

Complementary and Alternative Medicine Use Among Adults: United States, 2002

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Abstract

Objective—This report presents selected estimates of complementary and alternative medicine (CAM) use among U.S. adults, using data from the 2002 National Health Interview Survey (NHIS), conducted by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS).

Methods—Data for the U.S. civilian noninstitutionalized population were collected using computer-assisted personal interviews (CAPI). This report is based on 31,044 interviews of adults age 18 years and over. Statistics shown in this report were age adjusted to the year 2000 U.S. standard population.

Results—Sixty-two percent of adults used some form of CAM therapy during the past 12 months when the definition of CAM therapy included prayer specifically for health reasons. When prayer specifically for health reasons was excluded from the definition, 36% of adults used some form of CAM therapy during the past 12 months. The 10 most commonly used CAM therapies during the past 12 months were use of prayer specifically for one's own health (43.0%), prayer by others for one's own health (24.4%), natural products (18.9%), deep breathing exercises (11.6%), participation in prayer group for one's own health (9.6%), meditation (7.6%), chiropractic care (7.5%), yoga (5.1%), massage (5.0%), and diet-based therapies (3.5%). Use of CAM varies by sex, race, geographic region, health insurance status, use of cigarettes or alcohol, and hospitalization. CAM was most often used to treat back pain or back problems, head or chest colds, neck pain or neck problems, joint pain or stiffness, and anxiety or depression. Adults age 18 years or over who used CAM were more likely to do so because they believed that CAM combined with conventional medical treatments would help (54.9%) and/or they thought it would be interesting to try (50.1%). Most adults who have ever used CAM have used it within the past 12 months, although there is variation by CAM therapy.

Keywords: complementary and alternative medicine • National Health Interview Survey

Introduction

Complementary and alternative medicine (CAM) is a group of diverse medical and health care systems, therapies, and products that are not presently considered to be part of conventional medicine. The U.S. public's use of CAM increased substantially during the 1990s (1–11). This high rate of use translates into large out-of-pocket expenditures on CAM. It has been estimated that the U.S. public spent between \$36 billion and \$47 billion on CAM therapies in 1997 (5). Of this amount, between \$12.2 billion and \$19.6 billion was paid out-of-pocket for the services of professional CAM health care providers such as chiropractors, acupuncturists, and massage therapists. These fees are more than the U.S. public paid out-of-pocket for all hospitalizations in 1997 and about half that paid for all out-of-pocket physician services (12).

Explanations for this growth in CAM use have been proposed, including marketing forces, availability of information on the Internet, the desire of patients to be actively involved with medical decision making, and dissatisfaction with conventional



(western) medicine (13). This dissatisfaction may be related to the inability of conventional medicine to adequately treat many chronic diseases and their symptoms such as debilitating pain (1). Rates of CAM use are also exceptionally high among individuals with life threatening illnesses such as cancer (14) or HIV (15). It appears that the majority of people use CAM as a complement to conventional medicine, not as an alternative (1,3,5).

As used by the U.S. public, CAM consists of many heterogeneous systems of medicine as well as numerous stand-alone therapies (16). Several systems of CAM are practiced as part of the health care system in U.S. immigrants' countries of origin (17). For example, Ayurveda is practiced in India at a national level within the Federal health system. Traditional Chinese medicine, which includes acupuncture, acupressure, herbal medicine, tai chi, and qi gong, is often practiced in the same hospitals or clinics as conventional medicine in China. Kampo, the system of traditional herbal medicine in Japan, is covered by the national health insurance plan and is practiced by many medical doctors (18). Immigrants from these and other countries of origin may continue to rely on CAM as part of their medical treatment in the United States even as they seek care from conventional health care providers. Some of these systems may eventually prove to be low cost health care options for use by the U.S. public.

Despite the diverse ways in which these systems and therapies developed, they appear to have several characteristics in common: the use of complex interventions, often involving the administration of many medications or medicinal substances at the same time; individualized diagnosis and treatment of patients; an emphasis on maximizing the body's inherent healing ability; and treatment of the "whole" person by addressing their physical, mental, and spiritual attributes rather than focusing on a specific pathogenic process as emphasized in conventional medicine (19).

Notwithstanding the growing scientific evidence that some CAM therapies may be effective for specific

conditions (20,21), the public's wide use of many untested CAM therapies might have unanticipated negative consequences. For example, the U.S. Department of Health and Human Services banned the sale of the herbal supplement ephedra in 2003 after concluding that the risks associated with use of this product by the general public greatly outweighed any potential benefit (22). It has been found that other herbal products interact or interfere with the normal pharmacology of some pharmaceutical drugs with potentially fatal consequences (23). CAM users often do not share information about such use with their conventional health care providers (5), thereby increasing the possibility of serious interactions. Even when conventional health care providers are aware that their patients are taking herbal products, serious interactions could result if providers are unfamiliar with the scientific literature on CAM. Understanding the prevalence and reasons for CAM use is a first step toward improving communication between health care providers and their patients.

This report is based on a CAM supplement that was administered as part of the sample adult questionnaire of the 2002 NHIS. The report focuses on who uses CAM, what is used, and why it is used. It also examines the relationship between the use of CAM and the use of conventional medical practices. In particular, the report examines the relationship of CAM use and demographic and health behaviors among groups not previously studied in detail, including race and ethnic groups, the economically disadvantaged, and the elderly. The 2002 NHIS included questions that asked respondents about their use (ever and during the past 12 months) of 27 different CAM therapies. This report defines CAM broadly by including therapies or practices that may not be considered CAM, such as prayer specifically for health purposes and high-dose vitamin therapy, and examines the use of these practices in specific populations.

Methods

Data source

The statistics shown in this report are based on data from the Alternative Health/Complementary and Alternative Medicine supplement, the Sample Adult Core component, and the Family Core component of the 2002 NHIS (24). The NHIS, one of the major data collection systems of CDC's NCHS, is a survey of a nationally representative sample of the civilian noninstitutionalized household population of the United States. Basic health and demographic information were collected on all household members. Adults present at the time of the interview are asked to respond for themselves. Proxy responses are accepted for adults not present at the time of the interview and for children. Additional information is collected on one randomly selected adult age 18 years or over (sample adult) and one randomly selected child age 0–17 years (sample child) per family. Information on the sample adult is self-reported except in rare cases when the sample adult is physically or mentally incapable of responding, and information on the sample child is collected from an adult family member who is knowledgeable about the child's health.

