type and time of menopause as decisive factors for bone mass changes. *Eur J Clin Invest* 1999;29(10):877-85.
- Hagiwara S, Tsumura K. Smoking as a risk factor for bone mineral density in the heel of Japanese men. *J Clin Densitom* 1999 Fall;2(3):219-22.
- Halbreich U, Palter S. Accelerated osteoporosis in psychiatric patients: possible pathophysiological processes. *Schizophr Bull* 1996;22(3):447-54.
- Halbreich U, Rojansky N, Palter S, Hreshchyshyn M, Kreeger J, Bakhai Y, Rosan R. Decreased bone mineral density in medicated psychiatric patients. *Psychosom Med* 1995 Sep-Oct;57(5):485-91.
- Hall SL, Greendale GA. The relation of dietary vitamin C intake to bone mineral density: results from the PEPI study. *Calcif Tissue Int* 1998 Sep;63(3):183-9.
- Hangartner TN. Osteoporosis due to disuse. *Phys Med Rehabil Clin North Am* 1995;6(3):579-94.
- Harris SS, Dawson-Hughes B. Weight, body composition, and bone density in postmenopausal women. *Calcif Tissue Int* 1996 Dec;59(6):428-32.
- Hashimoto K, Nozaki M, Inoue Y, Sano M, Nakano H. The chronological change of vertebral bone loss following oophorectomy using dual energy X-ray absorptiometry: the correlation with specific markers of bone metabolism. *Maturitas* 1995 Nov;22(3):185-91.
- Heaney RP, Barger-Lux MJ, Davies KM, Ryan RA, Johnson ML, Gong G. Bone dimensional change with age: interactions of genetic, hormonal, and body size variables. *Osteoporos Int* 1997;7(5):426-31.
- Hekimsoy Z, Biberoglu S, Ozaksoy D, Bahceci O, Guner G. Bone mineral density in patients with endogenous subclinical hyperthyroidism. *Eur J Intern Med* 1997;8(1):29-34.
- Henderson NK, Price RI, Cole JH, Gutteridge DH, Bhagat CI. Bone density in young women is associated with body weight and muscle strength but not dietary intakes. *J Bone Miner Res* 1995;10(3):384-93.
- Henderson NK, White CP, Eisman JA. The roles of exercise and fall risk reduction in the prevention of osteoporosis. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):369-87.
- Herdings RM, Stricker BH, De Boer A, Bakker A, Sturmans F, Stergachis A. Current use of thiazide diuretics and prevention of femur fractures. *J Clin Epidemiol* 1996;49(1):115-9.
- Hernandez ER, Seco C, Revilla M, Villa LF, Cortes J, Rico H. Changes in the cortical and trabecular bone compartments with different types of menopause measured by peripheral quantitative computed tomography. *Maturitas* 1996;23(1):23-9.
- Hesdorffer DC, Melton LJ 3rd, Malkasian GD, Atkinson EJ, Brinton LA, O'Fallon WM. Hip fractures among infertile women. *Am J Epidemiol* 1999 May 1;149(9):810-3.
- Hla MM, Davis JW, Ross PD, Wasnich RD, Yates AJ, Ravn P, Hosking DJ, McClung MR. A multicenter study of the influence of fat and lean mass on bone mineral content: evidence for

- differences in their relative influence at major fracture sites. Early Postmenopausal Intervention Cohort (EPIC) Study Group. *Am J Clin Nutr* 1996 Sep;64(3):354-60.
- Ho SC, Chan SS, Woo J, Leung PC, Lau J. Determinants of bone mass in the Chinese old -old population. *Osteoporos Int* 1995;5(3):161-6.
- Ho SC, Wong E, Chan SG, Lau J, Chan C, Leung PC. Determinants of peak bone mass in chinese women aged 21-40 years. III. Physical activity and bone mineral density. *J Bone Miner Res* 1997;12(8):1262-71.
- Hoidrup S, Gronbaek M, Pedersen AT, Lauritzen JB, Gottschau A, Schroll M. Hormone replacement therapy and hip fracture risk: Effect modification by tobacco smoking, alcohol intake, physical activity, and body mass index. *Am J Epidemiol* 1999;150(10):1085-93.
- Hoidrup S, Gronbaek M, Gottschau A, Lauritzen JB, Schroll M. Alcohol intake, beverage preference, and risk of hip fracture in men and women. Copenhagen Centre for Prospective Population Studies. *Am J Epidemiol* 1999 Jun 1;149(11):993 -1001.
- Holbrook TL, Barrett-Connor E. An 18-year prospective study of dietary calcium and bone mineral density in the hip. *Calcif Tissue Int* 1995;56(5):364 -7.
- Honkanen R, Kroger H, Alhava E, Turpeinen P, Tuppurainen M, Saarikoski S. Lactose intolerance associated with fractures of weight-bearing bones in Finnish women aged 38 -57 years. *Bone (New York)* 1997 Dec;21(6):473-7.
- Hoshino H, Kushida K, Yamazaki K, Takahashi M, Ogihara H, Naitoh K, Toyoyama O, Doi S, Tamai H, Inoue T. Effect of physical activity as a caddie on ultrasound measurements of the Os calcis: a cross-sectional comparison. *J Bone Miner Res* 1996 Mar;11(3):412-8.
- Hui SL, Slemenda CW, Carey MA, Johnston CC Jr. Choosing between predictors of fractures. *J Bone Miner Res* 1995 Nov;10(11):1816-22.
- Hunt AH. The relationship between height change and bone mineral density. *Orthop Nurs* 1996 May-Jun;15(3):57-64; quiz 65-6.
- Ide S, Hirota Y, Hotokebuchi T, Takasugi S, Sugioka Y, Hayabuchi H. Osteoporosis and years since menopause. *Eur J Epidemiol* 1999;15(8):739 -45.
- Iki M, Dohi Y, Nishino H, Kajita E, Kusaka Y, Tsuchida C, Yamamoto K, Ishii Y. Relative contributions of age and menopause to the vertebral bone density of healthy Japanese women. *Bone* 1996 Jun;18(6):617-20.
- Iki M, Kajita E, Dohi Y, Nishino H, Kusaka Y, Tsuchida C, Yamamoto K, Ishii Y. Age, menopause, bone turnover markers and lumbar bone loss in healthy Japanese women. *Maturitas* 1996 Aug;25(1):59-67.
- Ito M, Yamada M, Hayashi K, Ohki M, Uetani M, Nakamura T. Relation of early menarche to high bone mineral density. *Calcif Tissue Int* 1995 Jul;57(1):11-4.
- Jaglal SB, Kreiger N, Darlington GA. Lifetime occupational physical activity and risk of hip fracture in women. *Ann Epidemiol* 1995 Jul;5(4):321 -4.
- Jamal SA, Browner WS, Bauer DC, Cummings SR. Intermittent use of nitrates increases bone mineral density: the study of osteoporotic fractures. *J Bone Miner Res* 1998 Nov;13(11):1755-9.
- Jamal SA, Browner WS, Bauer DC, Cummings SR. Warfarin use and risk for osteoporosis in elderly women. Study of Osteoporotic Fractures Research Group. *Ann Intern Med* 1998 May 15;128(10):829-32.
- Jamal SA, Stone K, Browner WS, Ensrud KE, Cummings SR. Serum fructosamine level and the risk of hip fracture in elderly women: a case -cohort study within the study of osteoporotic fractures. *Am J Med* 1998 Dec;105(6):488-93.
- Jarup L, Alfven T, Persson B, Toss G, Elinder CG. Cadmium may be a risk factor for osteoporosis. *Occup Environ Med* 1998 Jul;55(7):435-9.
- Jassal SK, Barrett-Connor E, Edelstein SL. Low bioavailable testosterone levels predict future height loss in postmenopausal women. *J Bone Miner Res* 1995;10(4):650-4.
- Jie KG, Bots ML, Vermeer C, Witteman JC, Grobbee DE. Vitamin K status and bone mass in women with and without aortic atherosclerosis: a population -based study. *Calcif Tissue Int* 1996 Nov;59(5):352 -6.
- Johansson C, Mellstrom D. An earlier fracture as a risk factor for new fracture and its association with smoking and menopausal age in women. *Maturitas* 1996 May;24(1-2):97-106.
- Johnell O, O'Neill T, Felsenberg D, Kanis J, Cooper C, Silman AJ. Anthropometric measurements and vertebral deformities. European Vertebral Osteoporosis Study (EVOS) Group. *Am J Epidemiol* 1997 Aug 15;146(4):287-93.

- Jones G, Beard T, Parameswaran V, Greenaway T, Von Witt R. A population-based study of the relationship between salt intake, bone resorption and bone mass. *Eur J Clin Nutr* 1997;51(8):561 -5.
- Jones G, Nguyen T, Sambrook PN, Eisman JA. Thiazide diuretics and fractures: can meta -analysis help? *J Bone Miner Res* 1995 Jan;10(1):106 -11.
- Jones G, Nguyen T, Sambrook PN, Lord SR, Kelly PJ, Eisman JA. Osteoarthritis, bone density, postural stability, and osteoporotic fractures: a population based study. *J Rheumatol* 1995 May;22(5):921-5.
- Kado DM, Browner WS, Palermo L, Nevitt MC, Genant HK, Cummings SR. Vertebral fractures and mortality in older women: a prospective study. Study of Osteoporotic Fractures Research Group. *Arch Intern Med* 1999 Jun 14;159(11):1215 -20.
- Kanis JA. The epidemiology and definition of osteoporosis. *Saudi Med J* 1997 Jul-Aug;18(4):338-41.
- Kanis JA. Estrogens, the menopause, and osteoporosis. *Bone* 1996 Nov;19(5 Suppl):185S-190S.
- Kanis JA, McCloskey EV, Powles T, Paterson AH, Ashley S, Spector T. A high incidence of vertebral fracture in women with breast cancer. *Br J Cancer* 1999 Mar;79(7-8):1179-81.
- Kannus P, Leppala J, Lehto M, Sievanen H, Heinonen A, Jarvinen M. A rotator cuff rupture produces permanent osteoporosis in the affected extremity, but not in those with whom shoulder function has returned to normal. *J Bone Miner Res* 1995 Aug;10(8):1263-71.
- Kano K. Relationship between exercise and bone mineral density among over 5,000 women aged 40 years and above. *J Epidemiol* 1998 Mar;8(1):28 -32.
- Karagas MR, Baron JA, Barrett JA, Jacobsen SJ. Patterns of fracture among the United States elderly: Geographic and fluoride effects. *Ann Epidemiol* 1996;6(3):209-16.
- Karlsson KM, Sernbo I, Obrant KJ, Redlund -Johnell I, Johnell O. Femoral neck geometry and radiographic signs of osteoporosis as predictors of hip fracture. *Bone* 1996 Apr;18(4):327-30.
- Karvonen RL, Miller PR, Nelson DA, Granda JL, Fernandez-Madrid F. Periarticular osteoporosis in osteoarthritis of the knee. *J Rheumatol* 1998 Nov;25(11):2187-94.
- Keay N, Fogelman I, Blake G. Bone mineral density in professional female dancers. *Br J Sports Med* 1997;31(2):143-7.
- Keen AD, Drinkwater BL. Irreversible bone loss in former amenorrheic athletes. *Osteoporos Int* 1997;7(4):311-5.
- Kessenich CR, Rosen CJ. Vitamin D and bone status in elderly women. *Orthop Nurs* 1996 May-Jun;15(3):67-71.
- Khan KM, Green RM, Saul A, Bennell KL, Crichton KJ, Hopper JL, Wark JD. Retired elite female ballet dancers and nonathletic controls have similar bone mineral density at weightbearing sites. *J Bone Miner Res* 1996 Oct;11(10):1566-74.
- Khosla S, Atkinson EJ, Melton LJ 3rd, Riggs BL. Effects of age and estrogen status on serum parathyroid hormone levels and biochemical markers of bone turnover in women: a population-based study. *J Clin Endocrinol Metab* 1997 May;82(5):1522 -7.
- Khosla S, Atkinson EJ, Riggs BL, Melton LJ 3rd. Relationship between body composition and bone mass in women. *J Bone Miner Res* 1996 Jun;11(6):857-63.
- Khosla S, Melton LJ 3rd, Atkinson EJ, O'Fallon WM, Klee GG, Riggs BL. Relationship of serum sex steroid levels and bone turnover markers with bone mineral density in men and women: a key role for bioavailable estrogen. *J Clin Endocrinol Metab* 1998 Jul;83(7):2266-74.
- Khosla S, Melton LJ 3rd, Wermers RA, Crowson CS, O'Fallon Wm, Riggs Bl. Primary hyperparathyroidism and the risk of fracture: a population-based study. *J Bone Miner Res* 1999 Oct;14(10):1700-7.
- Kiel DP, Zhang Y, Hannan MT, Anderson JJ, Baron JA, Felson DT. The effect of smoking at different life stages on bone mineral density in elderly men and women. *Osteoporos Int* 1996;6(3):240-8.
- Kim JG, Lee JY. Serum insulin -like growth factor binding protein profiles in postmenopausal women: their correlation with bone mineral density. *Am J Obstet Gynecol* 1996 May;174(5):1511-7.
- Kim SH, Morton DJ, Barrett-Connor EL. Carbonated beverage consumption and bone mineral density among older women: The Rancho Bernardo Study. *Am J Public Health* 1997;87(2):276 -9.
- Kimble RB. Alcohol, cytokines, and estrogen in the control of bone remodeling. *Alcohol Clin Exp Res* 1997 May;21(3):385-91.

- Kinoshita T, Ebara S, Kamimura M, Tateiwa Y, Itoh H, Yuzawa Y, Takahashi J, Takaoka K. Nontraumatic lumbar vertebral compression fracture as a risk factor for femoral neck fractures in involutional osteoporotic patients. *J Bone Miner Metab* 1999;17(3):201-5.
- Kinyamu HK, Gallagher JC, Balhorn KE, Petranick KM, Rafferty KA. Serum vitamin D metabolites and calcium absorption in normal young and elderly free-living women and in women living in nursing homes. *Am J Clin Nutr* 1997;65(3):790-7.
- Kirchner EM, Lewis RD, O'Connor PJ. Bone mineral density and dietary intake of female college gymnasts. *Med Sci Sports Exerc* 1995;27(4):543-9.
- Kirkwood RN, Culham EG, Costigan P. Hip moments during level walking, stair climbing, and exercise in individuals aged 55 years or older. *Phys Ther* 1999;79(4):360-70.
- Klein RF, Carlos AS. Inhibition of osteoblastic cell proliferation and ornithine decarboxylase activity by ethanol. *Endocrinology* 1995;136(8):3406-11.
- Kocijancic M. 13-Cis-retinoic acid and bone density. *Int J Dermatol* 1995;34(10):733-4.
- Kohlmeier M, Saupe J, Schaefer K, Asmus G. Bone fracture history and prospective bone fracture risk of hemodialysis patients are related to apolipoprotein E genotype. *Calcif Tissue Int* 1998;62(3):278-81.
- Kontulainen S, Kannus P, Haapasalo H, Heinonen A, Sievanen H, Oja P, Vuori I. Changes in bone mineral content with decreased training in competitive young adult tennis players and controls: A prospective 4 -yr follow-up. *Med Sci Sports Exerc* 1999;31(5):646-52.
- Krall EA, Dawson-Hughes B. Smoking increases bone loss and decreases intestinal calcium absorption. *J Bone Miner Res* 1999 Feb;14(2):215-20.
- Krebs NF, Reidinger CJ, Robertson AD, Brenner M. Bone mineral density changes during lactation: Maternal, dietary, and biochemical correlates. *Am J Clin Nutr* 1997;65(6):1738-46.
- Kudlacek S, Pietschmann F, Bernecker P, Resch H, Willvonseder R. The impact of a senior dancing program on spinal and peripheral bone mass. *Am J Phys Med Rehabil* 1997 Nov-Dec;76(6):477-81.
- Kuller LH, Cauley JA, Lucas L, Cummings S, Browner WS. Sex steroid hormones, bone mineral density, and risk of breast cancer. *Environ Health Perspect* 1997;105 Suppl 3:593-9.
- Landin-Wilhelmsen K, Wilhelmsen L, Bengtsson BA. Postmenopausal osteoporosis is more related to hormonal aberrations than to lifestyle factors. *Clin Endocrinol* 1999;51(4):387-94.
- Landin-Wilhelmsen K, Wilhelmsen L, Lappas G, Rosen T, Lindstedt G, Lundberg PA, Wilske J, Bengtsson BA. Serum intact parathyroid hormone in a random population sample of men and women: relationship to anthropometry, life-style factors, blood pressure, and vitamin D. *Calcif Tissue Int* 1995 Feb;56(2):104-8.
- Lane NE, Bauer DC, Nevitt MC, Pressman AR, Cummings SR. Aspirin and nonsteroidal antiinflammatory drug use in elderly women: effects on a marker of bone resorption. The Study of Osteoporotic Fractures Research Group. *J Rheumatol* 1997 Jun;24(6):1132-6.
- Langdahl BL, Loft AG, Moller N, Weeke J, Eriksen EF, Mosekilde L, Charles P. Is skeletal responsiveness to thyroid hormone altered in primary osteoporosis or following estrogen replacement therapy? *J Bone Miner Res* 1997 Jan;12(1):78-88.
- Langlois JA, Rosen CJ, Visser M, Hannan MT, Harris T, Wilson PW, Kiel DP. Association between insulin-like growth factor I and bone mineral density in older women and men: the Framingham Heart Study. *J Clin Endocrinol Metab* 1998 Dec;83(12):4257-62. Comment in: *J Clin Endocrinol Metab* 1999 May;84(5):1760-1.
- Larcos G. Hysterectomy with ovarian conservation: Effect on bone mineral density. *Aust New Zealand J Obstet Gynaecol* 1998;38(4):452-4.
- Larcos G. Predicting clinical discordance of bone mineral density. *Mayo Clin Proc* 1998 Sep;73(9):824-8.
- Lauder TD, Williams MV, Campbell CS, Davis G, Sherman R, Pulos E. The female athlete triad: prevalence in military women. *Mil Med* 1999 Sep;164(9):630-5.
- Law MR, Cheng R, Hackshaw AK, Allaway S, Hale AK. Cigarette smoking, sex hormones and bone density in women. *Eur J Epidemiol* 1997;13(5):553-8.
- Leachman SA, Insogna KL, Katz L, Ellison A, Milstone LM. Bone densities in patients receiving isotretinoin for cystic acne. *Arch Dermatol* 1999;135(8):961-5.
- LeBoff MS, Kohlmeier L, Hurwitz S, Franklin J, Wright J, Glowacki J. Occult vitamin D deficiency in postmenopausal US women with acute hip fracture. *JAMA* 1999 Apr 28;281(16):1505-11.

- Lee EJ, Long KA, Risser WL, Poindexter HB, Gibbons WE, Goldzieher J. Variations in bone status of contralateral and regional sites in young athletic women. *Med Sci Sports Exerc* 1995;27(10):1354-61.
- Lehmann R, Wapniarz M, Hofmann B, Pieper B, Haubitz I, Allolio B. Drinking water fluoridation: Bone mineral density and hip fracture incidence. *Bone* 1998;22(3):273-8.
- Leppala J, Kannus P, Natri A, Pasanen M, Sievanen H, Vuori I, Jarvinen M. Effect of anterior cruciate ligament injury of the knee on bone mineral density of the spine and affected lower extremity: A prospective one-year follow-up study. *Calcif Tissue Int* 1999;64(4):357-63.
- Leppala J, Kannus P, Niemi S, Sievanen H, Vuori I, Jarvinen M. An early-life femoral shaft fracture and bone mineral density at adulthood. *Osteoporos Int* 1999;10(4):337-42.
- Li D, Duan R, Wang S, He G, Li P, Nie Z, Wen T. Epidemiological and radiological study of skeletal fluorosis in Minzhu Town, Longli County, Guizhou Province, China. *Fluoride* 1999;32(2):55-9.
- Limpaphayom K, Panyakhamlerd K, Taechakraichana N, Kukulprasong A, Chotnopparatpattara P, Chaikittisilpa S. The predictive value of skin thickness in the diagnosis of osteopenia. *J Med Assoc Thai* 1999 Apr;82(4):347-51.
- Liu G, Peacock M. Age-related changes in serum undercarboxylated osteocalcin and its relationships with bone density, bone quality, and hip fracture. *Calcif Tissue Int* 1998 Apr;62(4):286-9.
- Lucas FL, Cauley JA, Stone RA, Cummings SR, Vogt MT, Weissfeld JL, Kuller LH. Bone mineral density and risk of breast cancer: differences by family history of breast cancer. Study of Osteoporotic Fractures Research Group. *Am J Epidemiol* 1998 Jul 1;148(1):22-9.
- Luisetto G, Zangari M, Bottega F, Peccolo F, Galuppo P, Nardi A, Ziliotto D. Different rates of forearm bone loss in healthy women with early or late menopause. *Osteoporos Int* 1995 Jan;5(1):54-62.
- Lunde AV, Barrett-Connor E, Morton DJ. Serum albumin and bone mineral density in healthy older men and women: the Rancho Bernardo Study. *Osteoporos Int* 1998;8(6):547-51.
- Lunt M, Felsenberg D, Reeve J, Benevolenskaya L, Cannata J, Dequeker J, Dodenhof C, Falch JA, Masaryk P, Pols HA, Poor G, Reid DM, Scheidt-Nave C, Weber K, Varlow J, Kanis JA, O'Neill TW, Silman AJ. Bone density variation and its effects on risk of vertebral deformity in men and women studied in thirteen European centers: the EVOS Study. *J Bone Miner Res* 1997 Nov;12(11):1883-94.
- Lynn SG, Sinaki M, Westerlind KC. Balance characteristics of persons with osteoporosis. *Arch Phys Med Rehabil* 1997 Mar;78(3):273-7.
- MacDougall J, Davies MC, Overton CE, Gulekli B, Hall M, Bounds W, Jacobs HS, Guillebaud JG. Bone density in a population of long term oral contraceptive pill users does not differ from that in menstruating women. *Br J Fam Plann* 1999;25(3):96-100.
- Madsen KL, Adams WC, Van Loan MD. Effects of physical activity, body weight and composition, and muscular strength on bone density in young women. *Med Sci Sports Exerc* 1998 Jan;30(1):114-20.
- Marcelli C, Favier F, Kotzki PO, Ferrazzi V, Picot MC, Simon L. The relationship between osteoarthritis of the hands, bone mineral density, and osteoporotic fractures in elderly women. *Osteoporos Int* 1995;5(5):382-8.
- Marcocci C, Golia F, Vignali E, Pinchera A. Skeletal integrity in men chronically treated with suppressive doses of L-thyroxine. *J Bone Miner Res* 1997;12(1):72-7.
- Marcus R. Relationship of age-related decreases in muscle mass and strength to skeletal status. *J Gerontol A Biol Sci Med Sci* 1995 Nov;50 Spec No:86-7.
- Margolis DJ, Attie M, Leyden JJ. Effects of isotretinoin on bone mineralization during routine therapy with isotretinoin for acne vulgaris. *Arch Dermatol* 1996;132(7):769-74.
- Margulies JY, Payzer A, Nyska M, Neuwirth MG, Floman Y, Robin GC. The relationship between degenerative changes and osteoporosis in the lumbar spine. *Clin Orthop* 1996 Mar;(324):145-52.
- Mariconda M, Pavia M, Colonna A, Angelillo IF, Marsico O, Sanzo F, Mancuso C, Milano C. Appendicular bone density, biochemical markers of bone turnover and lifestyle factors in female teachers of Southern Italy. *Eur J Epidemiol* 1997 Dec;13(8):909-17.
- Marone MM, Gouveia CH, Lewin S, Wehba S, Malvestiti LF, Bianco AC. Influence of body composition on the bone mass of postmenopausal women. *Rev Paul Med* 1997 Nov-Dec;115(6):1580-8.

- Marshall D, Johnell O, Wedel H. Meta -analysis of how well measures of bone mineral density predict occurrence of osteoporotic fractures. *BMJ* 1996 May 18;312(7041):1254-9. Comment in: *BMJ* 1996 Aug 31;313(7056):561; *BMJ* 1996 Aug 31; 313(7056):561-2 and *ACP J Club* 1996 Sep-Oct;125(2):48.
- Martini G, Valenti R, Giovani S, Nuti R. Age -related changes in body composition of healthy and osteoporotic women. *Maturitas* 1997 May;27(1):25-33.
- Masaryk P, Lunt M, Benevolenskaya L, Cannata J, Dequeker J, Dohenhof C, Falch JA, Felsenberg D, Pols HAP, Poor G, Reid DM, Scheidt-Nave C, Weber K, O'Neill T, Silman AJ, Reeve J. Effects of menstrual history and use of medications on bone mineral density: the EVOS Study. *Calcif Tissue Int* 1998 Oct;63(4):271-6.
- Matkovic V, Ilich JZ, Andon MB, Hsieh LC, Tzagournis MA, Lagger BJ, Goel PK. Urinary calcium, sodium, and bone mass of young females. *Am J Clin Nutr* 1995;62(2):417 -25.
- Matkovic V, Ilich JZ, Skugur M, Badenhop NE, Goel P, Clairmont A, Klisovic D, Nahhas RW, Landoll JD. Leptin is inversely related to age at menarche in human females. *J Clin Endocrinol Metab* 1997;82(10):3239-45.
- Maugars YM, Berthelot JM, Forestier R, Mammar N, Lalande S, Venisse JL, Prost AM. Follow-up of bone mineral density in 27 cases of anorexia nervosa. *Eur J Endocrinol* 1996;135(5):591 -7.
- Maugeri D, Russo MS, Franze C, Motta V, Motta M, Destro G, Speciale S, Santangelo A, Panebianco P, Malaguarnera M. Correlations between C -reactive protein, interleukin -6, tumor necrosis factor-alpha and body mass index during senile osteoporosis. *Arch Gerontol Geriatr* 1998;27(2):159-63.
- Mautalen C, Bagur A, Vega E, Gonzalez D. Body composition in normal and osteoporotic women. *Medicina (B Aires)* 1996;56(1):29 -34.
- Maxim P, Ettinger B, Spitalny GM. Fracture protection provided by long-term estrogen treatment. *Osteoporos Int* 1995 Jan;5(1):23-9.
- May H, Murphy S, Khaw KT. Alcohol consumption and bone mineral density in older men. *Gerontology* 1995;41(3):152-8.
- Mazzuoli GF, Diacinti D, Acca M, Pisani D, Rosso R, D'Erasmo E, Minisola S. Relationship between spine bone mineral density and vertebral body heights. *Calcif Tissue Int* 1998;62(6):486 -90.
- McKnight A, Steele K, Mills K, Gilchrist C, Taggart H. Bone mineral density in relation to medical and lifestyle risk factors for osteoporosis in premenopausal, menopausal and postmenopausal women in general practice. *Br J Gen Pract* 1995 Jun;45(395):317-20.
- McLaren-Howard J, Grant EC, Davies S. Hormone replacement therapy and osteoporosis: Bone enzymes and nutrient imbalances. *J Nutr Environ Med* 1998 Jun;8(2):129-38.
- Melhus H, Michaelsson K, Kindmark A, Bergstrom R, Holmberg L, Mallmin H, Wolk A, Ljunghall S. Excessive dietary intake of vitamin A is associated with reduced bone mineral density and increased risk for hip fracture. *Ann Intern Med* 1998 Nov 15;129(10):770-8.
- Melton LJ 3rd, Atkinson EJ, Cooper C, O'Fallon WM, Riggs BL. Vertebral fractures predict subsequent fractures. *Osteoporos Int* 1999;10(3):214-21.
- Melton LJ 3rd, Crowson CS, Malkasian GD, O'Fallon WM. Fracture risk following bilateral oophorectomy. *J Clin Epidemiol* 1996 Oct;49(10):1111 -5.
- Meyer HE, Falch JA, O'Neill T, Tverdal A, Varlow J. Height and body mass index in Oslo, Norway, compared to other regions of Europe: Do they explain differences in the incidence of hip fracture? The European Vertebral Osteoporosis Study Group. *Bone* 1995;17(4):347-50.
- Meyer HE, Tverdal A, Falch JA. Body height, body mass index, and fatal hip fractures: 16 Years' follow - up of 674,000 Norwegian women and men. *Epidemiology* 1995;6(3):299-305.
- Meyer HE, Tverdal A, Selmer R. Weight variability, weight change and the incidence of hip fracture: A prospective study of 39000 middle-aged Norwegians. *Osteoporos Int* 1998;8(4):373-8.
- Michaelsson K, Bergstrom R, Mallmin H, Holmberg L, Wolk A, Ljunghall S. Screening for osteopenia and osteoporosis: selection by body composition. *Osteoporos Int* 1996;6(2):120-6.
- Minisola S, Pacitti MT, Ombricolo E, Costa G, Scarda A, Palombo E, Rosso R. Bone turnover and its relationship with bone mineral density in pre - and postmenopausal women with or without fractures. *Maturitas* 1998 Jun 17;29(3):265 -70.
- Morton DJ, Barrett-Connor EL, Schneider DL. Nonsteroidal anti-inflammatory drugs and bone mineral density in older women: the Rancho Bernardo study. *J Bone Miner Res* 1998 Dec;13(12):1924-31.

- Mosekilde L, Hermann AP, Beck-Nielsen H, Charles P, Nielsen SP, Sorensen OH. The Danish osteoporosis prevention study (DOPS): Project design and inclusion of 2000 normal perimenopausal women. *Maturitas* 1999 Mar 15;31(3):207-19.
- Mussolino ME, Looker AC, Madans JH, Langlois JA, Orwoll ES. Risk factors for hip fracture in white men: the NHANES I Epidemiologic Follow-up Study. *J Bone Miner Res* 1998 Jun;13(6):918-24.
- Naves Diaz M, O'Neill TW, Silman AJ. The influence of alcohol consumption on the risk of vertebral deformity. European Vertebral Osteoporosis Study Group. *Osteoporos Int* 1997;7(1):65-71.
- Nevitt MC, Ettinger B, Black DM, Stone K, Jamal SA, Ensrud K, Segal M, Genant HK, Cummings SR. The association of radiographically detected vertebral fractures with back pain and function: a prospective study. *Ann Intern Med* 1998 May 15;128(10):793-800.
- Nevitt MC, Lane NE, Scott JC, Hochberg MC, Pressman AR, Genant HK, Cummings SR. Radiographic osteoarthritis of the hip and bone mineral density. The Study of Osteoporotic Fractures Research Group. *Arthritis Rheum* 1995 Jul;38(7):907-16.
- Nevitt MC, Ross PD, Palermo L, Musliner T, Genant HK, Thompson DE. Association of prevalent vertebral fractures, bone density, and alendronate treatment with incident vertebral fractures: Effect of number and spinal location of fractures. *Bone* 1999;25(5):613-9.
- Nguyen TT, Heath H 3rd, Bryant SC, O'Fallon WM, Melton LJ 3rd. Fractures after thyroidectomy in men: a population-based cohort study. *J Bone Miner Res* 1997 Jul;12(7):1092-9.
- Nguyen TV, Jones G, Sambrook PN, White CP, Kelly PJ, Eisman JA. Effects of estrogen exposure and reproductive factors on bone mineral density and osteoporotic fractures. *J Clin Endocrinol Metab* 1995 Sep;80(9):2709-14.
- Nguyen TV, Sambrook PN, Eisman JA. Bone loss, physical activity, and weight change in elderly women: The Dubbo Osteoporosis Epidemiology Study. *J Bone Miner Res* 1998 Sep;13(9):1458-67.
- Nordstrom P, Lorentzon R. Site-specific bone mass differences of the lower extremities in 17 - year-old ice hockey players. *Calcif Tissue Int* 1996;59(6):443-8.
- Nordstrom P, Nordstrom G, Lorentzon R. Correlation of bone density to strength and physical activity in young men with a low or moderate level of physical activity. *Calcif Tissue Int* 1997;60(4):332 -7.
- Nordstrom P, Thorsen K, Nordstrom G, Bergstrom E, Lorentzon R. Bone mass, muscle strength, and different body constitutional parameters in adolescent boys with a low or moderate exercise level. *Bone* 1995 Oct;17(4):351-6.
- O'Neill TW, Silman AJ, Naves Diaz M, Cooper C, Kanis J, Felsenberg D. Influence of hormonal and reproductive factors on the risk of vertebral deformity in European women. European Vertebral Osteoporosis Study Group. *Osteoporos Int* 1997;7(1):72-8.
- Ohta H, Sugimoto I, Masuda A, Komukai S, Suda Y, Makita K, Takamatsu K, Horiguchi F, Nozawa S. Decreased bone mineral density associated with early menopause progresses for at least ten years: cross-sectional comparisons between early and normal menopausal women. *Bone* 1996 Mar;18(3):227-31.
- Okano H, Mizunuma H, Soda M, Kagami I, Miyamoto S, Ohsawa M, Ibuki Y, Shiraki M, Suzuki T, Shibata H. The long-term effect of menopause on postmenopausal bone loss in Japanese women: results from a prospective study. *J Bone Miner Res* 1998 Feb;13(2):303-9. Comment in: *J Bone Miner Res* 1998 Aug;13(8):1350-1.
- Orozco P, Nolla JM. Associations between body morphology and bone mineral density in premenopausal women. *Eur J Epidemiol* 1997 Dec;13(8):919-24.
- Orr-Walker BJ, Evans MC, Ames RW, Clearwater JM, Reid IR. Premature hair graying and bone mineral density. *J Clin Endocrinol Metab* 1997 Nov;82(11):3580-3.
- Ortego-Centeno N, Munoz-Torres M, Jodar E, Hernandez-Quero J, Jurado-Duce A, De La Higuera Torres-Puchol J. Effect of tobacco consumption on bone mineral density in healthy young males. *Calcif Tissue Int* 1997;60(6):496-500.
- Osei-Hyiaman D, Satoshi T, Ueji M, Hideto T, Kano K. Timing of menopause, reproductive years, and bone mineral density: A cross-sectional study of postmenopausal Japanese women. *Am J Epidemiol* 1998;148(11):1055-61.
- Osei-Hyiaman D, Ueji M, Toyokawa S, Takahashi H, Kano K. Influence of grip strength on metacarpal bone mineral density in postmenopausal Japanese women: a cross-sectional study. *Calcif Tissue Int* 1999 Mar;64(3):263-6.

- Papadaki HA, Margioris AN, Miliaki M, Steriopoulos C, Valatas W, Eliopoulos GD. Chronic idiopathic neutropenia of adults is associated with decreased bone mineral density and alterations in bone turnover biochemical markers. *Eur J Haematol* 1999;62(5):311-6.
- Parazzini F, Bidoli E, Franceschi S, Schinella D, Tesio F, La Vecchia C, Zecchin R. Menopause, menstrual and reproductive history, and bone density in northern Italy. *J Epidemiol Community Health* 1996 Oct;50(5):519-23.
- Parazzini F, Tavani A, Ricci E, La Vecchia C. Menstrual and reproductive factors and hip fractures in post menopausal women. *Maturitas* 1996 Jul;24(3):191-6.
- Parra-Cabrera S, Hernandez-Avila M, Tamayo-y-Orozco J, Lopez-Carrillo L, Meneses-Gonzalez F. Exercise and reproductive factors as predictors of bone density among osteoporotic women in Mexico City. *Calcif Tissue Int* 1996 Aug;59(2):89-94.
- Parsons TJ, Prentice A, Smith EA, Cole TJ, Compston JE. Bone mineral mass consolidation in young British adults. *J Bone Miner Res* 1996;11(2):264-74.
- Patton CL, Millard PS, Kessenich CR, Storm D, Kinnicutt E, Rosen CJ. Screening calcaneal ultrasound and risk factors for osteoporosis among lesbians and heterosexual women. *J Womens Health* 1998 Sep;7(7):909-15.
- Peacock M, Turner CH, Liu G, Manatunga AK, Timmerman L, Johnston CC Jr. Better discrimination of hip fracture using bone density, geometry and architecture. *Osteoporos Int* 1995 May;5(3):167-73.
- Peichl P, Griesmacher A, Pointinger P, Marteau R, Hartl W, Gruber W, Broll H. Association between female sex hormones and biochemical markers of bone turnover in peri- and postmenopausal women. *Calcif Tissue Int* 1998;62(5):388-94.
- Perrone G, Galloppi P, Capri O, Anelli G, Borrello M, Zichella L. Lumbar and femoral bone density in perimenopausal women with irregular cycles. *Int J Fertil Menopausal Stud* 1995;40(3):120-5.
- Persson I, Bergkvist L, Lindgren C, Yuen J. Hormone replacement therapy and major risk factors for reproductive cancers, osteoporosis, and cardiovascular diseases: evidence of confounding by exposure characteristics. *J Clin Epidemiol* 1997 May;50(5):611-8.
- Petit MA, Prior JC, Barr SI. Running and ovulation positively change cancellous bone in premenopausal women. *Med Sci Sports Exerc* 1999;31(6):780-7.
- Petitfor JM, Moodley GP, Hough FS, Koch H, Chen T, Lu Z, Holick MF. The effect of season and latitude on in vitro vitamin D formation by sunlight in South Africa. *S Afr Med J* 1996;86(10):1270-2.
- Philip WJ, Martin JC, Richardson JM, Reid DM, Webster J, Douglas AS. Decreased axial and peripheral bone density in patients taking long -term warfarin. *QJM* 1995;88(9):635-40.
- Phipps KR, Orwoll ES, Bevan L. The association between water-borne fluoride and bone mineral density in older adults. *J Dent Res* 1998 Sep;77(9):1739-48.
- Pines A, Katchman H, Villa Y, Mijatovic V, Dotan I, Ayalon Y, Levo D. The effect of various hormonal preparations and calcium supplementation on bone mass in early menopause. Is there a predictive value for the initial bone density and body weight? *J Intern Med* 1999;246(4):357-61.
- Preisinger E, Alacamlioglu Y, Saradeth T, Resch KL, Holzer G, Metka M. Forearm bone density and grip strength in women after menopause, with and without estrogen replacement therapy. *Maturitas* 1995;21(1):57-63.
- Prior JC, Vigna YM, Barr SI, Kennedy S, Schulzer M, Li DK. Ovulatory premenopausal women lose cancellous spinal bone: A five year prospective study. *Bone* 1996;18(3):261-7.
- Puntila E, Kroger H, Lakka T, Honkanen R, Tuppurainen M. Physical activity in adolescence and bone density in peri- and postmenopausal women: a population-based study. *Bone* 1997 Oct;21(4):363-7.
- Rae SA, Wang WJ, Partridge D. Artificial neural networks: a potential role in osteoporosis. *J R Soc Med* 1999 Mar;92(3):119-22. Comment in: *J R Soc Med* 1999 Mar;92(3):108-9.
- Rannevik G, Jeppsson S, Johnell O, Bjerre B, Laurell-Borulf Y, Svanberg L. A longitudinal study of the perimenopausal transition: Altered profiles of steroid and pituitary hormones, SHBG and bone mineral density. *Maturitas* 1995;21(2):103-13.
- Ranstam J, Elffors L, Kanis JA. A mental -functional risk score for prediction of hip fracture. *Age Ageing* 1996 Nov;25(6):439-42.
- Ravn P, Cizza G, Bjarnason NH, Thompson D, Daley M, Wasnich RD, McClung M, Hosking D, Yates AJ, Christiansen C. Low body mass index is an important

risk factor for low bone mass and increased bone loss in early postmenopausal women. Early Postmenopausal Intervention Cohort (EPIC) study group. *J Bone Miner Res* 1999 Sep;14(9):1622-7.

Ravn P, Overgaard K, Spencer EM, Christiansen C. Insulin-like growth factors I and II in healthy women with and without established osteoporosis. *Eur J Endocrinol* 1995 Mar;132(3):313-9.

Ravn P, Rix M, Andreassen H, Clemmesen B, Bidstrup M, Gunnes M. High bone turnover is associated with low bone mass and spinal fracture in postmenopausal women. *Calcif Tissue Int* 1997 Mar;60(3):255-60.

Reed BY, Zerwekh JE, Sakhaei K, Breslau NA, Gottschalk F, Pak CY. Serum IGF 1 is low and correlated with osteoblastic surface in idiopathic osteoporosis. *J Bone Miner Res* 1995 Aug;10(8):1218-24.

Reginster JY, Deroisy R, Collette J, Albert A, Zegels B. Prediction of bone loss rate in healthy postmenopausal women. *Calcif Tissue Int* 1997 Mar;60(3):261-4.

Reginster JY, Deroisy R, Paul I, Hansenne M, Ansseau M. Depressive vulnerability is not an independent risk factor for osteoporosis in postmenopausal women. *Maturitas* 1999;33(2):133-7.

Reginster JY, Deroisy R, Pirenne H, Frederick I, Dewe W, Albert A, Collette J, Zheng SX, Gosset C. High prevalence of low femoral bone mineral density in elderly women living in nursing homes or community-dwelling: a plausible role of increased parathyroid hormone secretion. *Osteoporos Int* 1999;9(2):121-8.

Rencken ML, Chesnut CH 3rd, Drinkwater BL. Bone density at multiple skeletal sites in amenorrheic athletes. *JAMA* 1996 Jul 17;276(3):238-40. Comment in: *JAMA* 1996 Nov 6;276(17):1384-5.

Revilla M, Villa LF, Hernandez ER, Sanchez -Atrio A, Cortes J, Rico H. Influence of weight and gonadal status on total and regional bone mineral content and on weight-bearing and non-weight-bearing bones, measured by dual-energy x-ray absorptiometry. *Maturitas* 1997;28(1):69-74.

Riis BJ, Hansen MA, Jensen AM, Overgaard K, Christiansen C. Low bone mass and fast rate of bone loss at menopause: equal risk factors for future fracture: a 15-year follow-up study. *Bone* 1996 Jul;19(1):9-12.

Robinson RJ, al-Azzawi F, Iqbal SJ, Abrams K, Mayberry JF. The relation of hand skin -fold thickness

to bone mineral density in patients with Crohn's disease. *Eur J Gastroenterol Hepatol* 1997 Oct;9(10):945-9. Comment in: *Eur J Gastroenterol Hepatol* 1997 Oct;9(10):931-3.

Rogmark C, Sernbo I, Johnell O, Nilsson JA. Incidence of hip fractures in Malmo, Sweden, 1992-1995. A trend-break. *Acta Orthop Scand* 1999;70(1):19-22.

Rourke KM, Bowering J, Turkki P, Buckenmeyer PJ, Deavor Thomas F, Keller BA, Sforzo GA. Bone mineral density in weight -bearing and nonweight-bearing female athletes. *Pediatr Exerc Sci* 1998;10(1):28-37.

Ryan AS, Elahi D. Loss of bone mineral density in women athletes during aging. *Calcif Tissue Int* 1998 Oct;63(4):287-92.

Sabo D, Bernd L, Pfeil J, Reiter A. Bone quality in the lumbar spine in high -performance athletes. *Eur Spine J* 1996;5(4):258-63.

Sahota O, Masud T, San P, Hosking DJ. Vitamin D insufficiency increases bone turnover markers and enhances bone loss at the hip in patients with established vertebral osteoporosis. *Clin Endocrinol* 1999;51(2):217-21.

Salamone LM, Cauley JA, Black DM, Simkin -Silverman L, Lang W, Gregg E, Palermo L, Epstein RS, Kuller LH, Wing R. Effect of a lifestyle intervention on bone mineral density in premenopausal women: a randomized trial. *Am J Clin Nutr* 1999 Jul;70(1):97-103.

Salamone LM, Glynn N, Black D, Epstein RS, Palermo L, Meilahn E, Kuller LH, Cauley JA. Body composition and bone mineral density in premenopausal and early perimenopausal women. *J Bone Miner Res* 1995;10(11):1762-8.

Salamone LM, Gregg E, Wolf RL, Epstein RS, Black D, Palermo L, Kuller LH, Cauley JA. Are menopausal symptoms associated with bone mineral density and changes in bone mineral density in premenopausal women? *Maturitas* 1998 Jun 3;29(2):179-87.

Scharla SH, Scheidt-Nave C, Leidig G, Woitge H, Wuester C, Seibel MJ, Ziegler R. Lower serum 25-hydroxyvitamin D is associated with increased bone resorption markers and lower bone density at the proximal femur in normal females: A population-based study. *Exp Clin Endocrinol Diabetes* 1996;104(3):289-92.

- Schlatterer K, Auer DP, Yassouridis A, von Werder K, Stalla GK. Transsexualism and osteoporosis. *Exp Clin Endocrinol Diabetes* 1998;106(4):365 -8.
- Scoutellas V, O'Neill TW, Lunt M, Reeve J, Silman AJ. Does the presence of postmenopausal symptoms influence susceptibility to vertebral deformity? European Vertebral Osteoporosis Study (EVOS) Group. *Maturitas* 1999 Aug 16;32(3):179-87.
- Seeley DG, Cauley JA, Grady D, Browner WS, Nevitt MC, Cummings SR. Is postmenopausal estrogen therapy associated with neuromuscular function or falling in elderly women? Study of Osteoporotic Fractures Research Group. *Arch Intern Med* 1995 Feb 13;155(3):293-9.
- Seeley DG, Kelsey J, Jergas M, Nevitt MC. Predictors of ankle and foot fractures in older women. The Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1996 Sep;11(9):1347-55.
- Shiraki M, Shiraki Y, Aoki C, Hosoi T, Inoue S, Kaneki M, Ouchi Y. Association of bone mineral density with apolipoprotein E phenotype. *J Bone Miner Res* 1997;12(9):1438-45.
- Silman AJ. The patient with fracture: The risk of subsequent fractures. *Am J Med* 1995;98(2A):12S-16S.
- Silman AJ, O'Neill TW, Cooper C, Kanis J, Felsenberg D. Influence of physical activity on vertebral deformity in men and women: Results from the European Vertebral Osteoporosis Study. *J Bone Miner Res* 1997;12(5):813-9.
- Sinaki M, Fitzpatrick LA, Ritchie CK, Montesano A, Wahner HW. Site-specificity of bone mineral density and muscle strength in women: job-related physical activity. *Am J Phys Med Rehabil* 1998 Nov-Dec;77(6):470-6.
- Sinaki M, Itoi E, Rogers JW, Bergstrahl EJ, Wahner HW. Correlation of back extensor strength with thoracic kyphosis and lumbar lordosis in estrogen-deficient women. *Am J Phys Med Rehabil* 1996;75(5):370-4.
- Singer BR, McLauchlan GJ, Robinson CM, Christie J. Epidemiology of fractures in 15,000 adults: the influence of age and gender. *J Bone Joint Surg Br* 1998 Mar;80(2):243-8.
- Singer K, Edmondston S, Day R, Breidahl P, Price R. Prediction of thoracic and lumbar vertebral body compressive strength: Correlations with bone mineral density and vertebral region. *Bone* 1995;17(2):167-74.
- Sinigaglia L, Varenna M, Binelli L, Gallazzi M, Calori G, Ranza R. Effect of lactation on postmenopausal bone mineral density of the lumbar spine. *J Reprod Med Obstet Gynecol* 1996;41(6):439-43.
- Siris E, Miller P, Barrett-Connor E, Abbott T, Sherwood L, Berger M. Design of NORA, the National Osteoporosis Risk Assessment Program: a longitudinal US registry of postmenopausal women. *Osteoporos Int* 1998;8 Suppl 1:S62-9.
- Slemenda C. Prevention of hip fractures: Risk factor modification. *Am J Med* 1997;103(2A):65S -73S.
- Slemenda C, Longcope C, Peacock M, Hui S, Johnston CC. Sex steroids, bone mass, and bone loss. A prospective study of pre-, peri-, and postmenopausal women. *J Clin Invest* 1996 Jan 1;97(1):14-21.
- Sone T, Miyake M, Takeda N, Tomomitsu T, Otsuka N, Fukunaga M. Influence of exercise and degenerative vertebral changes on BMD: a cross-sectional study in Japanese men. *Geronontology* 1996;42 Suppl 1:57-66.
- Stewart A, Black A, Robins SP, Reid DM. Bone density and bone turnover in patients with osteoarthritis and osteoporosis. *J Rheumatol* 1999 Mar;26(3):622-6.
- Stone K, Bauer DC, Black DM, Sklarin P, Ensrud KE, Cummings SR. Hormonal predictors of bone loss in elderly women: a prospective study. The Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1998 Jul;13(7):1167-74.
- Sugimoto T, Nishiyama K, Kurabayashi F, Chihara K. Serum levels of insulin-like growth factor (IGF) I, IGF-binding protein (IGFBP)-2, and IGFBP-3 in osteoporotic patients with and without spinal fractures. *J Bone Miner Res* 1997 Aug;12(8):1272-9.
- Suleiman S, Nelson M. Validation in London of a physical activity questionnaire for use in a study of postmenopausal osteopaenia. *J Epidemiol Community Health* 1997 Aug;51(4):365-72.
- Suzuki N, Yano T, Nakazawa N, Yoshikawa H, Taketani Y. A possible role of estrone produced in adipose tissues in modulating postmenopausal bone density. *Maturitas* 1995 Jun;22(1):9-12.
- Suzuki T, Yoshida H, Hashimoto T, Yoshimura N, Fujiwara S, Fukunaga M, Nakamura T, Yoh K, Inoue T, Hosoi T, Orimo H. Case-control study of risk factors for hip fractures in the Japanese elderly by a Mediterranean Osteoporosis Study (MEDOS) questionnaire. *Bone* 1997;21(5):461-7.

- Symanski E, Hertz-Pannier I. Blood lead levels in relation to menopause, smoking, and pregnancy history. *Am J Epidemiol* 1995 Jun 1;141(11):1047-58.
- Takada H, Washino K, Iwata H. Risk factors for low bone mineral density among females: the effect of lean body mass. *Prev Med* 1997 Sep-Oct;26(5 Pt 1):633-8.
- Takahashi M, Kushida K, Naitou K. The degree of osteoporosis in patients with vertebral fracture and patients with hip fracture: Relationship to incidence of vertebral fracture. *J Bone Miner Metab* 1999;17(3):187-94.
- Tan J, Cubukcu S, Sepici V. Relationship between bone mineral density of the proximal femur and strength of hip muscles in postmenopausal women. *Am J Phys Med Rehabil* 1998;77(6):477-82.
- Tang OS, Tang G, Yip P, Li B, Fan S. Long-term depot-medroxyprogesterone acetate and bone mineral density. *Contraception* 1999;59(1):25-9.
- Tarquini B, Navari N, Perfetto F, Piluso A, Romano S, Tarquini R. Evidence for bone mass and body fat distribution relationship in postmenopausal obese women. *Arch Gerontol Geriatr* 1997;24(1):15-21.
- Tavassoli K, Cavalla P, Porcelli A, Surico N. Biohumoral parameters and bone mineral content in the identification of high risk subjects for postmenopausal osteoporosis. *Panminerva Med* 1999 Jun;41(2):109-13.
- Teegarden D, Proulx WR, Kern M, Sedlock D, Weaver CM, Johnston CC, Lyle RM. Previous physical activity relates to bone mineral measures in young women. *Med Sci Sports Exerc* 1996 Jan;28(1):105-13.
- Terauchi M, Shirakura K, Katayama M, Higuchi H, Takagishi K. The influence of osteoporosis on varus osteoarthritis of the knee. *J Bone Joint Surg Br* 1998 May;80(3):432-6.
- Thiebaud D, Burckhardt P, Costanza M, Sloutskis D, Gilliard D, Quinodoz F, Jacquet AF, Burnand B. Importance of albumin, 25(OH)-vitamin D and IGFBP-3 as risk factors in elderly women and men with hip fracture. *Osteoporos Int* 1997;7(5):457-62.
- Torgerson DJ, Campbell MK, Thomas RE, Reid DM. Prediction of perimenopausal fractures by bone mineral density and other risk factors. *J Bone Miner Res* 1996 Feb;11(2):293-7.
- Touliatos JS, Sebes JI, Hinton A, McCommon D, Karas JG, Palmieri GM. Hypoparathyroidism counteracts risk factors for osteoporosis. *Am J Med Sci* 1995;310(2):56-60.
- Tsuji S, Tsunoda N, Yata H, Katsukawa F, Onishi S, Yamazaki H. Relation between grip strength and radial bone mineral density in young athletes. *Arch Phys Med Rehabil* 1995;76(3):234-8.
- Tuppurainen M, Kroger H, Saarikoski S, Honkanen R, Alhava E. The effect of gynecological risk factors on lumbar and femoral bone mineral density in peri- and postmenopausal women. *Maturitas* 1995 Feb;21(2):137-45.
- Turner LW, Fu Q, Taylor JE, Wang MQ. Osteoporotic fracture among older U.S. women: risk factors quantified. *J Aging Health* 1998 Aug;10(3):372-91.
- Turner LW, Kendrick O, Perry BA. Study classifies low body mass index as risk factor for osteoporotic fracture among older U.S. women. *J Ark Med Soc* 1999 Sep;96(4):138-41.
- Turner LW, Taylor JE, Hunt S. Predictors for osteoporosis diagnosis among postmenopausal women: results from a national survey. *J Women Aging* 1998;10(3):79-96.
- Turner LW, Wang MQ, Fu Q. Risk factors for hip fracture among southern older women. *South Med J* 1998 Jun;91(6):533-40.
- Ulrich CM, Georgiou CC, Gillis DE, Snow CM. Lifetime physical activity is associated with bone mineral density in premenopausal women. *J Womens Health* 1999 Apr;8(3):365-75.
- Ulrich U, Murano R, Skinner MA, Yin H, Chesnut CH 3rd. Women of reproductive age with endometriosis are not osteopenic. *Fertil Steril* 1998 May;69(5):821-5.
- Uusi-Rasi K, Sievanen H, Vuori I, Heinonen A, Kannus P, Pasanen M, Rinne M, Oja P. Long-term recreational gymnastics, estrogen use, and selected risk factors for osteoporotic fractures. *J Bone Miner Res* 1999 Jul;14(7):1231-8.
- Uusi-Rasi K, Sievanen H, Vuori I, Pasanen M, Heinonen A, Oja P. Associations of physical activity and calcium intake with bone mass and size in healthy women at different ages. *J Bone Miner Res* 1998;13(1):133-42.
- Uyama O, Yoshimoto Y, Yamamoto Y, Kawai A. Bone changes and carotid atherosclerosis in postmenopausal women. *Stroke* 1997 Sep;28(9):1730-2.

- Van Dooren-Greebe RJ, Lemmens JA, De Boo T, Hangx NM, Kuijpers AL, Van de Kerkhof PC. Prolonged treatment with oral retinoids in adults: no influence on the frequency and severity of spinal abnormalities. *Br J Dermatol* 1996 Jan;134(1):71 -6. Comment in: *Br J Dermatol* 1996 Dec;135(6):1003.
- van Kesteren P, Lips P, Gooren LJ, Asscheman H, Megens J. Long-term follow-up of bone mineral density and bone metabolism in transsexuals treated with cross-sex hormones. *Clin Endocrinol (Oxf)* 1998;48(3):347-54.
- Varenna M, Binelli L, Zucchi F, Ghiringhelli D, Gallazzi M, Sinigaglia L. Prevalence of osteoporosis by educational level in a cohort of postmenopausal women. *Osteoporos Int* 1999;9(3):236-41.
- Verhaar HJ, Koele JJ, Neijzen T, Dessens JA, Duursma SA. Are arm span measurements useful in the prediction of osteoporosis in postmenopausal women? *Osteoporos Int* 1998;8(2):174-6.
- Versluis RG, Petri H, van de Ven CM, Scholtes AB, Broerse ER, Springer MP, Papapoulos SE. Usefulness of armspan and height comparison in detecting vertebral deformities in women. *Osteoporos Int* 1999;9(2):129-33.
- Vogel JM, Davis JW, Nomura A, Wasnich RD, Ross PD. The effects of smoking on bone mass and the rates of bone loss among elderly Japanese-American men. *J Bone Miner Res* 1997 Sep;12(9):1495-501.
- Vogt MT, Cauley JA, Kuller LH, Nevitt MC. Bone mineral density and blood flow to the lower extremities: the study of osteoporotic fractures. *J Bone Miner Res* 1997 Feb;12(2):283-9.
- Vogt MT, Cauley JA, Scott JC, Kuller LH, Browner WS. Smoking and mortality among older women: The study of osteoporotic fractures. *Arch Intern Med* 1996;156(6):630-6.
- Vogt MT, Rubin D, Valentin RS, Palermo L, Donaldson WF 3rd, Nevitt M, Cauley JA. Lumbar olisthesis and lower back symptoms in elderly white women. The Study of Osteoporotic Fractures. *Spine* 1998 Dec 1;23(23):2640-7.
- Vogt MT, San Valentín R, Forrest KY, Nevitt MC, Cauley JA. Bone mineral density and aortic calcification: the Study of Osteoporotic Fractures. *J Am Geriatr Soc* 1997 Feb;45(2):140-5.
- von der Recke P, Hansen MA, Hassager C. The association between low bone mass at the menopause and cardiovascular mortality. *Am J Med* 1999 Mar;106(3):273-8. Comment in: *Am J Med* 1999 Mar;106(3):374-5.
- Von Muhlen D, Visby Lunde A, Barrett -Connor E, Bettencourt R. Evaluation of the Simple Calculated Osteoporosis Risk Estimation (SCORE) in older Caucasian women: The Rancho Bernardo Study. *Osteoporos Int* 1999;10(1):79-84.
- Ward JA, Lord SR, Williams P, Anstey K, Zivanovic E. Physiologic, health and lifestyle factors associated with femoral neck bone density in older women. *Bone* 1995;16(4 Suppl):373S-8.
- Wasnich RD. A new, standardized approach to fracture risk interpretation. *Hawaii Med J* 1996 Aug;55(8):141-3.
- Watson JB, Lee K, Klein R, Klein BE, Koch DD. Epidemiological evidence for the disruption of ionized calcium homeostasis in the elderly. *J Clin Epidemiol* 1997;50(7):845-9.
- Watson NR, Studd JW, Garnett T, Savvas M, Milligan P. Bone loss after hysterectomy with ovarian conservation. *Obstet Gynecol* 1995;86(1):72-7.
- Weiland SK, Ruckmann A, Keil U, Lewis M, Dennler HJ, Welzel D. Thiazide diuretics and the risk of hip fracture among 70-79 year old women treated for hypertension. *Eur J Public Health* 1997;7(3):335-40.
- Weinstein L, Ullery B, Bourguignon C. A simple system to determine who needs osteoporosis screening. *Obstet Gynecol* 1999;93(5):757-60.
- Wejda B, Hintze G, Katschinski B, Olbricht T, Benker G. Hip fractures and the thyroid: A case-control study. *J Intern Med* 1995;237(3):241-7.
- Weyermann M, Brenner H. Factors affecting bone demineralization and blood lead levels of postmenopausal women: A population-based study from Germany. *Environ Res* 1998 Jan;76(1):19 -25.
- Whitmore SE, Levine MA. Risk factors for reduced skin thickness and bone density: Possible clues regarding pathophysiology, prevention, and treatment. *J Am Acad Dermatol* 1998;38(2 I):248 -55.
- Whooley MA, Kip KE, Cauley JA, Ensrud KE, Nevitt MC, Browner WS. Depression, falls, and risk of fracture in older women. Study of Osteoporotic Fractures Research Group. *Arch Intern Med* 1999 Mar 8;159(5):484-90.
- Wildner M, Clark DE, Casper W, Bergmann KE. An indirect method for the estimation of osteoporotic fractures from injury and fracture profiles. *Soz Praventivmed* 1999;44(2):78-84.