The Alternative Health/Complementary and Alternative Medicine supplemental questionnaire included questions on 27 types of CAM therapies commonly used in the United States (table 1). These 27 CAM therapies included 10 types of provider-based CAM therapies (e.g., acupuncture, chiropractic care, folk medicine), as well as 17 other CAM therapies for which the services of a provider are not necessary (e.g., natural products, special diets, megavitamin therapy). The CAM supplement, unlike earlier surveys, includes specific types of CAM diets such as Atkins, Macrobiotic, Ornish, Pritikin, and Zone; a comprehensive range of mind-body therapies, including biofeedback, deep breathing techniques, guided imagery, hypnosis, progressive relaxation, qi gong, tai chi, and yoga;

and the use of prayer for health purposes. Inclusion and development of the 2002 supplement was supported, in part, by the National Center for Complementary and Alternative Medicine (NCCAM), National Institutes of Health (NIH).

Statistical analysis

This report is based on data from 31,044 completed interviews with sample adults age 18 years and over, representing a conditional sample adult response rate of 84.4% and a final sample adult response rate of 74.3%. Procedures used in calculating response rates are described in detail in “Appendix I” of the Survey Description of the NHIS data files (24). Because the CAM questions were administered as part of the Sample Adult questionnaire and only about 1.4% of the sample adults did not answer any questions in the CAM supplement, a separate response rate for the CAM questions was not calculated.

All estimates (percents and frequencies) and associated standard errors shown in this report were generated using SUDAAN, a software package designed to account for a complex sample design such as that used by the NHIS (25). All estimates were weighted using the sample adult record weight, to represent the U.S. civilian noninstitutionalized population age 18 years and over.

Most estimates presented in this report were age adjusted to the year 2000 U.S. standard population age 18 years and over (26,27). The SUDAAN procedure PROC DESCRIPT was used to produce age-adjusted percentages and their standard errors. Age adjustment was used to allow comparison of various sociodemographic subgroups that have different age structures. The estimates found in this report were age adjusted using the age groups 18–24 years, 25–44 years, 45–64 years, and 65 years and over, unless otherwise noted. (See “Technical Notes” for details.)

Age-adjusted estimates were compared using two-tailed statistical tests at the 0.05 level. No adjustments were made for multiple comparisons. Terms such as “greater than” and “less

than” indicate a statistically significant difference. Terms such as “similar” or “no difference” indicate that the statistics being compared were not significantly different. Lack of comment regarding the difference between any two statistics does not mean that the difference was tested and found to be not significant.

Most statistics presented in this report can be replicated using NHIS public use data files and accompanying documentation available for downloading from the NCHS Web site at: <http://www.cdc.gov/nchs/nhis.htm>. Variables identifying metropolitan statistical area (MSA), urban/rural residence, and State, which was used to create the category “Pacific States,” are not included in the public use data files to protect respondent confidentiality. Therefore, corresponding estimates cannot be replicated. Many of the references cited in this report are also available via the NCHS Web site at: <http://www.cdc.gov/nchs>.

Strengths and limitations of the data

A major strength of the data on complementary and alternative medicine in the NHIS is that they were collected for a nationally representative sample of U.S. adults, allowing estimation of CAM use for a wide variety of population subgroups. The large sample size also facilitates investigation of the association between CAM and a wide range of other self-reported health characteristics included in the NHIS such as health behaviors, chronic health conditions, injury episodes, access to medical care, and health insurance coverage.

The CAM data collected in the 2002 NHIS are a significant improvement over the CAM data collected in the 1999 NHIS. The 1999 NHIS included only one question that asked respondents if they had used (during the past 12 months) any of the 11 listed therapies or some other CAM therapy that they were then asked to name. The 2002 NHIS included questions that asked respondents about their use (ever and during the past 12 months) of 27 different CAM therapies.

For therapies used during the past 12 months, respondents were asked more detailed questions such as the health problem or condition being treated with the therapy, the reason(s) for choosing the therapy, whether the costs of the therapy were covered by insurance, their satisfaction with the treatment, and whether any of their conventional medical professionals knew they were using the therapy.

The CAM questions have several limitations. First, they are dependent upon respondents’ knowledge of CAM therapies and/or their willingness to report use accurately. Secondly, the collection of CAM data at a single point in time results in an inability to produce consecutive annual estimates for CAM use so that changes can not be tracked over time, and it reduces the ability to produce reliable estimates of CAM use for small population subgroups as this would require a larger sample and/or more than 1 year of data.

Results

Use of complementary and alternative medicine (table 1)

- Seventy-five percent of adults age 18 and over have ever used CAM when prayer specifically for health reasons was included in the definition (figure 1).
- Sixty-two percent of adults have used CAM during the past 12 months when prayer specifically for health reasons was included in the definition (figure 1).
- The 10 CAM therapies most commonly used within the past 12 months measured in terms of the percentage of U.S. adults were prayer specifically for one’s own health (43.0%), prayer by others for one’s own health (24.4%), natural products (18.9%), deep breathing exercises (11.6%), participation in prayer group for one’s own health (9.6%), meditation (7.6%), chiropractic care (7.5%), yoga (5.1%), massage (5.0%), and diet-based therapies (3.5%).
- Of the 10 CAM therapies most commonly used within the past 12 months, most were mind-body interventions.

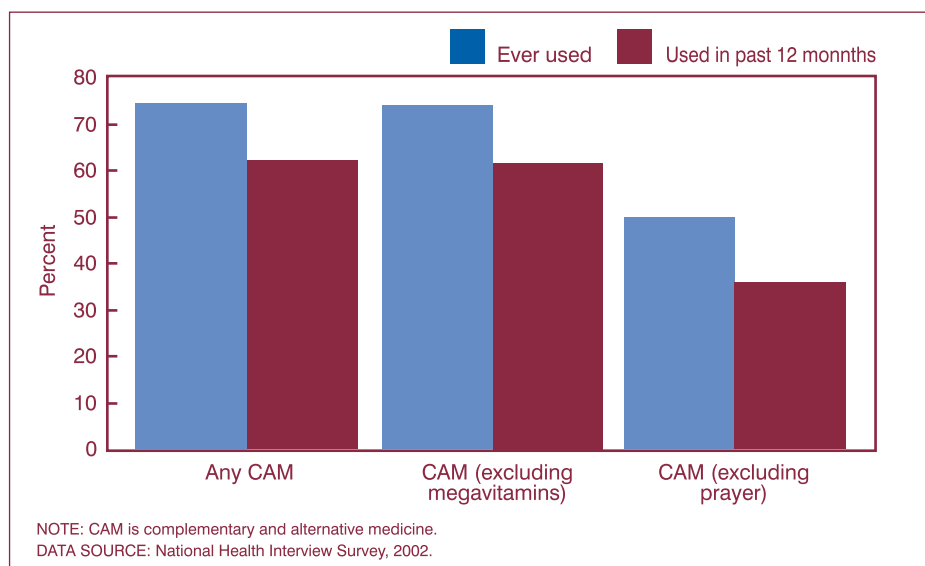


Figure 1. Age-adjusted percent of adults who have used complementary and alternative medicine: United States, 2002

- Forty-five percent of adults used some method of prayer for health reasons within the past 12 months.
- The two most widely used diet-based therapies by U.S. adults were the Atkins diet (1.7%) and the vegetarian diet (1.6%).

Use of selected natural products

- Nineteen percent of adults used natural products, including herbal medicine, functional foods (garlic), and animal-based (glucosamine) supplements during the past 12 months (table 1).
- The most commonly used natural products were echinacea (40.3%), ginseng (24.1%), ginkgo biloba (21.1%), and garlic supplements (19.9%) (table 2).

Medical conditions treated with CAM (table 3)

- CAM was most often used to treat back pain or problems, head or chest colds, neck pain or problems, joint pain or stiffness, and anxiety or depression.
- Approximately 1% of adult CAM users utilized it to treat sinusitis (1.2%), cholesterol (1.1%), asthma (1.1%), hypertension (1.0%), and/or menopause (0.8%).

Use of CAM by selected characteristics (table 4)

- Women were more likely than men to use CAM. The largest sex differential is seen in the use of mind-body therapies including prayer specifically for health reasons.
- For all therapies combined, CAM use was more likely among older adults than younger adults. However, the positive relationship between age and CAM use is primarily due to the inclusion of prayer specifically for health reasons. When specific types of CAM therapies are considered, only mind-body therapies including prayer specifically for health reasons show a positive correlation with age.
- If prayer specifically for health reasons is excluded from the definition of CAM, all the CAM categories demonstrated inverse “U” relationships with age, with the youngest and oldest groups reporting the least use of CAM.
- Black adults (68.3%) were more likely to use mind-body therapies including prayer specifically for health reasons than white adults (50.1%) or Asian adults (48.1%).
- Asian adults were more likely (43.1%) to use CAM (excluding megavitamin therapy and prayer specifically for health reasons) than white adults (35.9%) or black adults (26.2%).
- White adults (12.0%) were more likely to use manipulative and body-based therapies than Asian adults (7.2%) or black adults (4.4%).
- Non-Hispanic adults were more likely than Hispanic adults to use mind-body therapies excluding prayer specifically for health reasons and less likely to use mind-body therapies including prayer specifically for health reasons.
- Except for the groups of therapies that included prayer specifically for health reasons, use of CAM increased as education level increased.
- Poor adults were more likely than not poor adults to use CAM including megavitamin therapy and prayer specifically for health reasons, while not poor adults were more likely than poor adults or near poor adults to use CAM if megavitamin therapy and prayer specifically for health reasons were excluded.
- For adults under 65 years of age, those with public health insurance were more likely than adults with private health insurance or uninsured adults to use CAM when the definition included megavitamin therapy and prayer specifically for health reasons, and adults with private health insurance were more likely than adults with public health insurance or uninsured adults to use CAM if megavitamin therapy and prayer specifically for health reasons were excluded.
- Adults who live in urban areas were more likely than adults who live in rural areas to use alternative medical systems, biologically based therapies (including and excluding megavitamin therapy), and mind-body therapies (including and excluding prayer specifically for health reasons).
- Adults who were former smokers were more likely to use CAM than adults who were current smokers or those who had never smoked.
- Adults who were hospitalized in the last year were more likely than adults who were not hospitalized in the last year to use CAM when the definition included prayer specifically for health reasons.

Selected reasons for using CAM (table 5)

- Adult CAM users were most likely to utilize CAM because they believed that CAM combined with conventional medical treatments would help (54.9%).
- About one-half of adult CAM users initially utilized CAM because they thought it would be interesting to try (50.1%).
- Twenty-six percent of adult CAM users utilized it because a conventional medical professional suggested they try it.
- Twenty-eight percent of adult CAM users believed conventional medical treatments would not help them.
- Thirteen percent of adult CAM users used CAM because they felt that conventional medicine was too expensive.

Discussion

Overall, in 2002, about 62% of U.S. adults used some form of CAM in the past 12 months. Subgroup differences were noted in the use of CAM: women were more likely than men to use CAM; black adults were more likely than white adults or Asian adults to use CAM when megavitamin therapy and prayer specifically for health reasons were included in the definition; persons with higher educational attainment were more likely than persons with lower attainment levels to use CAM; and those who had been hospitalized in the past year were more likely than those who had not been in the hospital in the past year to use CAM. However, when specific CAM therapies were examined, different patterns of use were noted, indicating the importance of the relationship between respondent characteristics and CAM therapy. The findings that gender, education, and health status are associated with CAM use are consistent with earlier reports (1,2,5,9,11). However, this is the first observation that black adults (71.3%) and Asian adults (61.7%) are substantial users of CAM. Additional surveys are needed to explore use within these minority groups.

The survey also revealed that most people who have ever used CAM have used it within the past 12 months and provided national confirmation of an observation seen in a single State (9). These results are surprising given the lack of definitive evidence supporting the safety and efficacy of most CAM interventions. Research-based information on CAM therapies is available to the public from sources such as the National Library of Medicine's "CAM on PubMed" and "Medline Plus" or the Cochrane Collaboration Database (28–30).

The data confirm most earlier observations that most people use CAM to treat and/or prevent musculoskeletal conditions or other conditions associated with chronic or recurring pain (1,5,9,10). The high prevalence of CAM use for these conditions is not surprising when one considers that one-quarter to one-third of the adult population might be suffering from one of these disorders in any given year (31,32), yet many forms of chronic pain are resistant to conventional medical treatment (33,34).