Wittich A, Mautalen CA, Oliveri MB, Bagur A, Somoza F, Rotemberg E. Professional football (soccer) players have a markedly greater skeletal mineral content, density and size than age - and BMI-matched controls. *Calcif Tissue Int* 1998;63(2):112-7.

Yaffe K, Browner W, Cauley J, Launer L, Harris T. Association between bone mineral density and cognitive decline in older women. *J Am Geriatr Soc* 1999 Oct;47(10):1176-82.

Yildiz A, Sahin I, Gol K, Taner Z, Uluturk A, Biberoglu K. Bone loss rate in the lumbar spine: a comparison between natural and surgically induced menopause. *Int J Gynaecol Obstet* 1996 Nov;55(2):153-9.

## Assessment (Diagnosis)

### General

Abbott TA 3rd, Mucha L, Manfredonia D, Schwartz EN, Berger ML. Efficient patient identification strategies for women with osteoporosis. *J Clin Densitom* 1999 Fall;2(3):223 -30.

Abrahamsen B, Hansen TB, Jensen LB, Hermann AP, Eiken P. Site of osteodensitometry in perimenopausal women: correlation and limits of agreement between anatomic regions. *J Bone Miner Res* 1997 Sep;12(9):1471-9.

Acar B, Uslu T, Topuz A, Osma E, Ercal T, Posaci C, Erata Y, Mumcu A. Relation between bone mineral content and clinical, hormonal and biochemical parameters in postmenopausal women. *Arch Gynecol Obstet* 1998;261(3):121-8.

Adachi JD. The correlation of bone mineral density and biochemical markers to fracture risk. *Calcif Tissue Int* 1996;59 Suppl 1:S16-9.

Adam S, Kanis JA. Assessment of involutional bone loss: methodological and conceptual problems. *J Bone Miner Res* 1995 Apr;10(4):511 -7.

Adam S, Zamberlan N, Gatti D, Zanfisi C, Braga V, Broggini M, Rossini M. Computed radiographic absorptiometry and morphometry in the assessment of postmenopausal bone loss. *Osteoporos Int* 1996;6(1):8-13.

Aerssens J, Boonen S, Joly J, Dequeker J. Variations in trabecular bone composition with anatomical site and age: Potential implications for bone quality assessment. *J Endocrinol* 1997;155(3):411 -21.

Ahmed AI, Blake GM, Rymer JM, Fogelman I. Screening for osteopenia and osteoporosis: do the accepted normal ranges lead to overdiagnosis? *Osteoporos Int* 1997;7(5):432-8.

Ahmed AI, Ilic D, Blake GM, Rymer JM, Fogelman I. Review of 3,530 referrals for bone density measurements of spine and femur: evidence that radiographic osteopenia predicts low bone mass. *Radiology* 1998 Jun;207(3):619-24.

Ailinger RL, Harper DC, Lasus HA. Bone up on osteoporosis. Development of the Facts on Osteoporosis Quiz. *Orthop Nurs* 1998 Sep-Oct;17(5):66-73.

Al-Dehaimi AW, Blumsohn A, Eastell R. Serum galactosyl hydroxylysine as a biochemical marker of bone resorption. *Clin Chem* 1999;45(5):676 -81.

- Alenfeld FE, Wuster C, Funck C, Pereira -Lima JF, Fritz T, Meeder PJ, Ziegler R. Ultrasound measurements at the proximal phalanges in healthy women and patients with hip fractures. *Osteoporos Int* 1998;8(5):393-8.
- Alexander SJ. Serial bone mineral density studies in the evaluation and management of osteoporosis. *Bull Rheum Dis* 1997 Aug;46(5):3-7.
- Andresen R, Haidekker MA, Radmer S, Banzer D. Computerized analysis of gray -value profiles in spongy and cortical bone. Clinical experience. *Invest Radiol* 1999 Sep;34(9):572-8.
- Andresen R, Haidekker MA, Radmer S, Banzer D. CT determination of bone mineral density and structural investigations on the axial skeleton for estimating the osteoporosis-related fracture risk by means of a risk score. *Br J Radiol* 1999 Jun;72(858):569-78.
- Andresen R, Radmer S, Banzer D. Bone mineral density and spongiosa architecture in correlation to vertebral body insufficiency fractures. *Acta Radiol* 1998 Sep;39(5):538-42.
- Andresen R, Werner HJ, Schober HC. Contribution of the cortical shell of vertebrae to mechanical behaviour of the lumbar vertebrae with implications for predicting fracture risk. *Br J Radiol* 1998 Jul;71(847):759-65.
- Arnaud CD. Osteoporosis: using 'bone markers' for diagnosis and monitoring. *Geriatrics* 1996 Apr;51(4):24-30.
- Augat P, Fan B, Lane NE, Lang TF, LeHir P, Lu Y, Uffmann M, Genant HK. Assessment of bone mineral at appendicular sites in females with fractures of the proximal femur. *Bone* 1998 Apr;22(4):395 -402.
- Augat P, Fuerst T, Genant HK. Quantitative bone mineral assessment at the forearm: a review. *Osteoporos Int* 1998;8(4):299-310.
- Augat P, Link T, Lang TF, Lin JC, Majumdar S, Genant HK. Anisotropy of the elastic modulus of trabecular bone specimens from different anatomical locations. *Med Eng Phys* 1998;20(2):124-31.
- Augat P, Reeb H, Claes LE. Prediction of fracture load at different skeletal sites by geometric properties of the cortical shell. *J Bone Miner Res* 1996 Sep;11(9):1356-63.
- Bagur A, Vega E, Mautalen C. Discrimination of total body bone mineral density measured by dexa in vertebral osteoporosis. *Calcif Tissue Int* 1995 Apr;56(4):263-7.
- Ballard PA, Purdie DW, Langton CM, Steel SA, Mussurakis S. Prevalence of osteoporosis and related risk factors in UK women in the seventh decade: osteoporosis case finding by clinical referral criteria or predictive model? *Osteoporos Int* 1998;8(6):535-9.
- Balogh A, Bettemuk P. Hormone replacement therapy and prevention of osteoporosis: risk assessment and practical advice. *Eur J Obstet Gynecol Reprod Biol* 1997 Feb;71(2):189-91.
- Baran DT. Quantitative ultrasound: a technique to target women with low bone mass for preventive therapy. *Am J Med* 1995 Feb 27;98(2A):48S -51S.
- Bauer DC, Gluer CC, Cauley JA, Vogt TM, Ensrud KE, Genant HK, Black DM. Broadband ultrasound attenuation predicts fractures strongly and independently of densitometry in older women. A prospective study. Study of Osteoporotic Fractures Research Group. *Arch Intern Med* 1997 Mar 24;157(6):629-34. Comment in: *ACP J Club* 1997 Sep-Oct;127(2):42.
- Bauer DC, Gluer CC, Genant HK, Stone K. Quantitative ultrasound and vertebral fracture in postmenopausal women. Fracture Intervention Trial Research Group. *J Bone Miner Res* 1995 Mar;10(3):353-8.
- Bauer DC, Sklarin PM, Stone KL, Black DM, Nevitt MC, Ensrud KE, Arnaud CD, Genant HK, Garnero P, Delmas PD, Lawaetz H, Cummings SR. Biochemical markers of bone turnover and prediction of hip bone loss in older women: the study of osteoporotic fractures. *J Bone Miner Res* 1999 Aug;14(8):1404-10.
- Beck Jensen JE, Kollerup G, Sorensen HA, Pors Nielsen S, Sorensen OH. A single measurement of biochemical markers of bone turnover has limited utility in the individual person. *Scand J Clin Lab Invest* 1997;57(4):351-9.
- Berard A, Bravo G. Combining studies using effect sizes and quality scores: application to bone loss in postmenopausal women. *J Clin Epidemiol* 1998 Oct;51(10):801-7.
- Berry E, Truscott JG, Stewart SP, Smith MA. Spatial distribution of femoral bone mineral in dual energy X-ray absorptiometry images: a possible technique to improve discrimination between normal and osteoporotic patients. *Br J Radiol* 1996 Aug;69(824):743-50.
- Bettica P, Taylor AK, Talbot J, Moro L, Talamini R, Baylink DJ. Clinical performances of galactosyl hydroxylysine, pyridinoline, and deoxypyridinoline in postmenopausal osteoporosis. *J Clin Endocrinol Metab* 1996 Feb;81(2):542-6.

- Bikle DD. Biochemical markers in the assessment of bone disease. *Am J Med* 1997;103(5):427-36.
- Binkley N. Assessment and management of the patient with osteoporosis. *Top Geriatr Rehabil* 1995;10(4):64-74.
- Bjarnason K, Nilas L, Hassager C, Christiansen C. Dual energy X-ray absorptiometry of the spine--decubitus lateral versus anteroposterior projection in osteoporotic women: comparison to single energy X-ray absorptiometry of the forearm. *Bone* 1995 Feb;16(2):255-60.
- Black DM. Why elderly women should be screened and treated to prevent osteoporosis. *Am J Med* 1995 Feb 27;98(2A):67S-75S.
- Black DM, Palermo L, Nevitt MC, Genant HK, Christensen L, Cummings SR. Defining incident vertebral deformity: a prospective comparison of several approaches. The Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1999 Jan;14(1):90-101.
- Blake GM, Fogelman I. Applications of bone densitometry for osteoporosis. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):267-88.
- Blake GM, Herd RJ, Fogelman I. A longitudinal study of supine lateral DXA of the lumbar spine: a comparison with posteroanterior spine, hip and total-body DXA. *Osteoporos Int* 1996;6(6):462-70.
- Blake GM, Preston NG, Patel R, Herd RJ, Fogelman I. An unexpected change in DXA calibration not detected by routine quality control checks. *Osteoporos Int* 1999;9(2):115-20.
- Blanckaert F, Cortet B, Coquerelle P, Flipo RM, Duquesnoy B, Delcambre B. Ultrasound velocity through the phalanges in normal and osteoporotic patients. *Calcif Tissue Int* 1999 Jan;64(1):28 -33.
- Blanckaert F, Cortet B, Coquerelle P, Flipo RM, Duquesnoy B, Marchandise X, Delcambre B. Contribution of calcaneal ultrasonic assessment to the evaluation of postmenopausal and glucocorticoid-induced osteoporosis. *Rev Rhum Engl Ed* 1997 May;64(5):305-13.
- Blumsohn A, Eastell R. The performance and utility of biochemical markers of bone turnover: do we know enough to use them in clinical practice? *Ann Clin Biochem* 1997 Sep;34(Pt 5):449-59.
- Bollen AM, Kiyak HA, Eyre DR. Longitudinal evaluation of a bone resorption marker in elderly subjects. *Osteoporos Int* 1997;7(6):544-9.
- Bolotin HH. Analytic and quantitative exposition of patient-specific systematic inaccuracies inherent in planar DXA-derived in vivo BMD measurements. *Med Phys* 1998 Feb;25(2):139-51.
- Bonde M, Qvist P, Fledelius C, Riis BJ, Christiansen C. Applications of an enzyme immunoassay for a new marker of bone resorption (CrossLaps): Follow-up on hormone replacement therapy and osteoporosis risk assessment. *J Clin Endocrinol Metab* 1995;80(3):864-8.
- Bonjour JP, Ammann P, Rizzoli R. Importance of preclinical studies in the development of drugs for treatment of osteoporosis: a review related to the 1998 WHO guidelines. *Osteoporos Int* 1999;9(5):379-93.
- Bonnick SL, Nichols DL, Sanborn CF, Lloyd K, Payne SG, Lewis L, Reed CA. Dissimilar spine and femoral Z-scores in premenopausal women. *Calcif Tissue Int* 1997 Oct;61(4):263-5.
- Bonnick SL, Nichols DL, Sanborn CF, Payne SG, Moen SM, Heiss CJ. Right and left proximal femur analyses: Is there a need to do both? *Calcif Tissue Int* 1996;58(5):307-10.
- Boonen S, Cheng X, Nicholson PH, Verbeke G, Broos P, Dequeker J. The accuracy of peripheral skeletal assessment at the radius in estimating femoral bone density as measured by dual-energy X-ray absorptiometry: a comparative study of single-photon absorptiometry and computed tomography. *J Intern Med* 1997 Oct;242(4):323-8. Comment in: *J Intern Med* 1998 Oct;244(4):358 -9.
- Boonen S, Cheng XG, Nijs J, Nicholson PH, Verbeke G, Lesaffre E, Aerssens J, Dequeker J. Factors associated with cortical and trabecular bone loss as quantified by peripheral computed tomography (pQCT) at the ultradistal radius in aging women. *Calcif Tissue Int* 1997 Feb;60(2):164 -70.
- Boonen S, Koutri R, Dequeker J, Aerssens J, Lowet G, Nijs J, Verbeke G, Lesaffre E, Geusens P. Measurement of femoral geometry in type I and type II osteoporosis: differences in hip axis length consistent with heterogeneity in the pathogenesis of osteoporotic fractures. *J Bone Miner Res* 1995 Dec;10(12):1908-12.
- Borderie D, Cherruau B, Dougados M, Ekindjian OG, Roux C. Biochemical markers as predictors of bone mineral density changes after GnRH agonist treatment. *Calcif Tissue Int* 1998 Jan;62(1):21 -5.
- Bouxsein ML, Coan BS, Lee SC. Prediction of the strength of the elderly proximal femur by bone mineral density and quantitative ultrasound

- measurements of the heel and tibia. *Bone* 1999 Jul;25(1):49-54.
- Bouxsein ML, Courtney AC, Hayes WC. Ultrasound and densitometry of the calcaneus correlate with the failure loads of cadaveric femurs. *Calcif Tissue Int* 1995 Feb;56(2):99-103.
- Bouxsein ML, Michaeli DA, Plass DB, Schick DA, Melton ME. Precision and accuracy of computed digital absorptiometry for assessment of bone density of the hand. *Osteoporos Int* 1997;7(5):444-9.
- Bouxsein ML, Radloff SE. Quantitative ultrasound of the calcaneus reflects the mechanical properties of calcaneal trabecular bone. *J Bone Miner Res* 1997 May;12(5):839-46.
- Boyde A, Compston JE, Reeve J, Bell KL, Noble BS, Jones SJ, Loveridge N. Effect of estrogen suppression on the mineralization density of iliac crest biopsies in young women as assessed by backscattered electron imaging. *Bone* 1998 Mar;22(3):241 -50.
- Braga de Castro Machado A, Hannon R, Eastell R. Monitoring alendronate therapy for osteoporosis. *J Bone Miner Res* 1999 Apr;14(4):602-8.
- Bravenboer N, Papapoulos SE, Holzmann P, Hamdy NA, Netelenbos JC, Lips P. Bone histomorphometric evaluation of pamidronate treatment in clinically manifest osteoporosis. *Osteoporos Int* 1999;9(6):489-93.
- Brismar TB, Karlsson M, Li T, Ringertz H. The correlation between R2' and bone mineral measurements in human vertebrae: an in vitro study. *Eur Radiol* 1999;9(1):141-4.
- Broyles DL, Nielsen RG, Bussett EM, Lu WD, Mizrahi IA, Nunnelly PA, Ngo TA, Noell J, Christenson RH, Kress BC. Analytical and clinical performance characteristics of Tandem -MP Ostase, a new immunoassay for serum bone alkaline phosphatase. *Clin Chem* 1998;44(10):2139 -47.
- Buckland-Wright JC, Lynch JA, Bird C. Microfocal techniques in quantitative radiography: Measurement of cancellous bone organization. *Br J Rheumatol* 1996;35 Suppl 3:18-22.
- Burston B, McNally DS, Nicholson HD. Determination of a standard site for the measurement of bone mineral density of the human calcaneus. *J Anat* 1998 Oct;193(Pt 3):449-56.
- Cadarette SM, Jaglal SB, Murray TM. Validation of the Simple Calculated Osteoporosis Risk Estimation (SCORE) for patient selection for bone densitometry. *Osteoporos Int* 1999;10(1):85-90.
- Caldwell CB, Willett K, Cuncins AV, Hearn TC. Characterization of vertebral strength using digital radiographic analysis of bone structure. *Med Phys* 1995;22(5):611-5.
- Calvo MS, Eyre DR, Gundberg CM. Molecular basis and clinical application of biological markers of bone turnover. *Endocr Rev* 1996;17(4):333-68.
- Cardenas JL, Revilla M, Hernandez ER, Aguado F, Villa LF, Rico H. Comparison of three bone densitometry methods in osteoporotic women. *Calcif Tissue Int* 1997 Nov;61(5):358-61.
- Cecchettin M, Bellometti S, Torri G, Galzigna L. Comparison of commercial osteocalcin assay kits in evaluating osteoporosis. *Curr Ther Res Clin Exp* 1995;56(2):163-8.
- Chappard C, Berger G, Roux C, Laugier P. Ultrasound measurement on the calcaneus: influence of immersion time and rotation of the foot. *Osteoporos Int* 1999;9(4):318-26.
- Chappard C, Kolta S, Fechtenbaum J, Dougados M, Roux C. Clinical evaluation of spine morphometric X-ray absorptiometry. *Br J Rheumatol* 1998 May;37(5):496-501.
- Chappard D, Legrand E, Pasquaretti C, Basle MF, Audran M. Comparison of eight histomorphometric methods for measuring trabecular bone architecture by image analysis on histological sections. *Microsc Res Tech* 1999 May 15-Jun 1;45(4-5):303-12.
- Chavassieux PM, Arlot ME, Reda C, Wei L, Yates AJ, Meunier PJ. Histomorphometric assessment of the long-term effects of alendronate on bone quality and remodeling in patients with osteoporosis. *J Clin Invest* 1997 Sep 15;100(6):1475-80.
- Chen JT, Hosoda K, Hasumi K, Ogata E, Shiraki M. Serum N-terminal osteocalcin is a good indicator for estimating responders to hormone replacement therapy in postmenopausal women. *J Bone Miner Res* 1996;11(11):1784-92.
- Chen Z, Maricic M, Lund P, Tesser J, Gluck O. How the new Hologic hip normal reference values affect the densitometric diagnosis of osteoporosis. *Osteoporos Int* 1998;8(5):423-7.
- Cheng S, Kovanen V, Heikkilä E, Suominen H. Serum and urine markers of type I collagen metabolism in elderly women with high and low bone mineral density. *Eur J Clin Invest* 1996;26(3):186 -91.
- Cheng S, Tylavsky F, Carbone L. Utility of ultrasound to assess risk of fracture. *J Am Geriatr Soc* 1997 Nov;45(11):1382-94.

- Cheng S, Tylavsky FA, Orwoll ES, Rho JY, Carbone LD. The role of collagen abnormalities in ultrasound and densitometry assessment: In vivo evidence. *Calcif Tissue Int* 1999 Jun;64(6):470-6.
- Cheng XG, Sun Y, Boonen S, Nicholson PH, Brys P, Dequeker J, Felsenberg D. Measurements of vertebral shape by radiographic morphometry: sex differences and relationships with vertebral level and lumbar lordosis. *Skeletal Radiol* 1998 Jul;27(7):380-4.
- Chesnut CH 3rd, Bell NH, Clark GS, Drinkwater BL, English SC, Johnson CC Jr, Notelovitz M, Rosen C, Cain DF, Flessland KA, Mallinak NJ. Hormone replacement therapy in postmenopausal women: urinary N-telopeptide of type I collagen monitors therapeutic effect and predicts response of bone mineral density. *Am J Med* 1997 Jan;102(1):29 -37. Comment in: *Am J Med* 1998 Jul;105(1):80 -1.
- Chlebna-Sokol D, Brozik H, Bujnowski T, Biernacka M, Loba-Jakubowska E, Sikora A, Smolewska E. Significance of densitometry and biochemical tests in diagnosis of osteoporosis in children suffering from juvenile rheumatoid arthritis. *Med Sci Monit* 1999;5(4):720-5.
- Christgau S, Rosenquist C, Alexandersen P, Bjarnason NH, Ravn P, Fledelius C, Herling C, Qvist P, Christiansen C. Clinical evaluation of the Serum CrossLaps One Step ELISA, a new assay measuring the serum concentration of bone-derived degradation products of type I collagen C-telopeptides. *Clin Chem* 1998 Nov;44(11):2290-300.
- Christiansen C. Practical application of risk assessment. *Osteoporos Int* 1998;8 Suppl 1:S43-6.
- Clemens JD, Herrick MV, Singer FR, Eyre DR. Evidence that serum NTx (collagen -type I N-telopeptides) can act as an immunochemical marker of bone resorption. *Clin Chem* 1997;43(11):2058-63.
- Cohen FJ, Eckert S, Mitlak BH. Geographic differences in bone turnover: data from a multinational study in healthy postmenopausal women. *Calcif Tissue Int* 1998 Oct;63(4):277-82.
- Compston JE, Cooper C, Kanis JA. Bone densitometry in clinical practice. *BMJ* 1995 Jun 10;310(6993):1507-10. Comment in: *BMJ* 1995 Sep 9;311(7006):686-7; *BMJ* 1995 Sep 9;311(7006):687; *BMJ* 1995 Nov 11;311(7015):1300-1 and *BMJ* 1995 Nov 11;311(7015):1301.
- Confort-Gouny S, Mattei JP, Vion-Dury J, Roux H, Bisset JP, Cozzzone PJ. Phosphorus-31 in vivo magnetic resonance spectroscopy of bone fails to diagnose osteoporosis. *Calcif Tissue Int* 1995 Jun;56(6):529-32.
- Cooper C, Kanis JA, Compston J. How to assess drug efficacy in osteoporosis. *Lancet* 1995 Mar 25;345(8952):743-4.
- Cortet B, Dubois P, Boutry N, Bourel P, Cotten A, Marchandise X. Image analysis of the distal radius trabecular network using computed tomography. *Osteoporos Int* 1999;9(5):410-9.
- Cosman F, Nieves J, Wilkinson C, Schniering D, Shen V, Lindsay R. Bone density change and biochemical indices of skeletal turnover. *Calcif Tissue Int* 1996 Apr;58(4):236-43.
- Crespo R, Revilla M, Usabiago J, Crespo E, Garcia-Arino J, Villa LF, Rico H. Metacarpal radiogrammetry by computed radiography in postmenopausal women with Colles' fracture and vertebral crush fracture syndrome. *Calcif Tissue Int* 1998 May;62(5):470-3.
- Cummings SR, Black D. Bone mass measurements and risk of fracture in Caucasian women: a review of findings from prospective studies. *Am J Med* 1995 Feb 27;98(2A):24S-28S.
- Cummings SR, Melton LJ 3rd, Felsenberg D, Allander E, Black D, Cooper C, Dutta SN, Eastell R, Epstein R, Genant HK, Leidig -Bruckner G, Kanis J, Karpf D, Kleerekoper M, McCloskey E, Minne HW, Nelson D, O'Neil T, Orwoll E. Assessing vertebral fractures. *J Bone Miner Res* 1995;10(4):518-23.
- Cunningham JL, Fordham JN, Hewitt TA, Speed CA. Ultrasound velocity and attenuation at different skeletal sites compared with bone mineral density measured using dual energy X -ray absorptiometry. *Br J Radiol* 1996 Jan;69(817):25 -32.
- Damilakis J, Perisinakis K, Vagios E, Tsinikas D, Gourtsoyiannis N. Effect of region of the interest location on ultrasound measurements of the calcaneus. *Calcif Tissue Int* 1998 Oct;63(4):300 -5.
- Davis JW, Grove JS, Wasnich RD, Ross PD. Spatial relationships between prevalent and incident spine fractures. *Bone* 1999 Mar;24(3):261-4.
- Davis JW, Ross PD, Wasnich RD. Relation of height and weight to the regional variations in bone mass among Japanese-American men and women. *Osteoporos Int* 1995;5(4):234-8.
- Del Campo MT, Gonzalez-Casaus ML, Aguado P, Bernad M, Carrera F, Martinez ME. Effects of age, menopause and osteoporosis on free, peptide-bound

- and total pyridinium crosslink excretion. *Osteoporos Int* 1999;9(5):449-54.
- Del Rio L, Pons F, Huguet M, Setoain FJ, Setoain J. Anteroposterior versus lateral bone mineral density of spine assessed by dual X-ray absorptiometry. *Eur J Nucl Med* 1995 May;22(5):407-12.
- Delichatsios HK, Lane JM, Rivlin RS. Bone histomorphometry in men with spinal osteoporosis. *Calcif Tissue Int* 1995 May;56(5):359 -63.
- Delmas PD. How should the risk of fracture in postmenopausal women be assessed? *Osteoporos Int* 1999;9 Suppl 2:S33-9.
- Delmas PD. The role of markers of bone turnover in the assessment of fracture risk in postmenopausal women. *Osteoporos Int* 1998;8 Suppl 1:S32-6.
- Dominguez Cabrera C, Sosa Henriquez M, Traba ML, Alvarez Villafane E, de la Piedra C. Biochemical markers of bone formation in the study of postmenopausal osteoporosis. *Osteoporos Int* 1998;8(2):147-51.
- Donaldson MM, McGrother CW, Clayton DG, Clarke M, Osborne D. Calcaneal ultrasound attenuation in an elderly population: Measurement position and relationships with body size and past fractures. *Osteoporos Int* 1999;10(4):316-24.
- Douglas AS, Robins SP, Hutchison JD, Porter RW, Stewart A, Reid DM. Carboxylation of osteocalcin in post-menopausal osteoporotic women following vitamin K and D supplementation. *Bone* 1995 Jul;17(1):15-20.
- Dresner-Pollak R, Parker RA, Poku M, Thompson J, Seibel MJ, Greenspan SL. Biochemical markers of bone turnover reflect femoral bone loss in elderly women. *Calcif Tissue Int* 1996 Nov;59(5):328 -33.
- Eastell R. Assessment of bone density and bone loss. *Osteoporos Int* 1996;6 Suppl 2:3-5.
- Eastell R, Blumsohn A. The value of biochemical markers of bone turnover in osteoporosis. *J Rheumatol* 1997 Jun;24(6):1215 -7.
- Eastell R, Colwell A, Hampton L, Reeve J. Biochemical markers of bone resorption compared with estimates of bone resorption from radiotracer kinetic studies in osteoporosis. *J Bone Miner Res* 1997;12(1):59-65.
- Ebeling PR, Atley LM, Guthrie JR, Burger HG, Dennerstein L, Hopper JL, Wark JD. Bone turnover markers and bone density across the menopausal transition. *J Clin Endocrinol Metab* 1996;81(9):3366-71.
- Edmondston SJ, Price RI, Valente B, Singer KP. Measurement of vertebral body heights: Ex vivo comparisons between morphometric X-ray absorptiometry, morphometric radiography and direct measurements. *Osteoporos Int* 1999;10(1):7-13.
- Edmondston SJ, Singer KP, Day RE, Price RI, Breidahl PD. Ex vivo estimation of thoracolumbar vertebral body compressive strength: the relative contributions of bone densitometry and vertebral morphometry. *Osteoporos Int* 1997;7(2):142-8.
- Epstein S, Miller P. Bone mass measurements: The case for selected screening? *Trends Endocrinol Metab* 1997;8(4):157-60.
- Erlichman M, Holohan TV. Bone densitometry: patients receiving prolonged steroid therapy. *Health Technol Assess (Rocky)* 1996 Sep;(9):i-vi, 1-31.
- Erlichman M, Holohan TV. Bone densitometry: patients with asymptomatic primary hyperparathyroidism part I. Technical report. *Health Technol Assess (Rocky)* 1995 Dec;(6):1-30.
- Erlichman M, Holohan TV. Bone densitometry: patients with end-stage renal disease. *Health Technol Assess (Rocky)* 1996 Mar;(8):1-27.
- Faulkner KG, Roberts LA, McClung MR. Discrepancies in normative data between Lunar and Hologic DXA systems. *Osteoporos Int* 1996;6(6):432-6.
- Faulkner KG, von Stetten E, Miller P. Discordance in patient classification using T -scores. *J Clin Densitom* 1999 Fall;2(3):343 -50.
- Fiore CE, Pennisi P, Gibilaro M, Di Fazio S, Impellizzieri D, Ramirez MG. Correlation of quantitative ultrasound of bone with biochemical markers of bone resorption in women with osteoporotic fractures. *J Clin Densitom* 1999 Fall;2(3):231 -9.
- Foldes AJ, Rimon A, Keinan DD, Popovtzer MM. Quantitative ultrasound of the tibia: a novel approach for assessment of bone status. *Bone* 1995 Oct;17(4):363-7. Published erratum appears in *Bone* 1996 Apr;18(4):391.
- Formica CA, Nieves JW, Cosman F, Garrett P, Lindsay R. Comparative assessment of bone mineral measurements using dual X -ray absorptiometry and peripheral quantitative computed tomography. *Osteoporos Int* 1998;8(5):460-7.

Fountos G, Tzaphlidou M, Kounadi E, Glaros D. In vivo measurement of radius calcium/phosphorus ratio by X-ray absorptiometry. *Appl Radiat Isot* 1999 Sep;51(3):273-8.

Fournier B, Chappard C, Roux C, Berger G, Laugier P. Quantitative ultrasound imaging at the calcaneus using an automatic region of interest. *Osteoporos Int* 1997;7(4):363-9.

Gatti D, Rossini M, Zamberlan N, Braga V, Fracassi E, Adami S. Effect of aging on trabecular and compact bone components of proximal and ultradistal radius. *Osteoporos Int* 1996;6(5):355-60.

Genant HK, Njeh CF. Update on the diagnosis of osteoporosis. *Curr Orthop* 1999;13(2):144-55.

Gluer CC, Jergas M, Hans D. Peripheral measurement techniques for the assessment of osteoporosis. *Semin Nucl Med* 1997 Jul;27(3):229-47.

Martin JC, Reid DM. Radial bone mineral density and estimated rates of change in normal Scottish women: Assessment by peripheral quantitative computed tomography. *Calcif Tissue Int* 1999;64(2):126-32.

New measurement methods require reassessment of WHO criteria. *Diagn Imaging (San Franc)* 1998 Nov;Suppl Bone Mass:7.

Takahashi M, Kushida K, Hoshino H, Miura M, Ohishi T, Inoue T. Comparison of bone and total alkaline phosphatase activity on bone turnover during menopause and in patients with established osteoporosis. *Clin Endocrinol (Oxf)* 1997 Aug;47(2):177-83.

Thorpe JA, Steel SA, Langton CM. A phantom based study on the effect of subject positioning on morphometric X-ray absorptiometry using the Lunar Expert-XL. *Br J Radiol* 1998 Nov;71(851):1153-61.

Ultrasound units make densitometry cheaper and more accessible to PCPs. *Diagn Imaging (San Franc)* 1998 Nov;Suppl Bone Mass:3-4.

## Biochemical Markers

Gallagher JC, Kinyamu HK, Fowler SE, Dawson-Hughes B, Dalsky GP, Sherman SS. Calcitropic hormones and bone markers in the elderly. *J Bone Miner Res* 1998 Mar;13(3):475 -82.

Garnero P, Dargent-Molina P, Hans D, Schott AM, Breart G, Meunier PJ, Delmas PD. Do markers of bone resorption add to bone mineral density and ultrasonographic heel measurement for the prediction of hip fracture in elderly women? The EPIDOS prospective study. *Osteoporos Int* 1998;8(6):563-9.

Garnero P, Darte C, Delmas PD. A model to monitor the efficacy of alendronate treatment in women with osteoporosis using a biochemical marker of bone turnover. *Bone* 1999 Jun;24(6):603-9.

Garnero P, Gineys E, Arbault P, Christiansen C, Delmas PD. Different effects of bisphosphonate and estrogen therapy on free and peptide-bound bone cross-links excretion. *J Bone Miner Res* 1995 Apr;10(4):641-9.

Garnero P, Hausherr E, Chapuy MC, Marcelli C, Grandjean H, Muller C, Cormier C, Breart G, Meunier PJ, Delmas PD. Markers of bone resorption predict hip fracture in elderly women: the EPIDOS Prospective Study. *J Bone Miner Res* 1996 Oct;11(10):1531-8.

Garnero P, Sornay-Rendu E, Chapuy MC, Delmas PD. Increased bone turnover in late postmenopausal women is a major determinant of osteoporosis. *J Bone Miner Res* 1996 Mar;11(3):337-49.

Garnero P, Sornay-Rendu E, Duboeuf F, Delmas PD. Markers of bone turnover predict postmenopausal forearm bone loss over 4 years: the OFELY study. *J Bone Miner Res* 1999 Sep;14(9):1614-21.

Gertz BJ, Clemens JD, Holland SD, Yuan W, Greenspan S. Application of a new serum assay for type I collagen cross-linked N-telopeptides: assessment of diurnal changes in bone turnover with and without alendronate treatment. *Calcif Tissue Int* 1998 Aug;63(2):102-6.

Gonnelli S, Cepollaro C, Pondrelli C, Martini S, Monaco R, Gennari C. The usefulness of bone turnover in predicting the response to transdermal estrogen therapy in postmenopausal osteoporosis. *J Bone Miner Res* 1997 Apr;12(4):624-31.

Gorai I, Taguchi Y, Chaki O, Nakayama M, Minaguchi H. Specific changes of urinary excretion of cross-linked N-telopeptides of type I collagen in pre- and postmenopausal women: correlation with other

- markers of bone turnover. *Calcif Tissue Int* 1997 Apr;60(4):317-22.
- Greenspan SL, Parker RA, Ferguson L, Rosen HN, Maitland-Ramsey L, Karpf DB. Early changes in biochemical markers of bone turnover predict the long-term response to alendronate therapy in representative elderly women: A randomized clinical trial. *J Bone Miner Res* 1998;13(9):1431-8.
- Gundberg CM. Biology, physiology, and clinical chemistry of osteocalcin. *J Clin Ligand Assay* 1998;21(2):128-38.
- Haden ST, Fuleihan GE, Angell JE, Cotran NM, LeBoff MS. Calcidiol and PTH levels in women attending an osteoporosis program. *Calcif Tissue Int* 1999 Apr;64(4):275-9.
- Hall GM, Spector TD, Delmas PD. Markers of bone metabolism in postmenopausal women with rheumatoid arthritis: Effects of corticosteroids and hormone replacement therapy. *Arthritis Rheum* 1995;38(7):902-6.
- Hannan R, Blumsohn A, Naylor K, Eastell R. Response of biochemical markers of bone turnover to hormone replacement therapy: impact of biological variability. *J Bone Miner Res* 1998 Jul;13(7):1124-33. Comment in: *J Bone Miner Res* 1999 Mar;14(3):470-2.
- Heshmati HM, Riggs BL, Burritt MF, McAlister CA, Wollan PC, Khosla S. Effects of the circadian variation in serum cortisol on markers of bone turnover and calcium homeostasis in normal postmenopausal women. *J Clin Endocrinol Metab* 1998 Mar;83(3):751-6.
- Hesley RP, Shepard KA, Jenkins DK, Riggs BL. Monitoring estrogen replacement therapy and identifying rapid bone losers with an immunoassay for deoxypyridinoline. *Osteoporos Int* 1998;8(2):159-64.
- Hoshino H, Takahashi M, Kushida K, Ohishi T, Inoue T. Urinary excretion of type I collagen degradation products in healthy women and osteoporotic patients with vertebral and hip fractures. *Calcif Tissue Int* 1998 Jan;62(1):36-9.
- Ju HS, Leung S, Brown B, Stringer MA, Leigh S, Scherrer C, Shepard K, Jenkins D, Knudsen J, Cannon R. Comparison of analytical performance and biological variability of three bone resorption assays. *Clin Chem* 1997;43(9):1570-6.
- Karlsson MK, Vergnaud P, Delmas PD, Obrant KJ. Indicators of bone formation in weight lifters. *Calcif Tissue Int* 1995 Mar;56(3):177-80.
- Keen RW, Nguyen T, Sobnack R, Perry LA, Thompson PW, Spector TD. Can biochemical markers predict bone loss at the hip and spine?: a 4-year prospective study of 141 early postmenopausal women. *Osteoporos Int* 1996;6(5):399-406.
- Kim JG, Shin CS, Choi YM, Moon SY, Kim SY, Lee JY. The relationship among circulating insulin-like growth factor components, biochemical markers of bone turnover and bone mineral density in postmenopausal women under the age of 60. *Clin Endocrinol* 1999;51(3):301-7.
- Kollerup G, Sorensen HA, Hyldstrup L, Storm T. Assessment of different markers of bone resorption in postmenopausal osteoporotic women treated with pamidronate. *Scand J Clin Lab Invest* 1997 Oct;57(6):479-86.
- Kraenzlin ME, Seibel MJ, Trechsel U, Boerlin V, Azria M, Kraenzlin CA, Haas HG. The effect of intranasal salmon calcitonin on postmenopausal bone turnover as assessed by biochemical markers: Evidence of maximal effect after 8 weeks of continuous treatment. *Calcif Tissue Int* 1996;58(4):216-20.
- Krall EA, Dawson-Hughes B, Hirst K, Gallagher JC, Sherman SS, Dalsky G. Bone mineral density and biochemical markers of bone turnover in healthy elderly men and women. *J Gerontol A Biol Sci Med Sci* 1997 Mar;52(2):M61-7.
- Kress BC, Mizrahi IA, Armour KW, Marcus R, Emkey RD, Santora AC 2nd. Use of bone alkaline phosphatase to monitor alendronate therapy in individual postmenopausal osteoporotic women. *Clin Chem* 1999 Jul;45(7):1009-17.
- Kukuvitis A, Bildiris J, Prapas Y, Tsamis D, Papadimas J, Dimitriadou A, Vlassis G. Effect of treatment with GnRH agonists on new markers of bone metabolism. *Gynecol Obstet Invest* 1999;47(3):194-6.
- Kushida K, Takahashi M, Kawana K, Inoue T. Comparison of markers for bone formation and resorption in premenopausal and postmenopausal subjects, and osteoporosis patients. *J Clin Endocrinol Metab* 1995 Aug;80(8):2447-50.
- Kyd PA, De Vooght K, Kerkhoff F, Thomas E, Fairney A. Clinical usefulness of biochemical resorption markers in osteoporosis. *Ann Clin Biochem* 1999 Jul;36(Pt 4):483-91.
- Kyd PA, Vooght KD, Kerkhoff F, Thomas E, Fairney A. Clinical usefulness of bone alkaline phosphatase in osteoporosis. *Ann Clin Biochem* 1998 Nov;35(Pt 6):717-25.

- Lo Cascio V, Bertoldo F, Gambaro G, Gasperi E, Furlan F, Colapietro F, Lo Cascio C, Campagnola M. Urinary galactosyl-hydroxylysine in postmenopausal osteoporotic women: A potential marker of bone fragility. *J Bone Miner Res* 1999 Aug;14(8):1420 -4.
- Marcus R, Holloway L, Wells B, Greendale G, James MK, Wasilaukas C, Kelaghan J. The relationship of biochemical markers of bone turnover to bone density changes in postmenopausal women: Results from the postmenopausal estrogen/progestin interventions (PEPI) trial. *J Bone Miner Res* 1999;14(9):1583-95.
- Marshall LA, Cain DF, Dmowski WP, Chesnut CH 3rd. Urinary N-telopeptides to monitor bone resorption while on GnRH agonist therapy. *Obstet Gynecol* 1996 Mar;87(3):350-4.
- Masahashi T, Negoro Y, Kuroki T, Asai M, Noguchi M, Nakanishi M. Biochemical markers of bone turnover during hormone replacement therapy. *Int J Gynaecol Obstet* 1999 Feb;64(2):163-6.
- Masatomi C, Imai K, Wang DH, Ikeda S, Taketa K, Takata S, Kira S. Urinary excretion of type I collagen cross-linked N-telopeptides, bone mass and related lifestyle in middle -aged women. *Acta Med Okayama* 1999 Jun;53(3):133-40.
- Melton LJ 3rd, Khosla S, Atkinson EJ, O'Fallon WM, Riggs BL. Relationship of bone turnover to bone density and fractures. *J Bone Miner Res* 1997 Jul;12(7):1083-91.
- Miklos S. Dehydroepiandrosterone sulphate in the diagnosis of osteoporosis. *Acta Biomed Ateneo Parmense* 1995;66(3-4):139-46.
- Miller PD, Baran DT, Bilezikian JP, Greenspan SL, Lindsay R, Riggs BL, Watts NB. Practical clinical application of biochemical markers of bone turnover: Consensus of an expert panel. *J Clin Densitom* 1999 Fall;2(3):323-42.
- Miura H, Yamamoto I, Yuu I, Kigami Y, Ohta T, Yamamura Y, Ohnaka Y, Morita R. Estimation of bone mineral density and bone loss by means of bone metabolic markers in postmenopausal women. *Endocr J* 1995 Dec;42(6):797-802.
- Nakanishi M, Yoh K, Uchida K, Maruo S, Rai SK, Matsuoka A. Clinical usefulness of serum tartrate-resistant fluoride-sensitive acid phosphatase activity in evaluating bone turnover. *J Bone Miner Metab* 1999;17(2):125-30.
- Nakatsuka K, Miki T, Sekiya K, Kawakami H, Hirota Y, Miura M, Obi Y, Nishizawa Y, Morii H. Clinical application of immunoassay for urinary total excretion of deoxypyridinoline in patients with osteoporosis. *J Bone Miner Metab* 1997;15(3):153-59.
- Overgaard K, Christiansen P, Riis BJ, Christiansen C. Evaluation of a new commercial IRMA for bone-specific alkaline phosphatase during treatment with hormone replacement therapy and calcitonin. *Clin Chem* 1996;42(6):973 -4.
- Overgaard K, Christiansen C. A new biochemical marker of bone resorption for follow-up on treatment with nasal salmon calcitonin. *Calcif Tissue Int* 1996;59(1):12-6.
- Pacitti MT, Minisola S, Ombricolo E, D'Ambrosio C, Romagnoli E, Pellegrino C, Rosso R, Mazzuoli G. Measurement of urinary free pyridinolines at menopause and in elderly women: Is the sensitivity similar? *Ital J Miner Electrolyte Metab* 1997;11(1):25-7.
- Parviainen MT, Jaaskelainen K, Kroger H, Arnala I, Alhava E. Urinary bone resorption markers in monitoring treatment of symptomatic osteoporosis. *Clin Chim Acta* 1999 Jan;279(1 -2):145-54.
- Pedrazzoni M, Alfano FS, Gatti C, Fantuzzi M, Girasole G, Campanini C, Basini G, Passeri M. Acute effects of bisphosphonates on new and traditional markers of bone resorption. *Calcif Tissue Int* 1995 Jul;57(1):25-9.
- Pedrazzoni M, Alfano FS, Girasole G, Giuliani N, Fantuzzi M, Gatti C, Campanini C, Passeri M. Clinical observations with a new specific assay for bone alkaline phosphatase: a cross-sectional study in osteoporotic and pagetic subjects and a longitudinal evaluation of the response to ovariectomy, estrogens, and bisphosphonates. *Calcif Tissue Int* 1996 Nov;59(5):334-8.
- Peris P, Alvarez L, Monegal A, Guanabens N, Duran M, Pons F, Martinez de Osaba MJ, Echevarria M, Ballesta AM, Munoz-Gomez J. Biochemical markers of bone turnover after surgical menopause and hormone replacement therapy. *Bone* 1999;25(3):349-53.
- Quan H, Shih WJ. Assessing reproducibility by the within-subject coefficient of variation with random effects models. *Biometrics* 1996 Dec;52(4):1195-203.
- Ravin P, Clemmesen B, Christiansen C. Biochemical markers can predict the response in bone mass during alendronate treatment in early postmenopausal women. *Alendronate Osteoporosis Prevention Study Group. Bone* 1999 Mar;24(3):237-44.
- Ravn P, Hosking D, Thompson D, Cizza G, Wasnich RD, McClung M, Yates AJ, Bjarnason NH,

- Christiansen C. Monitoring of alendronate treatment and prediction of effect on bone mass by biochemical markers in the early postmenopausal intervention cohort study. *J Clin Endocrinol Metab* 1999 Jul;84(7):2363-8.
- Riis BJ, Overgaard K, Christiansen C. Biochemical markers of bone turnover to monitor the bone response to postmenopausal hormone replacement therapy. *Osteoporos Int* 1995;5(4):276-80.
- Ripoll E, Revilla M, Hernandez ER, Arribas I, Villa LF, Rico H. New evidence that serum beta(2)-microglobulin behaves as a biological marker of bone remodelling in women. *Eur J Clin Invest* 1996 Aug;26(8):681-5.
- Rosano TG, Peaston RT, Bone HG, Woitge HW, Francis RM, Seibel MJ. Urinary free deoxypyridinoline by chemiluminescence immunoassay: Analytical and clinical evaluation. *Clin Chem* 1998;44(10):2126-32.
- Rosen CJ, Chesnut CH 3rd, Mallinak NJ. The predictive value of biochemical markers of bone turnover for bone mineral density in early postmenopausal women treated with hormone replacement or calcium supplementation. *J Clin Endocrinol Metab* 1997 Jun;82(6):1904-10. Comment in: *J Clin Endocrinol Metab* 1998 Mar;83(3):1044-6.
- Rosen HN, Moses AC, Garber J, Ross DS, Lee SL, Greenspan SL. Utility of biochemical markers of bone turnover in the follow-up of patients treated with bisphosphonates. *Calcif Tissue Int* 1998;63(5):363-8.
- Rosenquist C, Qvist P, Bjarnason N, Christiansen C. Measurement of a more stable region of osteocalcin in serum by ELISA with two monoclonal antibodies. *Clin Chem* 1995;41(10):1439-45.
- Ross PD, Knowlton W. Rapid bone loss is associated with increased levels of biochemical markers. *J Bone Miner Res* 1998 Feb;13(2):297-302.
- Rosso R, Minisola S, Scarda A, Pacitti MT, Carnevale V, Romagnoli E, Mazzuoli GF. Temporal relationship between bone loss and increased bone turnover: a longitudinal study following natural menopause. *J Endocrinol Invest* 1995 Oct;18(9):723-8.
- Saarto T, Blomqvist C, Risteli J, Risteli L, Sarna S, Elomaa I. Aminoterminal propeptide of type I procollagen (PINP) correlates to bone loss and predicts the efficacy of antiresorptive therapy in pre- and post-menopausal non-metastatic breast cancer patients. *Br J Cancer* 1998 Jul;78(2):240-5.
- Scariano JK, Glew RH, Bou-Serhal CE, Clemens JD, Garry PJ, Baumgartner RN. Serum levels of cross-linked N-telopeptides and aminoterminal propeptides of type I collagen indicate low bone mineral density in elderly women. *Bone* 1998 Nov;23(5):471-7.
- Schlosser K, Scigalla P. Biochemical markers as surrogates in clinical trials in patients with metastatic bone disease and osteoporosis. *Scand J Clin Lab Invest Suppl* 1997;227:21-8.
- Schneider DL, Barrett-Connor EL. Urinary N-telopeptide levels discriminate normal, osteopenic, and osteoporotic bone mineral density. *Arch Intern Med* 1997 Jun 9;157(11):1241-5. Comment in: *Arch Intern Med* 1998 Feb 9;158(3):298, 300.
- Sirtori P, Sosio C, Polo RM, Tenni R, Rubinacci A. A comparative study on biochemical markers of bone collagen breakdown in post-menopausal women. *Pharmacol Res* 1997;36(3):229-35.
- Sone T, Miyake M, Takeda N, Fukunaga M. Urinary excretion of type I collagen crosslinked N-telopeptides in healthy Japanese adults: age - and sex-related changes and reference limits. *Bone* 1995 Oct;17(4):335-9.
- Souberbielle JC, Cormier C, Kindermans C. Bone markers in clinical practice. *Curr Opin Rheumatol* 1999;11(4):312-9.
- Stepan JJ, Vokrouhlicka J. Comparison of biochemical markers of bone remodelling in the assessment of the effects of alendronate on bone in postmenopausal osteoporosis. *Clin Chim Acta* 1999;288(1-2):121-35.
- Szulc P, Chapuy MC, Meunier PJ, Delmas PD. Serum undercarboxylated osteocalcin is a marker of the risk of hip fracture: A three year follow-up study. *Bone* 1996;18(5):487-8.
- Taga M, Minaguchi H. Change in C-terminal cross-linking domain of type I collagen in urine, a new marker of bone resorption, during and after gonadotropin-releasing hormone agonist administration. *Eur J Endocrinol* 1997;137(2):167-71.
- Taguchi Y, Gorai I, Zhang MG, Chaki O, Nakayama M, Minaguchi H. Differences in bone resorption after menopause in Japanese women with normal or low bone mineral density: quantitation of urinary cross-linked N-telopeptides. *Calcif Tissue Int* 1998 May;62(5):395-9.
- Takahashi M, Hoshino H, Kushida K. Measurements of urinary nonisomerized form of type I collagen degradation products (alpha-CTx) in aging.

menopause, and osteoporosis with fractures. *Clin Chim Acta* 1999 Jan;279(1-2):69-76.

Takahashi M, Kushida K, Hoshino H, Ohishi T, Inoue T. Evaluation of bone turnover in postmenopause, vertebral fracture, and hip fracture using biochemical markers for bone formation and resorption. *J Endocrinol Invest* 1997 Mar;20(3):112-7.

Takahashi M, Kushida K, Kawana K, Hoshino H, Inoue T. Discrimination ability of pyridinoline crosslinks related markers for bone resorption in postmenopause and osteoporosis. *Endocr Res* 1997;23(1-2):105-17.

Theiler R, Stahelin HB, Kranzlin M, Tyndall A, Bischoff HA. High bone turnover in the elderly. *Arch Phys Med Rehabil* 1999;80(5):485-9.

Villa I, Banfi G, Daverio R, Resmini G, Rubinacci A. Osteocalcin production in vivo and in vitro after 1,25-dihydroxycholecalciferol stimulation compared on different assays. *Eur J Clin Chem Clin Biochem* 1996;34(9):771-5.

Yasumizu T, Hoshi K, Iijima S, Asaka A. Serum concentration of the pyridinoline cross-linked carboxyterminal telopeptide of type I collagen (ICTP) is a useful indicator of decline and recovery of bone mineral density in lumbar spine: Analysis in Japanese postmenopausal women with or without hormone replacement. *Endocr J* 1998;45(1):45-51.

Yilmaz N, Bayram M, Erbagci AB, Kilincer MS. Diagnostic value of biochemical markers of bone turnover and postmenopausal osteoporosis. *Clin Chem Lab Med* 1999;37(2):137-43.

Yoshimura N, Hashimoto T, Sakata K, Morioka S, Kasamatsu T, Cooper C. Biochemical markers of bone turnover and bone loss at the lumbar spine and femoral neck: the Taiji study. *Calcif Tissue Int* 1999 Sep;65(3):198-202.

Yu SL, Ho LM, Lim BC, Sim ML. Urinary deoxypyridinoline is a useful biochemical bone marker for the management of postmenopausal osteoporosis. *Ann Acad Med Singapore* 1998 Jul;27(4):527-9.

Zhan Z, Yamamoto I, Morita R, Miura H. Urinary pyridinoline and deoxypyridinoline as bone metabolic markers in predicting therapeutic effects of estrogen and alfalcacidol in women with osteoporosis. *J Bone Miner Metab* 1999;17(2):113-8.

## Bone Structure / Quality / Histomorphometry

Fazzalari NL, Parkinson IH. Fractal properties of cancellous bone of the iliac crest in vertebral crush fracture. *Bone* 1998 Jul;23(1):53-7.

Fedarko NS, Vetter UK, Robey PG. Age-related changes in bone matrix structure in vitro. *Calcif Tissue Int* 1995;56 Suppl 1:S41-3.

Feik SA, Thomas CD, Clement JG. Age trends in remodeling of the femoral midshaft differ between the sexes. *J Orthop Res* 1996 Jul;14(4):590-7.

Fidouh F, Harba R, Jacquet G, Loussot T, Lespessailles E. Long-term reproducibility optimization of an x-ray process for bone architectural evaluation during osteoporosis. *Phys Med Biol* 1999 Jan;44(1):N1-8.

Hauge E, Mosekilde L, Melsen F. Missing observations in bone histomorphometry on osteoporosis: implications and suggestions for an approach. *Bone* 1999 Oct;25(4):389-95.

Koot VC, Kesselaer SM, Clevers GJ, de Hooge P, Weits T, van der Werken C. Evaluation of the Singh index for measuring osteoporosis. *J Bone Joint Surg Br* 1996 Sep;78(5):831-4.

Kothari M, Keaveny TM, Lin JC, Newitt DC, Majumdar S. Measurement of intraspecimen variations in vertebral cancellous bone architecture. *Bone* 1999 Aug;25(2):245-50.

### Comparative Methodology

- Grampp S, Genant HK, Mathur A, Lang P, Jergas M, Takada M, Gluer CC, Lu Y, Chavez M. Comparisons of noninvasive bone mineral measurements in assessing age-related loss, fracture discrimination, and diagnostic classification. *J Bone Miner Res* 1997 May;12(5):697-711. Comment in: *J Bone Miner Res* 1997 Nov;12(11):1954-5.
- Grampp S, Henk CB, Fuerst TP, Lu Y, Bader TR, Kainberger F, Genant HK, Imhof H. Diagnostic agreement of quantitative sonography of the calcaneus with dual X-ray absorptiometry of the spine and femur. *AJR Am J Roentgenol* 1999 Aug;173(2):329-34.
- Grampp S, Lang P, Jergas M, Gluer CC, Mathur A, Engelke K, Genant HK. Assessment of the skeletal status by peripheral quantitative computed tomography of the forearm: short-term precision in vivo and comparison to dual X-ray absorptiometry. *J Bone Miner Res* 1995 Oct;10(10):1566-76.
- Grampp S, Majumdar S, Jergas M, Newitt D, Lang P, Genant HK. Distal radius: in vivo assessment with quantitative MR imaging, peripheral quantitative CT, and dual X-ray absorptiometry. *Radiology* 1996 Jan;198(1):213-8.
- Greenspan SL, Bouxsein ML, Melton ME, Kolodny AH, Clair JH, Delucca PT, Stek M Jr, Faulkner KG, Orwoll ES. Precision and discriminatory ability of calcaneal bone assessment technologies. *J Bone Miner Res* 1997 Aug;12(8):1303-13. Published erratum appears in *J Bone Miner Res* 1997 Nov;12(11):1957.
- Guglielmi G, Cammisa M, De Serio A, Scillitani A, Chiodini I, Carnevale V, Fusilli S. Phalangeal US velocity discriminates between normal and vertebrally fractured subjects. *Eur Radiol* 1999;9(8):1632-7.
- Hagiwara S, Engelke K, Takada M, Yang SO, Grampp S, Dhillon MS, Genant HK. Accuracy and diagnostic sensitivity of radiographic absorptiometry of the second metacarpal. *Calcif Tissue Int* 1998 Feb;62(2):95-8.
- Hamanaka Y, Yamamoto I, Takada M, Matsushita R, Ota T, Yuh I, Morita R. Comparison of bone mineral density at various skeletal sites with quantitative ultrasound parameters of the calcaneus for assessment of vertebral fractures. *J Bone Miner Metab* 1999;17(3):195-200.
- Hans D, Fuerst T, Lang T, Majumdar S, Lu Y, Genant HK, Gluer C. How can we measure bone quality? *Baillieres Clin Rheumatol* 1997 Aug;11(3):495-515.
- Heilmann P, Wuester C, Prolingheuer C, Goetz M, Ziegler R. Measurement of forearm bone mineral density: Comparison of precision of five different instruments. *Calcif Tissue Int* 1998 May;62(5):383 -7.
- Huang C, Ross PD, Yates AJ, Walker RE, Imose K, Emi K, Wasnich RD. Prediction of fracture risk by radiographic absorptiometry and quantitative ultrasound: a prospective study. *Calcif Tissue Int* 1998 Nov;63(5):380-4.
- Ishikawa K, Ohta T. Radial and metacarpal bone mineral density and calcaneal quantitative ultrasound bone mass in normal Japanese women. *Calcif Tissue Int* 1999 Aug;65(2):112-6.
- Kalender WA, Felsenberg D, Genant HK, Fischer M, Dequeker J, Reeve J. The European Spine Phantom--a tool for standardization and quality control in spinal bone mineral measurements by DXA and QCT. *Eur J Radiol* 1995 Jul;20(2):83 -92.
- Kang C, Speller R. Comparison of ultrasound and dual energy X-ray absorptiometry measurements in the calcaneus. *Br J Radiol* 1998 Aug;71(848):861 -7.
- Karlsson MK, Obrant KJ, Nilsson BE, Johnell O. Bone mineral density assessed by quantitative ultrasound and dual energy X-ray absorptiometry. Normative data in Malmo, Sweden. *Acta Orthop Scand* 1998;69(2):189-93.
- Kiel DP, Mercier CA, Dawson-Hughes B, Cali C, Hannan MT, Anderson JJ. The effects of analytic software and scan analysis technique on the comparison of dual X-ray absorptiometry with dual photon absorptiometry of the hip in the elderly. *J Bone Miner Res* 1995 Jul;10(7):1130-6.
- Lafferty FW, Rowland DY. Correlations of dual-energy X-ray absorptiometry, quantitative computed tomography, and single photon absorptiometry with spinal and non -spinal fractures. *Osteoporos Int* 1996;6(5):407-15. Comment in: *Osteoporos Int* 1997;7(3):238-40.
- Langton CM, Langton DK, Beardsworth SA. Comparison of accuracy and cost effectiveness of clinical criteria and BUA for referral for BMD assessment by DXA in osteoporotic and osteopenic perimenopausal subjects. *Technol Health Care* 1999;7(5):319-30.
- Laval-Jeantet AM, Bergot C, Williams M, Davidson K, Laval-Jeantet M. Dual-energy X-ray absorptiometry of the calcaneus: comparison with vertebral dual-energy X-ray absorptiometry and

- quantitative computed tomography. *Calcif Tissue Int* 1995 Jan;56(1):14-8.
- Lin JC, Grampp S, Link T, Kothari M, Newitt DC, Felsenberg D, Majumdar S. Fractal analysis of proximal femur radiographs: Correlation with biomechanical properties and bone mineral density. *Osteoporos Int* 1999;9(6):516-24.
- Link TM, Majumdar S, Konermann W, Meier N, Lin JC, Newitt D, Ouyang X, Peters PE, Genant HK. Texture analysis of direct magnification radiographs of vertebral specimens: correlation with bone mineral density and biomechanical properties. *Acad Radiol* 1997 Mar;4(3):167-76.
- Lochmuller EM, Eckstein F, Kaiser D, Zeller JB, Landgraf J, Putz R, Steldinger R. Prediction of vertebral failure loads from spinal and femoral dual-energy x-ray absorptiometry, and calcaneal ultrasound: An in situ analysis with intact soft tissues. *Bone* 1998;23(5):417-24.
- Lochmuller EM, Zeller JB, Kaiser D, Eckstein F, Landgraf J, Putz R, Steldinger R. Correlation of femoral and lumbar DXA and calcaneal ultrasound, measured in situ with intact soft tissues, with the in vitro failure loads of the proximal femur. *Osteoporos Int* 1998;8(6):591-8.
- Louis O, Moreels X, Osteaux M. Reproducibility of phalanx osteosonography and relation with forearm peripheral quantitative computed tomography: single finger versus average measurement on the last four fingers. *Eur J Radiol* 1998 Oct;28(3):270-5.
- Maggio D, Agostinelli D, Simonelli G, Camilli L, Ubaldi E, Luchetti M, Aisa MC, Cherubini A, Baffa S, Senin U. Radiogrammetry vs dexa in the diagnosis of senile osteoporosis. *Ital J Miner Electrolyte Metab* 1996;10(1):15-8.
- Majumdar S, Genant HK, Grampp S, Newitt DC, Truong VH, Lin JC, Mathur A. Correlation of trabecular bone structure with age, bone mineral density, and osteoporotic status: in vivo studies in the distal radius using high resolution magnetic resonance imaging. *J Bone Miner Res* 1997 Jan;12(1):111-8.
- Majumdar S, Newitt D, Mathur A, Osman D, Gies A, Chiu E, Lotz J, Kinney J, Genant H. Magnetic resonance imaging of trabecular bone structure in the distal radius: relationship with X -ray tomographic microscopy and biomechanics. *Osteoporos Int* 1996;6(5):376-85.
- Martin JC, Campbell MK, Reid DM. A comparison of radial peripheral quantitative computed tomography, calcaneal ultrasound, and axial dual energy X-ray absorptiometry measurements in women aged 45-55 yr. *J Clin Densitom* 1999 Fall;2(3):265-73.
- Martin JC, Reid DM. Appendicular measurements in screening women for low axial bone mineral density. *Br J Radiol* 1996 Mar;69(819):234-40.
- Mautalen C, Vega E, Gonzalez D, Carrilero P, Otano A, Silberman F. Ultrasound and dual X -ray absorptiometry densitometry in women with hip fracture. *Calcif Tissue Int* 1995;57(3):165 -8.
- Moro M, Hecker AT, Bouxsein ML, Myers ER. Failure load of thoracic vertebrae correlates with lumbar bone mineral density measured by DXA. *Calcif Tissue Int* 1995 Mar;56(3):206 -9.
- Ng DC, Sundram FX. Bone mineral density--correlation between quantitative ultrasound characteristics and dual energy X -ray absorptiometry. *Ann Acad Med Singapore* 1998 Jul;27(4):524 -6.
- Njeh CF, Kuo CW, Langton CM, Atrah HI, Boivin CM. Prediction of human femoral bone strength using ultrasound velocity and BMD: An in vitro study. *Osteoporos Int* 1997;7(5):471-7.
- Peh WC, Khong PL, Yin Y, Ho WY, Evans NS, Gilula LA, Yeung HW, Davies AM. Imaging of pelvic insufficiency fractures. *Radiographics* 1996 Mar;16(2):335-48.
- Queralto JM, Torres J, Guinot M. Neural networks for the biochemical prediction of bone mass loss. *Clin Chem Lab Med* 1999 Aug;37(8):831-8.
- Stegman MR, Davies KM, Heaney RP, Recker RR, Lappe JM. The association of patellar ultrasound transmissions and forearm densitometry with vertebral fracture, number and severity: the Saunders County Bone Quality Study. *Osteoporos Int* 1996;6(2):130-5.
- Stegman MR, Heaney RP, Recker RR. Comparison of speed of sound ultrasound with single photon absorptiometry for determining fracture odds ratios. *J Bone Miner Res* 1995 Mar;10(3):346-52.
- Travers-Gustafson D, Stegman MR, Heaney RP, Recker RR. Ultrasound, densitometry, and extraskeletal appendicular fracture risk factors: a cross-sectional report on the Saunders County Bone Quality Study. *Calcif Tissue Int* 1995 Oct;57(4):267-71.
- Tromp AM, Smit JH, Deeg DJ, Lips P. Quantitative ultrasound measurements of the tibia and calcaneus in comparison with DXA measurements at various skeletal sites. *Osteoporos Int* 1999;9(3):230-5.