The high prevalence of CAM use for colds has not been reported previously for the U.S. adult population (35) and is consistent with the observation that 40.3% of individuals who use natural products use the herbal product echinacea, which is widely used for diseases of the upper respiratory tract.

About 1.0% of adult CAM users utilized CAM to treat each of the following three conditions: high cholesterol (1.1%), asthma (1.1%), and hypertension (1.0%). These results are interesting given that there are many effective ways to manage these conditions using both normal lifestyle changes and conventional pharmaceutical drugs. Further analyses will need to clarify the specific populations with these conditions using CAM, the types of CAM they employ, and the reasons why they use CAM.

Compared with earlier surveys, the NHIS CAM supplement has several important characteristics. These include questions about use of an extensive list of CAM therapies, a wide variety of health conditions and diseases for which they may be used, and questions about

reasons for use and satisfaction with treatment. In addition, unlike earlier surveys, the NHIS yielded CAM data that are representative of the adult U.S. population. Also, the NHIS has a large sample size so that subgroups can be examined, and data from the CAM component can be linked to a wide variety of respondent characteristics, enriching the analytic potential.

In the population-based surveys conducted in the United States on CAM use since 1990, CAM has been operationally defined in a variety of ways (1–11). Most surveys asked participants to indicate whether they used one or more items from a list of CAM interventions/therapies, but the lists varied considerably among the surveys. The most common CAM interventions/therapies included in the surveys, in order of most common inclusion, were chiropractic care, acupuncture, herbal medicine, hypnosis, massage therapy, relaxation techniques, biofeedback, and homeopathic treatment. CAM interventions/therapies such as chelation therapy, energy therapies, qi gong, tai chi, yoga, high-dose vitamins, and spirituality/prayer for health purposes were less commonly included.

In addition to differences in the definition of CAM, the previous population-based surveys varied from the NHIS survey in several other ways that might affect estimates of CAM use in the adult population. Few of the previous surveys were conducted using extensive, in-person interviews with participants randomly chosen to reflect the U.S. population (2,3,8,10). Instead, most relied on telephone interviews with random-digit dialing used to select households or a mail survey with recipients randomly chosen from an existing database of individuals who had previously agreed to respond to such surveys. Telephone and mail surveys tend to exclude lower income individuals who might not have access to a telephone or a stable mailing address and thus impair the representativeness of the data. Most previous surveys were small, with only two having sample sizes above a few

thousand individuals (2,3,8). This limited the ability to estimate CAM use among minority populations of interest such as adults of Hispanic or Asian heritage. Only six of the previous surveys identified the diseases and/or conditions associated with CAM use (1,2,4,5,9,10), and only four collected information on participant satisfaction with their CAM treatment (1,6,9,11). Most of the earlier surveys did not include questions about health insurance coverage, and only one included a question about reasons for CAM use (1).

Comparison of estimates derived from the NHIS CAM supplement using approximations of the CAM selection criteria from six of these earlier studies are shown in [table 6](#). The estimates of CAM use range from 20.3% to 48.8%. The NHIS estimates of total CAM use are higher than those from earlier studies, partly because of differences in operational definitions of CAM and differences in survey design described above. Given the breadth of CAM therapies queried in the NHIS, it is not surprising that NHIS estimates of CAM use (62.1%) are greater than previously reported in the literature. The inclusion of detailed questions on prayer for health purposes, items rarely queried in previous surveys of CAM use, accounted for most of this difference. About 45% of adults used prayer specifically for health reasons during the past 12 months. Excluding prayer specifically for health reasons as a therapy reduced the NHIS estimates of CAM use from 62.1% to 36.0%.

[Table 6](#) also presents the percentage of U.S. adults who used practitioner-based therapies. The fact that only 11.8% of adults sought care from a licensed or certified CAM practitioner suggests that most individuals who use CAM self-prescribe and/or self-medicate, as suggested by another study (5). This practice could increase the chance of inappropriate use of a given CAM therapy and result in negative consequences.

Consistent with previous studies (1,3,5), the present study found that the majority of individuals used CAM in conjunction with conventional medicine (54.9%). About one-quarter of U.S. adults who used CAM during the past

12 months did so because CAM use was suggested by a conventional health care provider, a rate almost identical to that seen in South Carolina (9). More surprising is the finding that 27.7% of individuals who use CAM believed that conventional medicine would not help their health care problem. These data are contrary to a previous observation that CAM users are not, in general, dissatisfied with conventional medicine (1).

Conclusions

The NHIS survey provides the most comprehensive and reliable current data describing CAM use by the U.S. adult population. This report adds to the increasing body of evidence about CAM use in the United States. The descriptive statistics and highlights presented in this report are a foundation for future studies of CAM use as it relates to health and disease among various population subgroups. Ongoing analysis of the NHIS dataset by NCHS and NCCAM staff will further explore the relationship of CAM use with various health behaviors, race and gender, and the differences between those who use CAM in conjunction with conventional medicine and those who use only CAM or only conventional medicine.

References

1. Astin JA. Why patients use alternative medicine: results of a national study. *JAMA* 279(19):1548–53. May 20, 1998.
2. Bausell RB, Lee WL, Berman BM. Demographic and health-related correlates to visits to complementary and alternative medical providers. *Med Care* 39(2):190–6. Feb. 2001.
3. Druss BG, Rosenheck RA. Association between use of unconventional therapies and conventional medical services. *JAMA* 282(7):651–6. Aug. 18, 1999.
4. Eisenberg DM, Kessler RC, Foster C, et al. Unconventional medicine in the United States. Prevalence, costs, and patterns of use. *N Engl J Med* 328(4):246–52. Jan. 28, 1993.
5. Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990–1997: results of a follow-up national survey. *JAMA* 280(18):1569–75. Nov. 11, 1998.
6. Landmark Healthcare, Inc. The Landmark Report on Public Perceptions of Alternative Care. Landmark Healthcare, Inc., Sacramento, CA. 1998.
7. Mackenzie ER, Taylor L, Bloom BS, et al. Ethnic minority use of complementary and alternative medicine (CAM): A national probability survey of CAM utilizers. *Alternative Therapies in Health and Medicine* 9(4):50–56. 2003.
8. Ni H, Simile C, Hardy AM. Utilization of complementary and alternative medicine by United States adults: Results from the 1999 National Health Interview Survey. *Med Care* 40(4):353–8. Apr. 2002.
9. Oldendick R, Coker AL, Wieland D, et al. Population-based survey of complementary and alternative medicine usage, patient satisfaction, and physician involvement. *Southern Medical Journal* 93(4):375–81. 2000.
10. Paramore LC. Use of alternative therapies: Estimates from the 1994 Robert Wood Johnson Foundation National Access to Care Survey. *J Pain Symptom Manage* 13(2):83–9. Feb. 1997.
11. Rafferty AP, McGee HB, Miller CE, Reyes M. Prevalence of complementary and alternative medicine use: State-specific estimates from the 2001 Behavioral Risk Factor Surveillance System. *Am J Public Health* 92(10):1598–1600. 2002.
12. Center for Medicare and Medicaid Services. 1997 National Health Expenditures Survey. Available at: <http://www.cms.hhs.gov/statistics/nhe/>.
13. Engel LW, Straus SE. Development of therapeutics: Opportunities within complementary and alternative medicine. *Nat Rev Drug Discov* 1(3):229–37. Mar. 1, 2002.
14. Sparber A, Wootton JC. Surveys of complementary and alternative medicine: Part II use of alternative and complementary cancer therapies. *J Altern Complement Med* 7(3):281–7. June 2001.
15. Wootton JC, Sparber A. Surveys of complementary and alternative medicine: Part III use of alternative and complementary therapies for HIV/AIDS. *J Altern Complement Med* 7(4):371–7. Aug. 2001.

16. NCCAM. Five Year Strategic Plan: 2001–2005. Available at: <http://nccam.nih.gov/about/plans/fiveyear/index.htm>
17. WHO. Legal status of traditional medicine and complementary/ alternative medicine: A worldwide review. WHO Geneva. 2001.
18. Watanabe S, Imanishi J, Satoh M, Ozasa K. Unique place of Kampo (Japanese traditional medicine) in complementary and alternative medicine: A survey of doctors belonging to the regional medical association in Japan. *Tohoku J Exp Med* 194(1): 55–63. May 2001.
19. Jonas WB, Levin JS (eds.) Essentials of complementary and alternative medicine. Lippincott, Williams & Wilkins. 1999.
20. NIH Consensus Conference Statement, Acupuncture. *JAMA* 280(17): 1518–24. Review. Nov. 4, 1998.
21. NIH Technology Assessment Conference Statement, Integration of behavioral and relaxation approaches into the treatment of chronic pain and insomnia. NIH Technology Assessment Panel on Integration of Behavioral and Relaxation Approaches into the Treatment of Chronic Pain and Insomnia. *JAMA* 276(4): 313–8. July 24–31, 1996.
22. DHHS. FDA Announces Plans to Prohibit Sales of Dietary Supplements Containing Ephedra. Dec. 30, 2003. Available at: <http://www.hhs.gov/news/press/2003pres/20031230.html>
23. Izzo AA, Ernst E. Interactions between herbal medicines and prescribed drugs: A systematic review. *Drugs* 61(15): 2163–75. 2001.
24. National Center for Health Statistics. 2002 National Health Interview Survey (NHIS). Public Use Data Release. NHIS Survey Description. ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2002/srvydesc.pdf.
25. Research Triangle Institute. SUDAAN (Release 8.0.1) [Computer Software]. Research Triangle Park, NC: Research Triangle Institute. 2002.
26. Day JC. Population projections of the United States by age, sex, race, and Hispanic origin: 1995 to 2050, U.S. Bureau of the Census, Current population reports, P25-1130, U.S. Government Printing Office, Washington. 1996. (<http://www.census.gov/prod/1/pop/p25-1130/>)
27. Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. *Healthy People Statistical Notes*, no.20. Hyattsville, Maryland. National Center for Health Statistics: Jan. 2001.
28. CAM on PubMed. <http://www.nlm.nih.gov/nccam/camonpubmed.html>
29. MedlinePlus. <http://www.nlm.nih.gov/medlineplus/>
30. Cochrane Collaboration Database. <http://www.update-software.com/cochrane/>
31. Lipton RB, Stewart WF, Diamond S, et al. Prevalence and burden of migraine in the United States: Data from the American Migraine Study II. *Headache* 41:646–57. 2002.
32. Yelin E, Herrndorf A, Trupin L, Sonneborn D. A national study of medical care expenditures for musculoskeletal conditions: the impact of health insurance and managed care. *Arthritis and Rheumatology* 44(5):1160–69. 2001.
33. Deyo RA, Weinstein JN. Low back pain. *N Engl J Med* 344(5):363–70. 2001.
34. Turk DC. Clinical effectiveness and cost-effectiveness of treatments for patients with chronic pain. *Clin J Pain* 18:355–65. 2001.
35. Fendrick AM, Monto AS, Nightengale B, Sarnes M. The economic burden of non-influenza-related viral respiratory tract infection in the United States. *Arch Intern Med* 163:487–94. 2003.
36. Office of Management and Budget. Revisions to the standards for the classification of Federal data on race and ethnicity. *Federal Register* 62 (210):58782–90. 1997.
37. U.S. Census Bureau. <http://www.census.gov/population/www/estimates/aboutmetro.html>.