Yu W, Gluer CC, Grampp S, Jergas M, Fuerst T, Wu CY, Lu Y, Fan B, Genant HK. Spinal bone mineral assessment in postmenopausal women: A comparison between dual X-ray absorptiometry and quantitative computed tomography. *Osteoporos Int* 1995;5(6):433-9.

Yuan X, Takahashi N, Terashita T, Nakatani M, Mizuno K. Which vertebrae should be assessed in diagnosing osteoporosis by plain radiography? Comparative study of radiographic findings and bone mineral density measured by dual energy X-ray absorptiometry. *J Orthop Sci* 1998;3(5):252-6.

Zaichick YeV, Morukov BV. In vivo bone mineral studies on volunteers during a 370 -day antithorstatic hypokinesia test. *Appl Radiat Isot* 1998 May-Jun;49(5-6):691-4.

### Computed Tomography (CT)

Gluer CC, Engelke K, Lang TF, Grampp S, Genant HK. Quantitative computed tomography (QCT) of the lumbar spine and appendicular skeleton. *Eur J Radiol* 1995 Sep;20(3):173-8.

Gordon CL, Lang TF, Augat P, Genant HK. Image-based assessment of spinal trabecular bone structure from high-resolution CT images. *Osteoporos Int* 1998;8(4):317-25.

Gowin W, Saparin PI, Kurths J, Felsenberg D. Measures of complexity for cancellous bone. *Technol Health Care* 1998 Dec;6(5-6):373-90.

Grampp S, Jergas M, Lang P, Steiner E, Fuerst T, Gluer CC, Mathur A, Genant HK. Quantitative CT assessment of the lumbar spine and radius in patients with osteoporosis. *AJR Am J Roentgenol* 1996 Jul;167(1):133-40.

Haidekker MA, Andresen R, Everts CJ, Banzer D, Peitgen HO. Evaluation of the cortical structure in high resolution CT images of lumbar vertebrae by analysing low bone mineral density clusters and cortical profiles. *Br J Radiol* 1997 Dec;70(840):1222-8.

Haidekker MA, Andresen R, Werner HJ. Relationship between structural parameters, bone mineral density and fracture load in lumbar vertebrae, based on high-resolution computed tomography, quantitative computed tomography and compression tests. *Osteoporos Int* 1999;9(5):433-40.

Hasegawa Y, Kushida K, Yamazaki K, Inoue T. Volumetric bone mineral density using peripheral quantitative computed tomography in Japanese women. *Osteoporos Int* 1997;7(3):195-9.

Hernandez ER, Revilla M, Seco-Durban C, Villa LF, Cortes J, Rico H. Heterogeneity of trabecular and cortical postmenopausal bone loss: a longitudinal study with pQCT. *Bone* 1997 Mar;20(3):283-7.

Ito M, Nakamura T, Matsumoto T, Tsurusaki K, Hayashi K. Analysis of trabecular microarchitecture of human iliac bone using microcomputed tomography in patients with hip arthroscopy with or without vertebral fracture. *Bone* 1998 Aug;23(2):163-9.

Ito M, Ohki M, Hayashi K, Yamada M, Uetani M, Nakamura T. Relationship of spinal fracture to bone density, textural, and anthropometric parameters. *Calcif Tissue Int* 1997;60(3):240-3.

- Jiang Y, Zhao J, Augat P, Ouyang X, Lu Y, Majumdar S, Genant HK. Trabecular bone mineral and calculated structure of human bone specimens scanned by peripheral quantitative computed tomography: Relation to biomechanical properties. *J Bone Miner Res* 1998;13(11):1783-90.
- Laib A, Hauselmann HJ, Ruegsegger P. In vivo high resolution 3D-QCT of the human forearm. *Technol Health Care* 1998 Dec;6(5-6):329-37.
- Laib A, Ruegsegger P. Calibration of trabecular bone structure measurements of in vivo three-dimensional peripheral quantitative computed tomography with 28-mum-resolution microcomputed tomography. *Bone* 1999;24(1):35-9.
- Laib A, Ruegsegger P. Comparison of structure extraction methods for in vivo trabecular bone measurements. *Comput Med Imaging Graph* 1999 Mar-Apr;23(2):69-74.
- Laib A, Ruegsegger P. Local x-ray tomography for in vivo bone structure examinations. *Med Phys* 1999;26(3):447-52.
- Lang TF, Augat P, Lane NE, Genant HK. Trochanteric hip fracture: strong association with spinal trabecular bone mineral density measured with quantitative CT. *Radiology* 1998 Nov;209(2):525-30.
- Lang TF, Keyak JH, Heitz MW, Augat P, Lu Y, Mathur A, Genant HK. Volumetric quantitative computed tomography of the proximal femur: precision and relation to bone strength. *Bone* 1997 Jul;21(1):101-8.
- Lang TF, Li J, Harris ST, Genant HK. Assessment of vertebral bone mineral density using volumetric quantitative CT. *J Comput Assist Tomogr* 1999 Jan-Feb;23(1):130-7.
- Link TM, Majumdar S, Lin JC, Augat P, Gould RG, Newitt D, Ouyang X, Lang TF, Mathur A, Genant HK. Assessment of trabecular structure using high resolution CT images and texture analysis. *J Comput Assisted Tomogr* 1998;22(1):15-24.
- Martin H, Werner J, Andresen R, Schober HC, Schmitz KP. Noninvasive assessment of stiffness and failure load of human vertebrae from CT -data. *Biomed Tech* 1998;43(4):82-8.
- Muller R, Ruegsegger P. Micro-tomographic imaging for the nondestructive evaluation of trabecular bone architecture. *Stud Health Technol Inform* 1997;40:61-79.
- Muller R, Van Campenhout H, Van Damme B, Van Der Perre G, Dequeker J, Hildebrand T, Ruegsegger P. Morphometric analysis of human bone biopsies: a quantitative structural comparison of histological sections and micro-computed tomography. *Bone* 1998 Jul;23(1):59-66.
- Newman DL, Dougherty G, al Obaid A, al Hajrasy H. Limitations of clinical CT in assessing cortical thickness and density. *Phys Med Biol* 1998 Mar;43(3):619-26.
- Nijs J, Westhovens R, Joly J, Cheng XG, Borghs H, Dequeker J. Diagnostic sensitivity of peripheral quantitative computed tomography measurements at ultradistal and proximal radius in postmenopausal women. *Bone* 1998;22(6):659-64.
- Rosenthal L, Caminis J, Tenehouse A. Correlation of ultrasound velocity in the tibial cortex, calcaneal ultrasonography, and bone mineral densitometry of the spine and femur. *Calcif Tissue Int* 1996;58(6):415-8.
- Sandor T, Felsenberg D, Brown E. Discriminability of fracture and nonfracture cases based on the spatial distribution of spinal bone mineral. *J Comput Assist Tomogr* 1997 May-Jun;21(3):498-505.
- Schneider P, Butz S, Allolio B, Borner W, Klein K, Lehmann R, Petermann K, Tysarczyk -Niemeyer G, Wuster C, Zander C, Ziegler R, Reiners C. Multicenter German reference data base for peripheral quantitative computer tomography. *Technol Health Care* 1995;3(2):69-73.
- Takagi Y, Fujii Y, Miyauchi A, Goto B, Takahashi K, Fujita T. Transmenopausal change of trabecular bone density and structural pattern assessed by peripheral quantitative computed tomography in Japanese women. *J Bone Miner Res* 1995 Nov;10(11):1830-4.
- Muller R, Van Campenhout H, Van Damme B, Van Der Perre G, Dequeker J, Hildebrand T, Ruegsegger P. Morphometric analysis of human bone biopsies: a quantitative structural comparison of histological sections and micro-computed tomography. *Bone* 1998 Jul;23(1):59-66.
- Newman DL, Dougherty G, al Obaid A, al Hajrasy H. Limitations of clinical CT in assessing cortical thickness and density. *Phys Med Biol* 1998 Mar;43(3):619-26.
- Nijs J, Westhovens R, Joly J, Cheng XG, Borghs H, Dequeker J. Diagnostic sensitivity of peripheral quantitative computed tomography measurements at ultradistal and proximal radius in postmenopausal women. *Bone* 1998;22(6):659-64.
- Rosenthal L, Caminis J, Tenehouse A. Correlation of ultrasound velocity in the tibial cortex, calcaneal ultrasonography, and bone mineral densitometry of the spine and femur. *Calcif Tissue Int* 1996;58(6):415-8.
- Sandor T, Felsenberg D, Brown E. Discriminability of fracture and nonfracture cases based on the spatial distribution of spinal bone mineral. *J Comput Assist Tomogr* 1997 May-Jun;21(3):498-505.
- Schneider P, Butz S, Allolio B, Borner W, Klein K, Lehmann R, Petermann K, Tysarczyk -Niemeyer G, Wuster C, Zander C, Ziegler R, Reiners C. Multicenter German reference data base for peripheral quantitative computer tomography. *Technol Health Care* 1995;3(2):69-73.
- Takagi Y, Fujii Y, Miyauchi A, Goto B, Takahashi K, Fujita T. Transmenopausal change of trabecular bone density and structural pattern assessed by peripheral quantitative computed tomography in Japanese women. *J Bone Miner Res* 1995 Nov;10(11):1830-4.

## Densitometry

- Fuleihan GE, Testa MA, Angell JE, Porrino N, Leboff MS. Reproducibility of DXA absorptiometry: a model for bone loss estimates. *J Bone Miner Res* 1995 Jul;10(7):1004-14.
- Gluer CC, Blake G, Lu Y, Blunt BA, Jergas M, Genant HK. Accurate assessment of precision errors: How to measure the reproducibility of bone densitometry techniques. *Osteoporos Int* 1995;5(4):262-70.
- Goh JCH, Low SL, Bose K. Effect of femoral rotation on bone mineral density measurements with dual energy x-ray absorptiometry. *Calcif Tissue Int* 1995;57(5):340-3.
- Greenspan SL, Maitland -Ramsey L, Meyers E. Classification of osteoporosis in the elderly is dependent on site-specific analysis. *Calcif Tissue Int* 1996;58(6):409-14.
- Hailey D, Marshall D, Sampietro -Colom L, Rico R, Granados A, Asua J, Jonsson E. International collaboration in health technology assessment: A study of technologies used in management of osteoporosis. *Health Policy* 1998;43(3):233-41.
- Hailey D, Sampietro-Colom L, Marshall D, Rico R, Granados A, Asua J. The effectiveness of bone density measurement and associated treatments for prevention of fractures. An international collaborative review. *Int J Technol Assess Health Care* 1998 Spring;14(2):237-54.
- Huang C, Ross PD, Wasnich RD. Short-term and long-term fracture prediction by bone mass measurements: a prospective study. *J Bone Miner Res* 1998 Jan;13(1):107-13.
- Iwamoto J, Takeda T, Otani T, Yabe Y. Age-related changes in cortical bone in women: metacarpal bone mass measurement study. *J Orthop Sci* 1998;3(2):90-4.
- Jergas M, Breitenseher M, Gluer CC, Black D, Lang P, Grampp S, Engelke K, Genant HK. Which vertebrae should be assessed using lateral dual-energy X-ray absorptiometry of the lumbar spine. *Osteoporos Int* 1995 May;5(3):196-204.
- Jergas M, Breitenseher M, Gluer CC, Yu W, Genant HK. Estimates of volumetric bone density from projectional measurements improve the discriminatory capability of dual X -ray absorptiometry. *J Bone Miner Res* 1995 Jul;10(7):1101-10.
- Jergas M, Genant HK. Spinal and femoral DXA for the assessment of spinal osteoporosis. *Calcif Tissue Int* 1997 Nov;61(5):351-7.
- Johansson C, Black D, Johnell O, Oden A, Mellstrom D. Bone mineral density is a predictor of survival. *Calcif Tissue Int* 1998 Sep;63(3):190 -6.
- Johnston CC Jr, Slemenda CW. Identification of patients with low bone mass by single photon absorptiometry and single -energy X-ray absorptiometry. *Am J Med* 1995 Feb 27;98(2A):37S-40S.
- Jones T, Davie MW. Bone mineral density at distal forearm can identify patients with osteoporosis at spine or femoral neck. *Br J Rheumatol* 1998 May;37(5):539-43.
- Kamei T, Aoyagi K, Matsumoto T, Ishida Y, Iwata K, Kumano H, Murakami Y, Kato Y. Age-related bone loss: relationship between age and regional bone mineral density. *Tohoku J Exp Med* 1999 Feb;187(2):141-7.
- Kang C, Speller R. The effect of region of interest selection on dual energy X-ray absorptiometry measurements of the calcaneus in 55 post-menopausal women. *Br J Radiol* 1999 Sep;72(861):864-71.
- Kleerekoper M, Nelson DA. Peripheral bone densitometry: an old friend revisited. *Trans Am Clin Climatol Assoc* 1998;109:62 -70; discussion 70 -2.
- Kullenberg RJ. In vitro study of the accuracy of bone mineral measuring devices in Norway and Sweden. *Acta Radiol* 1996 Mar;37(2):134-9.
- Liu G, Peacock M, Eilam O, Dorulla G, Braunstein E, Johnston CC. Effect of osteoarthritis in the lumbar spine and hip on bone mineral density and diagnosis of osteoporosis in elderly men and women. *Osteoporos Int* 1997;7(6):564-9.
- Lu PW, Cowell CT, Lloyd-Jones SA, Briody JN, Howman-Giles R. Volumetric bone mineral density in normal subjects, aged 5 -27 years. *J Clin Endocrinol Metab* 1996;81(4):1586-90.
- Lu Y, Mathur AK, Blunt BA, Gluer CC, Will AS, Fuerst TP, Jergas MD, Andriano KN, Cummings SR, Genant HK. Dual X-ray absorptiometry quality control: comparison of visual examination and process-control charts. *J Bone Miner Res* 1996 May;11(5):626-37.
- Lu Y, Ye K, Mathur AK, Hui S, Fuerst TP, Genant HK. Comparative calibration without a gold standard. *Stat Med* 1997 Aug 30;16(16):1889-905.

- Maggio D, McCloskey EV, Camilli L, Cenci S, Cherubini A, Kanis JA, Senin U. Short -term reproducibility of proximal femur bone mineral density in the elderly. *Calcif Tissue Int* 1998 Oct;63(4):296-9.
- Marshall DA, Sheldon TA, Jonsson E. Recommendations for the application of bone density measurement. What can you believe? *Int J Technol Assess Health Care* 1997 Summer;13(3):411-9.
- Martini G, Giovani S, Valenti R, Nuti R. Bone densitometry in the diagnostic approach of metabolic bone disease. *Ital J Miner Electrolyte Metab* 1997;11(3-4):81-7.
- Masud T, Jawed S, Doyle DV, Spector TD. A population study of the screening potential of assessment of trabecular pattern of the femoral neck (Singh index): the Chingford Study. *Br J Radiol* 1995 Apr;68(808):389-93.
- Mazess RB, Barden H. Bone density of the spine and femur in adult white females. *Calcif Tissue Int* 1999 Aug;65(2):91-9.
- Michael GJ, Henderson CJ. Monte Carlo modelling of an extended DXA technique. *Phys Med Biol* 1998 Sep;43(9):2583-96.
- Nguyen TV, Sambrook PN, Eisman JA. Sources of variability in bone mineral density measurements: Implications for study design and analysis of bone loss. *J Bone Miner Res* 1997;12(1):124-35.
- Njeh CF, Apple K, Temperton DH, Boivin CM. Radiological assessment of a new bone densitometer - The Lunar EXPERT. *Br J Radiol* 1996;69(820):335-40.
- Ongphiphadhanakul B, Rajatanavin R, Chailurkit L, Piaseu N, Teerarungskul K, Sirisriro R, Komindr S, Pauvilai G. Prediction of low bone mineral density in postmenopausal women by artificial neural network model compared to logistic regression model. *J Med Assoc Thai* 1997 Aug;80(8):508-15.
- Patel R, Blake GM, Herd RJ, Fogelman I. The effect of weight change on DXA scans in a 2-year trial of etidronate therapy. *Calcif Tissue Int* 1997 Nov;61(5):393-9.
- Pearson J, Dequeker J, Reeve J, Felsenberg D, Henley M, Bright J, Lunt M, Adams J, Diaz Curiel M, Galan F, et al. Dual X-ray absorptiometry of the proximal femur: normal European values standardized with the European Spine Phantom. *J Bone Miner Res* 1995 Feb;10(2):315-24.
- Peel NF, Eastell R. Comparison of rates of bone loss from the spine measured using two manufacturers' densitometers. *J Bone Miner Res* 1995 Nov;10(11):1796-801.
- Pocock NA, Noakes KA, Griffiths M, Bhalerao N, Sambrook PN, Eisman JA, Freund J. A comparison of longitudinal measurements in the spine and proximal femur using lunar and hologic instruments. *J Bone Miner Res* 1997;12(12):2113-8.
- Pocock NA, Noakes KA, Majerovic Y, Griffiths MR. Magnification error of femoral geometry using fan beam densitometers. *Calcif Tissue Int* 1997;60(1):8-10.
- Pors Nielsen S, Kolthoff N, Barenholdt O, Kristensen B, Abrahamsen B, Hermann AP, Brot C. Diagnosis of osteoporosis by planar bone densitometry: can body size be disregarded? *Br J Radiol* 1998 Sep;71(849):934-43.
- Rand T, Seidl G, Kainberger F, Resch A, Hittmair K, Schneider B, Gluer CC, Imhof H. Impact of spinal degenerative changes on the evaluation of bone mineral density with dual energy X-ray absorptiometry (DXA). *Calcif Tissue Int* 1997 May;60(5):430-3.
- Ravaud P, Reny JL, Giraudeau B, Porcher R, Dougados M, Roux C. Individual smallest detectable difference in bone mineral density measurements. *J Bone Miner Res* 1999 Aug;14(8):1449-56.
- Ravn P, Alexandersen P, Mollgaard A. Bone densitometry: A new, highly responsive region of interest in the distal forearm to monitor the effect of osteoporosis treatment. *Osteoporos Int* 1999;9(4):277-83.
- Ravn P, Overgaard K, Huang C, Ross PD, Green D, McClung M. Comparison of bone densitometry of the phalanges, distal forearm and axial skeleton in early postmenopausal women participating in the EPIC Study. *Osteoporos Int* 1996;6(4):308-13.
- Reginster JY, Janssen C, Deroisy R, Zegels B, Albert A, Franchimont P. Bone mineral density of the spine and the hip measured with dual energy X-ray absorptiometry: normal range and fracture threshold for western European (Belgian) postmenopausal females. *Clin Rheumatol* 1995 Jan;14(1):68-75.
- Revilla RM, Hernandez ER, Villa LF, Seco C, Sanchez-Atrio A, Rico H. Total body bone measurements in spinal osteoporosis by dual-energy X-ray absorptiometry. *Calcif Tissue Int* 1997 Jul;61(1):44-7.

- Riario-Sforza GG, Incorvaia C, Scazzoso A, Travisi T, Nitti F, Fumagalli M. Cut off values of bone mineral density defining postmenopausal women with bone fractures. *Ann Rheum Dis* 1995 Oct;54(10):807-10.
- Ringertz H, Marshall D, Johansson C, Johnell O, Kullenberg RJ, Ljunghall RJ, Saaf M, Wedel H, Hallerby N, Jonsson E, Marke LA, Werko L. Bone density measurement - A systematic review. *J Intern Med Suppl* 1997;241(739):1-60.
- Rozenberg S, Vandromme J, Aguillera A, Peretz A, Ham H. Clinical significance of heterogeneity of vertebral mineral density. *Maturitas* 1995 Feb;21(2):147-51.
- Sabin MA, Blake GM, MacLaughlin -Black SM, Fogelman I. The accuracy of volumetric bone density measurements in dual x -ray absorptiometry. *Calcif Tissue Int* 1995 Mar;56(3):210-4.
- Sekioka Y, Kushida K, Yamazaki K, Inoue T. Calcaneus bone mineral density using single x -ray absorptiometry in Japanese women. *Calcif Tissue Int* 1999 Aug;65(2):106-11.
- Simmons A, Barrington S, O'Doherty MJ, Coakley AJ. Dual energy X-ray absorptiometry normal reference range use within the UK and the effect of different normal ranges on the assessment of bone density. *Br J Radiol* 1995;68(812):903-9.
- Simmons A, Barrington SF, Archbold LJ, O'Doherty MJ, Coakley AJ. Assessment of changes in dual-energy X-ray absorptiometry performance following a system upgrade. *Nucl Med Commun* 1996;17(4):331-41.
- Simmons A, O'Doherty MJ, Barrington SF, Coakley AJ. A survey of dual-energy X-ray absorptiometry (DEXA) normal reference ranges used within the UK and their effect on patient classification. *Nucl Med Commun* 1995 Dec;16(12):1041-53.
- Simmons A, Simpson DE, O'Doherty MJ, Barrington S, Coakley AJ. The effects of standardization and reference values on patient classification for spine and femur dual-energy X-ray absorptiometry. *Osteoporos Int* 1997;7(3):200-6.
- Staron RB, Greenspan R, Miller TT, Bilezikian JP, Shane E, Haramati N. Computerized bone densitometric analysis: operator -dependent errors. *Radiology* 1999 May;211(2):467-70.
- Stewart A, Felsenberg D, Kalidis L, Reid DM. Vertebral fractures in men and women: How discriminative are bone mass measurements? *Br J Radiol* 1995;68(810):614-20.
- Stromsoe K, Hoiseth A, Alho A, Kok WL. Bending strength of the femur in relation to non -invasive bone mineral assessment. *J Biomech* 1995 Jul;28(7):857-61.
- Swezey RL, Draper D, Swezey AM. Bone densitometry: Comparison of dual energy X-ray absorptiometry to radiographic absorptiometry. *J Rheumatol* 1996;23(10):1734-8.
- Takada M, Engelke K, Hagiwara S, Grampp S, Jergas M, Gluer C, Genant HK. Assesment of osteoporosis: Comparison of radiographic absorptiometry of the phalanges and dual X -ray absorptiometry of the radius and lumbar spine. *Radiology* 1997;202(3):759 -63.
- Takada M, Grampp S, Ouyang X, Engelke K, Genant HK. A new trabecular region of interest for femoral dual X-ray absorptiometry: short-term precision, age-related bone loss, and fracture discrimination compared with current femoral regions of interest. *J Bone Miner Res* 1997 May;12(5):832-8.
- Tothill P, Avenell A. Anomalies in the measurement of changes in bone mineral density of the spine by dual-energy X-ray absorptiometry. *Calcif Tissue Int* 1998;63(2):126-33.
- Ulrich U, Browning M, Gaffney EV, Schoter KH, Chesnut CH 3rd. Implementation of an osteoporosis research program with a mobile dual -energy X-ray absorptiometry unit: the Montana/Wyoming experience. *Osteoporos Int* 1997;7(6):583-8.
- Varennna M, Sinigaglia L, Binelli L, Beltrametti P, Gallazzi M. Transient osteoporosis of the hip: a densitometric study. *Clin Rheumatol* 1996 Mar;15(2):169-73.
- Varney LF, Parker RA, Vincelette A, Greenspan SL. Classification of osteoporosis and osteopenia in postmenopausal women is dependent on site -specific analysis. *J Clin Densitom* 1999 Fall;2(3):275 -83.
- Vecht-Hart CM, Zwamborn AW, Peeters PH, Collette HJ. Prediction of peripheral fracture risk by quantitative microdensitometry. *Prev Med* 1997 Jan-Feb;26(1):86-91.
- Versluis RG, Vismans FJ, van de Ven CM, Springer MP, Petri H. Radiographic absorptiometry of the phalanges as a screening instrument to detect osteoporosis of the hip. *Acta Radiol* 1999 Jul;40(4):418-21.
- Yu W, Gluer CC, Fuerst T, Grampp S, Li J, Lu Y, Genant HK. Influence of degenerative joint disease on spinal bone mineral measurements in postmenopausal women. *Calcif Tissue Int* 1995 Sep;57(3):169-74.

## MRI

Fransson A, Grampp S, Imhof H. Effects of trabecular bone on marrow relaxation in the tibia. *Magn Reson Imaging* 1999;17(1):69-82.

Genant HK, Majumdar S. High-resolution magnetic resonance imaging of trabecular bone structure. *Osteoporos Int* 1997;7 Suppl 3:S135-9.

Hwang SN, Wehrli FW, Williams JL. Probability-based structural parameters from three-dimensional nuclear magnetic resonance images as predictors of trabecular bone strength. *Med Phys* 1997 Aug;24(8):1255-61.

Link TM, Majumdar S, Augat P, Lin JC, Newitt D, Lane NE, Genant HK. Proximal femur: assessment for osteoporosis with T2\* decay characteristics at MR imaging. *Radiology* 1998 Nov;209(2):531-6.

Link TM, Majumdar S, Augat P, Lin JC, Newitt D, Lu Y, Lane NE, Genant HK. In vivo high resolution MRI of the calcaneus: differences in trabecular structure in osteoporosis patients. *J Bone Miner Res* 1998 Jul;13(7):1175-82.

Majumdar S. A review of magnetic resonance (MR) imaging of trabecular bone micro-architecture: contribution to the prediction of biomechanical properties and fracture prevalence. *Technol Health Care* 1998 Dec;6(5-6):321-7.

Schick F, Seitz D, Machann J, Lutz O, Claussen CD. Magnetic resonance bone densitometry. Comparison of different methods based on susceptibility. *Invest Radiol* 1995 Apr;30(4):254-65.

Selby K, Majumdar S, Newitt DC, Genant HK. Investigation of MR decay rates in microphantom models of trabecular bone. *J Magn Reson Imaging* 1996 May-Jun;6(3):549-59.

Traber F, Block W, Layer G, Braucker G, Gieseke J, Kretzer S, Hasan I, Schild HH. Determination of 1H relaxation times of water in human bone marrow by fat-suppressed turbo spin echo in comparison to MR spectroscopic methods. *J Magn Reson Imaging* 1996 May-Jun;6(3):541-8.

Wehrli FW, Ford JC, Haddad JG. Osteoporosis: clinical assessment with quantitative MR imaging in diagnosis. *Radiology* 1995 Sep;196(3):631-41.

Wehrli FW, Hwang SN, Mo J, Song HK, Ford JC, Haddad JG. Cancellous bone volume and structure in the forearm: Noninvasive assessment with MR microimaging and image processing. *Radiology* 1998;206(2):347-57.

Yamato M, Nishimura G, Kuramochi E, Saiki N, Fujioka M. MR appearance at different ages of osteoporotic compression fractures of the vertebrae. *Radiat Med* 1998 Sep-Oct;16(5):329-34.

### Spine Morphometry

Genant HK. Assessment of vertebral fractures in osteoporosis research. *J Rheumatol* 1997 Jun;24(6):1212-4.

Genant HK, Jergas M, Palermo L, Nevitt M, Valentin RS, Black D, Cummings SR. Comparison of semiquantitative visual and quantitative morphometric assessment of prevalent and incident vertebral fractures in osteoporosis The Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1996 Jul;11(7):984-96.

Grey C, Young R, Bearcroft PWP, Compston JE. Vertebral deformity in the thoracic spine in post-menopausal women: Value of lumbar spine bone density. *Br J Radiol* 1996;69(818):137-42.

Harvey SB, Hutchison KM, Rennie EC, Hukins DW, Reid DM. Comparison of the precision of two vertebral morphometry programs for the lunar EXPERT-XL imaging densitometer. *Br J Radiol* 1998 Apr;71(844):388-98.

Kiel D. Assessing vertebral fractures. National Osteoporosis Foundation Working Group on Vertebral Fractures. *J Bone Miner Res* 1995 Apr;10(4):518-23. Published erratum appears in *J Bone Miner Res* 1995 Oct;10(10):1605.

Lang T, Takada M, Gee R, Wu C, Li J, Hayashi-Clark C, Schoen S, March V, Genant HK. A preliminary evaluation of the lunar expert -XL for bone densitometry and vertebral morphometry. *J Bone Miner Res* 1997 Jan;12(1):136-43.

Lazenby RA. Second metacarpal cross-sectional geometry: Rehabilitating a circular argument. *Am J Hum Biol* 1998;10(6):747-56.

Lems WF, Jahangier ZN, Raymakers JA, Jacobs JW, Bijlsma JW. Methods to score vertebral deformities in patients with rheumatoid arthritis. *Br J Rheumatol* 1997 Feb;36(2):220-4.

Lundon KM, Li AM, Bibershtein S. Interrater and intrarater reliability in the measurement of kyphosis in postmenopausal women with osteoporosis. *Spine* 1998 Sep 15;23(18):1978-85.

Melton LJ 3rd, Egan KS, O'Fallon WM, Riggs BL. Influence of fracture criteria on the outcome of a randomized trial of therapy. *Osteoporos Int* 1998;8(2):184-91.

O'Neill TW, Silman AJ. Definition and diagnosis of vertebral fracture. *J Rheumatol* 1997 Jun;24(6):1208-11.

Ouyang X, Majumdar S, Link TM, Lu Y, Augat P, Lin J, Newitt D, Genant HK. Morphometric texture analysis of spinal trabecular bone structure assessed using orthogonal radiographic projections. *Med Phys* 1998 Oct;25(10):2037-45.

Pak CY, Ho A, Poindexter J, Peterson R, Sakhaei K. Quantitation of incident spinal fractures: comparison of visual detection with quantitative morphometry. *Bone* 1996 Apr;18(4):349-53.

Rea JA, Chen MB, Li J, Potts E, Fan B, Blake GM, Steiger P, Smith IG, Genant HK, Fogelman I. Morphometric X-ray absorptiometry and morphometric radiography of the spine: A comparison of analysis precision in normal and osteoporotic subjects. *Osteoporos Int* 1999;9(6):536-44.

Revilla M, Fraile E, Aguado F, Hernandez ER, Villa LF, Rico H. Vertebral and metacarpal morphometry as indicators of nutritional improvement. *Clin Rheumatol* 1997 May;16(3):279-83.

Rosol MS, Cohen GL, Halpern EF, Chew FS, Kattapuram SV, Palmer WE, Dupuy DE, Rosenthal DI. Vertebral morphometry derived from digital images. *AJR Am J Roentgenol* 1996 Dec;167(6):1545-9.

Ross PD, Huang C, Davis JW, Wasnich RD. Vertebral dimension measurements improve prediction of vertebral fracture incidence. *Bone* 1995 Apr;16(4 Suppl):257S-262S.

Ross PD, Huang C, Karpf D, Lydick E, Coel M, Hirsch L, Wasnich RD. Blinded reading of radiographs increases the frequency of errors in vertebral fracture detection. *J Bone Miner Res* 1996 Nov;11(11):1793-800.

Smyth PP, Taylor CJ, Adams JE. Vertebral shape: Automatic measurement with active shape models. *Radiology* 1999;211(2):571-8.

Szulc P, Marchand F, Felsenberg D, Delmas PD. Prevalence of vertebral deformities according to the diagnostic method. *Rev Rhum Engl Ed* 1998 Apr;65(4):245-56.

Takada M, Wu CY, Lang TF, Genant HK. Vertebral fracture assessment using the lateral scoutview of computed tomography in comparison with radiographs. *Osteoporos Int* 1998;8(3):197-203.

van Bodegom JW, Kuiper JW, van Rijn RR, van Kuijk C, Zwamborn AW, Grashuis JL. Vertebral dimensions: influence of X-ray technique and patient size on measurements. *Calcif Tissue Int* 1998 Mar;62(3):214-8.

- Weber K, Lunt M, Gowin W, Lauermann T, Armbrecht G, Wieland E, Leb G, O'Neill T, Felsenberg D, Reeve J. Measurement imprecision in vertebral morphometry of spinal radiographs obtained in the European Prospective Osteoporosis Study: Consequences for the identification of prevalent and incident deformities. *Br J Radiol* 1999 Oct;72(862):957-66.
- Wu CY, Li J, Jergas M, Genant HK. Comparison of semiquantitative and quantitative techniques for the assessment of prevalent and incident vertebral fractures. *Osteoporos Int* 1995;5(5):354-70.
- Gnudi S, Gualtieri G, Malavolta N. Simultaneous densitometry and quantitative bone sonography in the estimation of osteoporotic fracture risk. *Br J Radiol* 1998 Jun;71(846):625-9.
- Gnudi S, Malavolta N, Ripamonti C, Caudarella R. Ultrasound transmission velocity at the patella: Normative data in the Italian female population. *Ital J Miner Electrolyte Metab* 1996;10(3-4):145-8.
- Graafmans WC, Lingen Av, Ooms ME, Bezemer PD, Lips P. Ultrasound measurements in the calcaneus: Precision and its relation with bone mineral density of the heel, hip, and lumbar spine. *Bone* 1996;19(2):97-100.
- Gregg EW, Kriska AM, Salamone LM, Roberts MM, Anderson SJ, Ferrell RE, Kuller LH, Cauley JA. The epidemiology of quantitative ultrasound: a review of the relationships with bone mass, osteoporosis and fracture risk. *Osteoporos Int* 1997;7(2):89-99.
- Hadj P, Hars O, Bock K, Albert U, Beckmann MW, Emons G, Schulz K. Age changes of calcaneal ultrasonometry in healthy German women. *Calcif Tissue Int* 1999 Aug;65(2):117-20.
- Hadj P, Hars O, Wuster C, Bock K, Alberts US, Bohnet HG, Emons G, Schulz KD. Stiffness index identifies patients with osteoporotic fractures better than ultrasound velocity or attenuation alone. *Maturitas* 1999 Mar 15;31(3):221-6.
- Hans D, Srivastav SK, Singal C, Barkmann R, Njeh CF, Kantorovich E, Gluer CC, Genant HK. Does combining the results from multiple bone sites measured by a new quantitative ultrasound device improve discrimination of hip fracture? *J Bone Miner Res* 1999 Apr;14(4):644-51.
- Hausler KD, Rich PA, Barry EB. Water bath and contact methods in ultrasonic evaluation of bone. *Calcif Tissue Int* 1997;61(1):26-9.
- Heaney RP, Avioli LV, Chesnut CH 3rd, Lappe J, Recker RR, Brandenburger GH. Ultrasound velocity, through bone predicts incident vertebral deformity. *J Bone Miner Res* 1995 Mar;10(3):341-5.
- Hodgkinson R, Njeh CF, Whitehead MA, Langton CM. The non-linear relationship between BUA and

- porosity in cancellous bone. *Phys Med Biol* 1996 Nov;41(11):2411-20.
- Howard GM, Nguyen TV, Pocock NA, Kelly PJ, Eisman JA. Influence of handedness on calcaneal ultrasound: implications for assessment of osteoporosis and study design. *Osteoporos Int* 1997;7(3):190-4.
- Johansen A, Evans W, Stone M. Bone assessment in elderly women: What does a low bone ultrasound result tell us about bone mineral density? *Arch Gerontol Geriatr* 1999;28(3):239-46.
- Johansen A, Stone MD. The effect of ankle oedema on bone ultrasound assessment at the heel. *Osteoporos Int* 1997;7(1):44-7.
- Joly J, Westhovens R, Borghs H, Peeters H, Tirry J, Nijs J, Dequeker J. Reference curve and diagnostic sensitivity for a new ultrasound device for the phalanges [correction of phalanxes], the DBMsonic 1200, in Belgian women. *Osteoporos Int* 1999;9(4):284-9.
- Jorgensen HL, Hassager C. Improved reproducibility of broadband ultrasound attenuation of the os calcis by using a specific region of interest. *Bone* 1997 Jul;21(1):109-12.
- Kann P, Schulz U, Klaus D, Piepkorn B, Beyer J. In-vivo investigation of material quality of bone tissue by measuring apparent phalangeal ultrasound transmission velocity. *Clin Rheumatol* 1995 Jan;14(1):26-34.
- Kolthoff N, Eiken P, Barenholdt O, Nielsen SP. Ultrasound measurements of the os calcis. Side differences and prediction of bone density in 39 persons. *Acta Orthop Scand* 1995;66(3):278-82.
- Krieg MA, Thiebaud D, Burckhardt P. Quantitative ultrasound of bone in institutionalized elderly women: a cross-sectional and longitudinal study. *Osteoporos Int* 1996;6(3):189-95.
- Langton CM. ZSD: a universal parameter for precision in the ultrasonic assessment of osteoporosis. *Physiol Meas* 1997 Feb;18(1):67-72.
- Langton CM, Langton DK. Male and female normative data for ultrasound measurement of the calcaneus within the UK adult population. *Br J Radiol* 1997 Jun;70(834):580-5.
- Langton CM, Njeh CF. Acoustic and ultrasonic tissue characterization--assessment of osteoporosis. *Proc Inst Mech Eng [H]* 1999;213(3):261-9.
- Langton CM, Njeh CF, Hodgkinson R, Currey JD. Prediction of mechanical properties of the human calcaneus by broadband ultrasonic attenuation. *Bone* 1996 Jun;18(6):495-503.
- Laugier P, Fournier B, Berger G. Ultrasound parametric imaging of the calcaneus: In vivo results with a new device. *Calcif Tissue Int* 1996;58(5):326-31.
- Lee SC, Coan BS, Bouxsein ML. Tibial ultrasound velocity measured in situ predicts the material properties of tibial cortical bone. *Bone* 1997 Jul;21(1):119-25.
- Lefebvre F, Berger G, Laugier P. Automatic detection of the boundary of the calcaneus from ultrasound parametric images using an active contour model; clinical assessment. *IEEE Trans Med Imaging* 1998 Feb;17(1):45-52.
- Leong KH. Ultrasound of the tibia: Precision error, left versus right sides and correlation with bone mineral density. *Ann Acad Med Singapore* 1997 Nov;26(6):747-9.
- Lochmuller EM, Eckstein F, Zeller JB, Steldinger R, Putz R. Comparison of quantitative ultrasound in the human calcaneus with mechanical failure loads of the hip and spine. *Ultrasound Obstet Gynecol* 1999 Aug;14(2):125-33.
- Lowet G, Van der Perre G. Ultrasound velocity measurement in long bones: Measurement method and simulation of ultrasound wave propagation. *J Biomech* 1996;29(10):1255-62.
- Mele R, Masci G, Ventura V, De Aloysio D, Bicocchi M, Cadossi R. Three-year longitudinal study with quantitative ultrasound at the hand phalanx in a female population. *Osteoporos Int* 1997;7(6):550-7.
- Messenger N, Scott S, McNaught-Davis P. Can the effects of exercise on bone quality be detected using the CUBA clinical ultrasound system? *Br J Sports Med* 1998 Jun;32(2):162-6.
- Mikhail MB, Flaster E, Aloia JF. Stiffness in discrimination of patients with vertebral fractures. *Osteoporos Int* 1999;9(1):24-8.
- Moris M, Peretz A, Tjeka R, Negaban N, Wouters M, Bergmann P. Quantitative ultrasound bone measurements: Normal values and comparison with bone mineral density by dual X-ray absorptiometry. *Calcif Tissue Int* 1995;57(1):6-10.
- Naganathan V, March L, Hunter D, Pocock NA, Markovey J, Sambrook PN. Quantitative heel ultrasound as a predictor for osteoporosis. *Med J Aust*

- 1999 Sep 20;171(6):297-300. Comment in: Med J Aust 1999 Sep 20;171(6):295-6.
- Nicholson PH, Lowet G, Langton CM, Dequeker J, Van der Perre G. A comparison of time-domain and frequency-domain approaches to ultrasonic velocity measurement in trabecular bone. *Phys Med Biol* 1996 Nov;41(11):2421-35.
- Njeh CF, Hodgkinson R, Currey JD, Langton CM. Orthogonal relationships between ultrasonic velocity and material properties of bovine cancellous bone. *Med Eng Phys* 1996 Jul;18(5):373-81.
- Njeh CF, Langton CM. The effect of cortical endplates on ultrasound velocity through the calcaneus: An in vitro study. *Br J Radiol* 1997 May;70(833):504-10.
- Njeh CF, Richards A, Boivin CM, Hans D, Fuerst T, Genant HV. Factors influencing the speed of sound through the proximal phalanges. *J Clin Densitom* 1999 Fall;2(3):241-9.
- Nogata F, Matsui K, Kagechika K, Sueyoshi Y, Tomita K. Estimation of in vivo bone mineral density (BMD) and shape characterization for diagnosing osteoporosis by ultrasonic inspection. *J Biomech Eng* 1999 Jun;121(3):298-303.
- Orgee JM, Foster H, McCloskey EV, Khan S, Coombes G, Kanis JA. A precise method for the assessment of tibial ultrasound velocity. *Osteoporos Int* 1996;6(1):1-7.
- Pfeifer M, Pollaehne W, Minne HW. Ultrasound analyses of the calcaneus predict relative risk of the presence of at least one vertebral fracture and reflect different physical qualities of bone in different regions of the skeleton. *Horm Metab Res* 1997 Feb;29(2):76-9.
- Pluijm SM, Graafmans WC, Bouter LM, Lips P. Ultrasound measurements for the prediction of osteoporotic fractures in elderly people. *Osteoporos Int* 1999;9(6):550-6.
- Pluskiewicz W, Drozdowska B. Ultrasonic measurement of the calcaneus in Polish normal and osteoporotic women and men. *Bone* 1999 Jun;24(6):611-7.
- Pluskiewicz W, Drozdowska B. Ultrasound measurements of proximal phalanges in Polish early postmenopausal women. *Osteoporos Int* 1998;8(6):578-83.
- Pocock NA, Noakes KA, Howard GM, Nguyen TV, Kelly PJ, Sambrook PN, Eisman JA, Freund J. Screening for osteoporosis: what is the role of heel ultrasound? *Med J Aust* 1996 Mar 18;164(6):367-70. Comment in: *Med J Aust* 1996 Aug 5;165(3):174-5 and *Med J Aust* 1996 Aug 5;165(3):175.
- Prins SH, Lauritzen J, Jorgensen HL, Simonsen L, Hassager C. Hip fracture discrimination by imaging ultrasound measurements of the calcaneus. *Clin Physiol* 1999 Sep;19(5):419-25.
- Reginster JY, Dethor M, Pirenne H, Dewe W, Albert A. Reproducibility and diagnostic sensitivity of ultrasonometry of the phalanges to assess osteoporosis. *Int J Gynaecol Obstet* 1998 Oct;63(1):21-8.
- Rosenthal L. Selective supplementation of calcaneal ultrasound densitometry with dual-energy x-ray absorptiometry of the spine and femur for population screening. *Can Assoc Radiol J* 1997 Feb;48(1):38-41.
- Rosenthal L, Caminis J, Tenehouse A. Calcaneal ultrasonometry: response to treatment in comparison with dual x-ray absorptiometry measurements of the lumbar spine and femur. *Calcif Tissue Int* 1999 Mar;64(3):200-4.
- Roux C, Fournier B, Laugier P, Chappard C, Kolta S, Dougados M, Berger G. Broadband ultrasound attenuation imaging: a new imaging method in osteoporosis. *J Bone Miner Res* 1996 Aug;11(8):1112-8.
- Sakata S, Kushida K, Yamazaki K, Inoue T. Ultrasound bone densitometry of os calcis in elderly Japanese women with hip fracture. *Calcif Tissue Int* 1997;60(1):2-7.
- Serpe L, Rho JY. The nonlinear transition period of broadband ultrasound attenuation as bone density varies. *J Biomech* 1996;29(7):963-6.
- Sili Scavalli A, Marini M, Spadaro A, Messineo D, Cremona A, Sensi F, Riccieri V, Taccari E. Ultrasound transmission velocity of the proximal phalanxes of the non-dominant hand in the study of osteoporosis. *Clin Rheumatol* 1997 Jun;16(4):396-403.
- Soballa T, Wuster C, Schlegel J, Cadossi R, Isani R, Battista S, Heilmann P, Ziegler R. Ultrasound transmission speed and ultrasound bone profile score (UBPS) of the phalanges in normal women and women with osteoporosis. *Horm Metab Res* 1998 Aug;30(8):536-41.
- Stegman MR, Heaney RP, Travers-Gustafson D, Leist J. Cortical ultrasound velocity as an indicator of bone status. *Osteoporos Int* 1995;5(5):349-53.

- Strelitzki R, Clarke AJ, Truscott JG, Evans JA. Ultrasonic measurement: an evaluation of three heel bone scanners compared with a bench-top system. *Osteoporos Int* 1996;6(6):471-9.
- Strelitzki R, Evans JA. An investigation of the measurement of broadband ultrasonic attenuation in trabecular bone. *Ultrasonics* 1996 Dec;34(8):785-91.
- Strelitzki R, Evans JA. On the measurement of the velocity of ultrasound in the os calcis using short pulses. *Eur J Ultrasound* 1996;4(3):205-13.
- Strelitzki R, Nicholson PH, Evans JA. Low-frequency ultrasonic velocity measurements in human calcaneal trabecular bone. *Physiol Meas* 1997 May;18(2):119-27.
- Strelitzki R, Nicholson PH, Paech V. A model for ultrasonic scattering in cancellous bone based on velocity fluctuations in a binary mixture. *Physiol Meas* 1998 May;19(2):189-96.
- Strelitzki R, Truscott JG. Broadband ultrasound attenuation in the os calcis and its dependence on the receiver aperture size. *Med Eng Phys* 1998;20(2):132-8.
- Thompson P, Taylor J, Fisher A, Oliver R. Quantitative heel ultrasound in 3180 women between 45 and 75 years of age: compliance, normal ranges and relationship to fracture history. *Osteoporos Int* 1998;8(3):211-4.
- Tirafili C, Romagnoli E, Pellegrino C, Costa G, Ombricolo E, Marciano M, Caravella P, Rosso R, Minisola S, Mazzuoli GF. Age - and menopause-related changes in speed of sound and ultrasound attenuation of the os calcis in a healthy Italian female population. *Aging Clin Exp Res* 1997;9(6):404-7.
- Turner CH, Peacock M, Timmerman L, Neal JM, Johnson CC Jr. Calcaneal ultrasonic measurements discriminate hip fracture independently of bone mass. *Osteoporos Int* 1995 Mar;5(2):130-5.
- van Daele PL, Burger H, De Laet CE, Hofman A, Grobbee DE, Birkenhager JC, Pols HA. Longitudinal changes in ultrasound parameters of the calcaneus. *Osteoporos Int* 1997;7(3):207-12.
- Varila E, Sievanen H, Vuori I, Oksanen H, Punnonen R. Limited value of ultrasound measured skin thickness in predicting bone mineral density in peri - and postmenopausal women. *Maturitas* 1995;21(1):45-9.
- Ventura V, Mauloni M, Mura M, Paltrinieri F, de Aloysio D. Ultrasound velocity changes at the proximal phalanxes of the hand in pre -, peri- and postmenopausal women. *Osteoporos Int* 1996;6(5):368-75.
- Wang SF, Chang CY, Shih C, Teng MM. Evaluation of tibial cortical bone by ultrasound velocity in oriental females. *Br J Radiol* 1997 Nov;70(839):1126-30.
- Wear KA, Garra BS. Assessment of bone density using ultrasonic backscatter. *Ultrasound Med Biol* 1998;24(5):689-95.
- Wu CY, Gluer CC, Jergas M, Bendavid E, Genant HK. The impact of bone size on broadband ultrasound attenuation. *Bone* 1995 Jan;16(1):137-41.
- Yamamoto A, Kishimoto H, Katagiri H. Clinical and experimental studies of quantitative ultrasound measurement in the os calcis: Prevalence and incidence of vertebral fracture. *J Orthop Sci* 1997;2(2):64-74.
- Yeap SS, Pearson D, Cawte SA, Hosking DJ. The relationship between bone mineral density and ultrasound in postmenopausal and osteoporotic women. *Osteoporos Int* 1998;8(2):141-6.
- Zerwekh JE, Antich PP, Mehta S, Sakhaee K, Gottschalk F, Pak CY. Reflection ultrasound velocities and histomorphometric and connectivity analyses: correlations and effect of slow-release sodium fluoride. *J Bone Miner Res* 1997 Dec;12(12):2068-75.

## Therapy (Treatment and Prevention)

### General

Adami S, Ortolani S, Wasnich R. Evaluation of therapeutic efficacy in osteoporosis. *Osteoporos Int* 1995 Mar;5(2):75-8.

Castelo-Branco C, Pons F, Vicente JJ, Sanjuan A, Vanrell JA. Preventing postmenopausal bone loss with ossein-hydroxyapatite compounds. Results of a two-year, prospective trial. *J Reprod Med* 1999 Jul;44(7):601-5.

Dawson-Hughes B. Vitamin D and calcium: recommended intake for bone health. *Osteoporos Int* 1998;8 Suppl 2:S30-4.

Eastell R. Treatment of postmenopausal osteoporosis. *N Engl J Med* 1998 Mar 12;338(11):736-46. Comment in: *N Engl J Med* 1998 Jul 16;339(3):202; discussion 203.

Fluoride and bone: a second look. No use in osteoporosis. *Prescribe Int* 1998 Aug;7(36):110-1.

Wasnich RD, Davis JW, He YF, Petrovich H, Ross PD. A randomized, double-masked, placebo-controlled trial of chlorthalidone and bone loss in elderly women. *Osteoporos Int* 1995;5(4):247-51.

### Clinical Trial Methodology

Cranney A, Tugwell P, Cummings S, Sambrook P, Adachi J, Silman AJ, Gillespie WJ, Felson DT, Shea B, Wells G. Osteoporosis clinical trials endpoints: candidate variables and clinimetric properties. *J Rheumatol* 1997 Jun;24(6):1222-9.

Cranney A, Tugwell P, Shea B, Wells G. Implications of OMERACT outcomes in arthritis and osteoporosis for cochrane metaanalysis. *J Rheumatol* 1997 Jun;24(6):1206-7.

Cranney A, Welch V, Tugwell P, Wells G, Adachi JD, McGowan J, Shea B. Responsiveness of endpoints in osteoporosis clinical trials --an update. *J Rheumatol* 1999 Jan;26(1):222-8.

Gullberg B. Design and statistical problems in prevention. *Scand J Rheumatol Suppl* 1996;103:108-10.

Oppenheimer L, Kher U. The impact of measurement error on the comparison of two treatments using a responder analysis. *Stat Med* 1999 Aug 30;18(16):2177-88.

Purser JL, Pieper CF, Duncan PW, Gold DT, McConnell ES, Schenkman MS, Morey MC, Branch LG. Reliability of physical performance tests in four different randomized clinical trials. *Arch Phys Med Rehabil* 1999;80(5):557-61.

Seeman E. Osteoporosis: trials and tribulations. *Am J Med* 1997 Aug 18;103(2A):74S-87S; discussion 87S-89S.

Todd S. Sequential designs for monitoring two endpoints in a clinical trial. *Drug Inf J* 1999;33(2):417-26.

Torgerson DJ, Ryan M, Ratcliffe J. Economics in sample size determination for clinical trials. *QJM* 1995 Jul;88(7):517-21.

Townsend J, Buxton M. Cost effectiveness scenario analysis for a proposed trial of hormone replacement therapy. *Health Policy* 1997;39(3):181-94.

Wells G, Cranney A, Shea B, Tugwell P. Responsiveness of endpoints in osteoporosis clinical trials. *J Rheumatol* 1997 Jun;24(6):1230 -3.

Windeler J, Lange S. Events per person year --a dubious concept. *BMJ* 1995 Feb 18;310(6977):454-6. Comment in: *BMJ* 1995 Jun 3;310(6992):1469; *BMJ* 1995 Jun 3;310(6992):1469-70 and *BMJ* 1995 Jun 3;310(6992):1470.

### Combination Therapies

Akesson K, Lau KH, Baylink DJ. Rationale for active vitamin D analog therapy in senile osteoporosis. *Calcif Tissue Int* 1997 Jan;60(1):100 -5.

Bolanca S, Korsic M, Dekanic D, Cvijetic S. Effects of combined treatment with etidronate, nandrolone-decanoate and calcium on bone mineral density in postmenopausal women. *Acta Med Croatica* 1998;52(3):159-63.

Castelo-Branco C, Martinez de Osaba MJ, Pons F, Casals E, Sanjuan A, Vicente JJ, Vanrell JA. Ossein-hydroxyapatite compounds for preventing postmenopausal bone loss. Coadjuvant use with hormone replacement therapy. *J Reprod Med* 1999 Mar;44(3):241-6.

Cosman F, Nieves J, Woelfert L, Shen V, Lindsay R. Alendronate does not block the anabolic effect of PTH in postmenopausal osteoporotic women. *J Bone Miner Res* 1998 Jun;13(6):1051 -5.

Davis JW, Ross PD, Johnson NE, Wasnich RD. Estrogen and calcium supplement use among Japanese-American women: effects upon bone loss when used singly and in combination. *Bone* 1995 Oct;17(4):369-73.

Erdtsieck RJ, Pols HA, Valk NK, van Ouwerkerk BM, Lamberts SW, Mulder P, Birkenhager JC. Treatment of post-menopausal osteoporosis with a combination of growth hormone and pamidronate: a placebo controlled trial. *Clin Endocrinol (Oxf)* 1995 Nov;43(5):557-65.

Frediani B, Allegri A, Bisogno S, Marcolongo R. Effects of combined treatment with calcitriol plus alendronate on bone mass and bone turnover in postmenopausal osteoporosis: Two years of continuous treatment. *Clin Drug Invest* 1998;15(3):235-44.

Gonnelli S, Cepollaro C, Montomoli M, Gennari L, Montagnani A, Palmieri R, Gennari C. Treatment of post-menopausal osteoporosis with recombinant human growth hormone and salmon calcitonin: a placebo controlled study. *Clin Endocrinol (Oxf)* 1997 Jan;46(1):55-61.

Gorai I, Chaki O, Taguchi Y, Nakayama M, Osada H, Suzuki N, Katagiri N, Misu Y, Minaguchi H. Early postmenopausal bone loss is prevented by estrogen and partially by 1alpha -OH-vitamin D3: therapeutic effects of estrogen and/or 1alpha-OH-vitamin D3. *Calcif Tissue Int* 1999 Jul;65(1):16 -22.

Hodsman AB, Fraher LJ, Watson PH, Ostbye T, Stitt LW, Adachi JD, Taves DH, Drost D. A randomized controlled trial to compare the efficacy of cyclical parathyroid hormone versus cyclical parathyroid hormone and sequential calcitonin to improve bone mass in postmenopausal women with osteoporosis. *J Clin Endocrinol Metab* 1997 Feb;82(2):620 -8.

Holloway L, Kohlmeier L, Kent K, Marcus R. Skeletal effects of cyclic recombinant human growth hormone and salmon calcitonin in osteopenic postmenopausal women. *J Clin Endocrinol Metab* 1997;82(4):1111-7.

Komulainen M, Kroger H, Tuppurainen MT, Heikkinen AM, Alhava E, Honkanen R, Jurvelin J, Saarikoski S. Prevention of femoral and lumbar bone loss with hormone replacement therapy and vitamin D3 in early postmenopausal women: a population-based 5-year randomized trial. *J Clin Endocrinol Metab* 1999 Feb;84(2):546-52.

Komulainen M, Tuppurainen MT, Kroger H, Heikkinen AM, Punttila E, Alhava E, Honkanen R, Saarikoski S. Vitamin D and HRT: no benefit additional to that of HRT alone in prevention of bone loss in early postmenopausal women. A 2.5 -year randomized placebo-controlled study. *Osteoporos Int* 1997;7(2):126-32.

Komulainen MH, Kroger H, Tuppurainen MT, Heikkinen AM, Alhava E, Honkanen R, Saarikoski S. HRT and Vit D in prevention of non-vertebral fractures in postmenopausal women; A 5 year randomized trial. *Maturitas* 1998;31(1):45 -54.

Lems WF, Jacobs JW, Bijlsma JW, van Veen GJ, Houben HH, Haanen HC, Gerrits MI, van Rijn HJ. Is addition of sodium fluoride to cyclical etidronate beneficial in the treatment of corticosteroid induced osteoporosis? *Ann Rheum Dis* 1997 Jun;56(6):357-63.

Lindsay R, Cosman F, Lobo RA, Walsh BW, Harris ST, Reagan JE, Liss CL, Melton ME, Byrnes CA. Addition of alendronate to ongoing hormone replacement therapy in the treatment of osteoporosis: a randomized, controlled clinical trial. *J Clin Endocrinol Metab* 1999 Sep;84(9):3076-81.