Table 1. Frequencies and age-adjusted percents of adults 18 years and over who used complementary and alternative medicine, by type of therapy: United States, 2002

| Therapy | Ever used | | Used during past 12 months | |
|--|---------------------|--------------------------|----------------------------|--------------------------|
| | Number in thousands | Percent (standard error) | Number in thousands | Percent (standard error) |
| Any CAM ¹ use | 149,271 | 74.6 (0.37) | 123,606 | 62.1 (0.40) |
| Alternative medical systems | | | | |
| Acupuncture | 8,188 | 4.0 (0.13) | 2,136 | 1.1 (0.07) |
| Ayurveda | 751 | 0.4 (0.04) | 154 | 0.1 (0.02) |
| Homeopathic treatment | 7,379 | 3.6 (0.14) | 3,433 | 1.7 (0.09) |
| Naturopathy | 1,795 | 0.9 (0.07) | 498 | 0.2 (0.03) |
| Biologically based therapies | | | | |
| Chelation therapy | 270 | 0.1 (0.02) | 66 | *0.0 (0.01) |
| Folk medicine | 1,393 | 0.7 (0.05) | 233 | 0.1 (0.02) |
| Nonvitamin, nonmineral, natural products | 50,613 | 25.0 (0.32) | 38,183 | 18.9 (0.28) |
| Diet-based therapies ² | 13,799 | 6.8 (0.18) | 7,099 | 3.5 (0.12) |
| Vegetarian diet | 5,324 | 2.6 (0.11) | 3,184 | 1.6 (0.08) |
| Macrobiotic diet | 1,368 | 0.7 (0.06) | 317 | 0.2 (0.03) |
| Atkins diet | 7,312 | 3.6 (0.13) | 3,417 | 1.7 (0.09) |
| Pritikin diet | 580 | 0.3 (0.04) | 137 | 0.1 (0.02) |
| Ornish diet | 290 | 0.1 (0.02) | 76 | *0.0 (0.01) |
| Zone diet | 1,062 | 0.5 (0.05) | 430 | 0.2 (0.03) |
| Megavitamin therapy | 7,935 | 3.9 (0.13) | 5,739 | 2.8 (0.11) |
| Manipulative and body-based therapies | | | | |
| Chiropractic care | 40,242 | 19.9 (0.33) | 15,226 | 7.5 (0.19) |
| Massage | 18,899 | 9.3 (0.22) | 10,052 | 5.0 (0.16) |
| Mind-body therapies | | | | |
| Biofeedback | 1,986 | 1.0 (0.06) | 278 | 0.1 (0.02) |
| Meditation | 20,698 | 10.2 (0.23) | 15,336 | 7.6 (0.20) |
| Guided imagery | 6,067 | 3.0 (0.12) | 4,194 | 2.1 (0.10) |
| Progressive relaxation | 8,518 | 4.2 (0.14) | 6,185 | 3.0 (0.12) |
| Deep breathing exercises | 29,658 | 14.6 (0.27) | 23,457 | 11.6 (0.24) |
| Hypnosis | 3,733 | 1.8 (0.10) | 505 | 0.2 (0.03) |
| Yoga | 15,232 | 7.5 (0.19) | 10,386 | 5.1 (0.16) |
| Tai chi | 5,056 | 2.5 (0.11) | 2,565 | 1.3 (0.08) |
| Qi gong | 950 | 0.5 (0.05) | 527 | 0.3 (0.04) |
| Prayer for health reasons ³ | 110,012 | 55.3 (0.42) | 89,624 | 45.2 (0.40) |
| Prayed for own health | 103,662 | 52.1 (0.41) | 85,432 | 43.0 (0.40) |
| Others ever prayed for your health | 62,348 | 31.3 (0.38) | 48,467 | 24.4 (0.35) |
| Participate in prayer group | 25,167 | 23.0 (0.46) | 18,984 | 9.6 (0.23) |
| Healing ritual for own health | 9,230 | 4.6 (0.15) | 4,045 | 2.0 (0.09) |
| Energy healing therapy/Reiki | 2,264 | 1.1 (0.07) | 1,080 | 0.5 (0.05) |

*Estimates preceded by an asterisk have a relative standard error of greater than 30% and should be used with caution as they do not meet the standard of reliability or precision.
0.0 Figure does not meet standard of reliability or precision and quantity more than zero but less than 0.05.

¹CAM includes acupuncture; ayurveda; homeopathic treatment; naturopathy; chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; diet-based therapies; megavitamin therapy; chiropractic care; massage; biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; qi gong; prayer for health reasons; and energy healing therapy/Reiki. Respondents may have reported using more than one type of therapy.

²The totals of the numbers and percents of the categories listed under "Diet-based therapies" are greater than the number and percent of "Diet-based therapies" because respondents could choose more than one diet-based therapy.

³The totals of the numbers and percents of the categories listed under "Prayer for health reasons" are greater than the number and percent of "Prayer for health reasons" because respondents could choose more than one method of prayer.

NOTES: CAM is complementary and alternative medicine. The denominators for statistics shown exclude persons with unknown CAM information. Estimates were age adjusted to the year 2000 U.S. standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over.

DATA SOURCE: National Health Interview Survey, 2002.

Table 2. Frequencies and age-adjusted percents of adults 18 years and over who used selected types of nonvitamin, nonmineral, natural products during the past 12 months for health reasons: United States, 2002

| Nonvitamin, nonmineral, and natural products | Used selected nonvitamin, nonmineral, natural products ¹ | |
|---|---|---------------------------------------|
| | Number in thousands | Percent ² (standard error) |
| Echinacea | 14,665 | 40.3 (0.80) |
| Ginseng | 8,777 | 24.1 (0.67) |
| Ginkgo biloba | 7,679 | 21.1 (0.65) |
| Garlic supplements | 7,096 | 19.9 (0.63) |
| Glucosamine with or without chondroitin | 5,249 | 14.9 (0.58) |
| St. John's wort | 4,390 | 12.0 (0.53) |
| Peppermint | 4,308 | 11.8 (0.52) |
| Fish oils/omega fatty acids | 4,253 | 11.7 (0.53) |
| Ginger supplements | 3,768 | 10.5 (0.51) |
| Soy supplements | 3,480 | 9.4 (0.49) |
| Ragweed/chamomile | 3,111 | 8.6 (0.44) |
| Bee pollen or royal jelly | 2,755 | 7.4 (0.41) |
| Kava kava | 2,441 | 6.6 (0.41) |
| Valerian | 2,131 | 5.9 (0.38) |
| Saw palmetto | 2,054 | 5.8 (0.35) |

¹Respondents may have used more than one nonvitamin, nonmineral, natural product.

²The denominators used in the calculation of percents are the estimated number of adults who used nonvitamin, nonmineral, natural products within the past 12 months, excluding persons with unknown information for usage of the specified nonvitamin, nonmineral, natural product.

NOTE: Estimates were age adjusted to the year 2000 U.S. standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over.

DATA SOURCE: National Health Interview Survey, 2002

Table 3. Frequencies and age-adjusted percents of adults 18 years and over who used complementary and alternative medicine (excluding megavitamin therapy and prayer) during the past 12 months by diseases and conditions for which it was used: United States, 2002

| Disease or condition ¹ | Used CAM as treatment | |
|---|-----------------------|---------------------------------------|
| | Number in thousands | Percent ² (standard error) |
| Back pain or problem | 11,965 | 16.8 (0.45) |
| Head or chest cold | 6,924 | 9.5 (0.34) |
| Neck pain or problem | 4,756 | 6.6 (0.29) |
| Joint pain or stiffness | 3,420 | 4.9 (0.26) |
| Anxiety/depression | 3,249 | 4.5 (0.22) |
| Arthritis, gout, lupus, or fibromyalgia | 3,216 | 4.9 (0.24) |
| Stomach or intestinal illness | 2,656 | 3.7 (0.20) |
| Severe headache or migraine | 2,307 | 3.1 (0.19) |
| Recurring pain | 1,762 | 2.4 (0.16) |
| Insomnia or trouble sleeping | 1,595 | 2.2 (0.16) |
| Sinusitis | 900 | 1.2 (0.13) |
| Cholesterol | 797 | 1.1 (0.13) |
| Asthma | 788 | 1.1 (0.11) |
| Hypertension | 714 | 1.0 (0.11) |
| Menopause | 657 | 0.8 (0.08) |

¹Respondents may have used more than one CAM therapy to treat a condition, but were counted only once under each condition treated.

²The denominators used in the calculation of percents are the estimated number of adults who used CAM (excluding megavitamin therapy and prayer) within the past 12 months, excluding persons with unknown information about whether CAM was used to treat the specified condition.

NOTES: CAM is complementary and alternative medicine. Estimates were age adjusted to the year 2000 U.S. standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over.

DATA SOURCE: National Health Interview Survey, 2002.

Table 4. Age-adjusted percents of adults 18 years and over who used selected complementary and alternative medicine categories during the past 12 months, by selected characteristics: United States, 2002

| Selected characteristic | Any use of— | | | | | | | | | |
|--|---|---|---|---|---|---|--|------------------|--|--|
| | CAM including megavitamin therapy and prayer ¹ | Biologically based therapies including megavitamin therapy ² | Mind-body therapies including prayer ³ | CAM excluding megavitamin therapy and prayer ⁴ | Biologically based therapies excluding megavitamin therapy ⁵ | Mind-body therapies excluding prayer ⁶ | Alternative medical systems ⁷ | Energy therapies | Manipulative and body-based therapies ⁸ | |
| Total ^{9,10} | 62.1 (0.40) | 21.9 (0.30) | 52.6 (0.42) | 35.1 (0.38) | 20.6 (0.29) | 16.9 (0.31) | 2.7 (0.12) | 0.5 (0.05) | 10.9 (0.24) | |
| Percents (standard error) | | | | | | | | | | |
| Sex ¹⁰ | | | | | | | | | | |
| Male | 54.1 (0.54) | 19.6 (0.41) | 43.4 (0.54) | 30.2 (0.49) | 18.2 (0.40) | 12.5 (0.36) | 2.2 (0.15) | 0.3 (0.06) | 9.5 (0.30) | |
| Female | 69.3 (0.49) | 24.1 (0.40) | 61.1 (0.51) | 39.7 (0.50) | 22.9 (0.39) | 21.1 (0.42) | 3.2 (0.17) | 0.7 (0.08) | 12.2 (0.33) | |
| Age | | | | | | | | | | |
| 18–29 years | 53.5 (0.84) | 19.6 (0.63) | 44.2 (0.87) | 32.9 (0.80) | 18.8 (0.62) | 17.7 (0.62) | 2.3 (0.25) | 0.4 (0.09) | 9.5 (0.47) | |
| 30–39 years | 60.7 (0.75) | 23.2 (0.64) | 49.8 (0.75) | 37.8 (0.76) | 22.1 (0.63) | 18.3 (0.57) | 3.3 (0.28) | 0.6 (0.11) | 12.8 (0.49) | |
| 40–49 years | 64.1 (0.68) | 24.7 (0.64) | 53.3 (0.75) | 39.4 (0.73) | 23.3 (0.62) | 18.9 (0.59) | 3.2 (0.25) | 0.7 (0.12) | 13.0 (0.51) | |
| 50–59 years | 66.1 (0.85) | 26.2 (0.72) | 56.1 (0.90) | 39.6 (0.82) | 24.7 (0.71) | 19.6 (0.67) | 3.3 (0.29) | 0.8 (0.16) | 11.3 (0.52) | |
| 60–69 years | 64.8 (0.97) | 21.3 (0.81) | 56.3 (1.04) | 32.6 (0.93) | 19.6 (0.79) | 14.4 (0.70) | 2.1 (0.29) | *0.4 (0.13) | 9.8 (0.62) | |
| 70–84 years | 68.6 (0.94) | 15.3 (0.68) | 63.3 (1.00) | 25.1 (0.85) | 13.3 (0.63) | 9.4 (0.58) | 1.4 (0.22) | *0.1 (0.06) | 7.7 (0.52) | |
| 85 years and over | 70.3 (2.05) | 9.1 (1.35) | 66.0 (2.16) | 14.9 (1.58) | 8.4 (1.32) | 6.4 (1.14) | *0.9 (0.33) | *0.3 (0.18) | 2.1 (0.52) | |
| Race ¹⁰ | | | | | | | | | | |
| White, single race | 60.4 (0.44) | 22.3 (0.33) | 50.1 (0.46) | 35.9 (0.42) | 20.9 (0.32) | 17.0 (0.35) | 2.8 (0.13) | 0.5 (0.06) | 12.0 (0.28) | |
| Black or African American, single race | 71.3 (0.98) | 16.5 (0.71) | 68.3 (0.98) | 26.2 (0.85) | 15.2 (0.68) | 14.7 (0.69) | 1.4 (0.22) | *0.3 (0.11) | 4.4 (0.37) | |
| Asian, single race | 61.7 (1.94) | 29.5 (1.87) | 48.1 (1.99) | 43.1 (2.03) | 28.9 (1.83) | 20.9 (1.67) | 4.5 (0.74) | *0.6 (0.27) | 7.2 (0.90) | |
| Hispanic or Latino origin ^{10,11} | | | | | | | | | | |
| Hispanic or Latino | 61.4 (0.94) | 20.6 (0.74) | 55.1 (0.98) | 28.3 (0.86) | 19.8 (0.73) | 10.9 (0.57) | 2.4 (0.28) | *0.4 (0.14) | 5.8 (0.43) | |
| Not Hispanic or Latino | 62.3 (0.43) | 22.3 (0.32) | 52.4 (0.45) | 36.1 (0.40) | 20.9 (0.31) | 17.7 (0.33) | 2.8 (0.12) | 0.6 (0.05) | 11.6 (0.26) | |
| Education ¹⁰ | | | | | | | | | | |
| Less than high school | 57.4 (0.88) | 12.5 (0.57) | 52.0 (0.89) | 20.8 (0.72) | 11.7 (0.55) | 8.0 (0.46) | 1.3 (0.19) | *0.2 (0.06) | 5.1 (0.40) | |
| High school graduate/GED ¹² recipient | 58.3 (0.68) | 17.8 (0.47) | 49.6 (0.70) | 29.5 (0.61) | 16.8 (0.46) | 12.4 (0.46) | 1.6 (0.16) | 0.3 (0.08) | 9.4 (0.39) | |
| Some college - no degree | 64.7 (0.76) | 24.1 (0.64) | 54.8 (0.81) | 38.8 (0.77) | 22.6 (0.63) | 19.1 (0.60) | 2.7 (0.23) | 0.7 (0.12) | 12.5 (0.54) | |
| Associate of arts degree | 64.1 (1.18) | 24.6 (1.01) | 53.8 (1.24) | 39.8 (1.14) | 23.1 (0.99) | 20.2 (0.92) | 3.0 (0.37) | *0.5 (0.17) | 12.6 (0.79) | |
| Bachelor of arts or science degree | 66.7 (0.82) | 29.8 (0.80) | 54.9 (0.89) | 45.9 (0.89) | 27.7 (0.78) | 25.0 (0.79) | 4.6 (0.37) | 0.9 (0.17) | 15.3 (0.65) | |
| Masters, doctorate, professional degree | 65.5 (1.92) | 31.5 (1.45) | 52.7 (1.81) | 48.8 (1.87) | 29.8 (1.44) | 26.5 (1.55) | 5.2 (0.79) | *1.6 (0.67) | 12.8 (0.78) | |
| Family income ^{10,13} | | | | | | | | | | |
| Less than \$20,000 | 64.9 (0.84) | 18.9 (0.65) | 58.8 (0.84) | 29.6 (0.78) | 18.0 (0.64) | 14.8 (0.58) | 2.4 (0.23) | 0.4 (0.12) | 6.7 (0.38) | |
| \$20,000 or more | 61.6 (0.44) | 23.1 (0.34) | 51.2 (0.46) | 37.0 (0.43) | 21.6 (0.34) | 17.9 (0.35) | 2.9 (0.14) | 0.6 (0.06) | 12.1 (0.28) | |
| \$20,000-\$34,999 | 63.5 (0.80) | 21.1 (0.70) | 55.3 (0.82) | 34.1 (0.83) | 19.9 (0.67) | 16.9 (0.66) | 2.0 (0.25) | 0.5 (0.15) | 10.0 (0.53) | |
| \$35,000-\$54,999 | 62.8 (0.83) | 22.6 (0.72) | 52.8 (0.86) | 36.6 (0.84) | 21.2 (0.68) | 17.9 (0.64) | 2.9 (0.28) | 0.6 (0.11) | 11.8 (0.55) | |
| \$55,000-\$74,999 | 60.9 (1.09) | 22.7 (0.84) | 50.1 (1.12) | 37.4 (1.04) | 21.2 (0.81) | 18.2 (0.84) | 2.4 (0.26) | 0.4 (0.13) | 11.0 (0.65) | |
| \$75,000 or more | 61.9 (0.94) | 27.1 (0.85) | 48.7 (0.97) | 43.3 (0.94) | 25.6 (0.84) | 20.7 (0.74) | 4.0 (0.33) | 0.7 (0.12) | 15.2 (0.66) | |