Masud T, Mulcahy B, Thompson AV, Donnelly S, Keen RW, Doyle DV, Spector TD. Effects of cyclical etidronate combined with calcitriol versus cyclical etidronate alone on spine and femoral neck bone mineral density in postmenopausal osteoporotic women. *Ann Rheum Dis* 1998 Jun;57(6):346 -9.

Montessori ML, Scheele WH, Netelenbos JC, Kerkhoff JF, Bakker K. The use of etidronate and calcium versus calcium alone in the treatment of

postmenopausal osteopenia: results of three years of treatment. *Osteoporos Int* 1997;7(1):52-8.

Nozaki M, Hashimoto K, Inoue Y, Ogata R, Okuma A, Nakano H. Treatment of bone loss in oophorectomized women with a combination of ipriflavone and conjugated equine estrogen. *Int J Gynaecol Obstet* 1998 Jul;62(1):69-75.

Prince R, Devine A, Dick I, Criddle A, Kerr D, Kent N, Price R, Randell A. The effects of calcium supplementation (milk powder or tablets) and exercise on bone density in postmenopausal women. *J Bone Miner Res* 1995 Jul;10(7):1068-75.

Reginster JY, Asnusdei D, Gennari C, Kicovic PM. Association of tibolone and fluoride displays a pronounced effect on bone mineral density in postmenopausal osteoporotic women. *Gynecol Endocrinol* 1999;13(5):361-8.

Shiota E. Evaluation of the drug therapy for established osteoporosis by dual-energy x-ray absorptiometry. *Fukuoka Igaku Zasshi* 1998 Jun;89(6):172-8.

Suleiman S, Nelson M, Li F, Buxton -Thomas M, Moniz C. Effect of calcium intake and physical activity level on bone mass and turnover in healthy, white, postmenopausal women. *Am J Clin Nutr* 1997 Oct;66(4):937-43.

Ushiroyama T, Okamura S, Ikeda A, Ueki M. Efficacy of ipriflavone and 1 alpha vitamin D therapy for the cessation of vertebral bone loss. *Int J Gynaecol Obstet* 1995 Mar;48(3):283-8.

### Comparison of Therapies

Adami S, Passeri M, Ortolani S, Broggini M, Carratelli L, Caruso I, Gandolini G, Gnessi L, Laurenzi M, Lombardi A, et al. Effects of oral alendronate and intranasal salmon calcitonin on bone mass and biochemical markers of bone turnover in postmenopausal women with osteoporosis. *Bone* 1995 Oct;17(4):383-90.

Agnusdei D, Gennari C, Bufalino L. Prevention of early postmenopausal bone loss using low doses of conjugated estrogens and the non-hormonal, bone-active drug ipriflavone. *Osteoporos Int* 1995;5(6):462-6.

Barrett-Connor E, Wenger NK, Grady D, Mosca L, Collins P, Kornitzer M, Cox DA, Moscarelli E, Anderson PW. Hormone and nonhormone therapy for the maintenance of postmenopausal health: the need for randomized controlled trials of estrogen and raloxifene. *J Womens Health* 1998 Sep;7(7):839-47.

Cardona JM, Pastor E. Calcitonin versus etidronate for the treatment of postmenopausal osteoporosis: a meta-analysis of published clinical trials. *Osteoporos Int* 1997;7(3):165-74.

Cecchettin M, Bellometti S, Cremonesi G, Solimeno LP, Torri G. Metabolic and bone effects after administration of ipriflavone and salmon calcitonin in postmenopausal osteoporosis. *Biomed Pharmacother* 1995;49(10):465-8.

Col NF, Pauker SG, Goldberg RJ, Eckman MH, Orr RK, Ross EM, Wong JB. Individualizing therapy to prevent long-term consequences of estrogen deficiency in postmenopausal women. *Arch Intern Med* 1999 Jul 12;159(13):1458-66.

Filipponi P, Pedetti M, Fedeli L, Cini L, Palumbo R, Boldrini S, Massoni C, Cristallini S. Cyclical clodronate is effective in preventing postmenopausal bone loss: a comparative study with transcutaneous hormone replacement therapy. *J Bone Miner Res* 1995 May;10(5):697-703.

Flicker L, Hopper JL, Larkins RG, Lichtenstein M, Buirski G, Wark JD. Nandrolone decanoate and intranasal calcitonin as therapy in established osteoporosis. *Osteoporos Int* 1997;7(1):2935.

Gurlek A, Bayraktar M, Gedik O. Comparison of calcitriol treatment with etidronate -calcitriol and calcitonin -calcitriol combinations in Turkish women with postmenopausal osteoporosis: a prospective study. *Calcif Tissue Int* 1997 Jul;61(1):39-43.

- Heaney RP, Draper MW. Raloxifene and estrogen: comparative bone-remodeling kinetics. *J Clin Endocrinol Metab* 1997 Oct;82(10):3425-9.
- Herrera JA, Saravia MO, Gonzalez MM. Effects of treatment with bisphosphonates on gastrointestinal and esophageal mucosa in patients with osteoporosis: Pamidronate versus alendronate. *Curr Ther Res Clin Exp* 1999;60(6):307-13.
- Itoi H, Minakami H, Sato I. Comparison of the long-term effects of oral estriol with the effects of conjugated estrogen, 1-alpha-hydroxyvitamin dmf 3 and calcium lactate on vertebral bone loss in early menopausal women. *Maturitas* 1997;28(1):11-7.
- Iwamoto I, Kosha S, Noguchi S, Murakami M, Fujino T, Douchi T, Nagata Y. A longitudinal study of the effect of vitamin K2 on bone mineral density in postmenopausal women: a comparative study with vitamin D3 and estrogen -progestin therapy. *Maturitas* 1999 Jan 4;31(2):161-4.
- Luisetto G, Bottega F, Zangari M, Tizian L, Scalella P, Pozzuoli A. Effects of three therapeutic regimens on postmenopausal bone loss in oophorectomized women. *Curr Ther Res Clin Exp* 1996;57(11):839-48.
- Meunier PJ. Evidence-based medicine and osteoporosis: a comparison of fracture risk reduction data from osteoporosis randomised clinical trials. *Int J Clin Pract* 1999 Mar;53(2):122-9.
- Perez-Jaraiz MD, Revilla M, Alvarez de los Heros JI, Villa LF, Rico H. Prophylaxis of osteoporosis with calcium, estrogens and/or eelcatonin: comparative longitudinal study of bone mass. *Maturitas* 1996 Apr;23(3):327-32.
- Shiraki M, Kushida K, Fukunaga M, Kishimoto H, Taga M, Nakamura T, Kaneda K, Minaguchi H, Inoue T, Morii H, Tomita A, Yamamoto K, Nagata Y, Nakashima M, Orimo H. A double -masked multicenter comparative study between alendronate and alfacalcidol in Japanese patients with osteoporosis. *Osteoporos Int* 1999;10(3):18392.
- Sili Scavalli A, Marini M, Spadaro A, Riccieri V, Cremona A, Zoppini A. Comparison of ultrasound transmission velocity with computed metacarpal radiogrammetry and dual -photon absorptiometry. *Eur Radiol* 1996;6(2):192-5.
- Thiebaud D, Bigler JM, Renteria S, Pache T, Welti HJ, Landry M, Bruckhardt P. A 3-year study of prevention of postmenopausal bone loss: Conjugated equine estrogens plus medroxyprogesterone acetate versus tibolone. *J Menopause* 1999;6 Suppl 1:19-26.
- Bisphosphonates**
- Adachi JD. Alendronate for osteoporosis. Safe and efficacious nonhormonal therapy. *Can Fam Physician* 1998 Feb;44:327-32. Comment in: *Can Fam Physician* 1998 May;44:971-2, 974, 976.
- Barreira JC, Messina OD, Maldonado -Cocco JA, Roldan EJ. Site-dependent bone mineral density response to oral pamidronate and calcium in postmenopausal osteoporosis: a preliminary report. *Clin Rheumatol* 1997 Jun;16(4):346-52.
- Beauchesne MF, Miller PF. Etidronate and alendronate in the treatment of postmenopausal osteoporosis. *Ann Pharmacother* 1999 May;33(5):587-99.
- Bettica P, Bevilacqua M, Vago T, Masino M, Cucinotta E, Norbiato G. Short-term variations in bone remodeling biochemical markers: Cyclical etidronate and alendronate effects compared. *J Clin Endocrinol Metab* 1997;82(9):3034-9.
- Black DM, Cummings SR, Karpf DB, Cauley JA, Thompson DE, Nevitt MC, Bauer DC, Genant HK, Haskell WL, Marcus R, Ott SM, Torner JC, Quandt SA, Reiss TF, Ensrud KE. Randomised trial of effect of alendronate on risk of fracture in women with existing vertebral fractures. *Fracture Intervention Trial Research Group. Lancet* 1996 Dec 7;348(9041):1535-41. Comment in: *Lancet* 1997 Feb 15; 349(9050):505-6 and *ACP J Club* 1997 May-Jun;126(3):73.
- Bone HG, Downs RW Jr, Tucci JR, Harris ST, Weinstein RS, Licata AA, McClung MR, Kimmel DB, Gertz BJ, Hale E, Polvino WJ. Dose-response relationships for alendronate treatment in osteoporotic elderly women. *Alendronate Elderly Osteoporosis Study Centers. J Clin Endocrinol Metab* 1997 Jan;82(1):265-74.
- Chappard D, Minaire P, Privat C, Berard E, Mendoza-Sarmiento J, Tournebise H, Basle MF, Audran M, Rebel A, Picot C, et al. Effects of tiludronate on bone loss in paraplegic patients. *J Bone Miner Res* 1995 Jan;10(1):112-8.
- Chesnut CH 3rd, McClung MR, Ensrud KE, Bell NH, Genant HK, Harris ST, Singer FR, Stock JL, Yood RA, Delmas PD, et al. Alendronate treatment of the postmenopausal osteoporotic woman: effect of multiple dosages on bone mass and bone remodeling. *Am J Med* 1995 Aug;99(2):144-52.
- Clemmesen B, Ravn P, Zegels B, Taquet AN, Christiansen C, Reginster JY. A 2 -year phase II study with 1-year of follow-up of risedronate (NE-58095) in

- postmenopausal osteoporosis. *Osteoporos Int* 1997;7(5):488-95.
- Cummings SR, Black DM, Thompson DE, Applegate WB, Barrett-Connor E, Musliner TA, Palermo L, Prineas R, Rubin SM, Scott JC, Vogt T, Wallace R, Yates AJ, LaCroix AZ. Effect of alendronate on risk of fracture in women with low bone density but without vertebral fractures: results from the Fracture Intervention Trial. *JAMA* 1998 Dec 23-30; 280(24):2077-82. Comment in: *JAMA* 1998 Dec 23-30;280(24):2119-20 and *JAMA* 1999 Jul 21;282(3):231.
- Daifotis AG, Karpf DB. Summary of safety profile and future research with alendronate. *Br J Rheumatol* 1997;36 Suppl 1:20-3.
- de Groen PC, Lubbe DF, Hirsch LJ, Daifotis A, Stephenson W, Freedholm D, Pryor-Tillotson S, Seleznick MJ, Pinkas H, Wang KK. Esophagitis associated with the use of alendronate. *N Engl J Med* 1996 Oct 3;335(14):1016-21. Comment in: *N Engl J Med* 1996 Oct 3;335(14):1058-9; *N Engl J Med* 1996 Oct 3;335(14):1069-70.
- Devogelaer JP, Broll H, Correa-Rotter R, Cumming DC, De Deuxchaisnes CN, Geusens P, Hosking D, Jaeger P, Kaufman JM, Leite M, Leon J, Liberman U, Menkes CJ, Meunier PJ, Reid I, Rodriguez J, Romanowicz A, Seeman E, Vermeulen A, Hirsch LJ, Lombardi A, Plezia K, Santora AC, Yates AJ, Yuan W. Oral alendronate induces progressive increases in bone mass of the spine, hip, and total body over 3 years in postmenopausal women with osteoporosis. *Bone* 1996 Feb;18(2):141-50. Published erratum appears in *Bone* 1996 Jul;19(1):78.
- Devogelaer JP, Nagant de Deuxchaisnes C. Use of pamidronate in chronic and acute bone loss conditions. *Medicina (B Aires)* 1997;57 Suppl 1:101-8.
- Ebetino FH, Francis MD, Rogers MJ, Russell RG. Mechanisms of action of etidronate and other bisphosphonates. *Rev Contemp Pharmacother* 1998;9(4):233-43.
- Eggelmeijer F, Papapoulos SE, Van Paassen Henk C, Dijkmans BA, Valkema R, Westedt ML, Landman JO, Pauwels EK, Breedveld FC. Increased bone mass with pamidronate treatment in rheumatoid arthritis. *Arthritis Rheum* 1996;39(3):396-402.
- Ensrud KE, Black DM, Palermo L, Bauer DC, Barrett-Connor E, Quandt SA, Thompson DE, Karpf DB. Treatment with alendronate prevents fractures in women at highest risk: results from the Fracture Intervention Trial. *Arch Intern Med* 1997 Dec 8-22;157(22):2617-24. Comment in: *Arch Intern Med* 1997 Dec 8-22;157(22):2545-6.
- Ensrud KE, Black DM, Palermo L, Cumming RG. Alendronate reduced new fractures in postmenopausal women who had low bone-mineral density and existing vertebral fractures. *Evid Based Med* 1998;3(4):119.
- Ettinger B, Pressman A, Schein J. Clinic visits and hospital admissions for care of acid-related upper gastrointestinal disorders in women using alendronate for osteoporosis. *Am J Manag Care* 1998;4(10):1377-82.
- Fairney A, Kyd P, Thomas E, Wilson J. The use of cyclical etidronate in osteoporosis: changes after completion of 3 years treatment. *Br J Rheumatol* 1998 Jan;37(1):51-6.
- Felsenberg D, Alenfeld F, Bock O, Hammermeister C, Gowan W. Placebo-controlled multicenter study of oral alendronate in postmenopausal osteoporotic women. *FOSIT-Study-Group. Fosamax International Trial. Maturitas* 1998 Nov 30;31(1):35-44.
- Filipponi P, Cristallini S, Rizzello E, Pollicani G, Fedeli L, Gregorio F, Boldrini S, Troiani S, Massoni F. Cyclical intravenous clodronate in postmenopausal osteoporosis: Results of a long-term clinical trial. *Bone* 1996;18(2):179-84.
- Fleisch H. Bisphosphonates: Mechanisms of action. *Endocr Rev* 1998;19(1):80-100.
- Gangji V, Appelboom T. Analgesic effect of intravenous pamidronate on chronic back pain due to osteoporotic vertebral fractures. *Clin Rheumatol* 1999;18(3):266-7.
- Geusens P, Dequeker J, Vanhoof J, Stalmans R, Boonen S, Joly J, Nijs J, Raus J. Cyclical etidronate increases bone density in the spine and hip of postmenopausal women receiving long term corticosteroid treatment. A double blind, randomised placebo controlled study. *Ann Rheum Dis* 1998 Dec;57(12):724-7.
- Giannini S, D'Angelo A, Sartori L, Passeri G, Dalle Carbonare L, Crepaldi G. Continuous and cyclical clodronate therapies and bone density in postmenopausal bone loss. *Obstet Gynecol* 1996 Sep;88(3):431-6.
- Gonnelli S, Cepollaro C, Pondrelli C, Martini S, Montagnani A, Monaco R, Gennari C. Bone turnover and the response to alendronate treatment in postmenopausal osteoporosis. *Calcif Tissue Int* 1999;65(5):359-64.

- Harris ST, Watts NB, Genant HK, McKeever CD, Hangartner T, Keller M, Chesnut CH 3rd, Brown J, Eriksen EF, Hoseyni MS, Axelrod DW, Miller PD. Effects of risedronate treatment on vertebral and nonvertebral fractures in women with postmenopausal osteoporosis: a randomized controlled trial. *Vertebral Efficacy With Risedronate Therapy (VERT) Study Group*. *JAMA* 1999 Oct 13;282(14):1344-52.
- Heaney A, Steele I, Taggart H. Long-term efficacy of cyclical etidronate therapy in postmenopausal osteoporosis. *Ir J Med Sci* 1997 Oct-Dec;166(4):257-9.
- Heikkinen JE, Selander KS, Laitinen K, Arnala I, Vaananen HK. Short-term intravenous bisphosphonates in prevention of postmenopausal bone loss. *J Bone Miner Res* 1997 Jan;12(1):103-10.
- Herd RJM, Balena R, Blake GM, Ryan PJ, Fogelman I. The prevention of early postmenopausal bone loss by cyclical etidronate therapy: A 2-year, double-blind, placebo-controlled study. *Am J Med* 1997;103(2):92-9.
- Hochberg MC, Ross PD, Black D, Cummings SR, Genant HK, Nevitt MC, Barrett-Connor E, Musliner T, Thompson D. Larger increases in bone mineral density during alendronate therapy are associated with a lower risk of new vertebral fractures in women with postmenopausal osteoporosis. *Fracture Intervention Trial Research Group*. *Arthritis Rheum* 1999 Jun;42(6):1246-54.
- Homik JE, Cranney A, Shea B, Tugwell P, Wells G, Adachi JD, Suarez-Almazor ME. A metaanalysis on the use of bisphosphonates in corticosteroid induced osteoporosis. *J Rheumatol* 1999 May;26(5):1148-57.
- Hosking D, Chilvers CE, Christiansen C, Ravn P, Wasnich R, Ross P, McClung M, Balske A, Thompson D, Daley M, Yates AJ. Prevention of bone loss with alendronate in postmenopausal women under 60 years of age. *Early Postmenopausal Intervention Cohort Study Group*. *N Engl J Med* 1998 Feb 19;338(8):485-92.
- Jenkins EA, Walker-Bone KE, Wood A, McCrae FC, Cooper C, Cawley MI. The prevention of corticosteroid-induced bone loss with intermittent cyclical etidronate. *Scand J Rheumatol* 1999;28(3):152-6.
- Karpf DB, Shapiro DR, Seeman E, Ensrud KE, Johnston CC Jr, Adamo S, Harris ST, Santora AC 2nd, Hirsch LJ, Oppenheimer L, Thompson D. Prevention of nonvertebral fractures by alendronate. A meta-analysis. *Alendronate Osteoporosis Treatment Study Groups*. *JAMA* 1997 Apr 9;277(14):1159-64.
- Comment in: *JAMA* 1997 Aug 27;278(8):631; discussion 631-2.
- Khan SA, Kanis JA, Vasikaran S, Kline WF, Matuszewski BK, McCloskey EV, Beneton MN, Gertz BJ, Sciberras DG, Holland SD, Orgee J, Coombes GM, Rogers SR, Porras AG. Elimination and biochemical responses to intravenous alendronate in postmenopausal osteoporosis. *J Bone Miner Res* 1997 Oct;12(10):1700-7.
- Koster JC, Hackeng WH, Mulder H. Diminished effect of etidronate in vitamin D deficient osteopenic postmenopausal women. *Eur J Clin Pharmacol* 1996;51(2):145-7.
- Landman JO, Hamdy NA, Pauwels EK, Papapoulos SE. Skeletal metabolism in patients with osteoporosis after discontinuation of long -term treatment with oral pamidronate. *J Clin Endocrinol Metab* 1995 Dec;80(12):3465-8.
- Landman JO, Papapoulos SE. Uninterrupted oral bisphosphonate (pamidronate) therapy of patients with osteoporosis is not associated with chronic stimulation of parathyroid hormone secretion. *Osteoporos Int* 1995 Mar;5(2):93-6.
- Landman JO, Schweitzer DH, Frolich M, Hamdy NA, Papapoulos SE. Recovery of serum calcium concentrations following acute hypocalcemia in patients with osteoporosis on long-term oral therapy with the bisphosphonate pamidronate. *J Clin Endocrinol Metab* 1995 Feb;80(2):524-8.
- Lees B, Garland SW, Walton C, Ross D, Whitehead MI, Stevenson JC. Role of oral pamidronate in preventing bone loss in postmenopausal women. *Osteoporos Int* 1996;6(6):480-5.
- Liberman UA, Weiss SR, Broll J, Minne HW, Quan H, Bell NH, Rodriguez-Portales J, Downs RW Jr, Dequeker J, Favus M. Effect of oral alendronate on bone mineral density and the incidence of fractures in postmenopausal osteoporosis. *The Alendronate Phase III Osteoporosis Treatment Study Group*. *N Engl J Med* 1995 Nov 30;333(22):1437-43. Comment in: *N Engl J Med* 1995 Nov 30;333(22):1495-6; *N Engl J Med* 1996 Mar 14;334(11):733-4; discussion 734-5; *N Engl J Med* 1996 Mar 14;334(11):734; discussion 734-5 and *ACP J Club* 1996 Mar-Apr;124(2):33.
- Lyritis GP, Tsakalakos N, Paspati I, Skarantavos G, Galanos A, Androulakis C. The effect of a modified etidronate cyclical regimen on postmenopausal osteoporosis: a four-year study. *Clin Rheumatol* 1997 Jun;16(4):354-60.
- Mackay FJ, Wilton LV, Pearce GL, Freemantle SN, Mann RD. United Kingdom experience with

- alendronate and oesophageal reactions. *Br J Gen Pract* 1998 Apr;48(429):1161-2.
- McClung M. Results of special studies with alendronate. *Int J Clin Pract Suppl* 1999; -(101):67-72.
- McClung M, Clemmesen B, Daifotis A, Gilchrist NL, Eisman J, Weinstein RS, Fuleihan G el -H, Reda C, Yates AJ, Ravn P. Alendronate prevents postmenopausal bone loss in women without osteoporosis. A double-blind, randomized, controlled trial. Alendronate Osteoporosis Prevention Study Group. *Ann Intern Med* 1998 Feb 15;128(4):253-61. Comment in: *Ann Intern Med* 1998 Feb 15;128(4):313-4.
- Meunier PJ. Oral alendronate increases bone mineral density and reduces vertebral fracture incidence in postmenopausal osteoporosis. *Br J Rheumatol* 1997;36 Suppl 1:15-9.
- Meunier PJ, Arlot M, Chavassieux P, Yates AJ. The effects of alendronate on bone turnover and bone quality. *Int J Clin Pract Suppl* 1999; -(101):14-7.
- Meunier PJ, Confavreux E, Tupinon I, Hardouin C, Delmas PD, Balena R. Prevention of early postmenopausal bone loss with cyclical etidronate therapy (a double-blind, placebo-controlled study and 1-year follow-up). *J Clin Endocrinol Metab* 1997 Sep;82(9):2784-91. Comment in: *J Clin Endocrinol Metab* 1997 Sep;82(9):2782-3. Published erratum appears in *J Clin Endocrinol Metab* 1997 Nov;82(11):3740.
- Miller PD, Watts NB, Licata AA, Harris ST, Genant HK, Wasnich RD, Ross PD, Jackson RD, Hoseyni MS, Schoenfeld SL, Valent DJ, Chesnut CH 3rd. Cyclical etidronate in the treatment of postmenopausal osteoporosis: efficacy and safety after seven years of treatment. *Am J Med* 1997 Dec;103(6):468-76. Published erratum appears in *J Med* 1998 Jun;104(6):608.
- Mitchell DY, Heise MA, Pallone KA, Clay ME, Nesbitt JD, Russell DA, Melson CW. The effect of dosing regimen on the pharmacokinetics of risedronate. *Br J Clin Pharmacol* 1999;48(4):536 -42.
- Mortensen L, Charles P, Bekker PJ, Digennaro J, Johnston CC Jr. Risedronate increases bone mass in an early postmenopausal population: two years of treatment plus one year of follow-up. *J Clin Endocrinol Metab* 1998 Feb;83(2):396-402.
- Orr-Walker B, Wattie DJ, Evans MC, Reid IR. Effects of prolonged bisphosphonate therapy and its discontinuation on bone mineral density in post-menopausal osteoporosis. *Clin Endocrinol (Oxf)* 1997 Jan;46(1):87-92.
- Paparella P, Giorgino R, Mancuso S. Oral continuous clodronate in the prevention of early postmenopausal bone loss. *Curr Ther Res Clin Exp* 1995;56(2):134-43.
- Paterson AH, Kanis JA, Powles TJ, McCloskey E, Hanson J, Ashley S. Role of bisphosphonates in prevention and treatment of bone metastases from breast cancer. *Can J Oncol* 1995 Dec;5 Suppl 1:54-7.
- Pecherstorfer M, Ludwig H, Schlosser K, Buck S, Huss HJ, Body JJ. Administration of the bisphosphonate ibandronate (BM 21.0955) by intravenous bolus injection. *J Bone Miner Res* 1996;11(5):587-93.
- Peretz A, Body JJ, Dumon JC, Rozenberg S, Hotimski A, Praet JP, Moris M, Ham H, Bergmann P. Cyclical pamidronate infusions in postmenopausal osteoporosis. *Maturitas* 1996 Aug;25(1):69-75.
- Perkins AC, Wilson CG, Frier M, Vincent RM, Blackshaw PE, Dansereau RJ, Juhlin KD, Bekker PJ, Spiller RC. Esophageal transit of risedronate cellulose-coated tablet and gelatin capsule formulations. *Int J Pharm* 1999;186(2):169 -75.
- Pitt P, Li F, Todd P, Webber D, Pack S, Moniz C. A double blind placebo controlled study to determine the effects of intermittent cyclical etidronate on bone mineral density in patients on long -term oral corticosteroid treatment. *Thorax* 1998 May;53(5):351-6. Comment in: *Thorax* 1998 May;53(5):331-2.
- Pols HA, Felsenberg D, Hanley DA, Stepan J, Munoz-Torres M, Wilkin TJ, Qin -sheng G, Galich AM, Vandormael K, Yates AJ, Stych B. Multinational, placebo -controlled, randomized trial of the effects of alendronate on bone density and fracture risk in postmenopausal women with low bone mass: results of the FOSIT study. Foxamax International Trial Study Group. *Osteoporos Int* 1999;9(5):461-8.
- Pouilles JM, Tremolieres F, Roux C, Sebert JL, Alexandre C, Goldberg D, Treves R, Khalifa P, Duntze P, Horlait S, Delmas P, Kuntz D. Effects of cyclical etidronate therapy on bone loss in early postmenopausal women who are not undergoing hormonal replacement therapy. *Osteoporos Int* 1997;7(3):213-8.
- Ravn P, Clemmesen B, Riis BJ, Christiansen C. The effect on bone mass and bone markers of different doses of ibandronate: a new bisphosphonate for prevention and treatment of postmenopausal osteoporosis: a 1-year, randomized, double-blind, placebo-controlled dose-finding study. *Bone* 1996 Nov;19(5):527-33.

- Rossini M, Braga V, Gatti D, Gerardi D, Zamberlan N, Adami S. Intramuscular clodronate therapy in postmenopausal osteoporosis. *Bone* 1999 Feb;24(2):125-9.
- Sairanen S, Tahtela R, Laitinen K, Loytyniemi E, Valimaki MJ. Effects of short -term treatment with clodronate on parameters of bone metabolism and their diurnal variation. *Calcif Tissue Int* 1997;60(2):160-3.
- Sebaldt RJ, Ioannidis G, Adachi JD, Bensen WG, Bianchi F, Cividino A, Gordon M, Kaminska E, Scocchia T, Petrie A, Stephenson GF, Goldsmith CH. 36 month intermittent cyclical etidronate treatment in patients with established corticosteroid induced osteoporosis. *J Rheumatol* 1999;26(7):1545-9.
- Shiraki M, Kushida K, Fukunaga M, Kishimoto H, Kaneda K, Minaguchi H, Inoue T, Tomita A, Nagata Y, Nakashima M, Orimo H. A placebo -controlled, single -blind study to determine the appropriate alendronate dosage in postmenopausal Japanese patients with osteoporosis. The Alendronate Research Group. *Endocr J* 1998 Apr;45(2):191-201.
- Spivacow FR, Zanchetta JR, Kerzberg EM, Frigeri A, Fiasche R, Roldan EJA. Tolerability of oral pamidronate in elderly patients with osteoporosis and other metabolic bone diseases. *Curr Ther Res Clin Exp* 1996;57(2):123-30.
- Stock JL, Bell NH, Chesnut CH 3rd, Ensrud KE, Genant HK, Harris ST, McClung MR, Singer FR, Yood RA, Pryor-Tillotson S, Wei L, Santora AC 2nd. Increments in bone mineral density of the lumbar spine and hip and suppression of bone turnover are maintained after discontinuation of alendronate in postmenopausal women. *Am J Med* 1997 Oct;103(4):291-7.
- Storm T, Kollerup G, Thamsborg G, Genant HK, Sorensen OH. Five years of clinical experience with intermittent cyclical etidronate for postmenopausal osteoporosis. *J Rheumatol* 1996 Sep;23(9):1560-4.
- Thiebaud D, Burckhardt P, Kriegbaum H, Huss H, Mulder H, Juttmann JR, Schoter KH. Three monthly intravenous injections of ibandronate in the treatment of postmenopausal osteoporosis. *Am J Med* 1997 Oct;103(4):298-307.
- Thomas T, Barou O, Vico L, Alexandre C, Lafage-Proust MH. Recurrence of vertebral fracture with cyclical etidronate therapy in osteoporosis: histomorphometry and X-Ray microanalysis evaluation. *J Bone Miner Res* 1999 Feb;14(2):198-205.
- Tsai KS, Hsu SH, Yang RS, Cheng WC, Chieng PU. The effectiveness of cyclic and continuous oral clodronate therapy on bone density and markers in osteopenic postmenopausal women. *Calcif Tissue Int* 1999 May;64(5):384-8.
- Tucci JR, Tonino RP, Emkey RD, Peverly CA, Kher U, Santora AC 2nd. Effect of three years of oral alendronate treatment in postmenopausal women with osteoporosis. *Am J Med* 1996 Nov;101(5):488-501.
- van Staa T, Abenhaim L, Cooper C. Upper gastrointestinal adverse events and cyclical etidronate. *Am J Med* 1997 Dec;103(6):462-7.
- Van Staa TP, Abenhaim L, Cooper C. Use of cyclical etidronate and prevention of non -vertebral fractures. *Br J Rheumatol* 1998 Jan;37(1):87-94.
- van Staa TP, Leufkens H, Abenhaim L, Cooper C. Postmarketing surveillance of the safety of cyclic etidronate. *Pharmacotherapy* 1998 Sep-Oct;18(5):1121-8.
- Vasikaran SD, Khan S, McCloskey EV, Kanis JA. Sustained response to intravenous alendronate in postmenopausal osteoporosis. *Bone* 1995 Dec;17(6):517-20.
- Wasnich RD, Ross PD, Thompson DE, Cizza G, Yates AJ. Skeletal benefits of two years of alendronate treatment are similar for early postmenopausal Asian and Caucasian women. *Osteoporos Int* 1999;9(5):455-60.
- Watts NB, Becker P. Alendronate increases spine and hip bone mineral density in women with postmenopausal osteoporosis who failed to respond to intermittent cyclical etidronate. *Bone* 1999 Jan;24(1):65-8.
- Why use calcitonin? New indication: no proven utility in the treatment of osteoporosis. *Prescribe Int* 1998 Feb;7(33):7-9.
- Yang TS, Tsan SH, Chen CR, Chang SP, Yuan CC. Effects of alendronate on bone turnover markers in early postmenopausal women. *Chin Med J Taipei* 1998;61(10):568-76.
- Zanchetta JR, Plotkin H, Roldan EJA. Mineral density gain in vertebrae of osteoporotic women on oral pamidronate reverts a year after treatment discontinuance. *Calcif Tissue Int* 1996 Jul;59(1):70 -2.

## Calcitonin

Arnala I, Saastamoinen J, Alhava EM. Salmon calcitonin in the prevention of bone loss at perimenopause. *Bone* 1996 Jun;18(6):629-32.

Avioli LV. The role of calcitonin in the prevention of osteoporosis. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):411-8.

Combe B, Cohen C, Aubin F. Equivalence of nasal spray and subcutaneous formulations of salmon calcitonin. *Calcif Tissue Int* 1997;61(1):10 -5.

Crespo R, Revilla M, Crespo E, Villa LF, Rico H. Complementary medical treatment for Colles' fracture: a comparative, randomized, longitudinal study. *Calcif Tissue Int* 1997 Jun;60(6):567 -70.

De Aloysio D, Pansini F, Campobasso C, Zanotti L, Abbruzzese AD, Mauloni M, Bottiglioni F. Effects of cyclic therapy with intranasal carbocalcitonin in healthy spontaneous postmenopausal women. *Clin Exp Obstet Gynecol* 1996;23(2):87-93.

Ellerington MC, Hillard TC, Whitcroft SI, Marsh MS, Lees B, Banks LM, Whitehead MI, Stevenson JC. Intranasal salmon calcitonin for the prevention and treatment of postmenopausal osteoporosis. *Calcif Tissue Int* 1996 Jul;59(1):6-11.

Escobar Jimenez F, Aranburu Albizuri JM, Almirall Alier JM, Molina Soto JJ, Gracia Canales A. Effectiveness and safety of medium- and long-term elcatonin use in the prevention and treatment of bone mass loss. *Curr Ther Res Clin Exp* 1995;56(4):385-99.

Foti R, Martorana U, Broggini M. Long-term tolerability of nasal spray formulation of salmon calcitonin. *Curr Ther Res Clin Exp* 1995;56(4):429-35.

Gonnelli S, Cepollaro C, Pondrelli C, Martini S, Rossi S, Gennari C. Ultrasound parameters in osteoporotic patients treated with salmon calcitonin: a longitudinal study. *Osteoporos Int* 1996;6(4):303-7.

Grigoriou O, Papoulias I, Vitoratos N, Papadias C, Konidaris S, Antoniou G, Chryssikopoulos A. Effects of nasal administration of calcitonin in oophorectomized women: 2-year controlled double-blind study. *Maturitas* 1997;28(2):147 -51.

Healey JH, Paget SA, Williams-Russo P, Szatrowski TP, Schneider R, Spiera H, Mitnick H, Ales K, Schwartzberg P. A randomized controlled trial of salmon calcitonin to prevent bone loss in corticosteroid-treated temporal arteritis and

polymyalgia rheumatica. *Calcif Tissue Int* 1996 Feb;58(2):73-80.

Hizmetli S, Elden H, Kaptanoglu E, Nacitarhan V, Kocagil S. The effect of different doses of calcitonin on bone mineral density and fracture risk in postmenopausal osteoporosis. *Int J Clin Pract* 1998;52(7):453-5.

Kapetanos G, Symeonides PP, Dimitriou C, Karakatsanis K, Potoupnis M. A double blind study of intranasal calcitonin for established postmenopausal osteoporosis. *Acta Orthop Scand Suppl* 1997 Oct;275:108-11.

Lyritis GP, Paspati I, Karachalios T, Ioakimidis D, Skarantavos G, Lyritis PG. Pain relief from nasal salmon calcitonin in osteoporotic vertebral crush fractures. A double blind, placebo -controlled clinical study. *Acta Orthop Scand Suppl* 1997 Oct;275:112-4.

Mazzantini M, Di Munno O, Pardini N, Ferdeghini M, Mandolesi MC, Nasti P. Treatment of postmenopausal osteoporosis with salmon calcitonin suppositories. *Ital J Miner Electrolyte Metab* 1996;10(1):23-8.

Overgaard K, Lindsay R, Christiansen C. Patient responsiveness to calcitonin salmon nasal spray: A subanalysis of a 2-year study. *Clin Ther* 1995;17(4):680-5.

Peichl P, Rintelen B, Kumpan W, Broll H. Increase of axial and appendicular trabecular and cortical bone density in established osteoporosis with intermittent nasal salmon calcitonin therapy. *Gynecol Endocrinol* 1999 Feb;13(1):7-14.

Reginster JY, Deroisy R, Lecart MP, Sarlet N, Zegels B, Jupsin I, de Longueville M, Franchimont P. A double-blind, placebo -controlled, dose-finding trial of intermittent nasal salmon calcitonin for prevention of postmenopausal lumbar spine bone loss. *Am J Med* 1995 May;98(5):452-8.

Reginster JY, Jupsin I, Deroisy R, Biquet I, Franchimont N, Franchimont P. Prevention of postmenopausal bone loss by rectal calcitonin. *Calcif Tissue Int* 1995 Jun;56(6):539-42.

## Calcium / Vitamin D

- Agnusdei D, Bufalino L. Efficacy of ipriflavone in established osteoporosis and long-term safety. *Calcif Tissue Int* 1997;61 Suppl 1:S23-7.
- Agnusdei D, Crepaldi G, Isaia G, Mazzuoli G, Ortolani S, Passeri M, Bufalino L, Gennari C. A double blind, placebo-controlled trial of ipriflavone for prevention of postmenopausal spinal bone loss. *Calcif Tissue Int* 1997 Aug;61(2):142 -7.
- Baeksgaard L, Andersen KP, Hyldstrup L. Calcium and vitamin D supplementation increases spinal BMD in healthy, postmenopausal women. *Osteoporos Int* 1998;8(3):255-60.
- Caniggia A, Nuti R, Martini G, Frediani B, Giovani S, Valenti R, Silvestri G, Matarazzo M. Efficacy and safety of long-term, open-label treatment of calcitriol in postmenopausal osteoporosis: A retrospective analysis. *Curr Ther Res Clin Exp* 1996;57(11):857-68.
- Cepollaro C, Orlandi G, Gonnelli S, Ferrucci G, Arditti JC, Borracelli D, Toti E, Gennari C. Effect of calcium supplementation as a high -calcium mineral water on bone loss in early postmenopausal women. *Calcif Tissue Int* 1996 Oct;59(4):238 -9.
- Chapuy MC, Meunier PJ. Prevention of secondary hyperparathyroidism and hip fracture in elderly women with calcium and vitamin D3 supplements. *Osteoporos Int* 1996;6 Suppl 3:60-3.
- Cross NA, Hillman LS, Allen SH, Krause GF. Changes in bone mineral density and markers of bone remodeling during lactation and postweaning in women consuming high amounts of calcium. *J Bone Miner Res* 1995;10(9):1312-20.
- Cumming RG, Nevitt MC. Calcium for prevention of osteoporotic fractures in postmenopausal women. *J Bone Miner Res* 1997 Sep;12(9):1321-9.
- Dambacher MA, Kranich M, Schacht E, Neff M. Can the fast bone loss in osteoporotic and osteopenic patients be stopped with active vitamin D metabolites? *Calcif Tissue Int* 1997 Jan;60(1):115 -8.
- Dawson-Hughes B. Calcium and vitamin D nutritional needs of elderly women. *J Nutr* 1996 Apr;126(4 Suppl):1165S-1167S.
- Dawson-Hughes B, Harris SS, Krall EA, Dallal GE. Effect of calcium and vitamin D supplementation on bone density in men and women 65 years of age or older. *N Engl J Med* 1997 Sep 4;337(10):670-6. Comment in: *N Engl J Med* 1997 Sep 4;337(10):701-2 and *ACP J Club* 1998 Mar-Apr;128(2):47.
- Dawson-Hughes B, Harris SS, Krall EA, Dallal GE, Falconer G, Green CL. Rates of bone loss in postmenopausal women randomly assigned to one of two dosages of vitamin D. *Am J Clin Nutr* 1995 May;61(5):1140-5.
- DeLuca HF. 1,25-Dihydroxyvitamin D3 in the pathogenesis and treatment of osteoporosis. *Osteoporos Int* 1997;7 Suppl 3:S24-9.
- Deroisy R, Collette J, Chevallier T, Breuil V, Reginster JY. Effects of two 1-year calcium and vitamin D3 treatments on bone remodeling markers and femoral bone density in elderly women. *Curr Ther Res Clin Exp* 1998 Dec;59(12):850 -62.
- Devine A, Dick IM, Heal SJ, Criddle RA, Prince RL. A 4-year follow-up study of the effects of calcium supplementation on bone density in elderly postmenopausal women. *Osteoporos Int* 1997;7(1):23-8.
- Falkenbach A, Sedlmeyer A, Unkelbach U. UVB radiation and its role in the treatment of postmenopausal women with osteoporosis. *Int J Biometeorol* 1998 Feb;41(3):128-31.
- Francis RM. Is there a differential response to alfacalcidol and vitamin D in the treatment of osteoporosis? *Calcif Tissue Int* 1997 Jan;60(1):111 -4.
- Francis RM, Boyle IT, Moniz C, Sutcliffe AM, Davis BS, Beastall GH, Cowan RA, Downes N. A comparison of the effects of alfacalcidol treatment and vitamin D<sub>3</sub> supplementation on calcium absorption in elderly women with vertebral fractures. *Osteoporos Int* 1996;6(4):284-90.
- Fujita T. Vitamin D in the treatment of osteoporosis revisited. *Proc Soc Exp Biol Med* 1996 Jun;212(2):110-5.
- Fujita T, Ohue T, Fujii Y, Miyauchi A, Takagi Y. Heated oyster shell-seaweed calcium (AAA Ca) on osteoporosis. *Calcif Tissue Int* 1996 Apr;58(4):226-30.
- Haines CJ, Chung TK, Leung PC, Hsu SY, Leung DH. Calcium supplementation and bone mineral density in postmenopausal women using estrogen replacement therapy. *Bone* 1995 May;16(5):529 -31.
- Heaney RP, Barger-Lux MJ, Dowell MS, Chen TC, Holick MF. Calcium absorptive effects of vitamin D and its major metabolites. *J Clin Endocrinol Metab* 1997 Dec;82(12):4111-6.

- Heaney RP, McCarron DA, Dawson-Hughes B, Oparil S, Berga SL, Stern JS, Barr SI, Rosen CJ. Dietary changes favorably affect bone remodeling in older adults. *J Am Diet Assoc* 1999 Oct;99(10):1228-33.
- Heikinheimo R, Sievanen H, Jantti P, Maki -Jokela PL, Rajala S, Vuori I. Vitamin D treatment and bone mineral density in the aged. *Maturitas* 1996 May;23 Suppl:S77-80.
- Holick MF. Environmental factors that influence the cutaneous production of vitamin D. *Am J Clin Nutr* 1995;61(3 Suppl):638S-645S.
- Hosking DJ, Ross PD, Thompson DE, Wasnich RD, McClung M, Bjarnason NH, Ravn P, Cizza G, Daley M, Yates AJ. Evidence that increased calcium intake does not prevent early postmenopausal bone loss. *Clin Ther* 1998 Sep-Oct;20(5):933-44.
- Kanis JA, McCloskey EV, de Takats D, Bernard J, Zhang DM. Treatment of osteoporosis with vitamin D. *Osteoporos Int* 1997;7 Suppl 3:S140-6.
- Keane EM, Healy M, O'Moore R, Coakley D, Walsh JB. Vitamin D-fortified liquid milk: Benefits for the elderly community - based population. *Calcif Tissue Int* 1998;62(4):300-2.
- Kruger MC, Coetzer H, de Winter R, Gericke G, van Papendorp DH. Calcium, gamma-linolenic acid and eicosapentaenoic acid supplementation in senile osteoporosis. *Aging (Milano)* 1998 Oct;10(5):385-94.
- Lau KH, Baylink DJ. Vitamin D therapy of osteoporosis: Plain vitamin D therapy versus active vitamin D analog (D-hormone) therapy. *Calcif Tissue Int* 1999 Oct;65(4):295-306.
- Lips P, Graafmans WC, Ooms ME, Bezemer PD, Bouter LM. Vitamin D supplementation and fracture incidence in elderly persons. A randomized, placebo-controlled clinical trial. *Ann Intern Med* 1996 Feb 15;124(4):400-6. Comment in: *ACP J Club* 1996 Jul-Aug;125(1):16.
- Mackerras D, Lumley T. First - and second-year effects in trials of calcium supplementation on the loss of bone density in postmenopausal women. *Bone* 1997 Dec;21(6):527-33.
- Michaelsson K, Bergstrom R, Holmberg L, Mallmin H, Wolk A, Ljunghall S. A high dietary calcium intake is needed for a positive effect on bone density in Swedish postmenopausal women. *Osteoporos Int* 1997;7(2):155-61.
- Nuti R, Martini G, Valenti R, Giovani S. Open -label, controlled study on the metabolic and absorptiometric effects of calcitriol in involutional osteoporosis. *Clin Drug Invest* 1996;11(5):270-7.
- Ooms ME, Roos JC, Bezemer PD, van der Vijgh WJ, Bouter LM, Lips P. Prevention of bone loss by vitamin D supplementation in elderly women: a randomized double-blind trial. *J Clin Endocrinol Metab* 1995 Apr;80(4):1052-8.
- Orimo H, Shiraki M, Tomita A, Morii H, Fujita T, Ohata M. Effects of menatetrenone on the bone and calcium metabolism in osteoporosis: A double-blind placebo-controlled study. *J Bone Miner Metab* 1998;16(2):106-12.
- Reid IR, Ames RW, Evans MC, Gamble GD, Sharpe SJ. Long-term effects of calcium supplementation on bone loss and fractures in postmenopausal women: a randomized controlled trial. *Am J Med* 1995 Apr;98(4):331-5. Comment in: *Am J Med* 1995 Apr;98(4):329-30.
- Ricci TA, Chowdhury HA, Heymsfield SB, Stahl T, Pierson RN Jr, Shapses SA. Calcium supplementation suppresses bone turnover during weight reduction in postmenopausal women. *J Bone Miner Res* 1998;13(6):1045-50.
- Rico H, Revilla M, Hernandez ER, Villa LF, Alvarez de Buergo M. Total and regional bone mineral content and fracture rate in postmenopausal osteoporosis treated with salmon calcitonin: a prospective study. *Calcif Tissue Int* 1995 Mar;56(3):181-5.
- Ruegsegger P, Keller A, Dambacher MA. Comparison of the treatment effects of osseous-hydroxyapatite compound and calcium carbonate in osteoporotic females. *Osteoporos Int* 1995 Jan;5(1):30-4.
- Schacht E. Rationale for treatment of involutional osteoporosis in women and for prevention and treatment of corticosteroid-induced osteoporosis with alfalcacitol. *Calcif Tissue Int* 1999 Oct;65(4):317-27.
- Shikari M, Kushida K, Yamazaki K, Nagai T, Inoue T, Orimo H. Effects of 2 years' treatment of osteoporosis with 1 alpha-hydroxy vitamin D3 on bone mineral density and incidence of fracture: a placebo-controlled, double-blind prospective study. *Endocr J* 1996 Apr;43(2):211-20.
- Storm D, Eslin R, Porter ES, Musgrave K, Vereault D, Patton C, Kessenich C, Mohan S, Chen T, Holick MF, Rosen CJ. Calcium supplementation prevents seasonal bone loss and changes in biochemical markers of bone turnover in elderly New England women: a randomized placebo-controlled trial. *J Clin Endocrinol Metab* 1998 Nov;83(11):3817-25.

Tanizawa T, Imura K, Ishii Y, Nishida S, Takano Y, Mashiba T, Endo N, Takahashi HE. Treatment with active vitamin D metabolites and concurrent treatments in the prevention of hip fractures: a retrospective study. *Osteoporos Int* 1999;9(2):163-70.

Tuppurainen MT, Komulainen M, Kroger H, Honkanen R, Jurvelin J, Punttila E, Heikkinen AM, Alhava E, Saarikoski S. Does vitamin D strengthen the increase in femoral neck BMD in osteoporotic women treated with estrogen? *Osteoporos Int* 1998;8(1):32-8.

Van Der Klis FR, Jonxis JH, Van Doormaal JJ, Sikkens P, Saleh AE, Muskiet FA. Changes in vitamin -D metabolites and parathyroid hormone in plasma following cholecalciferol administration to pre- and postmenopausal women in the Netherlands in early spring and to postmenopausal women in Curacao. *Br J Nutr* 1996;75(4):637-46.

### **Electromagnetic Stimulation**

BeDell KK, Scremin AME, Perell KL, Kunkel CF. Effects of functional electrical stimulation -induced lower extremity cycling on bone density of spinal cord-injured patients. *Am J Phys Med Rehabil* 1996 Jan-Feb;75(1):29-34.

Eyres KS, Saleh M, Kanis JA. Effect of pulsed electromagnetic fields on bone formation and bone loss during limb lengthening. *Bone* 1996 Jun;18(6):505-9.

Tabrah FL, Ross P, Hoffmeier M, Gilbert F Jr. Clinical report on long -term bone density after short-term EMF application. *Bioelectromagnetics* 1998;19(2):75-8.

### **Estrogen / Androgen**

- Abraham D, Carpenter PC. Issues concerning androgen replacement therapy in postmenopausal women. *Mayo Clin Proc* 1997;72(11):1051-5.
- Beardsworth SA, Kearney CE, Purdie DW. Prevention of postmenopausal bone loss at lumbar spine and upper femur with tibolone: a two -year randomised controlled trial. *Br J Obstet Gynaecol* 1999 Jul;106(7):678-83.
- Berning B, Kuijk CV, Kuiper JW, Bennink HJ, Kicovic PM, Fauser BC. Effects of two doses of tibolone on trabecular and cortical bone loss in early postmenopausal women: a two-year randomized, placebo-controlled study. *Bone* 1996 Oct;19(4):395-9.
- Berning B, Van Kuijk C, Kuiper JW, Coelingh Bennink HJT, Fauser BCJ. Increased loss of trabecular but not cortical bone density, 1 year after discontinuation of 2 years hormone replacement therapy with Tibolone. *Maturitas* 1999;31(2):151 -9.
- Bjarnason NH, Bjarnason K, Haarbo J, Rosenquist C, Christiansen C. Tibolone: prevention of bone loss in late postmenopausal women. *J Clin Endocrinol Metab* 1996 Jul;81(7):2419-22. Comment in: *J Clin Endocrinol Metab* 1996 Jul;81(7):2417-8.
- Blake JM, Ryan ED, Beaumont LF, Webber CE. Changes in spine and radius bone density during long-term hormone replacement. *Can J Physiol Pharmacol* 1999;77(7):505 -9.
- Cantatore FP, Cicinelli E, Galantino P, Pepe V, Popolizio A, Savino F, Balzano G, Epifani S. Evaluation of bone turnover and bone mass during tapering estrogen therapy: a preliminary report. *Arthritis Rheum* 1995 Feb;38(2):292 -4.
- Cantatore FP, Loverro G, Ingrosso AM, Lacanna R, Sassanelli E, Selvaggi L, Carrozzo M. Effect of oestrogen replacement on bone metabolism and cytokines in surgical menopause. *Clin Rheumatol* 1995 Mar;14(2):157-60.
- Christiansen C. Sex steroid analogs. *Osteoporos Int* 1999;9 Suppl 2:S62-5.
- Cicinelli E, Cantatore FP, Galantino P, Rubini G, Cerundolo M, Balzano G, D'Aquino TM. Effects of continuous percutaneous estradiol administration on skeletal turnover in postmenopausal women: A 1 -year prospective controlled study. *Eur J Obstet Gynecol Reprod Biol* 1996;69(2):109-13.
- Cooper C, Stakkestad JA, Radowicki S, Hardy P, Pilate C, Dain MP, Delmas PD. Matrix delivery

transdermal 17beta -estradiol for the prevention of bone loss in postmenopausal women. The International Study Group. *Osteoporos Int* 1999;9(4):358-66.

Cosman F, Nieves J, Shen V, Lindsay R. Oral 1,25-dihydroxyvitamin D administration in osteoporotic women: effects of estrogen therapy. *J Bone Miner Res* 1995 Apr;10(4):594-600.

Cumming RG, Cummings SR, Nevitt MC, Scott J, Ensrud KE, Vogt TM, Fox K. Calcium intake and fracture risk: results from the study of osteoporotic fractures. *Am J Epidemiol* 1997 May 15;145(10):926-34.

de Aloysio D, Rovati LC, Cadossi R, Paltrinieri F, Mauloni M, Mura M, Penacchioni P, Ventura V. Bone effects of transdermal hormone replacement therapy in postmenopausal women as evaluated by means of ultrasound: an open one -year prospective study. *Maturitas* 1997 May;27(1):61-8.

Delmas P, Gimona A. Osteoporosis prevention clinical study program. *Eur J Obstet Gynecol Reprod Biol* 1996 Apr;64 Suppl:S39 -45.

Delmas PD, Pornel B, Felsenberg D, Garnero P, Hardy P, Pilate C, Dain MP. A dose-ranging trial of a matrix transdermal 17beta -estradiol for the prevention of bone loss in early postmenopausal women. International Study Group. *Bone* 1999 May;24(5):517-23.

Design of the Women's Health Initiative clinical trial and observational study. The Women's Health Initiative Study Group. *Control Clin Trials* 1998 Feb;19(1):61-109.

Doren M. An assessment of hormone replacement therapy to prevent postmenopausal osteoporosis. *Osteoporos Int* 1999;9 Suppl 2:S53-61.

Duan Y, Tabensky A, DeLuca V, Seeman E. The benefit of hormone replacement therapy on bone mass is greater at the vertebral body than posterior processes or proximal femur. *Bone* 1997 Nov;21(5):447-51.

Eiken P, Kolthoff N, Nielsen SP. Effect of 10 years' hormone replacement therapy on bone mineral content in postmenopausal women. *Bone* 1996 Nov;19(5 Suppl):191S-193S.

Eiken P, Nielsen SP, Kolthoff N. Effects on bone mass after eight years of hormonal replacement therapy. *Br J Obstet Gynaecol* 1997;104(6):702-7.

Evans SF, Davie MW. Low and conventional dose transdermal oestradiol are equally effective at

- preventing bone loss in spine and femur at all post-menopausal ages. *Clin Endocrinol (Oxf)* 1996 Jan;44(1):79-84.
- Gambacciani M, Cappagli B, Ciapponi M, Benussi C, Genazzani AR. Hormone replacement therapy in perimenopause: effect of a low dose oral contraceptive preparation on bone quantitative ultrasound characteristics. *Menopause* 1999 Spring;6(1):43-8.
- Gambacciani M, Spinetti A, Orlandi R, Piaggesi L, Cappagli B, Weiss C, Ciapponi M, Genazzani AR. Effects of a new estrogen/progestin combination in the treatment of postmenopausal syndrome. *Maturitas* 1995;22(2):115-20.
- Gambacciani M, Spinetti A, Taponeco F, Ciapponi M, Cima GP, Teti GC, Genazzani AR. Prospective evaluation of calcium and estrogen administration on bone mass and metabolism after ovariectomy. *Gynecol Endocrinol* 1995 Jun;9(2):131 -5.
- Gass R, Neff M. For the prevention of postmenopausal osteoporosis: How beneficial is transdermal hormone replacement therapy? *Schweiz Med Wochenschr* 1995;125(34):1583-91.
- Genant HK, Lucas J, Weiss S, Akin M, Emkey R, McNaney-Flint H, Downs R, Mortola J, Watts N, Yang HW, Banav N, Brennan JJ, Nolan JC. Low -dose esterified estrogen therapy: Effects on bone, plasma estradiol concentrations, endometrium, and lipid levels. *Arch Intern Med* 1997;157(22):2609 -15.
- Geusens P. Nandrolone decanoate: pharmacological properties and therapeutic use in osteoporosis. *Clin Rheumatol* 1995 Sep;14 Suppl 3:32-9.
- Gordon CM, Grace E, Emans SJ, Goodman E, Crawford MH, Leboff MS. Changes in bone turnover markers and menstrual function after short - term oral DHEA in young women with anorexia nervosa. *J Bone Miner Res* 1999;14(1):136-45.
- Grey A, Cundy T, Evans M, Reid I. Medroxyprogesterone acetate enhances the spinal bone mineral density response to oestrogen in late post-menopausal women. *Clin Endocrinol (Oxf)* 1996 Mar;44(3):293-6. Comment in: *Clin Endocrinol (Oxf)* 1996 Mar;44(3):297-8 and *Clin Endocrinol (Oxf)* 1996 Jul;45(1):123-4.
- Haenggi W, Bersinger NA, Mueller MD, Birkhaeuser MH. Decrease of serum endothelin levels with postmenopausal hormone replacement therapy or tibolone. *Gynecol Endocrinol* 1999 Jun;13(3):202 -5.
- Hart DM, Farish E, Fletcher CD, Barnes JF, Hart H, Nolan D, Spowart K. Long-term effects of continuous combined HRT on bone turnover and lipid metabolism in postmenopausal women. *Osteoporos Int* 1998;8(4):326-32.
- Heikkinen J, Kyllonen E, Kurtila -Matero E, Wilen-Rosenqvist G, Lankinen KS, Rita H, Vaananen HK. HRT and exercise: effects on bone density, muscle strength and lipid metabolism. A placebo controlled 2-year prospective trial on two estrogen-progestin regimens in healthy postmenopausal women. *Maturitas* 1997 Mar;26(2):139-49.
- Labrie F, Diamond P, Cusan L, Gomez JL, Belanger A, Candas B. Effect of 12-month dehydroepiandrosterone replacement therapy on bone, vagina, and endometrium in postmenopausal women. *J Clin Endocrinol Metab* 1997;82(10):3498 -505.
- Leonetti HB, Longo S, Anasti JN. Transdermal progesterone cream for vasomotor symptoms and postmenopausal bone loss. *Obstet Gynecol* 1999 Aug;94(2):225-8.
- Leung KY, Lee TK, Lee CN, Sum TK, Chan MY, Tong CM. The effects of different dosages of oestrogen on the bone mineral density of postmenopausal Hong Kong Chinese women: Randomised controlled trial. *Hong Kong Med J* 1999;5(1):9-14.
- Lindsay R. The menopause and osteoporosis. *Obstet Gynecol* 1996 Feb;87(2 Suppl):16S-19S.
- Lippuner K, Haenggi W, Birkhaeuser MH, Casez JP, Jaeger P. Prevention of postmenopausal bone loss using tibolone or conventional peroral or transdermal hormone replacement therapy with 17beta -estradiol and dydrogesterone. *J Bone Miner Res* 1997 May;12(5):806-12.
- Lyritis GP, Karpathios S, Basdekis K, Grigoriou O, Katostaras T, Paspati I, Stamatopoulos T, Siampalioti G, Lyritis PG. Prevention of post-oophorectomy bone loss with Tibolone. *Maturitas* 1995 Nov;22(3):247-53.
- Mebane-Sims I, Bush TL, Wells HB, James MK, Barrett-Connor E, Marcus R, Greendale G, Hunsberger S, McGowan J. Effects of hormone therapy on bone mineral density: Results from the postmenopausal estrogen/progestin interventions (PEPI) trial. *J Am Med Assoc* 1996;276(17):1389-96.
- Michaelsson K, Baron JA, Johnell O, Persson I, Ljunghall S. Variation in the efficacy of hormone replacement therapy in the prevention of hip fracture. *Osteoporos Int* 1998;8(6):540-6.

- Minaguchi H, Uemura T, Shirasu K, Sato A, Tsukikawa S, Ibuki Y, Mizunuma H, Aso T, Koyama T, Nozawa S, Ohta H, Ikeda T, Kusuvara K, Ochiai K, Kato J, Kinoshita T, Tanaka K, Minagawa Y, Kurabayashi T, Fukunaga M. Effect of estriol on bone loss in postmenopausal Japanese women: a multicenter prospective open study. *J Obstet Gynaecol Res* 1996 Jun;22(3):259-65.
- Mizunuma H, Okano H, Soda M, Kagami I, Miyamoto S, Tokizawa T, Honjo S, Ibuki Y. Prevention of postmenopausal bone loss with minimal uterine bleeding using low dose continuous estrogen/progestin therapy: a 2-year prospective study. *Maturitas* 1997 May;27(1):69-76.
- Naessen T, Berglund L, Ulmsten U. Bone loss in elderly women prevented by ultralow doses of parenteral 17beta-estradiol. *Am J Obstet Gynecol* 1997 Jul;177(1):115-9.
- Naessen T, Lindmark B, Larsen HC. Better postural balance in elderly women receiving estrogens. *Am J Obstet Gynecol* 1997;177(2):412-6.
- Naessen T, Olsson SE, Gudmundson J. Differential effects on bone density of progestogen-only methods for contraception in premenopausal women. *Contraception* 1995;52(1):35-9.
- Nozaki M, Inoue Y, Hashimoto K, Ogata R, Nakano H. Differential time-related effects of conjugated equine estrogen on bone metabolism in oophorectomized women. *Int J Gynecol Obstet* 1998;60(1):41-6.
- Ongphiphadhanakul B, Chanprasertyothin S, Piaseu N, Chansirikanjana S, Puavilai G, Rajatanavin R. Change in body weight after hormone replacement therapy in postmenopausal women is dependent on basal circulating leptin. *Maturitas* 1998 Nov 16;30(3):283-8.
- Orr-Walker BJ, Evans MC, Ames RW, Clearwater JM, Cundy T, Reid IR. The effect of past use of the injectable contraceptive depot medroxyprogesterone acetate on bone mineral density in normal post-menopausal women. *Clin Endocrinol (Oxf)* 1998;49(5):615-8.
- Orwoll ES, Nelson HD. Does estrogen adequately protect postmenopausal women against osteoporosis: an iconoclastic perspective. *J Clin Endocrinol Metab* 1999 Jun;84(6):1872-4.
- Pavlov PW, Ginsburg J, Kicovic PM, van der Schaaf DB, Prelevic G, Bennink HJ. Double-blind, placebo-controlled study of the effects of tibolone on bone mineral density in postmenopausal osteoporotic women with and without previous fractures. *Gynecol Endocrinol* 1999 Aug;13(4):230-7.
- Prelevic GM, Bartram C, Wood J, Okolo S, Ginsburg J. Comparative effects on bone mineral density of tibolone, transdermal estrogen and oral estrogen/progestogen therapy in postmenopausal women. *Gynecol Endocrinol* 1996 Dec;10(6):413-20.
- Prestwood KM, Thompson DL, Kenny AM, Seibel MJ, Pilbeam CC, Raisz LG. Low dose estrogen and calcium have an additive effect on bone resorption in older women. *J Clin Endocrinol Metab* 1999;84(1):179-83.
- Prior JC, Vigna YM, Wark JD, Eyre DR, Lentle BC, Li DK, Ebeling PR, Atley L. Premenopausal ovariectomy-related bone loss: a randomized, double-blind, one-year trial of conjugated estrogen or medroxyprogesterone acetate. *J Bone Miner Res* 1997 Nov;12(11):1851-63.
- Raisz LG, Wiita B, Artis A, Bowen A, Schwartz S, Trahiotis M, Shoukri K, Smith J. Comparison of the effects of estrogen alone and estrogen plus androgen on biochemical markers of bone formation and resorption in postmenopausal women. *J Clin Endocrinol Metab* 1996;81(1):37-43.
- Recker RR, Davies KM, Dowd RM, Heaney RP. The effect of low-dose continuous estrogen and progesterone therapy with calcium and vitamin D on bone in elderly women. A randomized, controlled trial. *Ann Intern Med* 1999 Jun 1;130(11):897-904.
- Reid IR, Wattie DJ, Evans MC, Stapleton JP. Testosterone therapy in glucocorticoid-treated men. *Arch Intern Med* 1996;156(11):1173-7.
- Schlegel W, Petersdorf LI, Junker R, Schulte H, Ebert C, Von Eckardstein A. The effects of six months of treatment with a low-dose of conjugated oestrogens in menopausal women. *Clin Endocrinol* 1999;51(5):643-51.
- Sharp CA, Evans SF, Risteli L, Risteli J, Worsfold M, Davie MW. Effects of low- and conventional-dose transcutaneous HRT over 2 years on bone metabolism in younger and older postmenopausal women. *Eur J Clin Invest* 1996;26(9):763-71.
- Snyder PJ, Peachey H, Hannoush P, Berlin JA, Loh L, Lenrow DA, Holmes JH, Dlewati A, Santanna J, Rosen CJ, Strom BL. Effect of testosterone treatment on body composition and muscle strength in men over 65 years of age. *J Clin Endocrinol Metab* 1999 Aug;84(8):2647-53.

Stepan JJ, Schreiber V. Anabolic effects of progestogens in bone remodelling. *Sb Lek* 1995;96(4):293-7.

Studd J, Arnala I, Kicovic PM, Zamblera D, Kroger H, Holland N. A randomized study of tibolone on bone mineral density in osteoporotic postmenopausal women with previous fractures. *Obstet Gynecol* 1998 Oct;92(4 Pt 1):574-9.

Studd JW, MacCarthy K, Zamblera D, Dain MP. Efficacy and safety of Menorest (50 mikrog/day) compared to Premarin 0.625 mg in the treatment of menopausal symptoms and the prevention of bone loss, in menopausal women. A single -center, comparative, randomized, double -blind, double-dummy study. *Scand J Rheumatol Suppl* 1996;103:89-90.

Taskin O, Yalcinoglu AI, Kucuk S, Uryan I, Buhur A, Burak F. Effectiveness of tibolone on hypoestrogenic symptoms induced by goserelin treatment in patients with endometriosis. *Fertil Steril* 1997 Jan;67(1):40 -5.

Vered I, Kaiserman I, Sela BA, Sack J. Cross genotype sex hormone treatment in two cases of hypogonadal osteoporosis. *J Clin Endocrinol Metab* 1997 Feb;82(2):576-8.

Watts NB, Notelovitz M, Timmons MC, Addison WA, Wiita B, Downey LJ. Comparison of oral estrogens and estrogens plus androgen on bone mineral density, menopausal symptoms, and lipid -lipoprotein profiles i n surgical menopause. *Obstet Gynecol* 1995 Apr;85(4):529-37. Published erratum appears in *Obstet Gynecol* 1995 May;85(5 Pt 1):668.

Weiss SR, Ellman H, Dolker M. A randomized controlled trial of four doses of transdermal estradiol for preventing postmenopausal bone loss. Transdermal Estradiol Investigator Group. *Obstet Gynecol* 1999 Sep;94(3):330-6.

Wimalawansa SJ. Combined therapy with estrogen and etidronate has an additive effect on bone mineral density in the hip and vertebrae: Four -year randomized study. *Am J Med* 1995;99(1):36-42.

Wimalawansa SJ. A four -year randomized controlled trial of hormone replacement and bisphosphonate, alone or in combination, in women with postmenopausal osteoporosis. *Am J Med* 1998 Mar;104(3):219-26.

## Exercise

Adami S, Gatti D, Braga V, Bianchini D, Rossini M. Site-specific effects of strength training on bone structure and geometry of ultradistal radius in postmenopausal women. *J Bone Miner Res* 1999 Jan;14(1):120-4.

Bennell KL, Malcolm SA, Khan KM, Thomas SA, Reid SJ, Brukner PD, Ebeling PR, Wark JD. Bone mass and bone turnover in power athletes, endurance athletes, and controls: A 12-month longitudinal study. *Bone* 1997;20(5):477-84.

Berard A, Bravo G, Gauthier P. Meta-analysis of the effectiveness of physical activity for the prevention of bone loss in postmenopausal women. *Osteoporos Int* 1997;7(4):331-7.

Block JE. Interpreting studies of exercise and osteoporosis: a call for rigor. *Control Clin Trials* 1997 Feb;18(1):54-7.

Bravo G, Gauthier P, Roy PM, Payette H, Gaulin P. A weight-bearing, water-based exercise program for osteopenic women: its impact on bone, functional fitness, and well-being. *Arch Phys Med Rehabil* 1997;78(12):1375-80.

Bravo G, Gauthier P, Roy PM, Payette H, Gaulin P, Harvey M, Peloquin L, Dubois MF. Impact of a 12-month exercise program on the physical and psychological health of osteopenic women. *J Am Geriatr Soc* 1996 Jul;44(7):756-62.

Danz AM, Zittermann A, Schiedermaier U, Klein K, Hotzel D, Schonau E. The effect of a specific strength-development exercise on bone mineral density in perimenopausal and postmenopausal women. *J Womens Health* 1998 Aug;7(6):701 -9.

Ebrahim S, Thompson PW, Baskaran V, Evans K. Randomized placebo-controlled trial of brisk walking in the prevention of postmenopausal osteoporosis. *Age Ageing* 1997 Jul;26(4):253 -60.

Ernst E. Exercise for female osteoporosis. A systematic review of randomised clinical trials. *Sports Med* 1998 Jun;25(6):359-68.

Evans WJ. Effects of exercise on body composition and functional capacity of the elderly. *J Gerontol A Biol Sci Med Sci* 1995 Nov;50 Spec No:147-50.

Evans WJ. Exercise training guidelines for the elderly. *Med Sci Sports Exerc* 1999 Jan;31(1):12-7.

Hartard M, Haber P, Ilieva D, Preisinger E, Seidl G, Huber J. Systematic strength training as a model of

- therapeutic intervention. A controlled trial in postmenopausal women with osteopenia. *Am J Phys Med Rehabil* 1996 Jan-Feb;75(1):21-8.
- Heinonen A, Kannus P, Sievanen H, Oja P, Pasanen M, Rinne M, Uusi-Rasi K, Vuori I. Randomised controlled trial of effect of high-impact exercise on selected risk factors for osteoporotic fractures. *Lancet* 1996 Nov 16;348(9038):1343-7. Comment in: *Lancet* 1996 Nov 16;348(9038):1326-7.
- Heinonen A, Kannus P, Sievanen H, Pasanen M, Oja P, Vuori I. Good maintenance of high -impact activity-induced bone gain by voluntary, unsupervised exercises: An 8-month follow-up of a randomized controlled trial. *J Bone Miner Res* 1999;14(1):125-8.
- Heinonen A, Oja P, Sievanen H, Pasanen M, Vuori I. Effect of two training regimens on bone mineral density in healthy perimenopausal women: A randomized controlled trial. *J Bone Miner Res* 1998;13(3):483-90.
- Iwamoto J, Takeda T, Otani T, Yabe Y. Effect of increased physical activity on bone mineral density in postmenopausal osteoporotic women. *Keio J Med* 1998 Sep;47(3):157-61.
- Kelley G. Aerobic exercise and lumbar spine bone mineral density in postmenopausal women: a meta-analysis. *J Am Geriatr Soc* 1998;46(2):143-52.
- Kelley GA. Aerobic exercise and bone density at the hip in postmenopausal women: A meta -analysis. *Prev Med* 1998 Nov-Dec;27(6):798-807.
- Kelley GA. Exercise and regional bone mineral density in postmenopausal women: A meta -analytic review of randomized trials. *Am J Phys Med Rehabil* 1998;77(1):76-87.
- Kerr D, Morton A, Dick I, Prince R. Exercise effects on bone mass in postmenopausal women are site-specific and load-dependent. *J Bone Miner Res* 1996;11(2):218-25.
- Kerschan K, Alacamlioglu Y, Kollmitzer J, Wober C, Kaider A, Hartard M, Ghanem AH, Preisinger E. Functional impact of unvarying exercise program in women after menopause. *Am J Phys Med Rehabil* 1998;77(4):326-32.
- Kohrt WM, Ehsani AA, Birge SJ Jr. Effects of exercise involving predominantly either joint -reaction or ground-reaction forces on bone mineral density in older women. *J Bone Miner Res* 1997 Aug;12(8):1253-61.
- Kohrt WM, Ehsani AA, Birge SJ Jr. HRT preserves increases in bone mineral density and reductions in body fat after a supervised exercise program. *J Appl Physiol* 1998 May;84(5):1506-12.
- Kohrt WM, Snead DB, Slatopolsky E, Birge SJ Jr. Additive effects of weight-bearing exercise and estrogen on bone mineral density in older women. *J Bone Miner Res* 1995;10(9):1303-11.
- Kronhed AC, Moller M. Effects of physical exercise on bone mass, balance skill and aerobic capacity in women and men with low bone mineral density, after one year of training --a prospective study. *Scand J Med Sci Sports* 1998 Oct;8(5 Pt 1):290-8.
- Lohman T, Going S, Pamenter R, Hall M, Boyden T, Houtkooper L, Ritenbaugh C, Bare L, Hill A, Aickin M. Effect of resistance training on regional and total bone mineral density in premenopausal women: A Randomized Prospective Study. *J Bone Miner Res* 1995;10(7):1015-24.
- Lohman T, Going S, Pamenter R, Hall M, Boyden T, Houtkooper L, Ritenbaugh C, Bare L, Hill A, Aickin M. Effects of resistance training on regional and total bone mineral density in premenopausal women: a randomized prospective study. *J Bone Miner Res* 1995 Jul;10(7):1015-24.
- Lord SR, Ward JA, Williams P, Zivanovic E. The effects of a community exercise program on fracture risk factors in older women. *Osteoporos Int* 1996;6(5):361-7.
- Malmros B, Mortensen L, Jensen MB, Charles P. Positive effects of physiotherapy on chronic pain and performance in osteoporosis. *Osteoporos Int* 1998;8(3):215-21.
- Mayoux-Benhamou MA, Bagheri F, Roux C, Auleley GR, Rabourdin JP, Revel M. Effect of psoas training on postmenopausal lumbar bone loss: a 3 -year follow-up study. *Calcif Tissue Int* 1997 Apr;60(4):348-53.
- Morris FL, Naughton GA, Gibbs JL, Carlson JS, Wark JD. Prospective ten-month exercise intervention in premenarcheal girls: Positive effects on bone and lean mass. *J Bone Miner Res* 1997;12(9):1453-62.
- Pearlmutter LL, Bode BY, Wilkinson WE, Maricic MJ. Shoulder range of motion in patients with osteoporosis. *Arthritis Care Res* 1995 Sep;8(3):194-8.
- Preisinger E, Alacamlioglu Y, Pils K, Metka M, Schneider B, Ernst E. Regular physical exercises delay forearm bone loss - Results of five controlled trials. *Eur J Phys Med Rehabil* 1995;5(1):8 -12.

Ryan AS, Nicklas BJ, Dennis KE. Aerobic exercise maintains regional bone mineral density during weight loss in postmenopausal women. *J Appl Physiol* 1998;84(4):1305-10.

Ryan AS, Treuth MS, Hunter GR, Elahi D. Resistive training maintains bone mineral density in postmenopausal women. *Calcif Tissue Int* 1998;62(4):295-9.

Sinaki M, Wollan PC, Scott RW, Gelczer RK. Can strong back extensors prevent vertebral fractures in women with osteoporosis? *Mayo Clin Proc* 1996 Oct;71(10):951-6.

Thorsen K, Kristoffersson A, Hultdin J, Lorentzon R. Moderate endurance exercise does not affect serum collagen markers of bone metabolism in early postmenopausal women. *Eur J Exp Musculoskeletal Res* 1995;4(3-4):133-7.

Welsh L, Rutherford OM. Hip bone mineral density is improved by high-impact aerobic exercise in postmenopausal women and men over 50 years. *Eur J Appl Physiol Occup Physiol* 1996;74(6):511-7.

Wolff I, van Croonenborg JJ, Kemper HC, Kostense PJ, Twisk JW. The effect of exercise training programs on bone mass: a meta-analysis of published controlled trials in pre- and postmenopausal women. *Osteoporos Int* 1999;9(1):1-12.

## Fluoride

Balena R, Kleerekoper M, Foldes JA, Shih MS, Rao DS, Schober HC, Parfitt AM. Effects of different regimens of sodium fluoride treatment for osteoporosis on the structure, remodeling and mineralization of bone. *Osteoporos Int* 1998;8(5):428-35.

Battmann A, Resch H, Libanati CR, Ludy D, Fischer M, Farley S, Baylink DJ. Serum fluoride and serum osteocalcin levels in response to a novel sustained-release monofluorophosphate preparation: comparison with plain monofluorophosphate. *Osteoporos Int* 1997;7(1):48-51.

Devogelaer JP, Nagant de Deuxchaisnes C. Fluoride therapy of type I osteoporosis. *Clin Rheumatol* 1995 Sep;14 Suppl 3:26-31.

Dure-Smith BA, Farley SM, Linkhart SG, Farley JR, Baylink DJ. Calcium deficiency in fluoride-treated osteoporotic patients despite calcium supplementation. *J Clin Endocrinol Metab* 1996 Jan;81(1):269-75.

Erlacher L, Templ H, Magometschnigg D. A comparative bioavailability study on two new sustained-release formulations of disodiummonofluorophosphate versus a nonsustained-release formulation in healthy volunteers. *Calcif Tissue Int* 1995;56(3):196-200.

Gambacciani M, Spinetti A, Taponeco F, Piaggesi L, Cappagli B, Ciaponi M, Rovati LC, Genazzani AR. Treatment of postmenopausal vertebral osteopenia with monofluorophosphate: A long-term calcium-controlled study. *Osteoporos Int* 1995;5(6):467-71.

Guaydier-Souquieres G, Kotzki PO, Sabatier JP, Basse-Cathalinat B, Loeb G. In corticosteroid-treated respiratory diseases, monofluorophosphate increases lumbar bone density: A double-masked randomized study. *Osteoporos Int* 1996;6(2):171-7.

Kleerekoper M. The role of fluoride in the prevention of osteoporosis. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):441-52.

Lems WF, Jacobs WG, Bijlsma JW, Croone A, Haanen HC, Houben HH, Gerrits MI, van Rijn HJ. Effect of sodium fluoride on the prevention of corticosteroid-induced osteoporosis. *Osteoporos Int* 1997;7(6):575-82.

Lundy MW, Stauffer M, Wergedal JE, Baylink DJ, Featherstone JD, Hodgson SF, Riggs BL. Histomorphometric analysis of iliac crest bone

biopsies in placebo -treated versus fluoride-treated subjects. *Osteoporos Int* 1995 Mar;5(2):115-29.  
Comment in: *Osteoporos Int* 1996;6(5):416-7.

Meunier PJ, Sebert JL, Reginster JY, Briancon D, Appelboom T, Netter P, Loeb G, Rouillon A, Barry S, Evreux JC, Avouac B, Marchandise X. Fluoride salts are no better at preventing new vertebral fractures than calcium -vitamin D in postmenopausal osteoporosis: the FAVOStudy. *Osteoporos Int* 1998;8(1):4-12.

Pak CY, Adams-Huet B, Sakhae K, Bell NH, Licata A, Johnston C, Rubin B, Bonnick S, Piziak V, Graham H, Ballard J, Berger R, Fears W, Breslau N, Rubin C. Comparison of nonrandomized trials with slow-release sodium fluoride with a randomized placebo-controlled trial in postmenopausal osteoporosis. *J Bone Miner Res* 1996 Feb;11(2):160-8.

Pak CY, Sakhae K, Adams-Huet B, Piziak V, Peterson RD, Poindexter JR. Treatment of postmenopausal osteoporosis with slow-release sodium fluoride. Final report of a randomized controlled trial. *Ann Intern Med* 1995 Sep 15;123(6):401-8. Comment in: *Ann Intern Med* 1995 Sep 15;123(6):466-7 and *ACP J Club* 1996 Mar-Apr;124(2):34.

Patel S, Chan JK, Hosking DJ. Fluoride pharmacokinetics and changes in lumbar spine and hip bone mineral density. *Bone* 1996 Dec;19(6):651-5.

Reginster JY, Meurmans L, Zegels B, Rovati LC, Minne HW, Giacovelli G, Taquet AN, Setnikar I, Collette J, Gosset C. The effect of sodium monofluorophosphate plus calcium on vertebral fracture rate in postmenopausal women with moderate osteoporosis. A randomized, controlled trial. *Ann Intern Med* 1998 Jul 1;129(1):1 -8. Comment in: *Ann Intern Med* 1999 Feb 2;130(3):240; discussion 240-1 and *Ann Intern Med* 1999 Feb 2;130(3):240-1.

Reginster JY, Paul I, Gosset C. Current status of fluoride salts to treat postmenopausal osteoporosis. *Curr Opin Orthop* 1998;9(5):7-10.

Rigalli A, Pera L, Morosano M, Masoni A, Bocanera R, Tozzini R, Puche RC. In postmenopausal osteoporosis the bone increasing effect of monofluorophosphate is not dependent on serum fluoride. *Medicina (B Aires)* 1999;59(2):157 -61.

Ringe JD, Kipshoven C, Coster A, Umbach R. Therapy of established postmenopausal osteoporosis with monofluorophosphate plus calcium: dose -related

effects on bone density and fracture rate. *Osteoporos Int* 1999;9(2):171-8.

Schnitzler CM, Wing JR, Raal FJ, van der Merwe MT, Mesquita JM, Gear KA, Robson HJ, Shires R. Fewer bone histomorphometric abnormalities with intermittent than with continuous slow -release sodium fluoride therapy. *Osteoporos Int* 1997;7(4):376-89.

Sebert JL, Richard P, Mennecier I, Bisset JP, Loeb G. Monofluorophosphate increases lumbar bone density in osteopenic patients: a double -masked randomized study. *Osteoporos Int* 1995 Mar;5(2):108-14.

Talbot JR, Fischer MM, Farley SM, Libanati C, Farley J, Tabuena A, Baylink DJ. The increase in spinal bone density that occurs in response to fluoride therapy for osteoporosis is not maintained after the therapy is discontinued. *Osteoporos Int* 1996;6(6):442-7.

van Asten P, Darroudi F, Natarajan AT, Terpstra IJ, Duursma SA. Cytogenetic effects on lymphocytes in osteoporotic patients on long-term fluoride therapy. *Pharm World Sci* 1998 Oct;20(5):214 -8.

Zerwekh JE, Padalino P, Pak CY. The effect of intermittent slow -release sodium fluoride and continuous calcium citrate therapy on calcitropic hormones, biochemical markers of bone metabolism, and blood chemistry in postmenopausal osteoporosis. *Calcif Tissue Int* 1997 Oct;61(4):272 -8.

### Growth Hormone

Murphy MG, Bach MA, Plotkin D, Bolognese J, Ng J, Krupa D, Cerchio K, Gertz BJ. Oral administration of the growth hormone secretagogue MK-677 increases markers of bone turnover in healthy and functionally impaired elderly adults. *J Bone Miner Res* 1999;14(7):1182-8.

Saaf M, Hilding A, Thoren M, Troell S, Hall K. Growth hormone treatment of osteoporotic postmenopausal women - a one-year placebo-controlled study. *Eur J Endocrinol* 1999 May;140(5):390-9.

Saggese G, Baroncelli GI, Bertelloni S, Barsanti S. The effect of long-term growth hormone (GH) treatment on bone mineral density in children with GH deficiency. Role of GH in the attainment of peak bone mass. *J Clin Endocrinol Metab* 1996;81(8):3077-83.

Valimaki MJ, Salmela PI, Salmi J, Viikari J, Kataja M, Turunen H, Soppi E. Effects of 42 months of GH treatment on bone mineral density and bone turnover in GH-deficient adults. *Eur J Endocrinol* 1999;140(6):545-54.

### Parathyroid Hormone

Cosman F, Lindsay R. Is parathyroid hormone a therapeutic option for osteoporosis? A review of the clinical evidence. *Calcif Tissue Int* 1998 Jun;62(6):475-80.

Cosman F, Nieves J, Woelfert L, Gordon S, Shen V, Lindsay R. Parathyroid responsivity in postmenopausal women with osteoporosis during treatment with parathyroid hormone. *J Clin Endocrinol Metab* 1998 Mar;83(3):788-90.

Dietrich JW. Parathyroid hormone and related peptides for the treatment of postmenopausal osteoporosis. *Expert Opin Invest Drugs* 1997;6(6):655-63.

Finkelstein JS, Klibanski A, Arnold AL, Toth TL, Hornstein MD, Neer RM. Prevention of estrogen deficiency-related bone loss with human parathyroid hormone-(1-34): a randomized controlled trial. *JAMA* 1998 Sep 23-30;280(12):1067-73.

Fujita T, Inoue T, Morii H, Morita R, Norimatsu H, Orimo H, Takahashi HE, Yamamoto K, Fukunaga M. Effect of an intermittent weekly dose of human parathyroid hormone (1-34) on osteoporosis: a randomized double-masked prospective study using three dose levels. *Osteoporos Int* 1999;9(4):296-306.

Gasser JA. Preclinical studies and clinical experience with parathyroid hormone and its analogues. *Curr Opin Orthop* 1998;9(5):1-6.

Lane NE, Sanchez S, Modin GW, Genant HK, Pierini E, Arnaud CD. Parathyroid hormone treatment can reverse corticosteroid-induced osteoporosis. Results of a randomized controlled clinical trial. *J Clin Invest* 1998 Oct 15;102(8):1627-33.

Lindsay R, Nieves J, Formica C, Henneman E, Woelfert L, Shen V, Dempster D, Cosman F. Randomised controlled study of effect of parathyroid hormone on vertebral-bone mass and fracture incidence among postmenopausal women on oestrogen with osteoporosis. *Lancet* 1997 Aug 23;350(9077):550-5.

Morley P, Whitfield JF, Willick GE. Design and applications of parathyroid hormone analogues. *Curr Med Chem* 1999;6(11):1095-106.

Plotkin H, Gundberg C, Mitnick M, Stewart AF. Dissociation of bone formation from resorption during 2-week treatment with human parathyroid hormone-related peptide-(1-36) in humans: potential as an anabolic therapy for osteoporosis. *J Clin Endocrinol Metab* 1998 Aug;83(8):2786-91.

Sone T, Fukunaga M, Ono S, Nishiyama T. A small dose of human parathyroid hormone(1 -34) increased bone mass in the lumbar vertebrae in patients with senile osteoporosis. Miner Electrolyte Metab 1995;21(1-3):232-5.

### SERM's and Phytoestrogens

Adami S, Bufalino L, Cervetti R, Di Marco C, Di Munno O, Fantasia L, Isaia GC, Serni U, Vecchiet L, Passeri M. Ipriflavone prevents radial bone loss in postmenopausal women with low bone mass over 2 years. Osteoporos Int 1997;7(2):119-25.

Anderson JJ, Garner SC. The effects of phytoestrogens on bone. Nutr Res 1997;17(10):1617-32.

Anderson JJ, Garner SC. Phytoestrogens and bone. Baillieres Clin Endocrinol Metab 1998 Dec;12(4):543-57.

Armamento-Villareal R, Civitelli R. Estrogen action on the bone mass of postmenopausal women is dependent on body mass and initial bone density. J Clin Endocrinol Metab 1995;80(3):776 -82.

Choi YK, Han IK, Yoon HK. Ipriflavone for the treatment of osteoporosis. Osteoporos Int 1997;7 Suppl 3:S174-8.

Davies GC, Huster WJ, Lu Y, Plouffe L Jr, Lakshmanan M. Adverse events reported by postmenopausal women in controlled trials with raloxifene. Obstet Gynecol 1999;93(4):558-65.

De Aloysio D, Gambacciani M, Altieri P, Ciapponi M, Ventura V, Mura M, Genazzani AR, Bottiglioni F. Bone density changes in postmenopausal women with the administration of ipriflavone alone or in association with low-dose ERT. Gynaecol Endosc 1997;6(4):289-93.

Draper MW, Flowers DE, Huster WJ, Neild JA, Harper KD, Arnaud C. A controlled trial of raloxifene (LY139481) HCl: impact on bone turnover and serum lipid profile in healthy postmenopausal women. J Bone Miner Res 1996 Jun;11(6):835 -42.

Ettinger B, Black DM, Mitlak BH, Knickerbocker RK, Nickelsen T, Genant HK, Christiansen C, Delmas PD, Zanchetta JR, Stakkestad J, Gluer CC, Krueger K, Cohen FJ, Eckert S, Ensrud KE, Avioli LV, Lips P, Cummings SR. Reduction of vertebral fracture risk in postmenopausal women with osteoporosis treated with raloxifene: results from a 3-year randomized clinical trial. Multiple Outcomes of Raloxifene Evaluation (MORE) Investigators. JAMA 1999 Aug 18;282(7):637-45. Comment in: JAMA 1999 Aug 18;282(7):687-9.

Fitzpatrick LA. Selective estrogen receptor modulators and phytoestrogens: new therapies for the postmenopausal women. Mayo Clin Proc 1999 Jun;74(6):601 -7.

- Gambacciani M, Cappagli B, Piaggesi L, Ciapponi M, Genazzani AR. Ipriflavone prevents the loss of bone mass in pharmacological menopause induced by GnRH-agonists. *Calcif Tissue Int* 1997;61 Suppl 1:S15-8.
- Gambacciani M, Ciapponi M, Cappagli B, Piaggesi L, Genazzani AR. Effects of combined low dose of the isoflavone derivative ipriflavone and estrogen replacement on bone mineral density and metabolism in postmenopausal women. *Maturitas* 1997 Sep;28(1):75-81.
- Gennari C, Adami S, Agnusdei D, Bufalino L, Cervetti R, Crepaldi G, Di Marco C, Di Munno O, Fantasia L, Isaia GC, Mazzuoli GF, Ortolani S, Passeri M, Serni U, Vecchiet L. Effect of chronic treatment with ipriflavone in postmenopausal women with low bone mass. *Calcif Tissue Int* 1997;61 Suppl 1:S19-22.
- Gennari C, Agnusdei D, Crepaldi G, Isaia G, Mazzuoli G, Ortolani S, Bufalino L, Passeri M. Effect of ipriflavone --a synthetic derivative of natural isoflavones--on bone mass loss in the early years after menopause. *Menopause* 1998 Spring;5(1):9-15.
- Hagmeyer KO, Meyer TK. Raloxifene: A selective estrogen receptor modulator for the prevention of osteoporosis. *J Pharm Technol* 1999;15(2):37-45.
- Lufkin EG, Whitaker MD, Nickelsen T, Argueta R, Caplan RH, Knickerbocker RK, Riggs BL. Treatment of established postmenopausal osteoporosis with raloxifene: a randomized trial. *J Bone Miner Res* 1998 Nov;13(11):1747-54.
- Meunier PJ, Vignot E, Garnero P, Confavreux E, Paris E, Liu-Leage S, Sarkar S, Liu T, Wong M, Draper MW. Treatment of postmenopausal women with osteoporosis or low bone density with raloxifene. *Osteoporos Int* 1999;10(4):330-6.
- Nickelsen T, Lufkin EG, Riggs BL, Cox DA, Crook TH. Raloxifene hydrochloride, a selective estrogen receptor modulator: safety assessment of effects on cognitive function and mood in postmenopausal women. *Psychoneuroendocrinology* 1999 Jan;24(1):115-28.
- Ohta H, Komukai S, Makita K, Masuzawa T, Nozawa S. Effects of 1-year ipriflavone treatment on lumbar bone mineral density and bone metabolic markers in postmenopausal women with low bone mass. *Horm Res* 1999;51(4):178-83.
- Passeri M, Biondi M, Costi D, Dall'Aglio E, Pedrazzoni M, Bufalino L, Castiglione GN, Di Peppe C, Abate G. Effects of 2-year therapy with ipriflavone in elderly women with established osteoporosis. *Ital J Miner Electrolyte Metab* 1995;9(3-4):137-44.
- Powles TJ, Hickish T, Kanis JA, Tidy A, Ashley S. Effect of tamoxifen on bone mineral density measured by dual-energy x-ray absorptiometry in healthy premenopausal and postmenopausal women. *J Clin Oncol* 1996 Jan;14(1):78 -84.
- Reginster JY, Bufalino L, Christiansen C, Devogelaer JP, Gennari C, Riis BJ, Roux C. Design for an ipriflavone multicenter European fracture study. *Calcif Tissue Int* 1997;61 Suppl 1:S28 -32.
- Resch A, Biber E, Seifert M, Resch H. Evidence that tamoxifen preserves bone density in late postmenopausal women with breast cancer. *Acta Oncol* 1998;37(7-8):661-4.

## Bone Growth (Children)

- Al-Qadreh A, Schulpis KH, Athanasopoulou H, Mengreli C, Skarpalezou A, Voskaki I. Bone mineral status in children with phenylketonuria under treatment. *Acta Paediatrica* 1998 Nov;87(11):1162-6.
- Albanese A, Stanhope R. Endocrine investigation: Investigation of delayed puberty. *Clin Endocrinol (Oxf)* 1995;43(1):105-10.
- Bass S, Delmas PD, Pearce G, Hendrich E, Tabensky A, Seeman E. The differing tempo of growth in bone size, mass, and density in girls is region -specific. *J Clin Invest* 1999;104(6):795-804.
- Brumsen C, Hamdy NA, Papapoulos SE. Long-term effects of bisphosphonates on the growing skeleton. Studies of young patients with severe osteoporosis. *Medicine (Baltimore)* 1997 Jul;76(4):266-83.
- Cadogan J, Eastell R, Jones N, Barker ME. Milk intake and bone mineral acquisition in adolescent girls: Randomised, controlled intervention trial. *BMJ* 1997 Nov 15;315(7118):1255-60.
- Carrascosa A, Silber TJ. Osteoporosis: A pediatric concern? *Int Pediatr* 1996;11(2):84-94.
- Carrie Fassler AL, Bonjour JP. Osteoporosis as a pediatric problem. *Pediatr Clin North Am* 1995 Aug;42(4):811-24.
- Cassell C, Benedict M, Specker B. Bone mineral density in elite 7 - to 9-yr-old female gymnasts and swimmers. *Med Sci Sports Exerc* 1996;28(10):1243-6.
- Cassidy JT. Osteopenia and osteoporosis in children. *Clin Exp Rheumatol* 1999 Mar -Apr;17(2):245-50.
- Cassidy JT, Hillman LS. Abnormalities in skeletal growth in children with juvenile rheumatoid arthritis. *Rheum Dis Clin North Am* 1997 Aug;23(3):499 -522.
- Cheng JCY, Guo X, Sher AHL. Persistent osteopenia in adolescent idiopathic scoliosis: A longitudinal follow-up study. *Spine* 1999;24(12):1218-22.
- Cooper C, Cawley M, Bhalla A, Egger P, Ring F, Morton L, Barker D. Childhood growth, physical activity, and peak bone mass in women. *J Bone Miner Res* 1995 Jun;10(6):940-7.
- de Ridder CM, Delemarre-van de Waal HA. Clinical utility of markers of bone turnover in children and adolescents. *Curr Opin Pediatr* 1998 Aug;10(4):441-8.
- Docio S, Riancho JA, Perez A, Olmos JM, Amado JA, Gonzalez-Macias J. Seasonal deficiency of vitamin D in children: a potential target for osteoporosis-preventing strategies? *J Bone Miner Res* 1998 Apr;13(4):544-8.
- Faulkner RA, Bailey DA, Drinkwater DT, McKay HA, Arnold C, Wilkinson AA. Bone densitometry in Canadian children 8 -17 years of age. *Calcif Tissue Int* 1996;59(5):344-51.
- Fewtrell MS, Prentice A, Jones SC, Bishop NJ, Stirling D, Buffenstein R, Lunt M, Cole TJ, Lucas A. Bone mineralization and turnover in preterm infants at 8-12 years of age: The effect of early diet. *J Bone Miner Res* 1999;14(5):810-20.
- Fujita T, Fujii Y, Goto B. Measurement of forearm bone in children by peripheral computed tomography. *Calcif Tissue Int* 1999 Jan;64(1):34 -9.
- Gallo AM. Building strong bones in childhood and adolescence: reducing the risk of fractures in later life. *Pediatr Nurs* 1996 Sep-Oct;22(5):369-74, 422.
- Gunczler P, Lanes R, Paz-Martinez V, Martinis R, Esaa S, Colmenares V, Weisinger JR. Decreased lumbar spine bone mass and low bone turnover in children and adolescents with insulin dependent diabetes mellitus followed longitudinally. *J Pediatr Endocrinol Metab* 1998;11(3):413-9.
- Gunnes M, Lehmann EH. Physical activity and dietary constituents as predictors of forearm cortical and trabecular bone gain in healthy children and adolescents: A prospective study. *Acta Paediatr* 1996;85(1):19-25.
- Henderson RC. The correlation between dual-energy X-ray absorptiometry measures of bone density in the proximal femur and lumbar spine of children. *Skeletal Radiol* 1997 Sep;26(9):544-7.
- Ilich JZ, Matkovic V. Osteoporosis: Its pediatric causes and prevention opportunities. *Prim Care Update Ob Gyns* 1997;4(1):15-20.
- Iuliano-Burns S, Whiting SJ, Faulkner RA, Bailey DA. Levels, sources, and seasonality of dietary calcium intake in children and adolescents enrolled in the University of Saskatchewan Pediatric Bone Mineral Accrual Study. *Nutr Res* 1999 Oct;19(10):1471-83.
- Jackman LA, Millane SS, Martin BR, Wood OB, McCabe GP, Peacock M, Weaver CM. Calcium retention in relation to calcium intake and postmenarcheal age in adolescent females. *Am J Clin Nutr* 1997 Aug;66(2):327-33.

- Kemper HC, Van Mechelen W, Post GB, Snel J, Twisk JW, Van Lenthe FJ, Welten DC. The Amsterdam Growth and Health Longitudinal Study. The past (1976-1996) and future (1997-?). *Int J Sports Med Suppl* 1997;18(3):S140-50.
- Kovanlikaya A, Loro ML, Hangartner TN, Reynolds RA, Roe TF, Gilsanz V. Osteopenia in children: CT assessment. *Radiology* 1996 Mar;198(3):781-4.
- Lappe JM, Recker RR, Weidenbusch D. Influence of activity level on patellar ultrasound transmission velocity in children. *Osteoporos Int* 1998;8(1):39-46.
- Leonard MB, Feldman HI, Zemel BS, Berlin JA, Barden EM, Stallings VA. Evaluation of low density spine software for the assessment of bone mineral density in children. *J Bone Miner Res* 1998;13(11):1687-90.
- Leppala J, Kannus P, Sievanen H, Vuori I, Jarvinen M. A tibial shaft fracture sustained in childhood or adolescence does not seem to interfere with attainment of peak bone density. *J Bone Miner Res* 1999;14(6):988-93.
- Lloyd T, Martel JK, Rollings N, Andon MB, Kulin H, Demers LM, Eggli DF, Kieselhorst K, Chinchilli VM. The effect of calcium supplementation and Tanner Stage on bone density, content and area in teenage women. *Osteoporos Int* 1996;6(4):276-83.
- Lo SF, Huang JL, Chen LC, Yeh KW, Yang DC, Hsieh KH. Serum osteocalcin levels of normal children in Taiwan. *Acta Paediatr Sin* 1997;38(6):443-7.
- Lonzer MD, Imrie R, Rogers D, Worley D, Licata A, Secic M. Effects of heredity, age, weight, puberty, activity, and calcium intake on bone mineral density in children. *Clin Pediatr (Phila)* 1996 Apr;35(4):185-9.
- Lysen VC, Walker R. Osteoporosis risk factors in eighth grade students. *J Sch Health* 1997 Oct;67(8):317-21.
- Reid IR. Establishing healthy bones in the young. *Aust Fam Physician* 1997 Feb;26(2):132 -4.
- Sanchez CP, Salusky IB, Kuizon BD, Ramirez JA, Gales B, Ettenger RB, Goodman WG. Bone disease in children and adolescents undergoing successful renal transplantation. *Kidney Int* 1998;53(5):1358 -64.
- Schoenau E. The development of the skeletal system in children and the influence of muscular strength. *Horm Res* 1998 Jan;49(1):27-31.
- Schonau E. Problems of bone analysis in childhood and adolescence. *Pediatr Nephrol* 1998 Jun;12(5):420-9.
- Schonau E, Werhahn E, Schiedermaier U, Emokow, Schiessl H, Scheidhauer K, Michalk D. Influence of muscle strength on bone strength during childhood and adolescence. *Horm Res* 1996;45 Suppl 1:63-6.
- Slemenda CW, Peacock M, Hui S, Zhou L, Johnston CC. Reduced rates of skeletal remodeling are associated with increased bone mineral density during the development of peak skeletal mass. *J Bone Miner Res* 1997 Apr;12(4):676-82.
- Smith R. Idiopathic juvenile osteoporosis: experience of twenty-one patients. *Br J Rheumatol* 1995 Jan;34(1):68-77.
- Stern LS, Huba JC, Matkovic V. Development of a human growth and osteoporosis prevention curriculum and computer program. *Drug Inf J* 1997;31(1):311-7.
- Teegarden D, Proulx WR, Martin BR, Zhao J, McCabe GP, Lyle RM, Peacock M, Slemenda C, Johnston CC, Weaver CM. Peak bone mass in young women. *J Bone Miner Res* 1995 May;10(5):711-5.
- Uusi-Rasi K, Haapasalo H, Kannus P, Pasanen M, Sievanen H, Oja P, Vuori I. Determinants of bone mineralization in 8 to 20 year old Finnish females. *Eur J Clin Nutr* 1997;51(1):54 -9.
- Vandenbergh MF, Deman SA, Witteman JC, Hofman A, Trouerbach WT, Grobbee DE. Physical activity, calcium intake, and bone mineral content in children in The Netherlands. *J Epidemiol Community Health* 1995;49(3):299-304.
- Wang YL, Wu H, Yi BL, LeBlanc J. Newborn bone mineral density and health care during pregnancy. *J Bone Miner Metab* 1998;16(3):190-2.
- Wastney ME, Ng J, Smith D, Martin BR, Peacock M, Weaver CM. Differences in calcium kinetics between adolescent girls and young women. *Am J Physiol* 1996 Jul;271(1 Pt 2):R208-16.
- Yamada Y, Mizuno K, Kotani H, Otsuji K. A survey regarding the factors that influence bone mineral density among female high school students. *J Med* 1997;28(5-6):393-404.

## **Health Care (Burden of Illness) / Cost Effectiveness**

- Ahmed AI, Ryan PJ, Snelling T, Blake GM, Rymer J, Fogelman I. Long term compliance with hormone replacement treatment following screening for postmenopausal osteoporosis by bone density measurements. *J Obstet Gynaecol (Abingdon)* 1996;16(1):41-4.
- Ankjaer-Jensen A, Johnell O. Prevention of osteoporosis: cost-effectiveness of different pharmaceutical treatments. *Osteoporos Int* 1996;6(4):265-75.
- Barrett-Connor E. The economic and human costs of osteoporotic fracture. *Am J Med* 1995 Feb 27;98(2A):3S-8S.
- Bendich A, Leader S, Muhuri P. Supplemental calcium for the prevention of hip fracture: potential health-economic benefits. *Clin Ther* 1999 Jun;21(6):1058-72.
- Berman RS. Patient compliance of women taking estrogen replacement therapy. *Drug Inf J* 1997;31(1):71-83.
- Blalock SJ, DeVellis RF, Giorgino KB, DeVellis BM, Gold DT, Dooley MA, Anderson JJ, Smith SL. Osteoporosis prevention in premenopausal women: using a stage model approach to examine the predictors of behavior. *Health Psychol* 1996 Mar;15(2):84-93.
- Bosanquet N. Cost-effective prevention of osteoporosis: Family doctor perspectives. *Br J Med Econ* 1996;10(3):217-29.
- Brennan NJ, Caplan GA. Attitudes to osteoporosis and hormone replacement therapy among elderly women. *Osteoporos Int* 1999;9(2):139-43.
- Campbell MK, Torgerson DJ, Thomas RE, McClure JD, Reid DM. Direct disclosure of bone density results to patients: effect on knowledge of osteoporosis risk and anxiety level. *Osteoporos Int* 1998;8(6):584-90.
- Challen V. Screening for osteoporosis in peri-menopausal women: Does it fulfil the criteria for medical screening? *Radiography* 1997;3(3):191 -9.
- Chapman KM, Chan MW. Focus groups: Their role in developing calcium -related education materials. *J Hum Nutr Diet* 1995;8(5):363-7.
- Cole RP, Palushock S, Haboubi A. Osteoporosis management: physicians' recommendations and womens' compliance following osteoporosis testing. *Women Health* 1999;29(1):101-15.
- Cosman F, Nieves J, Walliser J, Lindsay R. Postmenopausal osteoporosis: patient choices and outcomes. *Maturitas* 1995 Sep;22(2):137-43.
- Coupland CA, Packham I, Lyons AR, Chilvers CE, Hosking DJ. The contribution of bone densitometry to the diagnosis and treatment of osteoporosis. *Public Health* 1997;111(3):191-4.
- Cummings SR. Prevention of hip fractures in older women: a population-based perspective. *Osteoporos Int* 1998;8 Suppl 1:S8-12.
- Cummings SR. Treatment thresholds for preventive therapy: a simplified example of therapy for prevention of hip fractures. *Scand J Rheumatol Suppl* 1996;103:101-7.
- Delmas PD, Fraser M. Strong bones in later life: luxury or necessity? *Bull World Health Organ* 1999;77(5):416-22. Comment in: *Bull World Health Organ* 1999;77(5):423-4; *Bull World Health Organ* 1999;77(5):424-6; *Bull World Health Organ* 1999;77(5):426-7; *Bull World Health Organ* 1999;77(5):427-8; *Bull World Health Organ* 1999;77(5):429-30; *Bull World Health Organ* 1999;77(5):430-1; *Bull World Health Organ* 1999;77(5):431-2; *Bull World Health Organ* 1999;77(5):433 and *Bull World Health Organ* 1999;77(5):434-5.
- Dolan P, Torgerson DJ. The cost of treating osteoporotic fractures in the United Kingdom female population. *Osteoporos Int* 1998;8(6):611-7.
- Edwards L, Fraser M. How do we increase awareness of osteoporosis? *Baillieres Clin Rheumatol* 1997 Aug;11(3):631-44.
- Edwards M. New drugs for osteoporosis. Comparison of the costs and required returns with those of other drugs intended for long-term use. *Pharmacoconomics* 1999 Mar;15(3):269-78.
- Eiken P, Kolthoff N. Compliance with long -term oral hormonal replacement therapy. *Maturitas* 1995;22(2):97-103.
- Elinson L, Cohen MM, Elmslie T. Hormone replacement therapy: A survey of Ontario physicians' prescribing practices. *Can Med Assoc J* 1999;161(6):695-8.
- Epstein RS, Feng W, Hirsch LJ, Kelly M. Intervention thresholds for the treatment of osteoporosis: comparison of different approaches to

- decision-making. *Osteoporos Int* 1998;8 Suppl 1:S22-7.
- Francis RM, Anderson FH, Torgerson DJ. A comparison of the effectiveness and cost of treatment for vertebral fractures in women. *Br J Rheumatol* 1995 Dec;34(12):1167-71.
- Fraser M. Availability and reimbursement of bone mineral density measurement in European countries: A European Foundation For Osteoporosis report. *Osteoporos Int* 1997;7(5):496-9.
- Fries JF. Prevention of osteoporotic fractures: possibilities, the role of exercise, and limitations. *Scand J Rheumatol Suppl* 1996;103:6-10; discussion 11-2.
- Garton M, Reid D, Rennie E. The climacteric, osteoporosis and hormone replacement; views of women aged 45-49. *Maturitas* 1995 Jan;21(1):7-15.
- Garton MJ, Cooper C, Reid D. Perimenopausal bone density screening --will it help prevent osteoporosis? *Maturitas* 1997 Jan;26(1):35-43.
- Horan ML, Kim KK, Gendler P, Froman RD, Patel MD. Development and evaluation of the Osteoporosis Self-Efficacy Scale. *Res Nurs Health* 1998 Oct;21(5):395-403.
- Huang C, Ross PD, Wasnich RD. Vertebral fracture and other predictors of physical impairment and health care utilization. *Arch Intern Med* 1996 Nov 25;156(21):2469-75.
- Joel ME, Le Gales C. Social and economic aspects of osteoporosis. *Curr Opin Rheumatol* 1998 Jul;10(4):362-7.
- Jonsson B, Christiansen C, Johnell O, Hedbrandt J. Cost-effectiveness of fracture prevention in established osteoporosis. *Osteoporos Int* 1995 Mar;5(2):136-42.
- Jonsson B, Christiansen C, Johnell O, Hedbrandt J, Karlsson G. Cost-effectiveness of fracture prevention in established osteoporosis. *Scand J Rheumatol Suppl* 1996;103:30-8; discussion 39-40.
- Kotzan JA, Martin BC, Wade WE. Persistence with estrogen therapy in a postmenopausal medicaid population. *Pharmacotherapy* 1999;19(3):363-9.
- Lane A. Direct costs of osteoporosis for New Zealand women. *Pharmacoconomics* 1996 Mar;9(3):231-45.
- Langton CM, Ballard PA, Langton DK, Purdie DW. Maximising the cost effectiveness of BMD referral for DXA using ultrasound as a selective population pre-screen. *Technol Health Care* 1997 Jul;5(3):235-41.
- Limouzin-Lamothe MA. What women want from hormone replacement therapy: results of an international survey. *Eur J Obstet Gynecol Reprod Biol* 1996 Apr;64 Suppl:S21-4.
- Lippuner K, von Overbeck J, Perrelet R, Bosshard H, Jaeger P. Incidence and direct medical costs of hospitalizations due to osteoporotic fractures in Switzerland. *Osteoporos Int* 1997;7(5):414-25.
- Lydick E, Cook K, Turpin J, Melton M, Stine R, Byrnes C. Development and validation of a simple questionnaire to facilitate identification of women likely to have low bone density. *Am J Managed Care* 1998;4(1):37-48.
- Lyles KW. Management of patients with vertebral compression fractures. *Pharmacotherapy* 1999 Jan;19(1 Pt 2):21S-24S.
- MacLennan AH, Wilson DH, Taylor AW. Hormone replacement therapies in women at risk of cardiovascular disease and osteoporosis in South Australia in 1997. *Med J Aust* 1999 Jun 7;170(11):524-7.
- Magnus JH, Joakimsen RM, Berntsen GK, Tollan A, Soogaard AJ. What do Norwegian women and men know about osteoporosis? *Osteoporos Int* 1996;6(1):32-6.
- Marshall D, Hailey D, Jonsson E. Health policy on bone density measurement technology in Sweden and Australia. *Health Policy* 1996;35(3):217-28.
- Matsumoto D, Pun KK, Nakatani M, Kadokawa D, Weissman M, McCarter L, Fletcher D, Takeuchi S. Cultural differences in attitudes, values, and beliefs about osteoporosis in first and second generation Japanese-American women. *Women Health* 1995;23(4):39-56.
- Matthis C, Weber U, O'Neill TW, Raspe H. Health impact associated with vertebral deformities: results from the European Vertebral Osteoporosis Study (EVOS). *Osteoporos Int* 1998;8(4):364-72.
- McKinney KA, Severino M, McFall P, Burry K, Thompson W. Treatment-seeking women at menopause: a comparison between two university menopause clinics. *Menopause* 1998 Fall;5(3):174-7.
- McMurray M. Educating young women about calcium. *Drug Inf J* 1997;31(1):269-71.
- Melton LJ 3rd, Thamer M, Ray NF, Chan JK, Chesnut CH 3rd, Einhorn TA, Johnston CC, Raisz

- LG, Silverman SL, Siris ES. Fractures attributable to osteoporosis: report from the National Osteoporosis Foundation. *J Bone Miner Res* 1997 Jan;12(1):16-23.
- New law mandates Medicare coverage of bone mass exams. *Diagn Imaging (San Franc)* 1998 Nov;Suppl Bone Mass:2-3.
- Newton KM, LaCroix AZ, Leveille SG, Rutter C, Keenan NL, Anderson LA. Women's beliefs and decisions about hormone replacement therapy. *J Womens Health* 1997;6(4):459-65.
- Norlund A. Prevention of osteoporosis--a cost-effectiveness analysis regarding fractures. *Scand J Rheumatol Suppl* 1996;103:42-5; discussion 46.
- Papa LJ, Weber BE. Physician characteristics associated with the use of bone densitometry. *J Gen Intern Med* 1997 Dec;12(12):781-3.
- Papaioannou A, Parkinson W, Adachi J, O'Connor A, Jolly EE, Tugwell P, Bedard M. Women's decisions about hormone replacement therapy after education and bone densitometry. *CMAJ* 1998 Nov 17;159(10):1253-7. Comment in: *CMAJ* 1998 Nov 17;159(10):1261-4.
- Phillipov G, Mos E, Scinto S, Phillips PJ. Initiation of hormone replacement therapy after diagnosis of osteoporosis by bone densitometry. *Osteoporos Int* 1997;7(2):162-4.
- Phillipov G, Phillips PJ, Leach G, Taylor AW. Public perceptions and self-reported prevalence of osteoporosis in South Australia. *Osteoporos Int* 1998;8(6):552-6.
- Purdie DW, Steel SA, Howey S, Doherty SM. The technical and logistical feasibility of population densitometry using DXA and directed HRT intervention: a 2-year prospective study. *Osteoporos Int* 1996;6 Suppl 3:31-6.
- Randell A, Sambrook PN, Nguyen TV, Lapsley H, Jones G, Kelly PJ, Eisman JA. Direct clinical and welfare costs of osteoporotic fractures in elderly men and women. *Osteoporos Int* 1995;5(6):427-32.
- Rapado A. General management of vertebral fractures. *Bone* 1996;18 (3 Suppl):191S-196S.
- Ray NF, Chan JK, Thamer M, Melton LJ 3rd. Medical expenditures for the treatment of osteoporotic fractures in the United States in 1995: report from the National Osteoporosis Foundation. *J Bone Miner Res* 1997 Jan;12(1):24-35.
- Reginster JY, Gillet P, Ben Sedrine W, Brands G, Ethgen O, de Froidmont C, Gosset C. Direct costs of hip fractures in patients over 60 years of age in Belgium. *Pharmacoeconomics* 1999 May;15(5):507-14.
- Rosner AJ, Grima DT, Torrance GW, Bradley C, Adachi JD, Sebaldt RJ, Willison DJ. Cost effectiveness of multi-therapy treatment strategies in the prevention of vertebral fractures in postmenopausal women with osteoporosis. *Pharmacoeconomics* 1998 Nov;14(5):559-73.
- Rozenberg S, Kroll M, Vandromme J, Paesmans M, Ham H. Effect of bone density evaluation on hormone replacement therapy prescription. *Maturitas* 1996 May;24(1-2):57-61.
- Rozenberg S, Lefever A, Kroll M, Vandromme J, Paesmans M, Ham H. Prescription attitudes among gynecologists towards two particular risk factors of osteoporosis: the patient's age and her bone mineral density. *Maturitas* 1999 May 31;32(1):19-24.
- Saadi H, Litaker D, Mills W, Kippes C, Richmond B, Licata A. Practice variation in the diagnosis and treatment of osteoporosis: a case for more effective physician education in primary care. *J Womens Health Gend Based Med* 1999 Jul-Aug;8(6):767-71.
- Salamone LM, Pressman AR, Seeley DG, Cauley JA. Estrogen replacement therapy: A survey of older women's attitudes. *Arch Intern Med* 1996;156(12):1293-7.
- Saver BG, Woods NF, Taylor TR, Stevens NG. Physician policies on the use of preventive hormone therapy. *Am J Prev Med* 1997;13(5):358-65.
- Schurh MA, Rizzoli R, Mermilliod B, Vasey H, Michel JP, Bonjour JP. A prospective study on socioeconomic aspects of fracture of the proximal femur. *J Bone Miner Res* 1996;11(12):1935-42.
- Sheldon TA, Raffle A, Watt I. Department of Health shoots itself in the hip. Why the report of the Advisory Group on Osteoporosis undermines evidence based purchasing. *BMJ* 1996 Feb 3; 312(7026):296-7. Comment in: *BMJ* 1996 Feb 3; 312(7026):297-8; *BMJ* 1996 May 11;312(7040):1225-6 and *BMJ* 1996 May 18;312(7041):1300-1.
- Silverman SL, Greenwald M, Klein RA, Drinkwater BL. Effect of bone density information on decisions about hormone replacement therapy: A randomized trial. *Obstet Gynecol* 1997;89(3):321-5.
- Stock JL, Waud CE, Coderre JA, Overdorf JH, Janikas JS, Heiniluoma KM, Morris MA. Clinical

- reporting to primary care physicians leads to increased use and understanding of bone densitometry and affects the management of osteoporosis. A randomized trial. *Ann Intern Med* 1998 Jun 15;128(12 Pt 1):996-9.
- Szucs T, Admani S. Clinical and health economic benefit of calcium and vitamin D supplementation in the prevention of osteoporotic fractures. *Br J Med Econ* 1997;11(1-2):37-44.
- Taggart HM, Connor SE. The relation of exercise habits to health beliefs and knowledge about osteoporosis. *J Am Coll Health* 1995 Nov;44(3):127-30.
- Togerson D, Cooper C. Osteoporosis as a candidate for disease management: Epidemiological and cost-of-illness considerations. *Dis Manage Health Outcomes* 1998;3(5):207-14.
- Torgerson DJ, Dolan P. Prescribing by general practitioners after an osteoporotic fracture. *Ann Rheum Dis* 1998 Jun;57(6):378-9.
- Torgerson DJ, Donaldson C, Reid DM. Bone mineral density measurements: are they worth while? *J R Soc Med* 1996 Aug;89(8):457-61. Comment in: *J R Soc Med* 1996 Oct;89(10):599.
- Torgerson DJ, Donaldson C, Russell IT, Reid DM. Hormone replacement therapy: compliance and cost after screening for osteoporosis. *Eur J Obstet Gynecol Reprod Biol* 1995 Mar;59(1):57-60.
- Torgerson DJ, Reid DM. The pharmacoeconomics of hormone replacement therapy. *Pharmacoeconomics* 1999;16(1):9-16.
- Torgerson DJ, Thomas RE, Campbell MK, Reid DM. Randomized trial of osteoporosis screening. Use of hormone replacement therapy and quality -of-life results. *Arch Intern Med* 1997 Oct 13;157(18):2121-5.
- Townsend J. Hormone replacement therapy: Assessment of present use, costs, and trends. *Br J Gen Pract* 1998;48(427):955-8.
- Truter I, Serfontein JH. A survey of the treatment of female patients with osteoporosis using drug utilization consumption parameters. *J Clin Pharm Ther* 1999 Jun;24(3):209-17.
- Ulahannan TJ, Lavelle LA. Is systematic osteoporosis prevention and detection possible in a district hospital? *J Clin Eff* 1997;2(2):43-6.
- Vestergaard P, Hermann AP, Gram J, Jensen LB, Kolthoff N, Abrahamsen B, Brot C, Eiken P. Improving compliance with hormonal replacement therapy in primary osteoporosis prevention. *Maturitas* 1997 Dec 15;28(2):137-45.
- Villar MT, Hill P, Inskip H, Thompson P, Cooper C. Will elderly rest home residents wear hip protectors? *Age Ageing* 1998 Mar;27(2):195-8.
- Visentin P, Ciravegna R, Fabris F. Estimating the cost per avoided hip fracture by osteoporosis treatment in Italy. *Maturitas* 1997 Apr;26(3):185-92.
- Waller J, Angbratt M, Blomberg C, Kronhed AC, Larsson L, Lofman O, Moller M, Toss G, Foldevi M, Trell E. Logics and logistics of community intervention against osteoporosis: an evidence basis. *J Med Syst* 1997 Feb;21(1):33-47.
- Wardle PG. Managed care of hormone replacement therapy in the menopause. *Curr Opin Obstet Gynecol* 1997;9(4):270-7.
- Wasnich RD. Using the Internet to report remaining lifetime fracture probability. *Drug Inf J* 1998;32(4):1005-10.
- Watts NB. Understanding the Bone Mass Measurement Act. *J Clin Densitom* 1999 Fall;2(3):211-7.
- Woo J, Ho SC, Chan SG, Yu AL, Yuen YK, Lau J. An estimate of chronic disease burden and some economic consequences among the elderly Hong Kong population. *J Epidemiol Community Health* 1997;51(5):486-9.
- Zethraeus N, Gerdtham UG. Estimating the costs of hip fracture and potential savings. *Int J Technol Assess Health Care* 1998 Spring;14(2):255-67.

## Models and Definitions

- Frost HM. Osteoporoses: a rationale for further definitions? *Calcif Tissue Int* 1998 Feb;62(2):89 -94.
- Frost HM. Osteoporosis treatment: quo vadis? (A brief overview). *Medicina (B Aires)* 1997;57 Suppl 1:119-26.
- Heaney RP, Yates AJ, Santora AC 2nd. Bisphosphonate effects and the bone remodeling transient. *J Bone Miner Res* 1997 Aug;12(8):1143 -51.
- Parfitt AM, Mundy GR, Roodman GD, Hughes DE, Boyce BF. A new model for the regulation of bone resorption, with particular reference to the effects of bisphosphonates. *J Bone Miner Res* 1996;11(2):150-9.
- Sandor T, Felsenberg D, Brown E. Comments on the hypotheses underlying fracture risk assessment in osteoporosis as proposed by the World Health Organization. *Calcif Tissue Int* 1999 Mar;64(3):267-70.

## Nutrition and Bone Health

- Aerssens J, Declerck K, Maeyaert B, Boonen S, Dequeker J. The effect of modifying dietary calcium intake pattern on the circadian rhythm of bone resorption. *Calcif Tissue Int* 1999 Jul;65(1):34 -40.
- Andersen AE, Woodward PJ, Lafrance N. Bone mineral density of eating disorder subgroups. *Int J Eat Disord* 1995;18(4):335-42.
- Andersen RE, Wadden TA, Herzog RJ. Changes in bone mineral content in obese dieting women. *Metabolism* 1997;46(8):857-61.
- Anderson JJ, Miller CP. Lower lifetime estrogen exposure among vegetarians as a possible risk factor for osteoporosis: a hypothesis. *Veg Nutr* 1998;2(1):4-12.
- Anderson JJ, Rondano P, Holmes A. Roles of diet and physical activity in the prevention of osteoporosis. *Scand J Rheumatol Suppl* 1996;103:65 -74.
- Angbratt M, Moller M. Questionnaire about calcium intake: Can we trust the answers? *Osteoporos Int* 1999;9(3):220-5.
- Barger-Lux MJ, Heaney RP, Lanspa SJ, Healy JC, DeLuca HF. An investigation of sources of variation in calcium absorption efficiency. *J Clin Endocrinol Metab* 1995 Feb;80(2):406-11. Published erratum appears in *J Clin Endocrinol Metab* 1995 Jul;80(7):2068.
- Bilezikian JP, Bailey L, Elmer PJ, Favus MJ, Go VLW, Abrams SA, Ascherlo A, Baron JA, Bell NH, Goldring SR, Holt LH, Insogna KL, Krimgold B, Mallette LE, Chrischilles EA, Dawson -Hughes B, Heaney RP, Shapiro JR, St Jeor ST, et al. Optimal calcium intake. *Nutrition* 1995;11(5):409 -17.
- Binkley NC, Suttie JW. Vitamin K nutrition and osteoporosis. *J Nutr* 1995 Jul;125(7):1812-21.
- Bonjour JP, Schurch MA, Chevalley T, Ammann P, Rizzoli R. Protein intake, IGF-1 and osteoporosis. *Osteoporos Int* 1997;7 Suppl 3:S36-42.
- Bonjour JP, Schurch MA, Rizzoli R. Nutritional aspects of hip fractures. *Bone* 1996 Mar;18(3 Suppl):139S-144S.
- Bonjour JP, Schurch MA, Rizzoli R. Proteins and bone health. *Pathol Biol (Paris)* 1997;45(1):57 -9.
- Bryant RJ, Cadogan J, Weaver CM. The new dietary reference intakes for calcium: implications for

- osteoporosis. *J Am Coll Nutr* 1999 Oct;18(5 Suppl):406S-412S.
- Cayon E, Roquer M. Solubility of calcium salts and their effects on osteoporosis. *Methods Find Exp Clin Pharmacol* 1997 Sep;19(7):501-4.
- Chiu JF, Lan SJ, Yang CY, Wang PW, Yao WJ, Su LH, Hsieh CC. Long-term vegetarian diet and bone mineral density in postmenopausal Taiwanese women. *Calcif Tissue Int* 1997 Mar;60(3):245-9.
- Clark K. Disordered eating behaviors and bone-mineral density in women who misuse alcohol. *West J Nurs Res* 1997 Feb;19(1):32-45; discussion 45-55.
- Cooper C, Atkinson EJ, Hensrud DD, Wahner HW, O'Fallon WM, Riggs BL, Melton LJ 3rd. Dietary protein intake and bone mass in women. *Calcif Tissue Int* 1996 May;58(5):320-5.
- Dreosti IE. Magnesium status and health. *Nutr Rev* 1995 Sep;53(9 Pt 2):S23-7.
- Earnshaw SA, Worley A, Hosking DJ. Current diet does not relate to bone mineral density after the menopause. *Br J Nutr* 1997;78(1):65-72.
- Elbon SM, Johnson MA, Fischer JG. Milk consumption in older Americans. *Am J Public Health* 1998 Aug;88(8):1221-4.
- Grinspoon S, Baum H, Lee K, Anderson E, Herzog D, Klibanski A. Effects of short-term recombinant human insulin-like growth factor I administration on bone turnover in osteopenic women with anorexia nervosa. *J Clin Endocrinol Metab* 1996;81(11):3864-70.
- Grinspoon SK, Baum HBA, Kim V, Coggins C, Klibanski A. Decreased bone formation and increased mineral dissolution during acute fasting in young women. *J Clin Endocrinol Metab* 1995;80(12):3628-33.
- Heaney RP. Excess dietary protein may not adversely affect bone. *J Nutr* 1998 Jun;128(6):1054-7. Comment in: *J Nutr* 1998 Dec;128(12):2529.
- Heaney RP. Nutrient effects: discrepancy between data from controlled trials and observational studies. *Bone* 1997 Dec;21(6):469-71.
- Heaney RP, Dowell MS, Barger-Lux MJ. Absorption of calcium as the carbonate and citrate salts, with some observations on method. *Osteoporos Int* 1999;9(1):19-23.
- Holick MF. Vitamin D and bone health. *J Nutr* 1996;126(4 Suppl):1159S-1164S.
- Hotta M, Shibasaki T, Sato K, Demura H. The importance of body weight history in the occurrence and recovery of osteoporosis in patients with anorexia nervosa: evaluation by dual X-ray absorptiometry and bone metabolic markers. *Eur J Endocrinol* 1998 Sep;139(3):276-83.
- Huang Z, Himes JH, McGovern PG. Nutrition and subsequent hip fracture risk among a national cohort of white women. *Am J Epidemiol* 1996;144(2):124-34.
- Iketani T, Kiriike N, Nakanishi S, Nakasuji T. Effects of weight gain and resumption of menses on reduced bone density in patients with anorexia nervosa. *Biol Psychiatry* 1995;37(8):521-7.
- Kardinaal AF, Morton MS, Bruggemann -Rotgans IE, van Beresteijn EC. Phyto-oestrogen excretion and rate of bone loss in postmenopausal women. *Eur J Clin Nutr* 1998 Nov;52(11):850-5.
- Kohlmeier L, Marcus R. Calcium disorders of pregnancy. *Endocrinol Metab Clin North Am* 1995 Mar;24(1):15-39.
- Kung AW, Luk KD, Chu LW, Chiu PK. Age-related osteoporosis in Chinese: an evaluation of the response of intestinal calcium absorption and calcitropic hormones to dietary calcium deprivation. *Am J Clin Nutr* 1998 Dec;68(6):1291-7. Comment in: *Am J Clin Nutr* 1998 Dec;68(6):1153-4 and *Am J Clin Nutr* 1999 Jun;69(6):1291-2.
- Lau EM, Kwok T, Woo J, Ho S. Bone mineral density in Chinese elderly female vegetarians, vegans, lacto-vegetarians and omnivores. *Eur J Clin Nutr* 1998;52(1):60-4.
- Leveille SG, LaCroix AZ, Koepsell TD, Beresford S, Van Belle G, Buchner DM. Do dietary antioxidants prevent postmenopausal bone loss? *Nutr Res* 1997;17(8):1261-9.
- Leveille SG, LaCroix AZ, Koepsell TD, Beresford SA, Van Belle G, Buchner DM. Dietary vitamin C and bone mineral density in postmenopausal women in Washington State, USA. *J Epidemiol Community Health* 1997;51(5):479-85.
- Lloyd T, Rollings N, Eggli DF, Kieselhorst K, Chinchilli VM. Dietary caffeine intake and bone status of postmenopausal women. *Am J Clin Nutr* 1997 Jun;65(6):1826-30.
- Michaelsson K, Holmberg K, Mallmin H, Wolk A, Bergstrom R, Ljunghall S. Diet, bone mass, and

- osteocalcin: A cross-sectional study. *Calcif Tissue Int* 1995;57(2):86-93.
- Michaelsson K, Holmberg L, Mallmin H, Sorensen S, Wolk A, Bergstrom R, Ljunghall S, Adami HO, Bergkvist L, Bruce A, Leppart J, Nilsson G, Ringqvist I, Vessby B. Diet and hip fracture risk: A case-control study. *Int J Epidemiol* 1995;24(4):771-82.
- Morris RC Jr, Schmidlin O, Tanaka M, Forman A, Frassetto L, Sebastian A. Differing effects of supplemental KCl and KHCO<sub>3</sub>: pathophysiological and clinical implications. *Semin Nephrol* 1999 Sep;19(5):487-93.
- Munger RG, Cerhan JR, Chiu BC. Prospective study of dietary protein intake and risk of hip fracture in postmenopausal women. *Am J Clin Nutr* 1999;69(1):147-52.
- Nieves JW, Golden AL, Siris E, Kelsey JL, Lindsay R. Teenage and current calcium intake are related to bone mineral density of the hip and forearm in women aged 30-39 years. *Am J Epidemiol* 1995;141(4):342-51.
- Nordin BE. Calcium and osteoporosis. *Nutrition* 1997;13(7-8):664-86.
- Nordin BE, Morris HA, Wishart JM, Scopacasa F, Horowitz M, Need AG, Clifton PM. Modification and validation of a single -isotope radiocalcium absorption test. *J Nucl Med* 1998 Jan;39(1):108-13.
- Nutrition and bone health: with particular reference to calcium and vitamin D. Report of the Subgroup on Bone Health, Working Group on the Nutritional Status of the Population of the Committee on Medical Aspects of the Food Nutrition Policy. *Rep Health Soc Subj (Lond)* 1998;49:iii-xvii, 1-24.
- O'Brien KO, Abrams SA, Liang LK, Ellis KJ, Gagel RF. Bone turnover response to changes in calcium intake is altered in girls and adult women in families with histories of osteoporosis. *J Bone Miner Res* 1998 Mar;13(3):491-9.
- Osler M, Heitmann BL. Food patterns, flour fortification, and intakes of calcium and vitamin D: A longitudinal study of Danish adults. *J Epidemiol Community Health* 1998 Mar;52(3):161-5.
- Packard PT, Recker RR. Caffeine does not affect the rate of gain in spine bone in young women. *Osteoporos Int* 1996;6(2):149-52.
- Recker RR, Hinders S, Davies KM, Heaney RP, Stegman MR, Lappe JM, Kimmel DB. Correcting calcium nutritional deficiency prevents spine fractures in elderly women. *J Bone Miner Res* 1996 Dec;11(12):1961-6.
- Relea P, Revilla M, Ripoll E, Arribas I, Villa LF, Rico H. Zinc, biochemical markers of nutrition, and type I osteoporosis. *Age Ageing* 1995 Jul;24(4):303-7.
- Rico H, Relea P, Crespo R, Revilla M, Villa LF, Arribas I, Usabiaga J. Biochemical markers of nutrition in type -I and type-II osteoporosis. *J Bone Joint Surg Br* 1995 Jan;77(1):148-51.
- Rude RK, Olerich M. Magnesium deficiency: possible role in osteoporosis associated with gluten-sensitive enteropathy. *Osteoporos Int* 1996;6(6):453-61.
- Schuch MA, Rizzoli R, Slosman D, Vadas L, Vergnaud P, Bonjour JP. Protein supplements increase serum insulin -like growth factor-I levels and attenuate proximal femur bone loss in patients with recent hip fracture. A randomized, double -blind, placebo-controlled trial. *Ann Intern Med* 1998 May 15;128(10):801-9. Comment in: *Ann Intern Med* 1998 Dec 15;129(12):1075-6; discussion 1076 and *Ann Intern Med* 1998 Dec 15;129(12):1076.
- Serpell L, Treasure J. Osteoporosis - A serious health risk in chronic anorexia nervosa. *Eur Eating Disord Rev* 1997;5(3):149-157.
- Stini WA. Calcium homeostasis and human evolution. *Coll Antropol* 1998 Dec;22(2):411-25.
- Suarez FL, Adshead J, Furne JK, Levitt MD. Lactose maldigestion is not an impediment to the intake of 1500 mg calcium daily as dairy products. *Am J Clin Nutr* 1998;68(5):1118-22.
- Susiyanti AE, Chambers IV E, Pearson M, Lewis NM. Calcium intake, attitudes toward calcium-containing foods, and number of risk factors for osteoporosis in two groups of 18- to 35-year-old women. *Nutr Res* 1996;16(8):1313-29.
- Teegarden D, Lyle RM, McCabe GP, McCabe LD, Proulx WR, Michon K, Knight AP, Johnston CC, Weaver CM. Dietary calcium, protein, and phosphorus are related to bone mineral density and content in young women. *Am J Clin Nutr* 1998 Sep;68(3):749-54. Comment in: *Am J Clin Nutr* 1998 Sep;68(3):523-4.
- Teegarden D, Lyle RM, Proulx WR, Johnston CC, Weaver CM. Previous milk consumption is associated with greater bone density in young women. *Am J Clin Nutr* 1999 May;69(5):1014-7.

- Teesalu S, Vihalemm T, Vaasa IO. Nutrition in prevention of osteoporosis. *Scand J Rheumatol Suppl* 1996;103:81-2; discussion 83.
- Tellez M, Arlot ME, Mawer EB, Diaz A, Hesp R, Hulme P, Edouard C, Green JR, Meunier PJ, Reeve J. Gastrointestinal calcium absorption and dietary calcium load: Relationships with bone remodelling in vertebral osteoporosis. *Osteoporos Int* 1995;5(1):14-22.
- Trichopoulou A, Georgiou E, Bassiakos Y, Lipworth L, Lagiou P, Proukakis C, Trichopoulos D. Energy intake and monounsaturated fat in relation to bone mineral density among women and men in Greece. *Prev Med* 1997;26(3):395-400.
- Tucker KL, Hannah MT, Chen H, Cupples LA, Wilson PW, Kiel DP. Potassium, magnesium, and fruit and vegetable intakes are associated with greater bone mineral density in elderly men and women. *Am J Clin Nutr* 1999;69(4):727-36.
- Ulrich CM, Georgiou CC, Snow-Harter CM, Gillis DE. Bone mineral density in mother -daughter pairs: Relations to lifetime exercise, lifetime milk consumption, and calcium supplements. *Am J Clin Nutr* 1996;63(1):72-9.
- Van Papendorp DH, Coetzer H, Kruger MC. Biochemical profile of osteoporotic patients on essential fatty acid supplementation. *Nutr Res* 1995;15(3):325-34.
- Vecht-Hart CM, Bode P, Trouerbach WT, Collette HJ. Calcium and magnesium in human toenails do not reflect bone mineral density. *Clin Chim Acta* 1995;236(1):1-6.
- Vermeer C, Gijsbers BL, Craciun AM, Groenen -van Dooren MM, Knapen MH. Effects of vitamin K on bone mass and bone metabolism. *J Nutr* 1996 Apr;126(4 Suppl):1187S-91S.
- Weaver CM, Heaney RP, Teegarden D, Hinders SM. Wheat bran abolishes the inverse relationship between calcium load size and absorption fraction in women. *J Nutr* 1996 Jan;126(1):303-7.
- Weaver CM, Martin BR, Plawecki KL, Peacock M, Wood OB, Smith DL, Wastney ME. Differences in calcium metabolism between adolescent and adult females. *Am J Clin Nutr* 1995 Mar;61(3):577 -81.
- Weaver CM, Peacock M, Martin BR, McCabe GP, Zhao J, Smith DL, Wastney ME. Quantification of biochemical markers of bone turnover by kinetic measures of bone formation and resorption in young healthy females. *J Bone Miner Res* 1997 Oct;12(10):1714-20.
- Weaver CM, Peacock M, Martin BR, Plawecki KL, McCabe GP. Calcium retention estimated from indicators of skeletal status in adolescent girls and young women. *Am J Clin Nutr* 1996 Jul;64(1):67 -70.
- Yamaguchi M. Role of zinc in bone formation and bone resorption. *J Trace Elem Exp Med* 1998;11(2-3):119-35.
- Yoshida H, Nagaya T, Hayashi T, Takahashi H, Kawai M. Milk consumption decreases activity of human serum alkaline phosphatase: a cross -sectional study. *Metabolism* 1995 Sep;44(9):1190-3.

## Osteoporosis in Men

Adams JS, Song CF, Kantorovich V. Rapid recovery of bone mass in hypercalciuric, osteoporotic men treated with hydrochlorothiazide. *Ann Intern Med* 1999 Apr 20;130(8):658-60.

Anderson FH, Francis RM, Bishop JC, Rawlings DJ. Effect of intermittent cyclical disodium etidronate therapy on bone mineral density in men with vertebral fractures. *Age Ageing* 1997 Sep;26(5):359-65.

Anderson FH, Francis RM, Faulkner K. Androgen supplementation in eugonadal men with osteoporosis-effects of 6 months of treatment on bone mineral density and cardiovascular risk factors. *Bone* 1996 Feb;18(2):171-7.

Anderson FH, Francis RM, Peaston RT, Wastell HJ. Androgen supplementation in eugonadal men with osteoporosis: effects of six months' treatment on markers of bone formation and resorption. *J Bone Miner Res* 1997 Mar;12(3):472-8.

Bilezikian JP. Osteoporosis in men. *J Clin Endocrinol Metab* 1999 Oct;84(10):3431-4.

Bilezikian JP, Kurland ES, Rosen CJ. Male skeletal health and osteoporosis. *Trends Endocrinol Metab* 1999;10(8):244-50.

Boonen S, Vanderschueren D, Cheng XG, Verbeke G, Dequeker J/Geusens P, Broos P, Bouillon R. Age-related (Type II) femoral neck osteoporosis in men: Biochemical evidence for both hypovitaminosis D- and androgen deficiency -induced bone resorption. *J Bone Miner Res* 1997 Dec;12(12):2119-26.

Boonen S, Vanderschueren D, Geusens P, Bouillon R. Age-associated endocrine deficiencies as potential determinants of femoral neck (type II) osteoporotic fracture occurrence in elderly men. *Int J Androl* 1997 Jun;20(3):134-43.

Center JR, Nguyen TV, Sambrook PN, Eisman JA. Hormonal and biochemical parameters in the determination of osteoporosis in elderly men. *J Clin Endocrinol Metab* 1999 Oct;84(10):3626-35.

Clarke BL, Ebeling PR, Jones JD, Wahner HW, O'Fallon WM, Riggs BL, Fitzpatrick LA. Changes in quantitative bone histomorphometry in aging healthy men. *J Clin Endocrinol Metab* 1996 Jun;81(6):2264-70.

Cohen-Solal ME, Baudoin C, Omouri M, Kuntz D, De Vernejoul MC. Bone mass in middle -aged

osteoporotic men and their relatives: familial effect. *J Bone Miner Res* 1998 Dec;13(12):1909-14.

Daniell HW. Osteoporosis after orchiectomy for prostate cancer. *J Urol* 1997 Feb;157(2):439-44. Comment in: *J Urol* 1997 Feb;157(2):575; *J Urol* 1997 Oct;158(4):1529-30; *J Urol* 1998 Apr;159(4):1314 and *J Urol* 1998 Nov;160(5):1809.

Di Somma C, Colao A, Di Sarno A, Klain M, Landi ML, Faccioli G, Pivonello R, Panza N, Salvatore M, Lombardi G. Bone marker and bone density responses to dopamine agonist therapy in hyperprolactinemic males. *J Clin Endocrinol Metab* 1998;83(3):807-13.

Diamond T, Smerdely P, Kormas N, Sekel R, Vu T, Day P. Hip fracture in elderly men: the importance of subclinical vitamin D deficiency and hypogonadism. *Med J Aust* 1998 Aug 3;169(3):138-41.

Diamond TH, Thornley SW, Sekel R, Smerdely P. Hip fracture in elderly men: prognostic factors and outcomes. *Med J Aust* 1997 Oct 20;167(8):412-5. Comment in: *Med J Aust* 1997 Oct 20;167(8):404-5.

Eastell R, Boyle IT, Compston J, Cooper C, Fogelman I, Francis RM, Hosking DJ, Purdie DW, Ralston S, Reeve J, Reid DM, Russell RG, Stevenson JC. Management of male osteoporosis: report of the UK Consensus Group. *QJM* 1998 Feb;91(2):71-92.

Ebeling PR. Osteoporosis in men. New insights into aetiology, pathogenesis, prevention and management. *Drugs Aging* 1998 Dec;13(6):421-34.

Effective treatment of osteoporosis in men still to be established. *Drugs Ther Perspect* 1999;14(6):8-10.

Finkelstein JS, Klibanski A, Neer RM. A longitudinal evaluation of bone mineral density in adult men with histories of delayed puberty. *J Clin Endocrinol Metab* 1996;81(3):1152-5.

Gillberg P, Johansson AG, Ljunghall S. Decreased estradiol levels and free androgen index and elevated sex hormone-binding globulin levels in male idiopathic osteoporosis. *Calcif Tissue Int* 1999 Mar;64(3):209-13.

Glynn NW, Meilahn EN, Charron M, Anderson SJ, Kuller LH, Cauley JA. Determinants of bone mineral density in older men. *J Bone Miner Res* 1995 Nov;10(11):1769-77.

Grisso JA, Kelsey JL, O'Brien LA, Miles CG, Sidney S, Maislin G, LaPann K, Moritz D, Peters B. Risk factors for hip fracture in men. *Hip Fracture Study Group. Am J Epidemiol* 1997 May 1;145(9):786-93.

- Hamdy RC, Moore SW, Whalen KE, Landy C. Nandrolone decanoate for men with osteoporosis. *Am J Ther* 1998;5(2):89-95.
- Huuskonen J, Kroger H, Arnala I, Alhava E. Characteristics of male hip fracture patients. *Ann Chir Gynaecol* 1999;88(1):48-53.
- Johansson AG, Lindh E, Blum WF, Kollerup G, Sorensen OH, Ljunghall S. Effects of growth hormone and insulin -like growth factor I in men with idiopathic osteoporosis. *J Clin Endocrinol Metab* 1996 Jan;81(1):44-8.
- Katznelson L. Therapeutic role of androgens in the treatment of osteoporosis in men. *Baillieres Clin Endocrinol Metab* 1998 Oct;12(3):453-70.
- Kelepouris N, Harper KD, Gannon F, Kaplan FS, Haddad JG. Severe osteoporosis in men. *Ann Intern Med* 1995 Sep 15;123(6):452-60.
- Kenny AM, Gallagher JC, Prestwood KM, Gruman CA, Raisz LG. Bone density, bone turnover, and hormone levels in men over age 75. *J Gerontol Ser A Biol Sci Med Sci* 1998;53(6):M419-25.
- Kurland ES, Chan FK, Rosen CJ, Bilezikian JP. Normal growth hormone secretory reserve in men with idiopathic osteoporosis and reduced circulating levels of insulin -like growth factor-I. *J Clin Endocrinol Metab* 1998 Jul;83(7):2576-9.
- Kurland ES, Rosen CJ, Cosman F, McMahon D, Chan F, Shane E, Lindsay R, Dempster D, Bilezikian JP. Insulin -like growth factor-I in men with idiopathic osteoporosis. *J Clin Endocrinol Metab* 1997 Sep;82(9):2799-805. Comment in: *J Clin Endocrinol Metab* 1997 Sep;82(9):2792-4.
- Melton LJ 3rd, Atkinson EJ, O'Connor MK, O'Fallon WM, Riggs BL. Bone density and fracture risk in men. *J Bone Miner Res* 1998 Dec;13(12):1915-23.
- Need AG, Morris HA, Horowitz M, Scopacasa F, Nordin BE. Intestinal calcium absorption in men with spinal osteoporosis. *Clin Endocrinol (Oxf)* 1998 Feb;48(2):163-8.
- Nguyen TV, Eisman JA, Kelly PJ, Sambrook PN. Risk factors for osteoporotic fractures in elderly men. *Am J Epidemiol* 1996 Aug 1;144(3):255-63.
- Nyquist F, Gardsell P, Sernbo I, Jeppsson JO, Johnell O. Assessment of sex hormones and bone mineral density in relation to occurrence of fracture in men: A prospective population-based study. *Bone* 1998 Feb;22(2):147-51.
- Ongphiphadhanakul B, Rajatanavin R, Chanprasertyothin S, Piaseu N, Chailurkit L. Serum oestradiol and oestrogen-receptor gene polymorphism are associated with bone mineral density independently of serum testosterone in normal males. *Clin Endocrinol (Oxf)* 1998 Dec;49(6):803-9.
- Orwoll ES, Bell NH, Nanes MS, Flessland KA, Pettiner MB, Mallinak NJ, Cain DF. Collagen N-telopeptide excretion in men: the effects of age and intrasubject variability. *J Clin Endocrinol Metab* 1998 Nov;83(11):3930-5.
- Otremski I, Lev-Ran M, Salama R, Edelstein S. The metabolism of vitamin D3 in response to testosterone. *Calcif Tissue Int* 1997 May;60(5):485-7.
- Poor G, Atkinson EJ, Lewallen DG, O'Fallon WM, Melton LJ 3rd. Age-related hip fractures in men: clinical spectrum and short -term outcomes. *Osteoporos Int* 1995;5(6):419-26.
- Poor G, Atkinson EJ, O'Fallon WM, Melton LJ 3rd. Determinants of reduced survival following hip fractures in men. *Clin Orthop* 1995 Oct;(319):260-5.
- Poor G, Atkinson EJ, O'Fallon WM, Melton LJ 3rd. Predictors of hip fractures in elderly men. *J Bone Miner Res* 1995 Dec;10(12):1900-7.
- Resch A, Schneider B, Bernecker P, Battmann A, Wergedal J, Willvonseder R, Resch H. Risk of vertebral fractures in men: relationship to mineral density of the vertebral body. *AJR Am J Roentgenol* 1995 Jun;164(6):1447-50.
- Ringe JD, Dorst A, Kipshoven C, Rovati LC, Setnikar I. Avoidance of vertebral fractures in men with idiopathic osteoporosis by a three year therapy with calcium and low -dose intermittent monofluorophosphate. *Osteoporos Int* 1998;8(1):47-52.
- Scane AC, Francis RM, Sutcliffe AM, Francis MJ, Rawlings DJ, Chapple CL. Case -control study of the pathogenesis and sequelae of symptomatic vertebral fractures in men. *Osteoporos Int* 1999;9(1):91-7.
- Schneider DL, Barrett-Connor EL, Morton DJ. Thyroid hormone use and bone mineral density in elderly men. *Arch Intern Med* 1995;155(18):2005-7.
- Seeman E. The structural basis of bone fragility in men. *Bone* 1999 Jul;25(1):143-7.
- Slemenda CW, Longcope C, Zhou L, Hui SL, Peacock M, Johnston CC. Sex steroids and bone mass in older men. Positive associations with serum estrogens and negative associations with androgens. *J Clin Invest* 1997 Oct 1;100(7):1755-9.

Varanasi SS, Francis RM, Berger CE, Papiha SS, Datta HK. Mitochondrial DNA deletion associated oxidative stress and severe male osteoporosis. *Osteoporos Int* 1999;10(2):143-9.

Vega E, Ghiringhelli G, Mautalen C, Rey Valzacchi G, Scaglia H, Zylberstein C. Bone mineral density and bone size in men with primary osteoporosis and vertebral fractures. *Calcif Tissue Int* 1998 May;62(5):465-9.

Whybro A, Jagger H, Barker M, Eastell R. Phosphate supplementation in young men: Lack of effect on calcium homeostasis and bone turnover. *Eur J Clin Nutr* 1998;52(1):29-33.

Wishart JM, Need AG, Horowitz M, Morris HA, Nordin BE. Effect of age on bone density and bone turnover in men. *Clin Endocrinol (Oxf)* 1995 Feb;42(2):141-6.

Wright NM, Renault J, Willi S, Veldhuis JD, Pandey JP, Gordon L, Key LL, Bell NH. Greater secretion of growth hormone in black than in white men: possible factor in greater bone mineral density --a clinical research center study. *J Clin Endocrinol Metab* 1995 Aug;80(8):2291-7. Comment in: *J Clin Endocrinol Metab* 1995 Aug;80(8):2289-90.

## Oral Bone and Osteoporosis

Grodstein F, Colditz GA, Stampfer MJ. Post-menopausal hormone use and tooth loss: a prospective study. *J Am Dent Assoc* 1996 Mar;127(3):370-7, quiz 392.

Hildebolt CF. Osteoporosis and oral bone loss. *Dentomaxillofac Radiol* 1997 Jan;26(1):3 -15.

Hildebolt CF, Pilgram TK, Dotson M, Yokoyama-Crothers N, Muckerman J, Hauser J, Cohen S, Kardaris E, Vannier MW, Hanes P, Shrout MK, Civitelli R. Attachment loss with postmenopausal age and smoking. *J Periodontal Res* 1997 Oct;32(7):619-25.

Horner K, Devlin H. The relationship between mandibular bone mineral density and panoramic radiographic measurements. *J Dent* 1998 May;26(4):337-43.

Horner K, Devlin H, Alsop CW, Hodgkinson IM, Adams JE. Mandibular bone mineral density as a predictor of skeletal osteoporosis. *Br J Radiol* 1996 Nov;69(827):1019-25.

Jacobs R, Ghyselen J, Koninckx P, van Steenberghe D. Long-term bone mass evaluation of mandible and lumbar spine in a group of women receiving hormone replacement therapy. *Eur J Oral Sci* 1996 Feb;104(1):10-16.

Jeffcoat MK. Osteoporosis: a possible modifying factor in oral bone loss. *Ann Periodontol* 1998 Jul;3(1):312-21.

Jonasson G, Kiliaridis S, Gunnarsson R. Cervical thickness of the mandibular alveolar process and skeletal bone mineral density. *Acta Odontol Scand* 1999 Jun;57(3):155-61.

Klemetti E. A review of residual ridge resorption and bone density. *J Prosthet Dent* 1996 May;75(5):512-4.

Klemetti E, Kroger H, Lassila L. Fluoridated drinking water, oestrogen therapy and residual ridge resorption. *J Oral Rehabil* 1997 Jan;24(1):47 -51.

Klemetti E, Kroger H, Lassila V. Relationship between body mass index and the remaining alveolar ridge. *J Oral Rehabil* 1997 Nov;24(11):808 -12.

Klemetti E, Vainio P, Kroger H. Craniomandibular disorders and skeletal mineral status. *Cranio* 1995 Apr;13(2):89-92.

Krall EA, Garcia RI, Dawson -Hughes B. Increased risk of tooth loss is related to bone loss at the whole

- body, hip, and spine. *Calcif Tissue Int* 1996 Dec;59(6):433-7.
- Law AN, Bollen AM, Chen SK. Detecting osteoporosis using dental radiographs: a comparison of four methods. *J Am Dent Assoc* 1996 Dec;127(12):1734-42.
- Ledgerton D, Horner K, Devlin H. Osteoporosis research: A dental perspective. *Radiography* 1997;3(4):265-77.
- Loza JC, Carpio LC, Dziak R. Osteoporosis and its relationship to oral bone loss. *Curr Opin Periodontol* 1996;3:27-33.
- May H, Reader R, Murphy S, Khaw KT. Self-reported tooth loss and bone mineral density in older men and women. *Age Ageing* 1995 May;24(3):217-21.
- Mohammad AR, Alder M, McNally MA. A pilot study of panoramic film density at selected sites in the mandible to predict osteoporosis. *Int J Prosthodont* 1996 May-Jun;9(3):290-4.
- Mohammad AR, Bauer RL, Yeh CK. Spinal bone density and tooth loss in a cohort of postmenopausal women. *Int J Prosthodont* 1997 Jul-Aug;10(4):381-5.
- Mohammad AR, Brunsvold M, Bauer R. The strength of association between systemic postmenopausal osteoporosis and periodontal disease. *Int J Prosthodont* 1996 Sep-Oct;9(5):479-83.
- Payne JB, Reinhardt RA, Nummikoski PV, Patil KD. Longitudinal alveolar bone loss in postmenopausal osteoporotic/osteopenic women. *Osteoporos Int* 1999;10(1):34-40.
- Payne JB, Zachs NR, Reinhardt RA, Nummikoski PV, Patil K. The association between estrogen status and alveolar bone density changes in postmenopausal women with a history of periodontitis. *J Periodontol* 1997 Jan;68(1):24-31.
- Reinhardt RA, Payne JB, Maze CA, Patil KD, Gallagher SJ, Mattson JS. Influence of estrogen and osteopenia/osteoporosis on clinical periodontitis in postmenopausal women. *J Periodontol* 1999 Aug;70(8):823-8.
- Southard TE, Southard KA. Detection of simulated osteoporosis in maxillae using radiographic texture analysis. *IEEE Trans Biomed Eng* 1996 Feb;43(2):123-32.
- Southard TE, Southard KA, Jakobsen JR, Hillis SL, Najim CA. Fractal dimension in radiographic analysis of alveolar process bone. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1996 Nov;82(5):569-76.
- Streckfus CF, Parsell DE, Streckfus JE, Pennington W, Johnson RB. Relationship between oral alveolar bone loss and aging among African -American and Caucasian individuals. *Gerontology* 1999;45(2):110-4.
- Taguchi A, Suei Y, Ohtsuka M, Otani K, Tanimoto K, Ohtaki M. Usefulness of panoramic radiography in the diagnosis of postmenopausal osteoporosis in women. Width and morphology of inferior cortex of the mandible. *Dentomaxillofac Radiol* 1996 Nov;25(5):263-7.
- Taguchi A, Tanimoto K, Suei Y, Ohama K, Wada T. Relationship between the mandibular and lumbar vertebral bone mineral density at different postmenopausal stages. *Dentomaxillofac Radiol* 1996 Jun;25(3):130-5.
- Taguchi A, Tanimoto K, Suei Y, Otani K, Wada T. Oral signs as indicators of possible osteoporosis in elderly women. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1995 Nov;80(5):612-6.
- Taguchi A, Tanimoto K, Suei Y, Wada T. Tooth loss and mandibular osteopenia. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1995 Jan;79(1):127 -32.
- Tomaszewski T. Evaluation of mandible bone density by a radiovisiography method. Detecting osteoporotic changes. *Med Sci Monit* 1997;3(6):937 -42.
- Ulm CW, Solar P, Gsellmann B, Matejka M, Watzek G. The edentulous maxillary alveolar process in the region of the maxillary sinus --a study of physical dimension. *Int J Oral Maxillofac Surg* 1995 Aug;24(4):279-82.
- Von Wowern N, Klausen B, Hylander E. Bone loss and oral state in patients on home parenteral nutrition. *J Parenter Enteral Nutr* 1996;20(2):105 -9.
- Watson EL, Katz RV, Adelezzi R, Gift HC, Dunn SM. The measurement of mandibular cortical bone height in osteoporotic vs. non-osteoporotic postmenopausal women. *Spec Care Dentist* 1995 May-Jun;15(3):124-8.
- White SC, Rudolph DJ. Alterations of the trabecular pattern of the jaws in patients with osteoporosis. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1999 Nov;88(5):628-35.

## Pathophysiology

### General

- Abrahamsen B, Bendtzen K, Beck -Nielsen H. Cytokines and T-lymphocyte subsets in healthy post-menopausal women: estrogen retards bone loss without affecting the release of IL-1 or IL-1ra. *Bone* 1997 Mar;20(3):251-8.
- Aguado F, Revilla M, Villa LF, Rico H. Cortical bone resorption in osteoporosis. *Calcif Tissue Int* 1997 Apr;60(4):323-6.
- Akgul C, Vural P, Canbaz M. Impact of calcitonin on urinary excretion of prostaglandins during menopause. *Gynecol Obstet Invest* 1998;46(3):199-201.
- Axelrod DW. Pathogenesis of the osteoporoses. *Rev Rhum Engl Ed* 1997 Jun 30;64(6 Suppl):15S -19S.
- Barrett-Connor E, Kritz-Silverstein D. Does hyperinsulinemia preserve bone? *Diabetes Care* 1996;19(12):1388-92.
- Bauer DC, Nevitt MC, Ettinger B, Stone K. Low thyrotropin levels are not associated with bone loss in older women: a prospective study. *J Clin Endocrinol Metab* 1997 Sep;82(9):2931-6.
- Becherini L, Frediani U, Gennari L, Gori F, Fiorelli G, Tanini A, Brandi ML. Role of estrogenic and antiestrogenic molecules in osteoclastogenesis. *Ital J Miner Electrolyte Metab* 1997;11(1):1-8.
- Bell KL, Loveridge N, Lindsay PC, Lunt M, Garrahan N, Compston JE, Reeve J. Cortical remodeling following suppression of endogenous estrogen with analogs of gonadotrophin releasing hormone. *J Bone Miner Res* 1997 Aug;12(8):1231-40.
- Boonen S, Aerssens J, Broos P, Pelemans W, Dequeker J. Age-related bone loss and senile osteoporosis: evidence for both secondary hyperparathyroidism and skeletal growth factor deficiency in the elderly. *Aging (Milano)* 1995 Dec;7(6):414-22.
- Boonen S, Aerssens J, Dequeker J. Age-related endocrine deficiencies and fractures of the proximal femur. I implications of growth hormone deficiency in the elderly. *J Endocrinol* 1996 Apr;149(1):7 -12.
- Boonen S, Aerssens J, Dequeker J, Nicholson P, Cheng X, Lowet G, Verbeke G, Bouillon R. Age-associated decline in human femoral neck cortical and trabecular content of insulin -like growth factor I: potential implications for age -related (type II) osteoporotic fracture occurrence. *Calcif Tissue Int* 1997 Sep;61(3):173-8.
- Boonen S, Broos P, Verbeke G, Aerssens J, Van Herck E, Jans I, Dequeker J, Bouillon R. Calcitropic hormones and markers of bone remodeling in age-related (type II) femoral neck osteoporosis: alterations consistent with secondary hyperparathyroidism -induced bone resorption. *J Gerontol A Biol Sci Med Sci* 1997 Sep;52(5):M286-93.
- Brixen K, Kassem M, Nielsen HK, Loft AG, Flyvbjerg A, Mosekilde L. Short -term treatment with growth hormone stimulates osteoblastic and osteoclastic activity in osteopenic postmenopausal women: a dose response study. *J Bone Miner Res* 1995 Dec;10(12):1865-74.
- Burr DB, Forwood MR, Fyhrie DP, Martin RB, Schaffler MB, Turner CH. Bone microdamage and skeletal fragility in osteoporotic and stress fractures. *J Bone Miner Res* 1997 Jan;12(1):6-15.
- Burr DB, Turner CH, Naick P, Forwood MR, Ambrosius W, Hasan MS, Pidaparti R. Does microdamage accumulation affect the mechanical properties of bone? *J Biomech* 1998;31(4):337-45.
- Byers RJ, Denton J, Hoyland JA, Freemont AJ. Differential patterns of altered bone formation in different bone compartments in established osteoporosis. *J Clin Pathol* 1999 Jan;52(1):23 -8.
- Byers RJ, Denton J, Hoyland JA, Freemont AJ. Differential patterns of osteoblast dysfunction in trabecular bone in patients with established osteoporosis. *J Clin Pathol* 1997 Sep;50(9):760-4.
- Chai B, Tang X, Li H. Osteoclastic resorption of Haversian systems in cortical bone of femoral neck in aged women. A scanning electron microscopic study. *Chin Med J (Engl)* 1996 Sep;109(9):705 -10.
- Chai B, Tang X, Zhou W, Li H. A scanning electron microscopic study of trabeculae in osteoporotic femoral head. *Chin Med J (Engl)* 1996 May;109(5):399-403.
- Chen JT, Shiraki M, Hasumi K, Tanaka N, Katase K, Kato T, Hirai Y, Nakamura T, Ogata E. 1-alpha-Hydroxyvitamin D<sub>3</sub> treatment decreases bone turnover and modulates calcium -regulating hormones in early postmenopausal women. *Bone* 1997 Jun;20(6):557-62.
- Chigira M. Mechanical optimization of bone. *Med Hypotheses* 1996 Apr;46(4):327-30.

- Chorev M, Dresner-Pollak R, Eshel Y, Rosenblatt M. Approach to discovering novel therapeutic agents for osteoporosis based on integrin receptor blockade. *Biomaterials* 1995;37(6):367-75.
- Crawford-Sharpe G, Rosen CJ. Insulin-like growth factor-I and the skeleton: New perspectives. *Endocrinologist* 1999;9(2):81-6.
- Dawson-Hughes B, Fowler SE, Dalsky G, Gallagher C. Sodium excretion influences calcium homeostasis in elderly men and women. *J Nutr* 1996 Sep;126(9):2107-12.
- Dawson-Hughes B, Harris SS, Dallal GE. Plasma calcidiol, season, and serum parathyroid hormone concentrations in healthy elderly men and women. *Am J Clin Nutr* 1997 Jan;65(1):67-71.
- Dempster DW, Parisien M, Silverberg SJ, Liang XG, Schnitzer M, Shen V, Shane E, Kimmel DB, Recker R, Lindsay R, Bilezikian JP. On the mechanism of cancellous bone preservation in postmenopausal women with mild primary hyperparathyroidism. *J Clin Endocrinol Metab* 1999 May;84(5):1562-6.
- Dobnig H, Kainer F, Stepan V, Winter R, Lipp R, Schaffer M, Kahr A, Nocnik S, Patterer G, Leb G. Elevated parathyroid hormone-related peptide levels after human gestation: Relationship to changes in bone and mineral metabolism. *J Clin Endocrinol Metab* 1995;80(12):3699-707.
- Duncan RL, Turner CH. Mechanotransduction and the functional response of bone to mechanical strain. *Calcif Tissue Int* 1995;57(5):344-58.
- Ershler WB, Harman SM, Keller ET. Immunologic aspects of osteoporosis. *Dev Comp Immunol* 1997 Nov-Dec;21(6):487-99.
- Evans DM, Ralston SH. Nitric oxide and bone. *J Bone Joint Surg Am* 1996;11(3):300-5.
- Fraser WD, Logue FC, Christie JP, Gallacher SJ, Cameron D, O'Reilly DS, Beastall GH, Boyle IT. Alteration of the circadian rhythm of intact parathyroid hormone and serum phosphate in women with established postmenopausal osteoporosis. *Osteoporos Int* 1998;8(2):121-6.
- Ghiron LJ, Thompson JL, Holloway L, Hintz RL, Butterfield GE, Hoffman AR, Marcus R. Effects of recombinant insulin-like growth factor-I and growth hormone on bone turnover in elderly women. *J Bone Miner Res* 1995 Dec;10(12):1844-52.
- Giustina A, Bussi AR, Jacobello C, Wehrenberg WB. Effects of recombinant human growth hormone (GH) on bone and intermediary metabolism in patients receiving chronic glucocorticoid treatment with suppressed endogenous GH response to GH-releasing hormone. *J Clin Endocrinol Metab* 1995;80(1):122-9.
- Gori F, Thomas T, Hicok KC, Spelsberg TC, Riggs BL. Differentiation of human marrow stromal precursor cells: bone morphogenetic protein-2 increases OSF2/CBFA1, enhances osteoblast commitment, and inhibits late adipocyte maturation. *J Bone Miner Res* 1999 Sep;14(9):1522-35.
- Greenspan SL, Holland S, Maitland-Ramsey L, Poku M, Freeman A, Yuan W, Kher U, Gertz B. Alendronate stimulation of nocturnal parathyroid hormone secretion: a mechanism to explain the continued improvement in bone mineral density accompanying alendronate therapy. *Proc Assoc Am Physicians* 1996 May;108(3):230-8. Published erratum appears in *Proc Assoc Am Physicians* 1996 Jul;108(4):following table of contents.
- Heaney RP. Pathophysiology of osteoporosis. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):255-65.
- Heshmati HM, Khosla S, Burritt MF, O'Fallon WM, Riggs BL. A defect in renal calcium conservation may contribute to the pathogenesis of postmenopausal osteoporosis. *J Clin Endocrinol Metab* 1998 Jun;83(6):1916-20.
- Hofbauer LC, Gori F, Riggs BL, Lacey DL, Dunstan CR, Spelsberg TC, Khosla S. Stimulation of osteoprotegerin ligand and inhibition of osteoprotegerin production by glucocorticoids in human osteoblastic lineage cells: potential paracrine mechanisms of glucocorticoid-induced osteoporosis. *Endocrinology* 1999 Oct;140(10):4382-9. Comment in: *Endocrinology* 1999 Oct;140(10):4377-81.
- Hofbauer LC, Khosla S, Dunstan CR, Lacey DL, Spelsberg TC, Riggs BL. Estrogen stimulates gene expression and protein production of osteoprotegerin in human osteoblastic cells. *Endocrinology* 1999 Sep;140(9):4367-70.
- Hofbauer LC, Lacey DL, Dunstan CR, Spelsberg TC, Riggs BL, Khosla S. Interleukin-1beta and tumor necrosis factor-alpha, but not interleukin-6, stimulate osteoprotegerin ligand gene expression in human osteoblastic cells. *Bone* 1999 Sep;25(3):255-9.
- Kassem M, Brixen K, Mosekilde L, Blum WF, Flyvbjerg A. Effects of growth hormone treatment on serum levels of insulin-like growth factors (IGFs) and IGF binding proteins 1-4 in postmenopausal women. *Clin Endocrinol (Oxf)* 1998 Dec;49(6):747-56.
- Kassem M, Khosla S, Spelsberg TC, Riggs BL. Cytokine production in the bone marrow

- microenvironment: failure to demonstrate estrogen regulation in early postmenopausal women. *J Clin Endocrinol Metab* 1996 Feb;81(2):513-8.
- Kassem M, Okazaki R, De Leon D, Harris SA, Robinson JA, Spelsberg TC, Conover CA, Riggs BL. Potential mechanism of estrogen -mediated decrease in bone formation: estrogen increases production of inhibitory insulin -like growth factor-binding protein-4. *Proc Assoc Am Physicians* 1996 Mar;108(2):155-64.
- Ledger GA, Burritt MF, Kao PC, O'Fallon WM, Riggs BL, Khosla S. Role of parathyroid hormone in mediating nocturnal and age -related increases in bone resorption. *J Clin Endocrinol Metab* 1995 Nov;80(11):3304-10.
- Lim SK, Won YJ, Lee JH, Kwon SH, Lee EJ, Kim KR, Lee HC, Huh KB, Chung BC. Altered hydroxylation of estrogen in patients with postmenopausal osteopenia. *J Clin Endocrinol Metab* 1997;82(4):1001-6.
- McKane WR, Khosla S, Burritt MF, Kao PC, Wilson DM, Ory SJ, Riggs BL. Mechanism of renal calcium conservation with estrogen replacement therapy in women in early postmenopause --a clinical research center study. *J Clin Endocrinol Metab* 1995 Dec;80(12):3458-64.
- McKane WR, Khosla S, Egan KS, Robins SP, Burritt MF, Riggs BL. Role of calcium intake in modulating age-related increases in parathyroid function and bone resorption. *J Clin Endocrinol Metab* 1996 May;81(5):1699-703. Comment in: *J Clin Endocrinol Metab* 1996 May;81(5):1697-8.
- McKane WR, Khosla S, Risteli J, Robins SP, Muhs JM, Riggs BL. Role of estrogen deficiency in pathogenesis of secondary hyperparathyroidism and increased bone resorption in elderly women. *Proc Assoc Am Physicians* 1997 Mar;109(2):174 -80.
- Melibovsky L, Diez A, Serrano S, Aubia J, Perez-Vila E, Marinoso ML, Nogues X, Recker RR. Bone remodeling alterations in myelodysplastic syndrome. *Bone* 1996 Oct;19(4):401-5.
- Mohan S, Farley JR, Baylink DJ. Age -related changes in IGFBP-4 and IGFBP-5 levels in human serum and bone: implications for bone loss with aging. *Prog Growth Factor Res* 1995;6(2-4):465-73.
- Nasu M, Sugimoto T, Chihara M, Mitsuo H, Kurimoto F, Chihara K. Effect of natural menopause on serum levels of IGF-I and IGF-binding proteins: Relationship with bone mineral density and lipid metabolism in perimenopausal women. *Eur J Endocrinol* 1997;136(6):608-16.
- Nawata H, Tanaka S, Tanaka S, Takayanagi R, Sakai Y, Yanase T, Ikuyama S, Haji M. Aromatase in bone cell: association with osteoporosis in postmenopausal women. *J Steroid Biochem Mol Biol* 1995 Jun;53(1-6):165-74.
- Need AG, Morris HA, Horowitz M, Nordin BE. The response to calcitriol therapy in postmenopausal osteoporotic women is a function of initial calcium absorptive status. *Calcif Tissue Int* 1997 Jul;61(1):6-9.
- Nierman DM, Mechanick JJ. Bone hyperresorption is prevalent in chronically critically ill patients. *Chest* 1998;114(4):1122-8.
- Ohlsson C, Bengtsson BA, Isaksson OGP, Andreassen TT, Slootweg MC. Growth hormone and bone. *Endocr Rev* 1998;19(1):55-79.
- Oreffo RO, Bord S, Triffitt JT. Skeletal progenitor cells and ageing human populations. *Clin Sci (Colch)* 1998 May;94(5):549-55.
- Papadopoulos NG, Georganas K, Skoutellas V, Konstantellos E, Lyritis GP. Correlation of interleukin -6 serum levels with bone density in postmenopausal women. *Clin Rheumatol* 1997 Mar;16(2):162-5.
- Papiha SS, Rathod H, Briceno I, Pooley J, Datta HK. Age related somatic mitochondrial DNA deletions in bone. *J Clin Pathol* 1998 Feb;51(2):117 -20.
- Parfitt AM, Villanueva AR, Foldes J, Rao DS. Relations between histologic indices of bone formation: implications for the pathogenesis of spinal osteoporosis. *J Bone Miner Res* 1995 Mar;10(3):466-73.
- Patel S, Pazianas M, Tobias J, Chambers TJ, Fox S, Chow J. Early effects of hormone replacement therapy on bone. *Bone* 1999 Mar;24(3):245-8.
- Petilli M, Fiorelli G, Benvenuti S, Frediani U, Gori F, Brandi ML. Interactions between ipriflavone and the estrogen receptor. *Calcif Tissue Int* 1995;56(2):160-5.
- Pocock AE, Francis MJ, Smith R. Type I collagen biosynthesis by skin fibroblasts from patients with idiopathic juvenile osteoporosis. *Clin Sci (Colch)* 1995 Jul;89(1):69-73.
- Prince RL, Dick I, Devine A, Price RI, Gutteridge DH, Kerr D, Criddle A, Garcia -Webb P, St John A. The effects of menopause and age on calcitropic hormones: a cross-sectional study of 655 healthy women aged 35 to 90. *J Bone Miner Res* 1995 Jun;10(6):835-42.

- Prince RL, Dick IM, Lemmon J, Randell D. The pathogenesis of age-related osteoporotic fracture: effects of dietary calcium deprivation. *J Clin Endocrinol Metab* 1997 Jan;82(1):260-4.
- Prockop DJ. What holds us together? Why do some of us fall apart? What can we do about it? *Matrix Biol* 1998;16(9):519-28.
- Rehman MT, Hoyland JA, Denton J, Freemont AJ. Histomorphometric classification of postmenopausal osteoporosis: implications for the management of osteoporosis. *J Clin Pathol* 1995 Mar;48(3):229-35.
- Rickard DJ, Hofbauer LC, Bonde SK, Gori F, Spelsberg TC, Riggs BL. Bone morphogenetic protein-6 production in human osteoblastic cell lines. Selective regulation by estrogen. *J Clin Invest* 1998 Jan 15;101(2):413-22.
- Rickard DJ, Kassem M, Hefferan TE, Sarkar G, Spelsberg TC, Riggs BL. Isolation and characterization of osteoblast precursor cells from human bone marrow. *J Bone Miner Res* 1996 Mar;11(3):312-24.
- Riggs BL, Khosla S, Melton LJ 3rd. A unitary model for involutional osteoporosis: estrogen deficiency causes both type I and type II osteoporosis in postmenopausal women and contributes to bone loss in aging men. *J Bone Miner Res* 1998 May;13(5):763-73. Comment in: *J Bone Miner Res* 1998 May;13(5):774-6 and *J Bone Miner Res* 1998 Dec;13(12):1954-5.
- Riggs BL, Melton LJ 3rd, O'Fallon WM. Drug therapy for vertebral fractures in osteoporosis: evidence that decreases in bone turnover and increases in bone mass both determine antifracture efficacy. *Bone* 1996 Mar;18(3 Suppl):197S-201S.
- Riggs BL, O'Fallon WM, Muhs J, O'Connor MK, Kumar R, Melton LJ 3rd. Long-term effects of calcium supplementation on serum parathyroid hormone level, bone turnover, and bone loss in elderly women. *J Bone Miner Res* 1998 Feb;13(2):168-74.
- Ritzel H, Amling M, Posl M, Hahn M, Delling G. The thickness of human vertebral cortical bone and its changes in aging and osteoporosis: a histomorphometric analysis of the complete spinal column from thirty-seven autopsy specimens. *J Bone Miner Res* 1997 Jan;12(1):89-95.
- Robinson JA, Harris SA, Riggs BL, Spelsberg TC. Estrogen regulation of human osteoblastic cell proliferation and differentiation. *Endocrinology* 1997 Jul;138(7):2919-27.
- Rodriguez JP, Garat S, Gajardo H, Pino AM, Seitz G. Abnormal osteogenesis in osteoporotic patients is reflected by altered mesenchymal stem cell dynamics. *J Cell Biochem* 1999;75(3):414-23.
- Rong H, Saaf M, Torring O, Sjostedt U, Bucht E. Circulating monomer -like calcitonin in osteoporotic patients. *Osteoporos Int* 1996;6(5):394-8.
- Rosen CJ, Verault D, Steffens C, Cheleuitte D, Glowacki J. Effects of age and estrogen status on the skeletal IGF regulatory system. Studies with human marrow. *Endocrine* 1997 Aug;7(1):77-80.
- Roux JP, Arlot ME, Gineys E, Meunier PJ, Delmas PD. Automatic-interactive measurement of resorption cavities in transiliac bone biopsies and correlation with deoxypyridinoline. *Bone* 1995 Aug;17(2):153-6.
- Samuels MH, Veldhuis JD, Kramer P, Urban RJ, Bauer R, Mundy GR. Episodic secretion of parathyroid hormone in postmenopausal women: Assessment by deconvolution analysis and approximate entropy. *J Bone Miner Res* 1997;12(4):616-23.
- Scopacasa F, Horowitz M, Need AG, Morris HA, Nordin BE. The effects of low dose norethisterone on biochemical variables in postmenopausal women. *Osteoporos Int* 1999;9(6):494-8.
- Silverberg SJ, Bone HG 3rd, Marriott TB, Locker FG, Thys-Jacobs S, Dziem G, Kaatz S, Sanguinetti EL, Bilezikian JP. Short -term inhibition of parathyroid hormone secretion by a calcium -receptor agonist in patients with primary hyperparathyroidism. *N Engl J Med* 1997 Nov 20;337(21):1506-10.
- Stein B, Yang MX. Repression of the interleukin -6 promoter by estrogen receptor is mediated by NF-kappaB and C/EBPbeta. *Mol Cell Biol* 1995;15(9):4971-9.
- Straub RH, Konecna L, Hrach S, Rothe G, Kreutz M, Scholmerich J, Falk W, Lang B. Serum dehydroepiandrosterone (DHEA) and DHEA sulfate are negatively correlated with serum interleukin -6 (IL-6), and DHEA inhibits IL -6 secretion from mononuclear cells in man in vitro: Possible link between endocrinosenescence and immunosenescence. *J Clin Endocrinol Metab* 1998;83(6):2012-7.
- Sunyer T, Lewis J, Collin-Osdoby P, Osdoby P. Estrogen's bone-protective effects may involve differential IL -1 receptor regulation in human osteoclast-like cells. *J Clin Invest* 1999;103(10):1409-18.

- Takada J, Chevalley T, Baylink DJ, Lau KH. Dexamethasone enhances the osteogenic effects of fluoride in human TE85 osteosarcoma cells in vitro. *Calcif Tissue Int* 1996;58(5):355-61.
- Takeuchi M, Tokin M, Nagata K. Tamoxifen directly stimulates the mineralization of human osteoblast-like osteosarcoma cells through a pathway independent of estrogen response element. *Biochem Biophys Res Commun* 1995;210(2):295-301.
- Tau KR, Hefferan TE, Waters KM, Robinson JA, Subramaniam M, Riggs BL, Spelsberg TC. Estrogen regulation of a transforming growth factor-beta inducible early gene that inhibits deoxyribonucleic acid synthesis in human osteoblasts. *Endocrinology* 1998 Mar;139(3):1346-53.
- Thomas T, Gori F, Khosla S, Jensen MD, Burguera B, Riggs BL. Leptin acts on human marrow stromal cells to enhance differentiation to osteoblasts and to inhibit differentiation to adipocytes. *Endocrinology* 1999 Apr;140(4):1630-8.
- Thomas T, Gori F, Spelsberg TC, Khosla S, Riggs BL, Conover CA. Response of bipotential human marrow stromal cells to insulin -like growth factors: effect on binding protein production, proliferation, and commitment to osteoblasts and adipocytes. *Endocrinology* 1999 Nov;140(11):5036-44.
- Tsubo M, Kawakami A, Nakashima T, Matsuoka N, Urayama S, Kawabe Y, Fujiyama K, Kiriya T, Aoyagi T, Maeda K, Eguchi K. Tumor necrosis factor-alpha and interleukin -1beta increase the Fas-mediated apoptosis of human osteoblasts. *J Lab Clin Med* 1999 Sep;134(3):222-31.
- van Hoof HJ, van der Mooren MJ, Swinkels LM, Sweep CG, Merkus JM, Benraad TJ. Female sex hormone replacement therapy increases serum free 1,25-dihydroxyvitamin D3: a 1 -year prospective study. *Clin Endocrinol (Oxf)* 1999 Apr;50(4):511 -6.
- Vestergaard P, Hermann AP, Orskov H, Mosekilde L. Effect of sex hormone replacement on the insulin -like growth factor system and bone mineral: a cross-sectional and longitudinal study in 595 perimenopausal women participating in the Danish Osteoporosis Prevention Study. *J Clin Endocrinol Metab* 1999 Jul;84(7):2286-90.
- Villanueva AR, Shih MS, Parfitt AM. Nuclear profile area of osteoblasts in normal, osteoporotic, and fluoride-treated subjects. *J Histotechnol* 1996;19(4):313-5.
- Weinstein RS, Jilka RL, Parfitt AM, Manolagas SC. Inhibition of osteoblastogenesis and promotion of apoptosis of osteoblasts and osteocytes by glucocorticoids. Potential mechanisms of their deleterious effects on bone. *J Clin Invest* 1998 Jul 15;102(2):274-82.
- Wiren KM, Zhang X, Chang C, Keenan E, Orwoll ES. Transcriptional up -regulation of the human androgen receptor by androgen in bone cells. *Endocrinology* 1997 Jun;138(6):2291-300.
- Yano K, Tsuda E, Washida N, Kobayashi F, Goto M, Harada A, Ikeda K, Higashio K, Yamada Y. Immunological characterization of circulating osteoprotegerin/osteoclastogenesis inhibitory factor: increased serum concentrations in postmenopausal women with osteoporosis. *J Bone Miner Res* 1999 Apr;14(4):518-27.
- Yasumizu T, Fukada Y, Hoshi K. Changes in serum levels of type I collagen-related proteins after surgically induced menopause and correlations with bone loss in the lumbar spine. *Endocr J* 1999 Apr;46(2):337-43.
- Zheng SX, Vrindts Y, Lopez M, De Groote D, Zangerle PF, Collette J, Franchimont N, Geenen V, Albert A, Reginster JY. Increase in cytokine production (IL-1 beta, IL-6, TNF-alpha but not IFN-gamma, GM-CSF or LIF) by stimulated whole blood cells in postmenopausal osteoporosis. *Maturitas* 1997 Jan;26(1):63-71.
- Zofkova I, Kancheva RL, Bendlova B. Effect of 1,25(OH)2 vitamin D3 on circulating insulin -like growth factor-I and beta 2 microglobulin in patients with osteoporosis. *Calcif Tissue Int* 1997 Mar;60(3):236-9.

### Bone Mechanics

- Frost HM. Defining osteopenias and osteoporoses: another view (with insights from a new paradigm). *Bone* 1997 May;20(5):385-91.
- Frost HM. On our age-related bone loss: insights from a new paradigm. *J Bone Miner Res* 1997 Oct;12(10):1539-46.
- Frost HM. Strain and other mechanical influences on bone strength and maintenance. *Curr Opin Orthop* 1997;8(5):60-70.
- Frost HM. Why do marathon runners have less bone than weight lifters? A vital -biomechanical view and explanation. *Bone* 1997 Mar;20(3):183-9. Comment in: *Bone* 1997 Mar;20(3):179-81.
- Keaveny TM, Wachtel EF, Kopperdahl DL. Mechanical behavior of human trabecular bone after overloading. *J Orthop Res* 1999;17(3):346-53.
- Keyak JH, Rossi SA, Jones KA, Skinner HB. Prediction of femoral fracture load using automated finite element modeling. *J Biomech* 1998;31(2):125-33.
- Kinney JH, Ladd AJ. The relationship between three-dimensional connectivity and the elastic properties of trabecular bone. *J Bone Miner Res* 1998 May;13(5):839-45.
- Lanyon LE. Using functional loading to influence bone mass and architecture: objectives, mechanisms, and relationship with estrogen of the mechanically adaptive process in bone. *Bone* 1996 Jan;18(1 Suppl):37S-43S.
- Lee TQ, Shapiro TA, Bell DM. Biomechanical properties of human tibias in long -term spinal cord injury. *J Rehabil Res Dev* 1997 Jul;34(3):295 -302.
- Li B, Aspden RM. Composition and mechanical properties of cancellous bone from the femoral head of patients with osteoporosis or osteoarthritis. *J Bone Miner Res* 1997 Apr;12(4):641 -51.
- Li B, Aspden RM. Material properties of bone from the femoral neck and calcar femorale of patients with osteoporosis or osteoarthritis. *Osteoporos Int* 1997;7(5):450-6.
- Li B, Aspden RM. Mechanical and material properties of the subchondral bone plate from the femoral head of patients with osteoarthritis or osteoporosis. *Ann Rheum Dis* 1997 Apr;56(4):247-54.
- Li B, Marshall D, Roe M, Aspden RM. The electron microscope appearance of the subchondral bone plate in the human femoral head in osteoarthritis and osteoporosis. *J Anat* 1999 Jul;195(Pt 1):101-10.
- McCubrey DA, Cody DD, Paterson EL, Kuhn JL, Flynn MJ, Goldstein SA. Static and fatigue failure properties of thoracic and lumbar vertebral bodies and their relation to regional density. *J Biomech* 1995;28(8):891-9.
- Mullender MG, van der Meer DD, Huiskes R, Lips P. Osteocyte density changes in aging and osteoporosis. *Bone* 1996 Feb;18(2):109-13.
- Neidlinger-Wilke C, Stalla I, Claes L, Brand R, Hoellen I, Rubenacker S, Arand M, Kinzl L. Human osteoblasts from younger normal and osteoporotic donors show differences in proliferation and TGF beta-release in response to cyclic strain. *J Biomech* 1995 Dec;28(12):1411-8.
- Oden ZM, Selvitelli DM, Bouxsein ML. Effect of local density changes on the failure load of the proximal femur. *J Orthop Res* 1999;17(5):661 -7.
- Pietruszczak S, Inglis D, Pande GN. A fabric-dependent fracture criterion for bone. *J Biomech* 1999 Oct;32(10):1071-9.
- Pinilla TP, Boardman KC, Bouxsein ML, Myers ER, Hayes WC. Impact direction from a fall influences the failure load of the proximal femur as much as age-related bone loss. *Calcif Tissue Int* 1996 Apr;58(4):231-5.
- Tohmeh AG, Mathis JM, Fenton DC, Levine AM, Belkoff SM. Biomechanical efficacy of unipedicular versus bipedicular vertebroplasty for the management of osteoporotic compression fractures. *Spine* 1999 Sep 1;24(17):1772-6.
- Ulrich D, van Rietbergen B, Laib A, Ruegsegger P. Load transfer analysis of the distal radius from in-vivo high-resolution CT-imaging. *J Biomech* 1999 Aug;32(8):821-8.
- Van Der Perre G, Lowet G. In vivo assessment of bone mechanical properties by vibration and ultrasonic wave propagation analysis. *Bone* 1996 Jan;18(1 Suppl):29S-35S.
- Werner HJ, Martin H, Behrend D, Schmitz KP, Schober HC. The loss of stiffness as osteoporosis progresses. *Med Eng Phys* 1996 Oct;18(7):601-6.

## Bone Structure

- Nicholson PH, Cheng XG, Lowet G, Boonen S, Davie MW, Dequeker J, Van der Perre G. Structural and material mechanical properties of human vertebral cancellous bone. *Med Eng Phys* 1997 Dec;19(8):729-37.
- Oda K, Shibayama Y, Abe M, Onomura T. Morphogenesis of vertebral deformities in involutional osteoporosis. Age-related, three-dimensional trabecular structure. *Spine* 1998 May 1;23(9):1050-5, discussion 1056.
- Oxlund H, Mosekilde L, Ortoft G. Reduced concentration of collagen reducible cross links in human trabecular bone with respect to age and osteoporosis. *Bone* 1996;19(5):479-84.
- Parisien M, Cosman F, Mellish RW, Schnitzer M, Nieves J, Silverberg SJ, Shane E, Kimmel D, Recker RR, Bilezikian JP, et al. Bone structure in postmenopausal hyperparathyroid, osteoporotic, and normal women. *J Bone Miner Res* 1995 Sep;10(9):1393-9.
- Paschalis EP, Betts F, DiCarlo E, Mendelsohn R, Boskey AL. FTIR microspectroscopic analysis of human iliac crest biopsies from untreated osteoporotic bone. *Calcif Tissue Int* 1997 Dec;61(6):487-92.
- Peacock M, Liu G, Carey M, Ambrosius W, Turner CH, Hui S, Johnston CC Jr. Bone mass and structure at the hip in men and women over the age of 60 years. *Osteoporos Int* 1998;8(3):231-9.
- Pothuaud L, Lespessailles E, Harba R, Jennane R, Royant V, Eynard E, Benhamou CL. Fractal analysis of trabecular bone texture on radiographs: discriminant value in postmenopausal osteoporosis. *Osteoporos Int* 1998;8(6):618-25.
- Roschger P, Fratzl P, Eschberger J, Klaushofer K. Validation of quantitative backscattered electron imaging for the measurement of mineral density distribution in human bone biopsies. *Bone* 1998 Oct;23(4):319-26. Comment in: *Bone* 1999 Jun;24(6):619-21.
- Roux C, Kolta S, Fechtenbaum J, Dougados M. Hip axis length measurement using dual -energy x-ray absorptiometry. *Rev Rhum Engl Ed* 1997;64(4):243-8.
- Seeman E, Formica C, Mosekilde L. Equivalent deficits in bone mass of the vertebral body and posterior processes in women with vertebral fractures: implications regarding the pathogenesis of spinal osteoporosis. *J Bone Miner Res* 1995 Dec;10(12):2005-10.
- Silva MJ, Gibson LJ. Modeling the mechanical behavior of vertebral trabecular bone: Effects of age-related changes in microstructure. *Bone* 1997;21(2):191-9.
- Sone T, Tomomitsu T, Miyake M, Takeda N, Fukunaga M. Age-related changes in vertebral height ratios and vertebral fracture. *Osteoporos Int* 1997;7(2):113-8.
- Sugita H, Oka M, Toguchida J, Nakamura T, Ueo T, Hayami T. Anisotropy of osteoporotic cancellous bone. *Bone* 1999 May;24(5):513-6.
- Tanizawa T, Itoh A, Uchiyama T, Zhang L, Yamamoto N. Changes in cortical width with bone turnover in the three different endosteal envelopes of the ilium in postmenopausal osteoporosis. *Bone* 1999 Oct;25(4):493-9.
- Thomsen JS, Barlach J, Mosekilde L. Determination of connectivity density in human iliac crest bone biopsies assessed by a computerized method. *Bone* 1996 May;18(5):459-65.
- Thomsen JS, Mosekilde L, Mosekilde E. Quantification of remodeling parameter sensitivity--assessed by a computer simulation model. *Bone* 1996 Nov;19(5):505-11.
- Uchiyama T, Tanizawa T, Muramatsu H, Endo N, Takahashi HE, Hara T. A morphometric comparison of trabecular structure of human ilium between microcomputed tomography and conventional histomorphometry. *Calcif Tissue Int* 1997 Dec;61(6):493-8.
- Ulrich D, van Rietbergen B, Laib A, Ruegsegger P. The ability of three-dimensional structural indices to reflect mechanical aspects of trabecular bone. *Bone* 1999 Jul;25(1):55-60.
- van Rietbergen B, Majumdar S, Pistoia W, Newitt DC, Kothari M, Laib A, Ruegsegger P. Assessment of cancellous bone mechanical properties from micro -FE models based on micro-CT, pQCT and MR images. *Technol Health Care* 1998 Dec;6(5-6):413-20.
- Vedi S, Compston JE. The effects of long-term hormone replacement therapy on bone remodeling in postmenopausal women. *Bone* 1996 Nov;19(5):535-9.
- Vedi S, Croucher PI, Garrahan NJ, Compston JE. Effects of hormone replacement therapy on cancellous bone microstructure in postmenopausal women. *Bone* 1996 Jul;19(1):69-72.

- Wessels M, Mason RP, Antich PP, Zerwekh JE, Pak CY. Connectivity in human cancellous bone by three-dimensional magnetic resonance imaging. *Med Phys* 1997 Sep;24(9):1409-20.
- Xu S, Liu S, Bao K. Development and application of an instrument for analysis of bone structure on radiographs. *J Tongji Med Univ* 1997;17(1):61 -4.
- Yang RS, Wang SS, Liu TK. Proximal femoral dimension in elderly Chinese women with hip fractures in Taiwan. *Osteoporos Int* 1999;10(2):109-13.
- Yeh OC, Keaveny TM. Biomechanical effects of intraspecimen variations in trabecular architecture: A three-dimensional finite element study. *Bone* 1999;25(2):223-8.
- Quality of Life**
- Ali NS. Predictors of quality of life in women: hormone therapy self-efficacy and health-promoting behaviors. *Women Health* 1999;29(2):69 -79.
- Begerow B, Pfeifer M, Pospeschill M, Scholz M, Schlotthauer T, Lazarescu A, Pollaehne W, Minne HW. Time since vertebral fracture: An important variable concerning quality of life in patients with postmenopausal osteoporosis. *Osteoporos Int* 1999;10(1):26-33.
- Cantarelli FB, Szejnfeld VL, Oliveira LM, Ciconelli RM, Ferraz MB. Quality of life in patients with osteoporosis fractures: Cultural adaptation, reliability and validity of the Osteoporosis Assessment Questionnaire. *Clin Exp Rheumatol* 1999;17(5):547-51.
- Chandler JM, Martin AR, Girman C, Ross PD, Love-McClung B, Lydick E, Yawn BP. Reliability of an Osteoporosis-Targeted Quality of Life Survey Instrument for use in the community: OPTQoL. *Osteoporos Int* 1998;8(2):127-35.
- Cook DJ, Guyatt GH, Adachi JD, Epstein RS, Juniper EF, Austin PA, Clifton J, Rosen CJ, Kesennich CR, Stock JL, Overdorf J, Miller PD, Erickson AL, McLung M, Love B, Griffith LE. Measuring quality of life in women with osteoporosis. *Osteoporos Int* 1997;7(5):478-87.
- Cooper C. The crippling consequences of fractures and their impact on quality of life. *Am J Med* 1997;103(2 Pt A):12S-19S.
- Cortet B, Houvenagel E, Puisieux F, Roches E, Garnier P, Delambre B. Spinal curvatures and quality of life in women with vertebral fractures secondary to osteoporosis. *Spine* 1999 Sep 15;24(18):1921-5.
- Cott CA, Gignac MA. Independence and dependence for older adults with osteoarthritis or osteoporosis. *Can J Aging* 1999;18(1):1 -25.
- Dolan P, Torgerson D, Kakarlapudi TK. Health-related quality of life of Colles' fracture patients. *Osteoporos Int* 1999;9(3):196-9.
- Gabriel SE, Kneeland TS, Melton LJ 3rd, Moncur MM, Ettinger B, Tosteson AN. Health-related quality of life in economic evaluations for osteoporosis: whose values should we use? *Med Decis Making* 1999 Apr-Jun;19(2):141-8.
- Galindo-Ciocon D, Ciocon JO, Galindo D. Functional impairment among elderly women with osteoporotic

- vertebral fractures. *Rehabil Nurs* 1995 Mar-Apr;20(2):79-83.
- Gold DT. The clinical impact of vertebral fractures: quality of life in women with osteoporosis. *Bone* 1996 Mar;18(3 Suppl):185S-189S.
- Hall SE, Criddle RA, Comito TL, Prince RL. A case-control study of quality of life and functional impairment in women with long -standing vertebral osteoporotic fracture. *Osteoporos Int* 1999;9(6):508-15.
- Helmes E, Hodsman A, Lazowski D, Bhardwaj A, Crilly R, Nichol P, Drost D, Vanderburgh L, Pederson L. A questionnaire to evaluate disability in osteoporotic patients with vertebral compression fractures. *J Gerontol A Biol Sci Med Sci* 1995 Mar;50(2):M91-8.
- Ioannidis G, Adachi JD, Guyatt GH. Development and validation of the Mini -Osteoporosis Quality of Life Questionnaire (OQLQ) in osteoporotic women with back pain due to vertebral fractures. Osteoporosis Quality of Life Study Group. *Osteoporos Int* 1999;10(3):207-13.
- Iwarsson S. Environmental influences on the cumulative structure of instrumental ADL: an example in osteoporosis patients in a Swedish rural district. *Clin Rehabil* 1998 Jun;12(3):221 -7.
- Kessenich CR, Guyatt GH, Rosen CJ. Health-related quality of life and participation in osteoporosis clinical trials. *Calcif Tissue Int* 1998 Mar;62(3):189-92.
- Leidig-Bruckner G, Minne HW, Schlaich C, Wagner G, Scheidt-Nave C, Bruckner T, Gebest HJ, Ziegler R. Clinical grading of spinal osteoporosis: quality of life components and spinal deformity in women with chronic low back pain and women with vertebral osteoporosis. *J Bone Miner Res* 1997 Apr;12(4):663-75.
- Lips P, Agnusdei D, Caulin F, Cooper C, Johnell O, Kanis J, Liberman U, Minne H, Reeve J, Reginster JY, de Vernejoul MC, Wiklund I. The development of a European questionnaire for quality of life in patients with vertebral osteoporosis. *Scand J Rheumatol Suppl* 1996;103:84-5; discussion 86-8.
- Lips P, Cooper C, Agnusdei D, Caulin F, Egger P, Johnell O, Kanis JA, Kellingray S, Leplege A, Liberman UA, McCloskey E, Minne H, Reeve J, Reginster JY, Scholz M, Todd C, De Vernejoul MC, Wiklund I. Quality of life in patients with vertebral fractures: Validation of the quality of life questionnaire of the European Foundation for Osteoporosis (QUALEFFO). *Osteoporos Int* 1999;10(2):150-60.
- Lips P, Cooper C, Agnusdei D, Caulin F, Egger P, Johnell O, Kanis JA, Liberman U, Minne H, Reeve J, Reginster JY, de Vernejoul MC, Wiklund I. Quality of life as outcome in the treatment of osteoporosis: the development of a questionnaire for quality of life by the European Foundation for Osteoporosis. *Osteoporos Int* 1997;7(1):36-8.
- Lydick E, Martin A, Yawn B. Impact of fears on quality of life in patients with a silent disease: osteoporosis. *Clin Ther* 1996 Nov-Dec;18(6):1307-15.
- Lydick E, Zimmerman SI, Yawn B, Love B, Kleerekoper M, Ross P, Martin A, Holmes R. Development and validation of a discriminative quality of life questionnaire for osteoporosis (the OPTQoL). *J Bone Miner Res* 1997 Mar;12(3):456-63.
- Martin AR, Holmes R, Lydick E. Fears, knowledge, and perceptions of osteoporosis among women. *Drug Inf J* 1997;31(1):301-6.
- Paier GS. Specter of the crone: the experience of vertebral fracture. *ANS Adv Nurs Sci* 1996 Mar;18(3):27-36.
- Randell AG, Bhalerao N, Nguyen TV, Sambrook PN, Eisman JA, Silverman SL. Quality of life in osteoporosis: reliability, consistency, and validity of the Osteoporosis Assessment Questionnaire. *J Rheumatol* 1998 Jun;25(6):1171-9.
- Ryan SD, Fried LP. The impact of kyphosis on daily functioning. *J Am Geriatr Soc* 1997;45(12):1479 -86.
- Salkeld G, Cameron ID, Cumming RG, Easter S, Seymour J, Kurkle SE, Quine S. Quality of life related to fear of falling and hip fracture in older women: a time trade off study. *BMJ* 2000 Feb 5;320(7231):341-6.
- Schlaich C, Minne HW, Bruckner T, Wagner G, Gebest HJ, Grunze M, Ziegler R, Leidig-Bruckner G. Reduced pulmonary function in patients with spinal osteoporotic fractures. *Osteoporos Int* 1998;8(3):261-7.
- Scholz MG, Minne HW. Spinal deformity, disability, and quality of life in osteoporotic patients. *Curr Opin Orthop* 1998;9(5):21-7.
- Silverman SL, Cranney A. Quality of life measurement in osteoporosis. *J Rheumatol* 1997 Jun;24(6):1218-21.

Tosteson AN. Quality of life in the economic evaluation of osteoporosis prevention and treatment. *Spine* 1997 Dec 15;22(24 Suppl):S58-S-62S.

Ulrich LG, Barlow DH, Sturdee DW, Wells M, Campbell MJ, Nielsen B, Bragg AJ, Vessey MP. Quality of life and patient preference for sequential versus continuous combined HRT: The UK Kliofem multicenter study experience. *Int J Gynaecol Obstet* 1997;59 Suppl 1:S11-7.

## **Rehabilitation and Fracture Treatment**

al-Allaf AW, Pal B, Reid N. An audit of post fracture rehabilitation with special emphasis on osteoporosis assessment and treatment. *Clin Exp Rheumatol* 1998 Jul-Aug;16(4):451-3.

Aldrete JA, Ghaly R, Zapata JC, Aldrete VT. Ambulatory pain-free treatment of compressed vertebral fractures from osteoporosis: A preliminary report. *Pain Dig* 1998;8(1):26-31.

Bai B, Jazrawi LM, Kummer FJ, Spivak JM. The use of an injectable, biodegradable calcium phosphate bone substitute for the prophylactic augmentation of osteoporotic vertebrae and the management of vertebral compression fractures. *Spine* 1999 Aug 1;24(15):1521-6.

Belkoff SM, Maroney M, Fenton DC, Mathis JM. An in vitro biomechanical evaluation of bone cements used in percutaneous vertebroplasty. *Bone* 1999 Aug;25(2 Suppl):23S-26S.

Bennett GJ, Serhan HA, Sorini PM, Willis BH. An experimental study of lumbar destabilization. Restabilization and bone density. *Spine* 1997;22(13):1448-53.

Bostrom MP, Lane JM. Future directions. Augmentation of osteoporotic vertebral bodies. *Spine* 1997 Dec 15;22(24 Suppl):S38-S-42S. Published erratum appears in *Spine* 1998 Sep 1;23(17):1922.

Clairmont AC, Kidd RL. Rehabilitation of the patient with osteoporosis. *Phys Med Rehabil Clin North Am* 1995;6(3):649-64.

Cortet B, Cotten A, Boutry N, Flipo RM, Duquesnoy B, Chastanet P, Delcambre B. Percutaneous vertebroplasty in the treatment of osteoporotic vertebral compression fractures: an open prospective study. *J Rheumatol* 1999 Oct;26(10):2222-8.

Cotten A, Boutry N, Cortet B, Assaker R, Demondion X, Leblond D, Chastanet P, Duquesnoy B, Deramond H. Percutaneous vertebroplasty: state of the art. *Radiographics* 1998 Mar-Apr;18(2):311-20; discussion 320-3.

Deramond H, Depriester C, Galibert P, Le Gars D. Percutaneous vertebroplasty with polymethylmethacrylate. Technique, indications, and results. *Radiol Clin North Am* 1998 May;36(3):533-46.

Fitzsimmons A. Physical rehabilitation of the osteoporotic patient. *Drug Inf J* 1997;31(1):307-9.

- Fitzsimmons A, Freundlich B, Bonner F. Osteoporosis and rehabilitation. Crit Rev Phys Rehabil Med 1997;9(3-4):331-53.
- Gangi A, Dietemann JL, Guth S, Steib JP, Roy C. Computed tomography (CT) and fluoroscopy-guided vertebroplasty: Results and complications in 187 patients. Semin Intervent Radiol 1999;16(2):137-42.
- Jensen ME, Evans AJ, Mathis JM, Kallmes DF, Cloft HJ, Dion JE. Percutaneous polymethylmethacrylate vertebroplasty in the treatment of osteoporotic vertebral body compression fractures: technical aspects. AJNR Am J Neuroradiol 1997 Nov-Dec;18(10):1897-904.
- Kagel EM, Majeska RJ, Einhorn TA. Effects of diabetes and steroids on fracture healing. Curr Opin Orthop 1995;6(5):7-13.
- Kaplan RS, Sinaki M, Hameister MD. Effect of back supports on back strength in patients with osteoporosis: a pilot study. Mayo Clin Proc 1996 Mar;71(3):235-41.
- Karlsson M, Nilsson JA, Sernbo I, Redlund -Johnell I, Johnell O, Obrant KJ. Changes of bone mineral mass and soft tissue composition after hip fracture. Bone 1996 Jan;18(1):19-22.
- Kaye RA. Insufficiency stress fractures of the foot and ankle in postmenopausal women. Foot Ankle Int 1998 Apr;19(4):221-4.
- Olson SA, Bay BK, Chapman MW, Sharkley NA. Biomechanical consequences of fracture and repair of the posterior wall of the acetabulum. J Bone Jt Surg Ser A 1995;77(8):1184-92.
- Pal B, Morris J, Muddu B. The management of osteoporosis-related fractures: a survey of orthopaedic surgeons' practice. Clin Exp Rheumatol 1998 Jan-Feb;16(1):61-2.
- Petersen MM, Gehrchen PM, Nielsen PK, Lund B. Loss of bone mineral of the hip assessed by DEXA following tibial shaft fractures. Bone 1997 May;20(5):491-5.
- Raiszadeh K, Akbarnia BA. Surgical management of adult kyphosis: Idiopathic, posttraumatic, osteoporotic. Semin Spine Surg 1998;10(4):367-80.
- Ritson F, Scott S. Physiotherapy for osteoporosis. A pilot study comparing practice and knowledge in Scotland and Sweden. Physiotherapy 1996;82(7):390-4.
- Schildhauer TA, Bennett AP, Wright TM, Lane JM, O'Leary PF. Intravertebral body reconstruction with an injectable in situ -setting carbonated apatite: biomechanical evaluation of a minimally invasive technique. J Orthop Res 1999 Jan;17(1):67-72.
- Sinaki M. Musculoskeletal challenges of osteoporosis. Aging (Milano) 1998 Jun;10(3):249-62.
- Stappaerts KH, Deldycke J, Broos PL, Staes FF, Rommens PM, Claes P. Treatment of unstable peritrochanteric fractures in elderly patients with a compression hip screw or with the Vandeputte (VDP) endoprosthesis: a prospective randomized study. J Orthop Trauma 1995;9(4):292-7. Comment in: J Orthop Trauma 1996;10(7):515.
- Wenger M, Markwalder TM, Calatayud -Maldonado V, Sonntag V, Weidner A. Surgically controlled, transpedicular methyl methacrylate vertebroplasty with fluoroscopic guidance. Acta Neurochir 1999;141(6):625-31.

## Secondary Osteoporosis

### General

Abitbol V, Chaussade S, Roux C. Mechanisms of low bone mineral density in inflammatory bowel diseases (3). *Gastroenterology* 1997;112(4):1428.

Abitbol V, Roux C, Guillemant S, Valleur P, Hautefeuille P, Dougados M, Couturier D, Chaussade S. Bone assessment in patients with ileal pouch -anal anastomosis for inflammatory bowel disease. *Br J Surg* 1997;84(11):1551-4.

Adachi JD, Rostom A. Metabolic bone disease in adults with inflammatory bowel disease. *Inflamm Bowel Dis* 1999 Aug;5(3):200-11.

Adachi Y, Shiota E, Matsumata T, Iso Y, Yoh R, Kitano S. Bone mineral density in patients taking H2-receptor antagonist. *Calcif Tissue Int* 1998 Apr;62(4):283-5.

Affinito P, Sorrentino C, Farace MJ, di Carlo C, Moccia G, Canciello P, Palomba S, Nappi C. Effects of thyroxine therapy on bone metabolism in postmenopausal women with hypothyroidism. *Acta Obstet Gynecol Scand* 1996 Oct;75(9):843-8.

Anapliotou ML, Kastanias IT, Psara P, Evangelou EA, Liparaki M, Dimitriou P. The contribution of hypogonadism to the development of osteoporosis in thalassaemia major: new therapeutic approaches. *Clin Endocrinol (Oxf)* 1995 Mar;42(3):279-87.

Andreassen H, Rungby J, Dahlerup JF, Mosekilde L. Inflammatory bowel disease and osteoporosis. *Scand J Gastroenterol* 1997 Dec;32(12):1247-55.

Angelopoulou N, Souftas V, Sakadamis A, Mandroukas K. Bone mineral density in adults with Down's syndrome. *Eur Radiol* 1999;9(4):648-51.

Angulo P, Therneau TM, Jorgensen RA, DeSotell CK, Egan KS, Dickson ER, Hay JE, Lindor KD. Bone disease in patients with primary sclerosing cholangitis: Prevalence, severity and prediction of progression. *J Hepatol* 1998;29(5):729-35.

Arikoski P, Komulainen J, Riikonen P, Voutilainen R, Knip M, Kroger H. Alterations in bone turnover and impaired development of bone mineral density in newly diagnosed children with cancer: A 1 -year prospective study. *J Clin Endocrinol Metab* 1999 Sep;84(9):3174-81.

Aris RM, Renner JB, Winders AD, Buell HE, Riggs DB, Lester GE, Ontjes DA. Increased rate of fractures and severe kyphosis: sequelae of living into adulthood

with cystic fibrosis. *Ann Intern Med* 1998 Feb 1;128(3):186-93.

Aspray TJ, Francis RM, Thompson A, Quilliam SJ, Rawlings DJ, Tyrer SP. Comparison of ultrasound measurements at the heel between adults with mental retardation and control subjects. *Bone* 1998 Jun;22(6):665-8. Comment in: *Bone* 1999 May;24(5):525.

Bagur A, Mautalen C, Findor J, Sorda J, Somoza J. Risk factors for the development of vertebral and total skeleton osteoporosis in patients with primary biliary cirrhosis. *Calcif Tissue Int* 1998 Nov;63(5):385-90.

Baldelli R, Perrone G, Nardone MR, Galloppi P, Provenzano A, Fabbrini A, Rocco A. The role of hyperprolactinaemia on bone mass density. *Ital J Miner Electrolyte Metab* 1995;9(3-4):131-5.

Baldini M, Vigna L, Gallazzi M, Orsatti A, Legnani L, Peracchi G, Poletto C, Cantalamessa L. Age and postmenopausal state related risk of axial bone demineralization in goitrous women treated with L-thyroxine. A longitudinal study. *Riv Ital Biol Med* 1996;16(3-4):85-90.

Bano G, Rodin DA, Pazianas M, Nussey SS. Reduced bone mineral density after surgical treatment for obesity. *Int J Obes Relat Metab Disord* 1999 Apr;23(4):361-5.

Baroncelli GI, De Luca F, Magazzu G, Arrigo T, Sferlazzas C, Catena C, Bertelloni S, Saggese G. Bone demineralization in cystic fibrosis: Evidence of imbalance between bone formation and degradation. *Pediatr Res* 1997;41(3):397-403.

Bauman WA, Garland DE, Schwartz E. Calcium metabolism and osteoporosis in individuals with spinal cord injury. *Top Spinal Cord Inj Rehabil* 1997;2(4):84-95.

Bernstein CN. Calcium and bone issues in inflammatory bowel disease. *Gastroenterol Int* 1997;10(2):71-7.

Bernstein CN, Seeger LL, Anton PA, Artinian L, Geffrey S, Goodman W, Belin TR, Shanahan F. A randomized, placebo-controlled trial of calcium supplementation for decreased bone density in corticosteroid-using patients with inflammatory bowel disease: a pilot study. *Aliment Pharmacol Ther* 1996 Oct;10(5):777-86.

Brand CA, Jolley D, Tellus M, Muirden KD, Wark JD. Risk factors for osteoporosis and fracture in patients attending rheumatology outpatient clinics.

- Aust N Z J Med 1999 Apr;29(2):197-202. Comment in: Aust N Z J Med 1999 Apr;29(2):185-7.
- Bronson WD, Walker SE, Hillman LS, Keisler D, Hoyt T, Allen SH. Bone mineral density and biochemical markers of bone metabolism in ankylosing spondylitis. *J Rheumatol* 1998;25(5):929-35.
- Brunner R, Doderlein L. Pathological fractures in patients with cerebral palsy. *J Pediatr Orthop B* 1996 Fall;5(4):232-8. Comment on: *J Pediatr Orthop B* 1996 Fall;5(4):223-4.
- Burgess JR, David R, Greenaway TM, Parameswaran V, Shepherd JJ. Osteoporosis in multiple endocrine neoplasia type 1: severity, clinical significance, relationship to primary hyperparathyroidism, and response to parathyroideectomy. *Arch Surg* 1999 Oct;134(10):1119-23.
- Burrows R, Leiva L, Burgueno M, Lillo R, Pumarino H, Rios G, Chavez E, Bergenfield C, Muzzo S. Bone mineral density (BMD) in children with celiac disease (CD): Its relation to puberty and calcium intake. *Nutr Res* 1999;19(4):493-9.
- Campanello M, Herlitz H, Lindstedt G, Mellstrom D, Wilske J, Akerlund S, Jonsson O. Determinants of bone loss in patients with Kock ileal urinary reservoir. *Scand J Urol Nephrol* 1999;33(5):312-6.
- Canatan D, Akar N, Arcasoy A. Effects of calcitonin therapy on osteoporosis in patients with thalassemia. *Acta Haematol* 1995;93(1):20-4.
- Cann CE. Bone densitometry as an adjunct to GnRH agonist therapy. *J Reprod Med* 1998 Mar;43(3 Suppl):321-30.
- Celiker R, Gokce-Kutsal Y, Cindas A, Ariyurek M, Renda N, Koray Z, Basgoze O. Osteoporosis in rheumatoid arthritis: effect of disease activity. *Clin Rheumatol* 1995 Jul;14(4):429-33.
- Center J, Beange H, McElduff A. People with mental retardation have an increased prevalence of osteoporosis: a population study. *Am J Ment Retard* 1998 Jul;103(1):19-28.
- Cetin A, Celiker R, Dincer F, Ariyurek M. Bone mineral density in children with juvenile chronic arthritis. *Clin Rheumatol* 1998;17(6):551 -3.
- Chad KE, Bailey DA, McKay HA, Zello GA, Snyder RE. The effect of a weight-bearing physical activity program on bone mineral content and estimated volumetric density in children with spastic cerebral palsy. *J Pediatr* 1999 Jul;135(1):115 -7.
- Chen CC, Wang SS, Jeng FS, Lee SD. Metabolic bone disease of liver cirrhosis: is it parallel to the clinical severity of cirrhosis? *J Gastroenterol Hepatol* 1996 May;11(5):417-21.
- Chen CJ, Yen JH, Tsai WC, Lin MB, Hsu SC, Tsai JJ, Lin HC, Lu SN, Liu GC, Lin SF, Liu HW. Decreased bone mineral density in premenopausal patients with systemic lupus erythematosus. *Kaohsiung J Med Sci* 1996;12(10):567-72.
- Clark HJ. Antiepileptic drug -induced bone disease. *Med Update Psychiatr* 1998;3(2):58-61.
- Coelho R, Silva C, Maia A, Prata J, Barros H. Bone mineral density and depression: a community study in women. *J Psychosom Res* 1999 Jan;46(1):29-35.
- Cohen A, Lancman M, Mogul H, Marks S, Smith K. Strategies to protect bone mass in the older patient with epilepsy. *Geriatrics* 1997 Aug;52(8):70, 75 -8, 81.
- Cokolic M. Diabetes mellitus and osteoporosis. *Diabetol Croat* 1998 Nov;27(4):135-42.
- Compston JE, Yamaguchi K, Croucher PI, Garrahan NJ, Lindsay PC, Shaw RW. The effects of gonadotrophin-releasing hormone agonists on iliac crest cancellous bone structure in women with endometriosis. *Bone* 1995 Feb;16(2):261-7.
- Cortet B, Flipo RM, Pigny P, Duquesnoy B, Boersma A, Marchandise X, Delambre B. Is bone turnover a determinant of bone mass in rheumatoid arthritis? *J Rheumatol* 1998;25(12):2339-44.
- Cosman F, Nieves J, Komar L, Ferrer G, Herbert J, Formica C, Shen V, Lindsay R. Fracture history and bone loss in patients with MS. *Neurology* 1998 Oct;51(4):1161-5.
- Crosbie OM, Freaney R, McKenna MJ, Hegarty JE. Bone density, vitamin D status, and disordered bone remodeling in end - stage chronic liver disease. *Calcif Tissue Int* 1999;64(4):295-300.
- D'Haens GR, Rutgeerts PJ. How should corticosteroids be used in inflammatory bowel disease? *Clin Immunother* 1996;5(5):334 -40.
- Davies MC, Gulekli B, Jacobs HS. Osteoporosis in Turner's syndrome and other forms of primary amenorrhoea. *Clin Endocrinol (Oxf)* 1995 Dec;43(6):741-6.
- de Bruin ED, Frey-Rindova P, Herzog RE, Dietz V, Dambacher MA, Stussi E. Changes of tibia bone properties after spinal cord injury: effects of early

- intervention. *Arch Phys Med Rehabil* 1999 Feb;80(2):214-20.
- del Puente A, Pappone N, Mandes MG, Mantova D, Scarpa R, Oriente P. Determinants of bone mineral density in immobilization: a study on hemiplegic patients. *Osteoporos Int* 1996;6(1):50-4.
- Delmas PD, Fontana A. Bone loss induced by cancer treatment and its management. *Eur J Cancer* 1998 Feb;34(2):260-2.
- Demers LM, Costa L, Chinchilli VM, Gaydos L, Curley E, Lipton A. Biochemical markers of bone turnover in patients with metastatic bone disease. *Clin Chem* 1995;41(10):1489 -94.
- Demirel G, Yilmaz H, Paker N, Onel S. Osteoporosis after spinal cord injury. *Spinal Cord* 1998 Dec;36(12):822-5.
- Deodhar AA, Brabyn J, Jones PW, Davis MJ, Woolf AD. Longitudinal study of hand bone densitometry in rheumatoid arthritis. *Arthritis Rheum* 1995;38(9):1204-10.
- Deodhar AA, Woolf AD. Bone mass measurement and bone metabolism in rheumatoid arthritis: a review. *Br J Rheumatol* 1996 Apr;35(4):309 -22.
- Dequeker J, Maenaut K, Verwilghen J, Westhovens R. Osteoporosis in rheumatoid arthritis. *Clin Exp Rheumatol* 1995 Sep-Oct;13 Suppl 12:S21-6.
- Di Munno O, Mazzantini M, Massei P, Ferdeghini M, Pitaro N, Latorraca A, Ferri C. Reduced bone mass and normal calcium metabolism in systemic sclerosis with and without calcinosis. *Clin Rheumatol* 1995 Jul;14(4):407-12.
- Di Somma C, Colao A, Pivonello R, Klain M, Faggiano A, Tripodi FS, Merola B, Salvatore M, Lombardi G. Effectiveness of chronic treatment with alendronate in the osteoporosis of Cushing's disease. *Clin Endocrinol (Oxf)* 1998 May;48(5):655 -62.
- Diamond T, Levy S, Day P, Barbagallo S, Manoharan A, Kwan YK. Biochemical, histomorphometric and densitometric changes in patients with multiple myeloma: Effects of glucocorticoid therapy and disease activity. *Br J Haematol* 1997;97(3):641 -8.
- Dmowski WP, Rana N, Pepping P, Cain DF, Clay TH. Excretion of urinary N-telopeptides reflects changes in bone turnover during ovarian suppression and indicates individually variable estradiol threshold for bone loss. *Fertil Steril* 1996 Dec;66(6):929-36.
- Donovan DS Jr, Papadopoulos A, Staron RB, Addesso V, Schulman L, McGregor C, Cosman F, Lindsay RL, Shane E. Bone mass and vitamin D deficiency in adults with advanced cystic fibrosis lung disease. *Am J Respir Crit Care Med* 1998 Jun;157(6 Pt 1):1892-9.
- El Maghraoui A, Borderie D, Cherruau B, Edouard R, Dougados M, Roux C. Osteoporosis, body composition, and bone turnover in ankylosing spondylitis. *J Rheumatol* 1999 Oct;26(10):2205 -9.
- El-Masry A, Nooman MF, Ibrahim I, El-Gawad SA. Bone density changes in postmenopausal women with breast cancer treated with long term adjuvant tamoxifen. *J Med Res Inst* 1997;18(1):170 -8.
- Faber J, Jensen IW, Petersen L, Nygaard B, Hegedus L, Siersbaek-Nielsen K. Normalization of serum thyrotrophin by means of radioiodine treatment in subclinical hyperthyroidism: effect on bone loss in postmenopausal women. *Clin Endocrinol (Oxf)* 1998 Mar;48(3):285-90.
- Falcini F, Ermini M, Bagnoli F. Bone turnover is reduced in children with juvenile rheumatoid arthritis. *J Endocrinol Invest* 1998 Jan;21(1):31 -6.
- Filosa A, Di Maio S, Vocca S, Saviano A, Esposito G, Pagano L. Longitudinal monitoring of bone mineral density in thalassemic patients. Genetic structure and osteoporosis. *Acta Paediatr* 1997 Apr;86(4):342-6.
- Foldes J, Lakatos P, Zsadanyi J, Horvath C. Decreased serum IGF-I and dehydroepiandrosterone sulphate may be risk factors for the development of reduced bone mass in postmenopausal women with endogenous subclinical hyperthyroidism. *Eur J Endocrinol* 1997 Mar;136(3):277 -81.
- Formiga F, Moga I, Nolla JM, Navarro MA, Bonnin R, Roig-Escofet D. The association of dehydroepiandrosterone sulphate levels with bone mineral density in systemic lupus erythematosus. *Clin Exp Rheumatol* 1997 Jul-Aug;15(4):387-92.
- Formiga F, Moga I, Nolla JM, Navarro MA, Bonnin R, Roig-Escofet D. Parameters of bone turnover in premenopausal women with systemic lupus erythematosus and glucocorticoid therapy. *Eur J Intern Med* 1996;7(2):83-6.
- Formiga F, Moga I, Nolla JM, Pac M, Mitjavila F, Roig-Escofet D. Loss of bone mineral density in premenopausal women with systemic lupus erythematosus. *Ann Rheum Dis* 1995;54(4):274 -6.
- Fowler PB, McIvor J, Sykes L, Macrae KD. The effect of long-term thyroxine on bone mineral density and serum cholesterol. *J R Coll Physicians Lond* 1996 Nov-Dec;30(6):527-32.

- Franklyn JA, Betteridge J, Holder R, Sheppard MC. Effect of estrogen replacement therapy upon bone mineral density in thyroxine -treated postmenopausal women with a past history of thyrotoxicosis. *Thyroid* 1995;5(5):359-63.
- Fries W, Dinca M, Luisetto G, Peccolo F, Bottega F, Martin A. Calcaneal ultrasound bone densitometry in inflammatory bowel disease - A comparison with double x-ray densitometry of the lumbar spine. *Am J Gastroenterol* 1998;93(12):2339-44.
- Fujiyama K, Kiriyama T, Ito M, Kimura H, Ashizawa K, Tsuruta M, Nagayama Y, Villadolid MC, Yokoyama N, Nagataki S. Suppressive doses of thyroxine do not accelerate age-related bone loss in late postmenopausal women. *Thyroid* 1995 Feb;5(1):13-7.
- Fujiyama K, Kiriyama T, Ito M, Nakata K, Yamashita S, Yokoyama N, Nagataki S. Attenuation of postmenopausal high turnover bone loss in patients with hypoparathyroidism. *J Clin Endocrinol Metab* 1995 Jul;80(7):2135-8.
- Gennari C, Martini G, Nuti R. Secondary osteoporosis. *Aging (Milano)* 1998 Jun;10(3):214-24.
- Godang K, Ueland T, Bollerslev J. Decreased bone area, bone mineral content, formative markers, and increased bone resorptive markers in endogenous Cushing's syndrome. *Eur J Endocrinol* 1999;141(2):126-31.
- Gomez Acotto C, Schott AM, Hans D, Nieponmiszczce H, Mautalen CA, Meunier PJ. Hyperthyroidism influences ultrasound bone measurement on the Os calcis. *Osteoporos Int* 1998;8(5):455-9.
- Gorres G, Kaim A, Otte A, Gotze M, Muller-Brand J. Bone mineral density in patients receiving suppressive doses of thyroxine for differentiated thyroid carcinoma. *Eur J Nucl Med* 1996 Jun;23(6):690-2.
- Gough A, Sambrook P, Devlin J, Huissoon A, Njeh C, Robbins S, Nguyen T, Emery P. Osteoclastic activation is the principal mechanism leading to secondary osteoporosis in rheumatoid arthritis. *J Rheumatol* 1998 Jul;25(7):1282-9. Comment in: *J Rheumatol* 1998 Jul;25(7):1251-3.
- Gussinye M, Carrascosa A, Potau N, Errrubia M, Vicens-Calvet E, Ibanez L, Yeste D. Bone mineral density in prepubertal and in adolescent and young adult patients with the salt -wasting form of congenital adrenal hyperplasia. *Pediatrics* 1997;100(4):671 -4.
- Haas RH, Dixon SD, Sartoris DJ, Hannessy MJ. Osteopenia in Rett syndrome. *J Pediatr* 1997;131(5):771-4.
- Hallengren B, Elmstahl B, Berglund J, Christensen SB, Elmstahl S, Johnell O, Thorngren KG. No increase in fracture incidence in patients treated for thyrotoxicosis in Malmo during 1970 -74. A 20-year population-based follow-up. *J Intern Med* 1999 Aug;246(2):139-44.
- Hampson G, Evans C, Petitt RJ, Evans WD, Woodhead SJ, Peters JR, Ralston SH. Bone mineral density, collagen type 1 alpha 1 genotypes and bone turnover in premenopausal women with diabetes mellitus. *Diabetologia* 1998 Nov;41(11):1314 -20.
- Hansen M, Florescu A, Stoltenberg M, Podenphant J, Pedersen-Zbinden B, Horslev-Petersen K, Hyldstrup L, Lorenzen I. Bone loss in rheumatoid arthritis. Influence of disease activity, duration of the disease, functional capacity, and corticosteroid treatment. *Scand J Rheumatol* 1996;25(6):367-76.
- Hanyu T, Arai K, Takahashi HE. Structural mechanisms of bone loss in iliac biopsies: comparison between rheumatoid arthritis and postmenopausal osteoporosis. *Rheumatol Int* 1999;18(5-6):193-200.
- Harper KD, Weber TJ. Secondary osteoporosis. Diagnostic considerations. *Endocrinol Metab Clin North Am* 1998 Jun;27(2):325 -48.
- Haworth CS, Selby PL, Webb AK, Adams JE. Osteoporosis in adults with cystic fibrosis. *J R Soc Med* 1998;91 Suppl 34:14-8.
- Haworth CS, Selby PL, Webb AK, Mawer EB, Adams JE, Freemont TJ. Severe bone pain after intravenous pamidronate in adult patients with cystic fibrosis. *Lancet* 1998;352(9142):1753-4.
- Hay JE. Bone disease in cholestatic liver disease. *Gastroenterology* 1995;108(1):276-83.
- Headley JA, Theriault RL, LeBlanc AD, Vassilopoulou-Sellin R, Hortobagyi GN. Pilot study of bone mineral density in breast cancer patients treated with adjuvant chemotherapy. *Cancer Invest* 1998;16(1):6-11.
- Healey JH. The epidemic of chemotherapy -related osteoporosis. *Curr Opin Orthop* 1999;10(5):331-3.
- Henderson RC, Madsen CD. Bone density in children and adolescents with cystic fibrosis. *J Pediatr* 1996;128(1):28-34.

- Henderson RC, Madsen CD, Davis C, Gold SH. Bone density in survivors of childhood malignancies. *J Pediatr Hematol Oncol* 1996;18(4):367-71.
- Henderson RC, Madsen CD, Davis C, Gold SH. Longitudinal evaluation of bone mineral density in children receiving chemotherapy. *J Pediatr Hematol Oncol* 1998 Jul-Aug;20(4):322-6. Comment in: *J Pediatr Hematol Oncol* 1999 May-Jun;21(3):249-50.
- Hergenroeder AC. Bone mineralization, hypothalamic amenorrhea, and sex steroid therapy in female adolescents and young adults. *J Pediatr* 1995 May;126(5 Pt 1):683-9.
- Hergenroeder AC, Smith EO, Shypailo R, Jones LA, Klish WJ, Ellis K. Bone mineral changes in young women with hypothalamic amenorrhea treated with oral contraceptives, medroxyprogesterone, or placebo over 12 months. *Am J Obstet Gynecol* 1997;176(5):1017-25.
- Herrala J, Puolijoki H, Liippo K, Raitio M, Impivaara O, Tala E, Nieminen MM. Clodronate is effective in preventing corticosteroid-induced bone loss among asthmatic patients. *Bone* 1998 May;22(5):577-82.
- Hirano Y, Kishimoto H, Hagino H, Teshima R. The change of bone mineral density in secondary osteoporosis and vertebral fracture incidence. *J Bone Miner Metab* 1999;17(2):119-24.
- Hoorweg-Nijman JJG, Kardos G, Roos JC, Van Dijk HJ, Netelenbos C, Popp-Snijders C, De Ridder CM, Delemarre-Van de Waal HA. Bone mineral density and markers of bone turnover in young adult survivors of childhood lymphoblastic leukaemia. *Clin Endocrinol* 1999;50(2):237-44.
- Isaia G, Di Stefano M, Roggia C, Ardissoni P, Rosina F. Bone disorders in cholestatic liver diseases. *Forum (Genova)* 1998 Jan-Feb;8(1):28-38.
- Isaia GC, Ardissoni P, Di Stefano M, Ferrari D, Martina V, Porta M, Tagliabue M, Molinatti GM. Bone metabolism in type 2 diabetes mellitus. *Acta Diabetol* 1999 Jun;36(1-2):35-8.
- Ishida Y, Ishikawa S. Hypogonadal osteoporosis in elderly male patients with lepromatous leprosy. *Jpn J Lepr* 1997;66(3):237-42.
- Ishikawa S, Ishikawa A, Yoh K, Tanaka H, Fujiwara M. Osteoporosis in male and female leprosy patients. *Calcif Tissue Int* 1999 Feb;64(2):144-7.
- Jahnsen J, Falch JA, Mowinckel P, Aadland E. Ultrasound measurements of calcaneus for estimation of skeletal status in patients with inflammatory bowel disease. *Scand J Gastroenterol* 1999;34(8):790-7.
- Jensen CE, Tuck SM, Agnew JE, Koneru S, Morris RW, Yardumian A, Prescott E, Hoffbrand AV, Wonke B. High prevalence of low bone mass in thalassaemia major. *Br J Haematol* 1998 Dec;103(4):911-5.
- Jodar E, Munoz-Torres M, Escobar-Jimenez F, Quesada-Charneco M, Lund del Castillo JD. Bone loss in hyperthyroid patients and in former hyperthyroid patients controlled on medical therapy: influence of aetiology and menopause. *Clin Endocrinol (Oxf)* 1997 Sep;47(3):279-85.
- Jodar Gimeno E, Munoz-Torres M, Escobar-Jimenez F, Quesada Charneco M, Luna del Castillo JD, Olea N. Identification of metabolic bone disease in patients with endogenous hyperthyroidism: role of biological markers of bone turnover. *Calcif Tissue Int* 1997 Nov;61(5):370-6.
- Kalla AA, Meyers OL, Laubscher R. Prevalence of metacarpal osteopenia in young rheumatoid arthritis patients. *Clin Rheumatol* 1995;14(6):617-25.
- Kannisto M, Alaranta H, Merikanto J, Kroger H, Karkkainen J. Bone mineral status after pediatric spinal cord injury. *Spinal Cord* 1998 Sep;36(9):641-6.
- Karasick D, Schweitzer ME, Abidi NA, Cotler JM. Fractures of the vertebrae with spinal cord injuries in patients with ankylosing spondylitis: Imaging findings. *Am J Roentgenol* 1995;165(5):1205-8.
- Kauppila M, Irlala K, Koskinen P, Pulkki K, Sonninen P, Viikari J, Remes K. Bone mineral density after allogeneic bone marrow transplantation. *Bone Marrow Transplant* 1999;24(8):885-9.
- Keaveny AP, Freaney R, McKenna MJ, Masterson J, O'Donoghue DP. Bone remodeling indices and secondary hyperparathyroidism in celiac disease. *Am J Gastroenterol* 1996;91(6):1226-31.
- Kemppainen T, Kroger H, Janatuinen E, Arnala I, Kosma VM, Pikkarainen P, Julkunen R, Jurvelin J, Alhava E, Uusitupa M. Osteoporosis in adult patients with celiac disease. *Bone* 1999 Mar;24(3):249-55.
- Kipen E, Helme RD, Wark JD, Flicker L. Bone density, vitamin D nutrition, and parathyroid hormone levels in women with dementia. *J Am Geriatr Soc* 1995 Oct;43(10):1088-91.
- Klein GL, Wolf SE, Langman CB, Rosen CJ, Mohan S, Keenan BS, Matin S, Steffen C, Nicolai M, Sailer DE, Herndon DN. Effects of therapy with recombinant human growth hormone on insulin-like growth factor system components and serum levels of biochemical markers of bone formation in children

- after severe burn injury. *J Clin Endocrinol Metab* 1998 Jan;83(1):21-4.
- Kotaniemi A, Savolainen A, Kroger H, Kautiainen H, Isomaki H. Development of bone mineral density at the lumbar spine and femoral neck in juvenile chronic arthritis: A prospective one year followup study. *J Rheumatol* 1998;25(12):2450-5.
- Kotzmann H, Riedl M, Bernecker P, Clodi M, Kainberger F, Kaider A, Woloszczuk W, Luger A. Effect of long-term growth-hormone substitution therapy on bone mineral density and parameters of bone metabolism in adult patients with growth hormone deficiency. *Calcif Tissue Int* 1998 Jan;62(1):40-6.
- Kung AW, Yeung SS. Prevention of bone loss induced by thyroxine suppressive therapy in postmenopausal women: the effect of calcium and calcitonin. *J Clin Endocrinol Metab* 1996 Mar;81(3):1232-6.
- Kwon DJ, Kim JH, Chung KW, Kim JH, Lee JW, Kim SP, Lee HY. Bone mineral density of the spine using dual energy X-ray absorptiometry in patients with non-insulin-dependent diabetes mellitus. *J Obstet Gynaecol Res* 1996 Apr;22(2):157-62.
- Laatikainen AK, Kroger HP, Tukiainen HO, Honkanen RJ, Saarikoski SV. Bone mineral density in perimenopausal women with asthma: a population-based cross-sectional study. *Am J Respir Crit Care Med* 1999 Apr;159(4 Pt 1):1179-85.
- Lala R, Chiabotto P, Di Stefano M, Isaia G C, Garofalo F, Piga A. Bone density and metabolism in thalassaemia. *J Pediatr Endocrinol Metab* 1998;11 Suppl 3:785-90.
- Landin-Wilhelmsen K, Bryman I, Windh M, Wilhelmsen L. Osteoporosis and fractures in Turner syndrome-importance of growth promoting and oestrogen therapy. *Clin Endocrinol* 1999;51(4):497-502.
- Lane NE, Pressman AR, Star VL, Cummings SR, Nevitt MC. Rheumatoid arthritis and bone mineral density in elderly women. The Study of Osteoporotic Fractures Research Group. *J Bone Miner Res* 1995 Feb;10(2):257-63.
- Laursen EM, Molgaard C, Michaelsen KF, Koch C, Muller J. Bone mineral status in 134 patients with cystic fibrosis. *Arch Dis Child* 1999;81(3):235-40.
- Lee PJ, Patel JS, Fewtrell M, Leonard JV, Bishop NJ. Bone mineralisation in type 1 glycogen storage disease. *Eur J Pediatr* 1995 Jun;154(6):483-7.
- Leone J, Vilque JP, Jolly D, Pignon B, Blaise AM, Pennaforte JL, Eschard JP, Etienne JC. Effect of chlorambucil on bone mineral density in the course of chronic lymphoid leukemia. *Eur J Haematol* 1998;61(2):135-9.
- Liedman B, Bosaeus I, Mellstrom D, Lundell L. Osteoporosis after total gastrectomy. Results of a prospective, clinical study. *Scand J Gastroenterol* 1997 Nov;32(11):1090-5.
- Lindsay R. Secondary prevention of osteoporosis. *Phys Med Rehabil Clin North Am* 1995;6(3):629-38.
- Lingg GM, Soltesz I, Kessler S, Dreher R. Insufficiency and stress fractures of the long bones occurring in patients with rheumatoid arthritis and other inflammatory diseases, with a contribution on the possibilities of computed tomography. *Eur J Radiol* 1997 Dec;26(1):54-63.
- Liu M, Tsuji T, Higuchi Y, Domen K, Tsujiuchi K, Chino N. Osteoporosis in hemiplegic stroke patients as studied with dual-energy X-ray absorptiometry. *Arch Phys Med Rehabil* 1999 Oct;80(10):1219-26.
- Locker FG, Silverberg SJ, Bilezikian JP. Optimal dietary calcium intake in primary hyperparathyroidism. *Am J Med* 1997 Jun;102(6):543-50.
- Loviselli A, Mastinu R, Rizzolo E, Massa GM, Velluzzi F, Sammartano L, Mela Q, Mariotti S. Circulating telopeptide type I is a peripheral marker of thyroid hormone action in hyperthyroidism and during levothyroxine suppressive therapy. *Thyroid* 1997;7(4):561-6.
- Lunt H, Florkowski CM, Cundy T, Kendall D, Brown LJ, Elliot JR, Wells JE, Turner JG. A population-based study of bone mineral density in women with longstanding type 1 (insulin dependent) diabetes. *Diabetes Res Clin Pract* 1998 Apr;40(1):31-8.
- Lupoli G, Nuzzo V, Di Carlo C, Affinito P, Vollery M, Vitale G, Cascone E, Arlotta F, Nappi C. Effects of alendronate on bone loss in pre- and postmenopausal hyperthyroid women treated with methimazole. *Gynecol Endocrinol* 1996 Oct;10(5):343-8.
- Lyhne N, Pedersen FB. Changes in bone mineral content during long-term CAPD. Indication of a sex-dependent bone mineral loss. *Nephrol Dial Transplant* 1995;10(3):395-8.
- Madsen OR, Egsmose C, Hansen B, Sorensen OH. Soft tissue composition, quadriceps strength, bone

- quality and bone mass in rheumatoid arthritis. *Clin Exp Rheumatol* 1998;16(1):27-32.
- Martin JC, Munro R, Campbell MK, Reid DM. Effects of disease and corticosteroids on appendicular bone mass in postmenopausal women with rheumatoid arthritis: comparison with axial measurements. *Br J Rheumatol* 1997 Jan;36(1):43 -9.
- Mateo L, Nolla JM, Bonnin MR, Navarro MA, Roig-Escofet D. Sex hormone status and bone mineral density in men with rheumatoid arthritis. *J Rheumatol* 1995;22(8):1455-60.
- Maugeri D, Panebianco P, Destro G, Tropea S, Rizzo A, Carnazzo G, Di Stefano F, Catanzaro S, Campagna S, Motta M, Russo MS. Senile diabetes and bone mineral density. *Arch Gerontol Geriatr* 1995;20(3):241-8.
- McFarlane XA, Bhalla AK, Reeves DE, Morgan LM, Robertson DA. Osteoporosis in treated adult coeliac disease. *Gut* 1995 May;36(5):710-4.
- Meirelles ES, Borelli A, Camargo OP. Influence of disease activity and chronicity on ankylosing spondylitis bone mass loss. *Clin Rheumatol* 1999;18(5):364-8.
- Melton LJ 3rd, Atkinson EJ, Khosla S, O'Fallon WM, Riggs BL. Secondary osteoporosis and the risk of vertebral deformities in women. *Bone* 1999 Jan;24(1):49-55.
- Melton LJ 3rd, Crowson CS, Khosla S, O'Fallon WM. Fracture risk after surgery for peptic ulcer disease: a population-based cohort study. *Bone* 1999 Jul;25(1):61-7.
- Melton LJ 3rd, Crowson CS, Khosla S, Wilson DM, O'Fallon WM. Fracture risk among patients with urolithiasis: a population -based cohort study. *Kidney Int* 1998 Feb;53(2):459-64.
- Miazgowski T, Czekalski S. A 2-year follow-up study on bone mineral density and markers of bone turnover in patients with long -standing insulin -dependent diabetes mellitus. *Osteoporos Int* 1998;8(5):399-403.
- Minisola S, Rosso R, Scarda A, Pacitti MT, Romagnoli E, Mazzuoli G. Quantitative ultrasound assessment of bone in patients with primary hyperparathyroidism. *Calcif Tissue Int* 1995;56(6):526-8.
- Miyamoto S, Kageyama Y, Ozeki T, Suzuki M, Inoue T. Reduction of bone mineral density in rheumatoid arthritis: A longitudinal study. *J Bone Miner Metab* 1997;15(1):30-3.
- Molyvda-Athanasopoulou E, Sioundas A, Karatzas N, Aggellaki M, Pazaitou K, Vainas I. Bone mineral density of patients with thalassemia major: four -year follow-up. *Calcif Tissue Int* 1999 Jun;64(6):481 -4.
- Monegal A, Navasa M, Guanabens N, Peris P, Pons F, Martinez de Osaba MJ, Rimola A, Rodes J, Munoz-Gomez J. Osteoporosis and bone mineral metabolism disorders in cirrhotic patients referred for orthotopic liver transplantation. *Calcif Tissue Int* 1997 Feb;60(2):148-54.
- Mora S, Barera G, Beccio S, Proverbio MC, Weber G, Bianchi C, Chiumello G. Bone density and bone metabolism are normal after long -term gluten-free diet in young celiac patients. *Am J Gastroenterol* 1999 Feb;94(2):398-403.
- Mora S, Barera G, Ricotti A, Weber O, Bianchi C, Chiumello G. Reversal of low bone density with a gluten-free diet in children and adolescents with celiac disease. *Am J Clin Nutr* 1998;67(3):477 -81.
- Mora S, Saggion F, Russo G, Weber G, Bellini A, Prinster C, Chiumello G. Bone density in young patients with congenital adrenal hyperplasia. *Bone* 1996 Apr;18(4):337-40.
- Moran CE, Sosa EG, Martinez SM, Geldern P, Messina D, Russo A, Boerr L, Bai JC. Bone mineral density in patients with pancreatic insufficiency and steatorrhea. *Am J Gastroenterol* 1997 May;92(5):867-71.
- Munoz-Torres M, Jodar E, Escobar-Jimenez F, Lopez-Ibarra PJ, Luna JD. Bone mineral density measured by dual X-ray absorptiometry in Spanish patients with insulin -dependent diabetes mellitus. *Calcif Tissue Int* 1996;58(5):316 -9.
- Nance PW, Schryvers O, Leslie W, Ludwig S, Krahn J, Uebelhart D. Intravenous pamidronate attenuates bone density loss after acute spinal cord injury. *Arch Phys Med Rehabil* 1999;80(3):243-51.
- Needham-Shropshire BM, Broton JG, Klose KJ, Lebwohl N, Guest RS, Jacobs PL. Evaluation of a training program for persons with SCI paraplegia using the Parastep 1 ambulation system: part 3. Lack of effect on bone mineral density. *Arch Phys Med Rehabil* 1997 Aug;78(8):799 -803.
- Nisbeth U, Lindh E, Ljunghall S, Backman U, Fellstrom B. Increased fracture rate in diabetes mellitus and females after renal transplantation. *Transplantation* 1999 May 15;67(9):1218 -22.
- Njeh CF, Boivin CM, Gough A, Hans D, Srivastav SK, Bulmer N, Devlin J, Emery P. Evaluation of finger ultrasound in the assessment of bone status

- with application of rheumatoid arthritis. *Osteoporos Int* 1999;9(1):82-90.
- Nuzzo V, Lupoli G, Esposito Del Puente A, Rampone E, Carpinelli A, Del Puente AE, Oriente P. Bone mineral density in premenopausal women receiving levothyroxine suppressive therapy. *Gynecol Endocrinol* 1998 Oct;12(5):333-7.
- Nysom K, Holm K, Michaelsen KF, Hertz H, Muller J, Molgaard C. Bone mass after treatment for acute lymphoblastic leukemia in childhood. *J Clin Oncol* 1998;16(12):3752-60.
- Oelzner P, Franke S, Muller A, Hein G, Stein G. Relationship between soluble markers of immune activation and bone turnover in post-menopausal women with rheumatoid arthritis. *Rheumatology* 1999;38(9):841-7.
- Olsson R, Mattsson LA, Obrant K, Mellstrom D. Estrogen-progestogen therapy for low bone mineral density in primary biliary cirrhosis. *Liver* 1999 Jun;19(3):188-92.
- Ormarsdottir S, Ljunggren O, Mallmin H, Brahm H, Loof L. Low body mass index and use of corticosteroids, but not cholestasis, are risk factors for osteoporosis in patients with chronic liver disease. *J Hepatol* 1999 Jul;31(1):84-90.
- Paoletti AM, Serra GG, Cagnacci A, Vacca AM, Guerriero S, Solla E, Melis GB. Spontaneous reversibility of bone loss induced by gonadotropin-releasing hormone analog treatment. *Fertil Steril* 1996 Apr;65(4):707 -10.
- Paparella P, Giorgino R, Maglione A, Lorusso D, Scirpa P, Del Bosco A, Mancuso S. Maternal ultrasound bone density in normal pregnancy. *Clin Exp Obstet Gynecol* 1995;22(4):268-78.
- Parasa RB, Maffulli N. Musculoskeletal involvement in cystic fibrosis. *Bull Hosp Jt Dis* 1999;58(1):37 -44.
- Paton NI, Macallan DC, Griffin GE, Pazianas M. Bone mineral density in patients with human immunodeficiency virus infection. *Calcif Tissue Int* 1997;61(1):30-2.
- Pearson EG, Nance PW, Leslie WD, Ludwig S. Cyclical etidronate: Its effect on bone density in patients with acute spinal cord injury. *Arch Phys Med Rehabil* 1997;78(3):269-72.
- Pecherstorfer M, Seibel MJ, Woitge HW, Horn E, Schuster J, Neuda J, Sagaster P, Kohn H, Bayer P, Thiebaud D, Ludwig H. Bone resorption in multiple myeloma and in monoclonal gammopathy of undetermined significance: Quantification by urinary pyridinium cross-links of collagen. *Blood* 1997;90(9):3743-50.
- Pereira RM, Corrente JE, Chahade WH, Yoshinari NH. Evaluation by dual X-ray absorptiometry (DXA) of bone mineral density in children with juvenile chronic arthritis. *Clin Exp Rheumatol* 1998 Jul-Aug;16(4):495-501.
- Pereira SP, Bray GP, Pitt PI, Li F, Moniz C, Williams R. Non-invasive assessment of bone density in primary biliary cirrhosis. *Eur J Gastroenterol Hepatol* 1999 Mar;11(3):323-8.
- Peris P, Guanabens N, Monegal A, Suris X, Alvarez L, Martinez de Osaba MJ, Hernandez MV, Munoz-Gomez J. Aetiology and presenting symptoms in male osteoporosis. *Br J Rheumatol* 1995 Oct;34(10):936-41.
- Peris P, Guanabens N, Pares A, Pons F, del Rio L, Monegal A, Suris X, Caballeria J, Rodes J, Munoz-Gomez J. Vertebral fractures and osteopenia in chronic alcoholic patients. *Calcif Tissue Int* 1995;57(2):111-4.
- Petri M. Musculoskeletal complications of systemic lupus erythematosus in the Hopkins Lupus Cohort: An update. *Arthritis Care Res* 1995;8(3):137 -45.
- Pichette V, Bonnardeaux A, Prudhomme L, Gagne M, Cardinal J, Ouimet D. Long -term bone loss in kidney transplant recipients: a cross -sectional and longitudinal study. *Am J Kidney Dis* 1996 Jul;28(1):105-14.
- Pivonello R, Faggiano A, Di Somma C, Klain M, Filippella M, Salvatore M, Lombardi G, Colao A. Effect of a short-term treatment with alendronate on bone density and bone markers in patients with central diabetes insipidus. *J Clin Endocrinol Metab* 1999 Jul;84(7):2349-52.
- Pluskiewicz W, Nowakowska J. Bone status after long-term anticonvulsant therapy in epileptic patients: Evaluation using quantitative ultrasound of calcaneus and phalanges. *Ultrasound Med Biol* 1997;23(4):553-8.
- Pons F, Peris P, Guanabens N, Font J, Huguet M, Espinosa G, Ingelmo M, Munoz-Gomez J, Setoain J. The effect of systemic lupus erythematosus and long-term steroid therapy on bone mass in pre-menopausal women. *Br J Rheumatol* 1995 Aug;34(8):742-6.
- Ramnemark A, Nyberg L, Borssen B, Olsson T, Gustafson Y. Fractures after stroke. *Osteoporos Int* 1998;8(1):92-5.

- Ramnemark A, Nyberg L, Lorentzon R, Englund U, Gustafson Y. Progressive hemosteoporosis on the paretic side and increased bone mineral density in the nonparetic arm the first year after severe stroke. *Osteoporos Int* 1999;9(3):269-75.
- Ramnemark A, Nyberg L, Lorentzon R, Olsson T, Gustafson Y. Hemosteoporosis after severe stroke, independent of changes in body composition and weight. *Stroke* 1999 Apr;30(4):755-60.
- Reeves HL, Francis RM, Manas DM, Hudson M, Day CP. Intravenous bisphosphonate prevents symptomatic osteoporotic vertebral collapse in patients after liver transplantation. *Liver Transpl Surg* 1998 Sep;4(5):404-9.
- Roberts D, Lee W, Cuneo RC, Wittmann J, Ward G, Flatman R, McWhinney B, Hickman PE. Longitudinal study of bone turnover after acute spinal cord injury. *J Clin Endocrinol Metab* 1998;83(2):415-22.
- Robinson RJ, al-Azzawi F, Iqbal SJ, Kryszewski T, Almond L, Abrams K, Mayberry JF. Osteoporosis and determinants of bone density in patients with Crohn's disease. *Dig Dis Sci* 1998 Nov;43(11):2500-6.
- Robinson RJ, Carr I, Iqbal SJ, al-Azzawi F, Abrams K, Mayberry JF. Screening for osteoporosis in Crohn's disease. A detailed evaluation of calcaneal ultrasound. *Eur J Gastroenterol Hepatol* 1998 Feb;10(2):137-40.
- Robinson RJ, Iqbal SJ, Abrams K, Al-Azzawi F, Mayberry JF. Increased bone resorption in patients with Crohn's disease. *Aliment Pharmacol Ther* 1998 Aug;12(8):699-705.
- Robinson RJ, Iqbal SJ, Al-Azzawi F, Abrams K, Mayberry JF. Sex hormone status and bone metabolism in men with Crohn's disease. *Aliment Pharmacol Ther* 1998 Jan;12(1):21-5.
- Robinson RJ, Krzywicki T, Almond L, Al-Azzawi F, Abrams K, Iqbal SJ, Mayberry JF. Effect of a low-impact exercise program on bone mineral density in Crohn's disease: A randomized controlled trial. *Gastroenterology* 1998;115(1):36-41.
- Rosen HN, Moses AC, Garber J, Ross DS, Lee SL, Ferguson L, Chen V, Lee K, Greenspan SL. Randomized trial of pamidronate in patients with thyroid cancer: Bone density is not reduced by suppressive doses of thyroxine, but is increased by cyclic intravenous pamidronate. *J Clin Endocrinol Metab* 1998;83(7):2324-30.
- Roux C, Abitbol V, Chaussade S, Kolta S, Guillemant S, Dougados M, Amor B, Couturier D.
- Bone loss in patients with inflammatory bowel disease: a prospective study. *Osteoporos Int* 1995 May;5(3):156-60.
- Saarto T, Blomqvist C, Valimaki M, Makela P, Sarna S, Elomaa I. Chemical castration induced by adjuvant cyclophosphamide, methotrexate, and fluorouracil chemotherapy causes rapid bone loss that is reduced by clodronate: A randomized study in premenopausal breast cancer patients. *J Clin Oncol* 1997;15(4):1341-7.
- Sambrook PN, Spector TD, Seeman E, Bellamy N, Buchanan RR, Duffy DL, Martin NG, Prince R, Owen E, Silman AJ, et al. Osteoporosis in rheumatoid arthritis. A monozygotic co-twin control study. *Arthritis Rheum* 1995 Jun;38(6):806-9.
- Sato Y, Asoh T, Oizumi K. High prevalence of vitamin D deficiency and reduced bone mass in elderly women with Alzheimer's disease. *Bone* 1998 Dec;23(6):555-7.
- Sato Y, Honda Y, Kunoh H, Oizumi K. Long-term oral anticoagulation reduces bone mass in patients with previous hemispheric infarction and nonrheumatic atrial fibrillation. *Stroke* 1997;28(12):2390-4.
- Sato Y, Manabe S, Kuno H, Oizumi K. Amelioration of osteopenia and hypovitaminosis D by 1alpha-hydroxyvitamin D3 in elderly patients with Parkinson's disease. *J Neurol Neurosurg Psychiatry* 1999;66(1):64-8.
- Sato Y, Maruoka H, Oizumi K. Amelioration of hemiplegia-associated osteopenia more than 4 years after stroke by 1alpha-hydroxyvitamin D<sub>3</sub> and calcium supplementation. *Stroke* 1997;28(4):736-9.
- Schey S. Osteosclerotic myeloma and 'POEMS' syndrome. *Blood Rev* 1996;10(2):75-80.
- Schoon EJ, Wolffenbuttel BH, Stockbrugger RW. Osteoporosis as a risk in inflammatory bowel disease. *Med Actual* 1999 Apr;35 Suppl A:17-28.
- Schulte C, Dignass AU, Mann K, Goebell H. Bone loss in patients with inflammatory bowel disease is less than expected: a follow-up study. *Scand J Gastroenterol* 1999 Jul;34(7):696-702.
- Schulte C, Dignass AU, Mann K, Goebell H. Reduced bone mineral density and unbalanced bone metabolism in patients with inflammatory bowel disease. *Inflamm Bowel Dis* 1998 Nov;4(4):268-75.
- Schwahn B, Mokov E, Scheidhauer K, Lettgen B, Schonau E. Decreased trabecular bone mineral density in patients with phenylketonuria measured by

- peripheral quantitative computed tomography. *Acta Paediatr* 1998 Jan;87(1):61-3.
- Schwid SR, Goodman AD, Puzas JE, McDermott MP, Mattson DH. Sporadic corticosteroid pulses and osteoporosis in multiple sclerosis. *Arch Neurol* 1996 Aug;53(8):753-7.
- Selby PL, Davies M, Adams JE, Mawer EB. Bone loss in celiac disease is related to secondary hyperparathyroidism. *J Bone Miner Res* 1999 Apr;14(4):652-7.
- Semeao EJ, Stallings VA, Peck SN, Piccoli DA. Vertebral compression fractures in pediatric patients with Crohn's disease. *Gastroenterology* 1997;112(5):1710-3.
- Sepulveda D, Allison DB, Gomez JE, Kreibich K, Brown RA, Pierson RN Jr, Heymsfield SB. Low spinal and pelvic bone mineral density among individuals with Down syndrome. *Am J Ment Retard* 1995 Sep;100(2):109-14.
- Shaarawy M, El-Dawakhly AS, Mosaad M, El-Sadek MM. Biomarkers of bone turnover and bone mineral density in hyperprolactinemic amenorrheic women. *Clin Chem Lab Med* 1999;37(4):433-8.
- Shaker JL, Brickner RC, Findling JW, Kelly TM, Rapp R, Rizk G, Haddad JG, Schalch DS, Shenker Y. Hypocalcemia and skeletal disease as presenting features of celiac disease. *Arch Intern Med* 1997;157(9):1013-6.
- Shane E, Mancini D, Aaronson K, Silverberg SJ, Seibel MJ, Addesso V, McMahon DJ. Bone mass, vitamin D deficiency, and hyperparathyroidism in congestive heart failure. *Am J Med* 1997 Sep;103(3):197-207. Comment in: *Am J Med* 1998 May;104(5):508-9; *Am J Med* 1998 Oct;105(4):358; *Am J Med* 1998 Oct;105(4):358-9 and *Am J Med* 1999 Jul;107(1):102-3.
- Shaw NJ, Rehan VK, Husain S, Marshall T, Smith CS. Bone mineral density in Turner's syndrome - A longitudinal study. *Clin Endocrinol* 1997;47(3):367-70.
- Shefras J, Farquharson RG. Bone density studies in pregnant women receiving heparin. *Eur J Obstet Gynecol Reprod Biol* 1996 Apr;65(2):171-4.
- Sheth RD, Wesolowski CA, Jacob JC, Penney S, Hobbs GR, Riggs JE, Bodensteiner JB. Effect of carbamazepine and valproate on bone mineral density. *J Pediatr* 1995 Aug;127(2):256-62. Comment in: *J Pediatr* 1996 Mar;128(3):441.
- Shioi S, Masaki K, Habu D, Takeda T, Nishiguchi S, Kuroki T, Ochi H. Calcitriol for bone loss in patients with primary biliary cirrhosis. *J Gastroenterol* 1999 Apr;34(2):241-5.
- Shioi S, Masaki K, Habu D, Takeda T, Nishiguchi S, Kuroki T, Tanaka T, Ochi H. Calcitriol for bone disease in patients with cirrhosis of the liver. *J Gastroenterol Hepatol* 1999 Jun;14(6):547-52.
- Sillem M, Parviz M, Woitge HW, Kiesel L, Ulrich U, von Holst T, Runnebaum B, Ziegler R, Seibel MJ. Add-back medrogestone does not prevent bone loss in premenopausal women treated with goserelin. *Exp Clin Endocrinol Diabetes* 1999;107(6):379-85.
- Silvennoinen J. Relationships between vitamin D, parathyroid hormone and bone mineral density in inflammatory bowel disease. *J Intern Med* 1996;239(2):131-7.
- Silvennoinen J, Lamberg-Allardt C, Karkkainen M, Niemela S, Lehtola J. Dietary calcium intake and its relation to bone mineral density in patients with inflammatory bowel disease. *J Intern Med* 1996;240(5):285-92.
- Silvennoinen J, Risteli L, Karttunen T, Risteli J. Increased degradation of type I collagen in patients with inflammatory bowel disease. *Gut* 1996;38(2):223-8.
- Silvennoinen JA, Karttunen TJ, Niemela SE, Manelius JJ, Lehtola JK. A controlled study of bone mineral density in patients with inflammatory bowel disease. *Gut* 1995 Jul;37(1):71-6.
- Silvennoinen JA, Lehtola JK, Niemela SE. Smoking is a risk factor for osteoporosis in women with inflammatory bowel disease. *Scand J Gastroenterol* 1996 Apr;31(4):367-71.
- Silverberg SJ, Gartenberg F, Jacobs TP, Shane E, Siris E, Staron RB, Bilezikian JP. Longitudinal measurements of bone density and biochemical indices in untreated primary hyperparathyroidism. *J Clin Endocrinol Metab* 1995 Mar;80(3):723-8.
- Silverberg SJ, Gartenberg F, Jacobs TP, Shane E, Siris E, Staron RB, McMahon DJ, Bilezikian JP. Increased bone mineral density after parathyroidectomy in primary hyperparathyroidism. *J Clin Endocrinol Metab* 1995 Mar;80(3):729-34. Comment in: *J Clin Endocrinol Metab* 1995 Mar;80(3):720-2.
- Silverberg SJ, Locker FG, Bilezikian JP. Vertebral osteopenia: a new indication for surgery in primary hyperparathyroidism. *J Clin Endocrinol Metab* 1996 Nov;81(11):4007-12.

- Silverberg SJ, Shane E, Jacobs TP, Siris E, Bilezikian JP. A 10-year prospective study of primary hyperparathyroidism with or without parathyroid surgery. *N Engl J Med* 1999 Oct 21;341(17):1249-55. Comment in: *N Engl J Med* 1999 Oct 21;341(17):1301-2.
- Sinigaglia L, Fargion S, Fracanzani AL, Binelli L, Battafarano N, Varenna M, Piperno A, Fiorelli G. Bone and joint involvement in genetic hemochromatosis: role of cirrhosis and iron overload. *J Rheumatol* 1997 Sep;24(9):1809-13.
- Sinigaglia L, Varenna M, Binelli L, Zucchi F, Ghiringhella D, Gallazzi M, Limonta M, Zeni S, Fantini F. Determinants of bone mass in systemic lupus erythematosus: a cross sectional study on premenopausal women. *J Rheumatol* 1999 Jun;26(6):1280-4.
- Sivri A, Kilinc S, Gokce -Kutsal Y, Ariyurek M. Bone mineral density in ankylosing spondylitis. *Clin Rheumatol* 1996;15(1):51-4.
- Smith R, Athanasou NA, Ostlere SJ, Vipond SE. Pregnancy-associated osteoporosis. *QJM* 1995 Dec;88(12):865-78.
- Soliman AT, El Banna N, Fattah MA, Elzalabani MM, Ansari BM. Bone mineral density in prepubescent children with beta-thalassemia: Correlation with growth and hormonal data. *Metab Clin Exp* 1998;47(5):541-8.
- Staun M, Tjellesen L, Thale M, Schaadt O, Jarnum S. Bone mineral content in patients with Crohn's disease. A longitudinal study in patients with bowel resections. *Scand J Gastroenterol* 1997 Mar;32(3):226-32.
- Stehman-Breen CO, Sherrard D, Walker A, Sadler R, Alem A, Lindberg J. Racial differences in bone mineral density and bone loss among end-stage renal disease patients. *Am J Kidney Dis* 1999 May;33(5):941-6.
- Stephen LJ, McLellan AR, Harrison JH, Shapiro D, Dominiczak MH, Sills GJ, Brodie MJ. Bone density and antiepileptic drugs: A case-controlled study. *Seizure* 1999;8(6):339-42.
- Stern JM, Chesnut CH 3rd, Bruemmer B, Sullivan KM, Lenssen PS, Aker SN, Sanders J. Bone density loss during treatment of chronic GVHD. *Bone Marrow Transplant* 1996 Mar;17(3):395-400.
- Synder BD, Zaltz I, Breitenbach MA, Kido TH, Myers ER, Emans JB. Does bracing affect bone density in adolescent scoliosis? *Spine* 1995;20(14):1554-60.
- Szollar SM, Martin EM, Sartoris DJ, Parthemore JG, Deftos LJ. Bone mineral density and indexes of bone metabolism in spinal cord injury. *Am J Phys Med Rehabil* 1998 Jan-Feb;77(1):28-35.
- Taal MW, Cassidy MJD, Pearson D, Green D, Masud T. Usefulness of quantitative heel ultrasound compared with dual-energy X-ray absorptiometry in determining bone mineral density in chronic haemodialysis patients. *Nephrol Dial Transplant* 1999;14(8):1917-21.
- Taal MW, Masud T, Green D, Cassidy MJ. Risk factors for reduced bone density in haemodialysis patients. *Nephrol Dial Transplant* 1999 Aug;14(8):1922-8.
- Taga M, Minaguchi H. Reduction of bone mineral density by gonadotropin-releasing hormone agonist, nafarelin, is not completely reversible at 6 months after the cessation of administration. *Acta Obstet Gynecol Scand* 1996 Feb;75(2):162-5.
- Takahashi M, Nagao H, Matsuda H. Estimating bone change in patients with severe disability. *Dev Med Child Neurol* 1995;37(12):1085-93.
- Tanaka N, Sonoda S, Kondo K, Chino N. Reproducibility of dual-energy X-ray absorptiometry in the upper extremities in stroke patients. *Disabil Rehabil* 1997;19(12):523-7.
- Teichmann J, Lange U, Stracke H, Federlin K, Bretzel RG. Bone metabolism and bone mineral density of systemic lupus erythematosus at the time of diagnosis. *Rheumatol Int* 1999;18(4):137-40.
- Thys-Jacobs S, Donovan D, Papadopoulos A, Sarrel P, Bilezikian JP. Vitamin D and calcium dysregulation in the polycystic ovarian syndrome. *Steroids* 1999 Jun;64(6):430-5.
- Toivonen J, Tahtela R, Laitinen K, Risteli J, Valimaki MJ. Markers of bone turnover in patients with differentiated thyroid cancer with and following withdrawal of thyroxine suppressive therapy. *Eur J Endocrinol* 1998;138(6):667-73.
- Toritsuka Y, Nakamura N, Seung Bak Lee, Hashimoto J, Yasui N, Shino K, Ochi T. Osteoclastogenesis in iliac bone marrow of patients with rheumatoid arthritis. *J Rheumatol* 1997;24(9):1690-6.
- Toussirot E, Nguyen NU, Dumoulin G, Regnard J, Wendling D. Insulin-like growth factor-I and insulin-like growth factor binding protein-3 serum levels in ankylosing spondylitis. *Br J Rheumatol* 1998 Nov;37(11):1172-6.

- Towheed TE, Brouillard D, Yendt E, Anastassiades T. Osteoporosis in rheumatoid arthritis: findings in the metacarpal, spine, and hip and a study of the determinants of both localized and generalized osteopenia. *J Rheumatol* 1995 Mar;22(3):440-3.
- Townsend MF, Sanders WH, Northway RO, Graham SD Jr. Bone fractures associated with luteinizing hormone-releasing hormone agonists used in the treatment of prostate carcinoma. *Cancer* 1997 Feb 1;79(3):545-50.
- Toyoda T, Inokuchi S, Saito S, Horie Y, Tomita S. Bone loss of the radius in rheumatoid arthritis: Comparison between 34 patients and 40 controls. *Acta Orthop Scand* 1996;67(3):269-73.
- Trapani S, Civinini R, Ermini M, Paci E, Falcini F. Osteoporosis in juvenile systemic lupus erythematosus: a longitudinal study on the effect of steroids on bone mineral density. *Rheumatol Int* 1998;18(2):45-9.
- Tsuzuku S, Ikegami Y, Yabe K. Bone mineral density differences between paraplegic and quadriplegic patients: A cross-sectional study. *Spinal Cord* 1999;37(5):358-61.
- Tuominen JT, Impivaara O, Puukka P, Ronnemaa T. Bone mineral density in patients with type 1 and type 2 diabetes. *Diabetes Care* 1999;22(7):1196-200.
- Uzzan B, Campos J, Cucherat M, Nony P, Boissel JP, Perret GY. Effects on bone mass of long term treatment with thyroid hormones: A meta -analysis. *J Clin Endocrinol Metab* 1996;81(12):4278 -89.
- Valdimarsson T, Lofman O, Toss G, Strom M. Reversal of osteopenia with diet in adult coeliac disease. *Gut* 1996;38(3):322-7.
- Verbruggen A, De Clerck LS, Bridts CH, Van Offel JF, Stevens WJ. Flow cytometrical determination of interleukin 1beta, interleukin 6 and tumour necrosis factor alpha in monocytes of rheumatoid arthritis patients; relation with parameters of osteoporosis. *Cytokine* 1999;11(11):869-74.
- Villareal MS, Klausermeyer WB, Hahn TJ, Gordon EH. Osteoporosis in steroid-dependent asthma. *Ann Allergy Asthma Immunol* 1996 Apr;76(4):369 -72.
- Vogelsang H, Ferenci P, Resch H, Kiss A, Gangl A. Prevention of bone mineral loss in patients with Crohn's disease by long -term oral vitamin D supplementation. *Eur J Gastroenterol Hepatol* 1995 Jul;7(7):609-14.
- Vogelsang H, Klamert M, Resch H, Ferenci P. Dietary vitamin D intake in patients with Crohn's disease. *Wien Klin Wochenschr* 1995;107(19):578-81.
- Wall JE, Kaste SC, Greenwald CA, Jenkins JJ, Douglass EC, Pratt CB. Fractures in children treated with radiotherapy for soft tissue sarcoma. *Orthopedics* 1996;19(8):657-64.
- Walters JR, Banks LM, Butcher GP, Fowler CR. Detection of low bone mineral density by dual energy x ray absorptiometry in unsuspected suboptimally treated coeliac disease. *Gut* 1995;37(2):220-4.
- Wei JT, Gross M, Jaffe CA, Gravlin K, Lahaie M, Faerber GJ, Cooney KA. Androgen deprivation therapy for prostate cancer results in significant loss of bone density. *Urology* 1999;54(4):607-11.
- Wilmet E, Ismail AA, Heilporn A, Welraeds D, Bergmann P. Longitudinal study of the bone mineral content and of soft tissue composition after spinal cord section. *Paraplegia* 1995 Nov;33(11):674-7.
- Wolfhagen FH, van Buuren HR, den Ouden JW, Hop WC, van Leeuwen JP, Schalm SW, Pols HA. Cyclical etidronate in the prevention of bone loss in corticosteroid-treated primary biliary cirrhosis. A prospective, controlled pilot study. *J Hepatol* 1997 Feb;26(2):325-30.
- Yakisan E, Schirg E, Zeidler C, Bishop NJ, Reiter A, Hirt A, Riehm H, Welte K. High incidence of significant bone loss in patients with severe congenital neutropenia (Kostmann's syndrome). *J Pediatr* 1997 Oct;131(4):592-7.
- Yamaguchi T, Kanno E, Tsubota J, Shiomi T, Nakai M, Hattori S. Retrospective study on the usefulness of radius and lumbar bone density in the separation of hemodialysis patients with fractures from those without fractures. *Bone* 1996 Nov;19(5):549-55.
- Zak M, Hassager C, Lovell DJ, Nielsen S, Henderson CJ, Pedersen FK. Assessment of bone mineral density in adults with a history of juvenile chronic arthritis: a cross-sectional long -term followup study. *Arthritis Rheum* 1999 Apr;42(4):790-8.
- Zamberlan N, Castello R, Gatti D, Rossini M, Braga V, Fracassi E, Adami S. Intermittent Etidronate partially prevents bone loss in hirsute hyperandrogenic women treated with GnRH agonist. *Osteoporos Int* 1997;7(2):133-7.

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- Aagaard EM, Lin P, Modin GW, Lane NE. Prevention of glucocorticoid-induced osteoporosis: Provider practice at an urban county hospital. *Am J Med* 1999;107(5):456-60.
- Adachi JD. Corticosteroid-induced osteoporosis. *Am J Med Sci* 1997 Jan;313(1):41-9.
- Adachi JD. Cyclical etidronate therapy in the prevention and treatment of corticosteroid-induced osteoporosis. *Rev Contemp Pharmacother* 1998;9(4):267-75.
- Adachi JD, Bell MJ, Bensen WG, Bianchi F, Cividino A, Sebaldt RJ, Gordon M, Ioannidis G, Goldsmith C. Fluoride therapy in prevention of rheumatoid arthritis induced bone loss. *J Rheumatol* 1997;24(12):2308-13.
- Adachi JD, Bensen WG. Corticosteroid-induced osteoporosis part I: Pathophysiology, clinical features and assessment. *Mature Med Can* 1999;2(2):77-81.
- Adachi JD, Bensen WG. Corticosteroid-induced osteoporosis. Part II: Prevention and treatment. *Mature Med Can* 1999;2(3):133-7.
- Adachi JD, Bensen WG, Bell MJ, Bianchi FA, Cividino AA, Craig GL, Sturridge WC, Sebaldt RJ, Steele M, Gordon M, Themeles E, Tugwell P, Roberts R, Gent M. Salmon calcitonin nasal spray in the prevention of corticosteroid-induced osteoporosis. *Br J Rheumatol* 1997 Feb;36(2):255-9.
- Adachi JD, Bensen WG, Bianchi F, Cividino A, Pillersdorf S, Sebaldt RJ, Tugwell P, Gordon M, Steele M, Webber C, Goldsmith CH. Vitamin D and calcium in the prevention of corticosteroid induced osteoporosis: a 3 year followup. *J Rheumatol* 1996 Jun;23(6):995-1000. Comment in: *J Rheumatol* 1997 Feb;24(2):407.
- Adachi JD, Bensen WG, Brown J, Hanley D, Hodzman A, Josse R, Kendler DL, Lentle B, Olszynski W, Ste-Marie LG, Tenenhouse A, Chines AA. Intermittent etidronate therapy to prevent corticosteroid-induced osteoporosis. *N Engl J Med* 1997 Aug 7;337(6):382-7. Comment in: *N Engl J Med* 1997 Aug 7;337(6):420-1 and *N Engl J Med* 1997 Dec 25;337(26):1921.
- Adachi JD, Bensen WG, Cividino A. Corticosteroid-induced osteoporosis. *J Am Med Womens Assoc* 1998 Winter;53(1):25-30, 40.
- Adachi JD, Dequeker J. Intermittent therapy with etidronate and calcium helps prevent osteoporosis secondary to steroids. *Clin Exp Rheumatol* 1998;16(2):117-8.
- Adachi JD, Ioannidis G. Calcium and vitamin D therapy in corticosteroid-induced bone loss: What is the evidence? *Calcif Tissue Int* 1999 Oct;65(4):332-6.
- Allen DB. Do inhaled steroids impair growth? It all depends. *J Respir Dis* 1998;19(12):1023-36.
- Aman S, Hakala M, Silvennoinen J, Manelius J, Risteli L, Risteli J. Low incidence of osteoporosis in a two year follow-up of early community based patients with rheumatoid arthritis. *Scand J Rheumatol* 1998;27(3):188-93.
- Amin S, LaValley MP, Simms RW, Felson DT. The role of vitamin D in corticosteroid-induced osteoporosis: a meta-analytic approach. *Arthritis Rheum* 1999 Aug;42(8):1740-51.
- Baron YM, Brincat MP, Galea R. Increased reduction in bone density and skin thickness in postmenopausal women taking long-term corticosteroid therapy: A suggested role for estrogen add-back therapy. *Climacteric* 1999;2(3):189-96.
- Bell R, Carr A, Thompson P. Managing corticosteroid induced osteoporosis in medical outpatients. *J R Coll Physicians Lond* 1997 Mar -Apr;31(2):158-61.
- Bijlsma JW. Prevention of glucocorticoid induced osteoporosis. *Ann Rheum Dis* 1997 Sep;56(9):507-9.
- Bootsma GP, Dekhuijzen PNR, Festen J, Mulder PGH, Swinkels LMJW, Van Herwaarden CLA. Fluticasone propionate does not influence bone metabolism in contrast to beclomethasone dipropionate. *Am J Respir Crit Care Med* 1996;153(3):924-30.
- Boutsen Y, Jamart J, Esselinckx W, Stoffel M, Devogelaer JP. Primary prevention of glucocorticoid-induced osteoporosis with intermittent intravenous pamidronate: a randomized trial. *Calcif Tissue Int* 1997 Oct;61(4):266-71.
- Brik R, Keidar Z, Schapira D, Israel O. Bone mineral density and turnover in children with systemic juvenile chronic arthritis. *J Rheumatol* 1998 May;25(5):990-2.
- Buckley LM, Leib ES, Cartularo KS, Vacek PM, Cooper SM. Effects of low dose corticosteroids on the bone mineral density of patients with rheumatoid arthritis. *J Rheumatol* 1995;22(6):1055-9.
- Buckley LM, Leib ES, Cartularo KS, Vacek PM, Cooper SM. Effects of low dose methotrexate on the

- bone mineral density of patients with rheumatoid arthritis. *J Rheumatol* 1997 Aug;24(8):1489 -94.
- Buckley LM, Marquez M, Feezor R, Ruffin DM, Benson LL. Prevention of corticosteroid-induced osteoporosis: results of a patient survey. *Arthritis Rheum* 1999 Aug;42(8):1736-9.
- Buckley LM, Marquez M, Hudson JO, Downs RW, Vacek P, Small RE, Poses R. Variations in physicians' judgments about corticosteroid induced osteoporosis by physician specialty. *J Rheumatol* 1998 Nov;25(11):2195-202.
- Chappard D, Legrand E, Basle MF, Fromont P, Racineux JL, Rebel A, Audran M. Altered trabecular architecture induced by corticosteroids: a bone histomorphometric study. *J Bone Miner Res* 1996 May;11(5):676-85.
- Compston JE. Alendronate increased bone mineral density but did not reduce new fractures in glucocorticoid induced osteoporosis. *Gut* 1999 Jun;44(6):780-1.
- Compston JE. Management of bone disease in patients on long term glucocorticoid therapy. *Gut* 1999 Jun;44(6):770-2.
- Compston JE. Review article: osteoporosis, corticosteroids and inflammatory bowel disease. *Aliment Pharmacol Ther* 1995 Jun;9(3):237 -50.
- Cortet B, Flipo RM, Blanckaert F, Duquesnoy B, Marchandise X, Delambre B. Evaluation of bone mineral density in patients with rheumatoid arthritis. Influence of disease activity and glucocorticoid therapy. *Rev Rhum Engl Ed* 1997 Jul-Sep;64(7-9):451-8.
- Cortet B, Hachulla E, Barton I, Bonvoisin B, Roux C. Evaluation of the efficacy of etidronate therapy in preventing glucocorticoid-induced bone loss in patients with inflammatory rheumatic diseases. A randomized study. *Rev Rhum Engl Ed* 1999 Apr;66(4):214-9.
- D'Souza M. Comparative review of the effects of inhaled beclomethasone dipropionate and budesonide on bone. *Respir Med* 1998;92 Suppl B:24-36.
- Dennison E, Hindmarsh P, Fall C, Kellingray S, Barker D, Phillips D, Cooper C. Profiles of endogenous circulating cortisol and bone mineral density in healthy elderly men. *J Clin Endocrinol Metab* 1999 Sep;84(9):3058-63.
- Dequeker J, Van Cleemput J, Declerck K, Mbuyi-Muamba JM. Role of alfalcacitol on bone quality and immunomodulation in autoimmune disease and organ transplantation. *Calcif Tissue Int* 1997;60(1):128-9.
- Diamond T, McGuigan L, Barbagallo S, Bryant C. Cyclical etidronate plus ergocalciferol prevents glucocorticoid-induced bone loss in postmenopausal women. *Am J Med* 1995 May;98(5):459-63.
- Dunne CA, Moran CJ, Thompson PW. The effect of regular intramuscular corticosteroid therapy on bone mineral density in rheumatoid patients. *Scand J Rheumatol* 1995;24(1):48-9.
- Ebeling PR, Erbas B, Hopper JL, Wark JD, Rubinfeld AR. Bone mineral density and bone turnover in asthmatics treated with long -term inhaled or oral glucocorticoids. *J Bone Miner Res* 1998 Aug;13(8):1283-9.
- Efthimiou J, Barnes PJ. Effect of inhaled corticosteroids on bones and growth. *Eur Respir J* 1998;11(5):1167-77.
- Falcini F, Trapani S, Civinini R, Capone A, Ermini M, Bartolozzi G. The primary role of steroids on the osteoporosis in juvenile rheumatoid patients evaluated by dual energy X-ray absorptiometry. *J Endocrinol Invest* 1996 Mar;19(3):165 -9.
- Falcini F, Trapani S, Ermini M, Brandi ML. Intravenous administration of alendronate counteracts the in vivo effects of glucocorticoids on bone remodeling. *Calcif Tissue Int* 1996 Mar;58(3):166 -9.
- Fitzgerald RC, Skingle SJ, Crisp AJ. Testosterone concentrations in men on chronic glucocorticosteroid therapy. *J R Coll Physicians Lond* 1997 Mar-Apr;31(2):168-70.
- Gonnelli S, Rottoli P, Cepollaro C, Pondrelli C, Cappiello V, Vagliasindi M, Gennari C. Prevention of corticosteroid-induced osteoporosis with alendronate in sarcoid patients. *Calcif Tissue Int* 1997 Nov;61(5):382-5.
- Kipen Y, Buchbinder R, Forbes A, Strauss B, Littlejohn G, Morand E. Prevalence of reduced bone mineral density in systemic lupus erythematosus and the role of steroids. *J Rheumatol* 1997;24(10):1922-9.
- Kirwan JR, Russell AS. Systemic glucocorticoid treatment in rheumatoid arthritis - A debate. *Scand J Rheumatol* 1998;27(4):247-51.
- Kos-Kudla B, Pluskiewicz W. Quantitative ultrasound of the heel and serum and urinary cortisol values in assessment of long -term corticotherapy side effects in female bronchial asthma patients. *Ultrasound Med Biol* 1997;23(9):1325-30.

- Lane NF, Lukert B. Prevention and treatment of glucocorticoid-induced osteoporosis. *J Clin Rheumatol* 1999;5(5 Suppl):S16-22.
- Li EK, Tam LS, Young RP, Ko GT, Li M, Lau EM. Loss of bone mineral density in Chinese pre-menopausal women with systemic lupus erythematosus treated with corticosteroids. *Br J Rheumatol* 1998 Apr;37(4):405-10.
- LoCascio V, Ballanti P, Milani S, Bertoldo F, LoCascio C, Zanolini EM, Bonucci E. A histomorphometric long-term longitudinal study of trabecular bone loss in glucocorticoid-treated patients: prednisone versus deflazacort. *Calcif Tissue Int* 1998 Mar;62(3):199-204.
- Manolagas SC, Weinstein RS. New developments in the pathogenesis and treatment of steroid-induced osteoporosis. *J Bone Miner Res* 1999;14(7):1061-6.
- Marystone JF, Barrett-Connor EL, Morton DJ. Inhaled and oral corticosteroids: their effects on bone mineral density in older adults. *Am J Public Health* 1995 Dec;85(12):1693-5.
- McEvoy CE, Ensrud KE, Bender E, Genant HK, Yu W, Griffith JM, Niewoehner DE. Association between corticosteroid use and vertebral fractures in older men with chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 1998 Mar;157(3 Pt 1):704-9.
- Meeran K, Hattersley A, Burrin J, Shiner R, Ibbertson K. Oral and inhaled corticosteroids reduce bone formation as shown by plasma osteocalcin levels. *Am J Respir Crit Care Med* 1995;151(2 Pt 1):333-6.
- Miyamoto S, Kageyama Y, Ozeki T, Hiyoshi M, Suzuki M, Inoue T. Effects of glucocorticoids on bone mineral density in rheumatoid arthritis patients. A longitudinal study. *Arch Orthop Trauma Surg* 1999;119(1-2):18-21.
- Navarro MA, Formiga F, Blanco A, Bonnin MR, Nolla JM, Moga I. PDN-21 in premenopausal women with systemic lupus erythematosus treated with glucocorticoids. *J Rheumatol* 1995 Dec;22(12):2238-40.
- Nordborg E, Schaufelberger C, Andersson R, Bosaeus I, Bengtsson BA. The ineffectiveness of cyclical oral clodronate on bone mineral density in glucocorticoid-treated patients with giant-cell arteritis. *J Intern Med* 1997;242(5):367-71.
- Ogueh O, Khastgir G, Studd JW, Jones J, Alaghband-Zadeh J, Johnson MR. Antenatal corticosteroid therapy and risk of osteoporosis. *Br J Obstet Gynaecol* 1998 May;105(5):551-5.
- Peacey SR, Guo CY, Robinson AM, Price A, Giles MA, Eastell R, Weetman AP. Glucocorticoid replacement therapy: Are patients over treated and does it matter? *Clin Endocrinol (Oxf)* 1997;46(3):255-61.
- Pearce G, Ryan PF, Delmas PD, Tabensky DA, Seeman E. The deleterious effects of low-dose corticosteroids on bone density in patients with polymyalgia rheumatica. *Br J Rheumatol* 1998 Mar;37(3):292-9. Comment in: *Rheumatology (Oxford)* 1999 Mar;38(3):285-6.
- Pearce G, Tabensky DA, Delmas PD, Baker HW, Seeman E. Corticosteroid-induced bone loss in men. *J Clin Endocrinol Metab* 1998;83(3):801-6.
- Peat ID, Healy S, Reid DM, Ralston SH. Steroid induced osteoporosis: an opportunity for prevention? *Ann Rheum Dis* 1995 Jan;54(1):66-8.
- Peel NF, Moore DJ, Barrington NA, Bax DE, Eastell R. Risk of vertebral fracture and relationship to bone mineral density in steroid treated rheumatoid arthritis. *Ann Rheum Dis* 1995 Oct;54(10):801-6.
- Reginster JY, de Froidmont C, Lecart MP, Sarlet N, Defraigne JO. Alphacalcidol in prevention of glucocorticoid-induced osteoporosis. *Calcif Tissue Int* 1999 Oct;65(4):328-31.
- Reginster JY, Kuntz D, Verdickt W, Wouters M, Guillevin L, Menkes CJ, Nielsen K. Prophylactic use of alfalcacidol in corticosteroid-induced osteoporosis. *Osteoporos Int* 1999;9(1):75-81.
- Ringe JD, Coester A, Meng T, Schacht E, Umbach R. Treatment of glucocorticoid-induced osteoporosis with alfalcacidol/calcium versus vitamin D/calcium. *Calcif Tissue Int* 1999 Oct;65(4):337-40.
- Rizzoli R, Chevalley T, Slosman DO, Bonjour JP. Sodium monofluorophosphate increases vertebral bone mineral density in patients with corticosteroid-induced osteoporosis. *Osteoporos Int* 1995 Jan;5(1):39-46.
- Roux C, Oriente P, Laan R, Hughes RA, Ittner J, Goemaere S, Di Munno O, Pouilles JM, Horlait S, Cortet B. Randomized trial of effect of cyclical etidronate in the prevention of corticosteroid-induced bone loss. Ciblos Study Group. *J Clin Endocrinol Metab* 1998 Apr;83(4):1128-33.
- Saag KG. Epidemiology of glucocorticoid-induced osteoporosis concepts and controversies. *J Clin Rheumatol* 1999;5(5 Suppl):S3-9.

- Saag KG, Emkey R, Schnitzer TJ, Brown JP, Hawkins F, Goemaere S, Thamsborg G, Liberman UA, Delmas PD, Malice MP, Czachur M, Daifotis AG. Alendronate for the prevention and treatment of glucocorticoid-induced osteoporosis. *Glucocorticoid-Induced Osteoporosis Intervention Study Group.* *N Engl J Med* 1998 Jul 30;339(5):292-9.
- Saito JK, Davis JW, Wasnich RD, Ross PD. Users of low-dose glucocorticoids have increased bone loss rates: a longitudinal study. *Calcif Tissue Int* 1995 Aug;57(2):115-9.
- Sanchez CP, Goodman WG, Brandli D, Goldenhersh M, Murray C, Carlton E, Hahn T, Salusky IB. Skeletal response to recombinant human growth hormone (rhGH) in children treated with long -term corticosteroids. *J Bone Miner Res* 1995;10(1):2-6.
- Sebaldt RJ, Adachi JD, Bensen WG, Bianchi F, Cividano A, Craig GL, Cranney A, Kaminska E, Gordon M, Steele M, Goldsmith C. Intermittent cyclic therapy with etidronate prevents corticosteroid-induced bone loss: two years of follow-up. *Scand J Rheumatol Suppl* 1996;103:91 -3.
- Skingle SJ, Moore DJ, Crisp AJ. Cyclical etidronate increases lumbar spine bone density in patients on long-term glucocorticosteroid therapy. *Int J Clin Pract* 1997;51(6):364-7.
- Struijs A, Mulder H. The effects of inhaled glucocorticoids on bone mass and biochemical markers of bone homeostasis: a 1-year study of beclomethasone versus budesonide. *Neth J Med* 1997 Jun;50(6):233-7. Comment in: *Neth J Med* 1998 Jan;52(1):48-9.
- Struys A, Snelder AA, Mulder H. Cyclical etidronate reverses bone loss of the spine and proximal femur in patients with established corticosteroid -induced osteoporosis. *Am J Med* 1995 Sep;99(3):235-42. Comment in: *Am J Med* 1995 Sep;99(3):233 -4.
- Thompson JM, Modin GW, Arnaud CD, Lane NE. Not all postmenopausal women on chronic steroid and estrogen treatment are osteoporotic: predictors of bone mineral density. *Calcif Tissue Int* 1997 Nov;61(5):377-81.
- Toogood JH, Baskerville JC, Markov AE, Hodsman AB, Fraher LJ, Jennings B, Haddad RG, Drost D. Bone mineral density and the risk of fracture in patients receiving long - term inhaled steroid therapy for asthma. *J Allergy Clin Immunol* 1995;96(2):157-66.
- Toogood JH, Hodsman AB, Fraher LJ, Markov AE, Baskerville JC. Serum osteocalcin and procollagen as markers for the risk of osteoporotic fracture in corticosteroid-treated asthmatic adults. *J Allergy Clin Immunol* 1999 Oct;104(4 Pt 1):769-74.
- Verhoeven AC, Boers M. Limited bone loss due to corticosteroids; a systematic review of prospective studies in rheumatoid arthritis and other diseases. *J Rheumatol* 1997 Aug;24(8):1495-503.
- Walsh LJ, Wong CA, Pringle M, Tattersfield AE. Use of oral corticosteroids in the community and the prevention of secondary osteoporosis: a cross sectional study. *BMJ* 1996 Aug 10;313(7053):344-6. Comment in: *BMJ* 1996 Nov 16;313(7067):1264.
- Werth VP, Kligman AM, Shi X, Pagnoni A. Lack of correlation of skin thickness with bone density in patients receiving chronic glucocorticoid. *Arch Dermatol Res* 1998 Jul;290(7):388-93.
- Woodcock A. Effects of inhaled corticosteroids on bone density and metabolism. *J Allergy Clin Immunol* 1998 Apr;101(4 Pt 2):S456-9.

### **Transplantation-Related Osteoporosis**

Abdelhadi M, Eriksson SA, Ljusk Eriksson S, Ericzon BG, Nordenstrom J. Bone mineral status in end-stage liver disease and the effect of liver transplantation. *Scand J Gastroenterol* 1995 Dec;30(12):1210-5.

Anijar JR, Szejnfeld VL, Almeida DR, Fernandes AR, Ferraz MB. Reduced bone mineral density in men after heart transplantation. *Braz J Med Biol Res* 1999 Apr;32(4):413-20.

Aringer M, Kiener HP, Koeller MD, Artemiou O, Zuckermann A, Wieselthaler G, Klepetko W, Seidl G, Kainberger F, Bernecker P, Smolen JS, Pietschmann P. High turnover bone disease following lung transplantation. *Bone* 1998 Nov;23(5):485-8.

Aris RM, Neuringer IP, Weiner MA, Egan TM, Ontjes D. Severe osteoporosis before and after lung transplantation. *Chest* 1996 May;109(5):1176-83. Comment in: *Chest* 1997 Jan;111(1):257-8.

Boncimino K, McMahon DJ, Addesso V, Bilezikian JP, Shane E. Magnesium deficiency and bone loss after cardiac transplantation. *J Bone Miner Res* 1999 Feb;14(2):295-303.

Boot AM, Nauta J, Hokken-Koelega AC, Pols HA, de Ridder MA, de Muinck Keizer-Schrama SM. Renal transplantation and osteoporosis. *Arch Dis Child* 1995 Jun;72(6):502-6.

Braith RW, Mills RM, Welsch MA, Keller JW, Pollock ML. Resistance exercise training restores bone mineral density in heart transplant recipients. *J Am Coll Cardiol* 1996 Nov 15;28(6):1471-7.

Braith RW, Mitchell MJ. Effect of resistance training on bone metabolism in heart transplant recipients. *Congestive Heart Fail* 1998;4(1):16-24.

Caglar M, Adeera L. Factors affecting bone mineral density in renal transplant patients. *Ann Nucl Med* 1999;13(3):141-5.

Castaneda S, Carmona L, Carvajal I, Arranz R, Diaz A, Garcia-Vadillo A. Reduction of bone mass in women after bone marrow transplantation. *Calcif Tissue Int* 1997 Apr;60(4):343-7.

Castelo-Branco C, Rovira M, Pons F, Duran M, Sierra J, Vives A, Balasch J, Fortuny A, Vanrell J. The effect of hormone replacement therapy on bone mass in patients with ovarian failure due to bone marrow transplantation. *Maturitas* 1996 Apr;23(3):307-12.

Cremer J, Struber M, Wagenbreth I, Nischelsky J, Demertzis S, Graeter T, Abraham C, Haverich A. Progression of steroid-associated osteoporosis after heart transplantation. *Ann Thorac Surg* 1999 Jan;67(1):130-3.

Di Boscio V, Sarli MA. Lung transplantation and osteoporosis: A review. *Clin Pulm Med* 1999;6(2):110-7.

Dodd VA, Staron RB, Papadopoulos A, Evans L, Schulman LL, Jorgensen B, Gerow-Smith R, Shane E. Bone densitometry should be included in the evaluation of candidates for lung transplantation. *J Transplant Coor* 1999;9(2):119-23.

Epstein S, Shane E, Bilezikian JP. Organ transplantation and osteoporosis. *Curr Opin Rheumatol* 1995 May;7(3):255-61.

Feller RB, McDonald JA, Sherbon KJ, McCaughan GW. Evidence of continuing bone recovery at a mean of 7 years after liver transplantation. *Liver Transpl Surg* 1999 Sep;5(5):407-13.

Ferrari SL, Nicod LP, Hamacher J, Spiliopoulos A, Slosman DO, Rochat T, Bonjour JP, Rizzoli R. Osteoporosis in patients undergoing lung transplantation. *Eur Respir J* 1996 Nov;9(11):2378-82.

Garcia-Delgado I, Prieto S, Gil-Fraguas L, Robles E, Rufilanchas JJ, Hawkins F. Calcitonin, etidronate, and calcidiol treatment in bone loss after cardiac transplantation. *Calcif Tissue Int* 1997;60(2):155-9.

Glendinning P, Kent GN, Adler BD, Matz L, Watson I, O'Driscoll GJ, Hurley DM. High prevalence of osteoporosis in cardiac transplant recipients and discordance between biochemical turnover markers and bone histomorphometry. *Clin Endocrinol (Oxf)* 1999 Mar;50(3):347-55.

Grotz WH, Mundinger FA, Gugel B, Exner VM, Kirste G, Schollmeyer PJ. Bone mineral density after kidney transplantation. A cross-sectional study in 190 graft recipients up to 20 years after transplantation. *Transplantation* 1995 Apr 15;59(7):982-6.

Grotz WH, Rump LC, Niessen A, Schmidt-Gayk H, Reichelt A, Kirste G, Olschewski M, Schollmeyer PJ. Treatment of osteopenia and osteoporosis after kidney transplantation. *Transplantation* 1998 Oct 27;66(8):1004-8.

Guardiola J, Xiol X, Sallie R, Nolla JM, Roig-Escofet D, Jaurrieta E, Casals L. Influence of the vitamin D receptor gene polymorphism on bone loss in men after liver transplantation. *Ann Intern Med* 1999 Nov 16;131(10):752-5.

- Guo CY, Johnson A, Locke TJ, Eastell R. Mechanisms of bone loss after cardiac transplantation. *Bone* 1998 Mar;22(3):267-71.
- Hussaini SH, Oldroyd B, Stewart SP, Roman F, Smith MA, Pollard S, Lodge P, O'Grady JG, Losowsky MS. Regional bone mineral density after orthotopic liver transplantation. *Eur J Gastroenterol Hepatol* 1999 Feb;11(2):157-63.
- Keogh JB, Tsalamandris C, Sewell RB, Jones RM, Angus PW, Nyulasi IB, Seeman E. Bone loss at the proximal femur and reduced lean mass following liver transplantation: a longitudinal study. *Nutrition* 1999 Sep;15(9):661-4.
- Neuhaus R, Kubo A, Lohmann R, Rayes N, Hierholzer J, Neuhaus P. Calcitriol in prevention and therapy of osteoporosis after liver transplantation. *Transplant Proc* 1999 Feb-Mar;31(1-2):472-3.
- Parker CR, Freemont AJ, Blackwell PJ, Grainge MJ, Hosking DJ. Cross-sectional analysis of renal transplantation osteoporosis. *J Bone Miner Res* 1999;14(11):1943-51.
- Shane E, Papadopoulos A, Staron RB, Addesso V, Donovan D, McGregor C, Schulman LL. Bone loss and fracture after lung transplantation. *Transplantation* 1999 Jul 27;68(2):220-7.
- Shane E, Rivas M, McMahon DJ, Staron RB, Silverberg SJ, Seibel MJ, Mancini D, Michler RE, Aaronson K, Addesso V, Lo SH. Bone loss and turnover after cardiac transplantation. *J Clin Endocrinol Metab* 1997 May;82(5):1497-506.
- Shane E, Rivas M, Staron RB, Silverberg SJ, Seibel MJ, Kuiper J, Mancini D, Addesso V, Michler RE, Factor-Litvak P. Fracture after cardiac transplantation: a prospective longitudinal study. *J Clin Endocrinol Metab* 1996 May;81(5):1740-6.
- Shane E, Rodino MA, McMahon DJ, Addesso V, Staron RB, Seibel MJ, Mancini D, Michler RE, Lo SH. Prevention of bone loss after heart transplantation with antiresorptive therapy: a pilot study. *J Heart Lung Transplant* 1998 Nov;17(11):1089-96.
- Shane E, Silverberg SJ, Donovan D, Papadopoulos A, Staron RB, Addesso V, Jorgesen B, McGregor C, Schulman L. Osteoporosis in lung transplantation candidates with end-stage pulmonary disease. *Am J Med* 1996 Sep;101(3):262-9. Comment in: *Am J Med* 1997 Oct;103(4):334-6.
- Stempfle HU, Werner C, Echtler S, Wehr U, Rambeck WA, Siebert U, Uberfuhr P, Angermann CE, Theisen K, Gartner R. Prevention of osteoporosis after cardiac transplantation: a prospective, longitudinal, randomized, double-blind trial with calcitriol. *Transplantation* 1999 Aug 27;68(4):523-30.
- Talalaj M, Gradowska L, Marcinowska-Suchowierska E, Durlik M, Gaciog Z, Lao M. Efficiency of preventive treatment of glucocorticoid-induced osteoporosis with 25-hydroxyvitamin D3 and calcium in kidney transplant patients. *Transplant Proc* 1996 Dec;28(6):3485-7.
- Thiebaud D, Krieg MA, Gillard -Berguer D, Jacquet AF, Goy JJ, Burckhardt P. Cyclosporine induces high bone turnover and may contribute to bone loss after heart transplantation. *Eur J Clin Invest* 1996 Jul;26(7):549-55.
- Valero MA, Loinaz C, Larrodera L, Leon M, Moreno E, Hawkins F. Calcitonin and bisphosphonates treatment in bone loss after liver transplantation. *Calcif Tissue Int* 1995 Jul;57(1):15-9.
- Valimaki MJ, Kinnunen K, Volin L, Tahtela R, Loytyniemi E, Laitinen K, Makela P, Keto P, Ruutu T. A prospective study of bone loss and turnover after allogeneic bone marrow transplantation: Effect of calcium supplementation with or without calcitonin. *Bone Marrow Transplant* 1999 Feb;23(4):355-61.
- Van Cleemput J, Daenen W, Geusens P, Dequeker P, Van De Werf F, VanHaecke J. Prevention of bone loss in cardiac transplant recipients. A comparison of bisphosphonates and vitamin D. *Transplantation* 1996 May 27;61(10):1495-9.
- van Cleemput J, Daenen W, Nijs J, Geusens P, Dequeker J, Vanhaecke J. Timing and quantification of bone loss in cardiac transplant recipients. *Transplant Int* 1995;8(3):196-200.
- Vedi S, Greer S, Skingle SJ, Garrahan NJ, Ninkovic M, Alexander GA, Compston JE. Mechanism of bone loss after liver transplantation: A histomorphometric analysis. *J Bone Miner Res* 1999 Feb;14(2):281-7.