See footnotes at end of table.

Table 4. Age-adjusted percents of adults 18 years and over who used selected complementary and alternative medicine categories during the past 12 months, by selected characteristics: United States, 2002—Con.

| Selected characteristic | Any use of— | | | | | | | | |
|---|---|---|---|---|---|---|--|------------------|--|
| | CAM including megavitamin therapy and prayer ¹ | Biologically based therapies including megavitamin therapy ² | Mind-body therapies including prayer ³ | CAM excluding megavitamin therapy and prayer ⁴ | Biologically based therapies excluding megavitamin therapy ⁵ | Mind-body therapies excluding prayer ⁶ | Alternative medical systems ⁷ | Energy therapies | Manipulative and body-based therapies ⁸ |
| Percents (standard error) | | | | | | | | | |
| Poverty status^{10,14} | | | | | | | | | |
| Poor | 65.5 (1.10) | 17.9 (0.81) | 60.8 (1.13) | 28.2 (1.02) | 17.0 (0.81) | 14.1 (0.79) | 2.0 (0.29) | *0.3 (0.13) | 5.9 (0.52) |
| Near poor | 64.3 (0.91) | 19.1 (0.68) | 57.1 (0.98) | 30.4 (0.83) | 18.3 (0.67) | 14.7 (0.63) | 1.9 (0.25) | *0.4 (0.13) | 7.7 (0.52) |
| Not poor | 62.6 (0.49) | 24.7 (0.41) | 51.2 (0.52) | 39.8 (0.49) | 23.2 (0.40) | 19.5 (0.42) | 3.2 (0.17) | 0.6 (0.07) | 13.1 (0.33) |
| Health insurance¹⁵ | | | | | | | | | |
| Under 65 years: | | | | | | | | | |
| Private | 61.4 (0.47) | 24.6 (0.40) | 50.0 (0.49) | 39.4 (0.48) | 23.2 (0.39) | 19.3 (0.38) | 3.0 (0.15) | 0.6 (0.07) | 13.1 (0.33) |
| Public | 65.1 (1.21) | 17.9 (0.88) | 59.8 (1.22) | 31.1 (1.10) | 16.5 (0.85) | 18.0 (0.92) | 2.3 (0.36) | *0.4 (0.20) | 7.3 (0.64) |
| Uninsured | 57.7 (1.00) | 21.1 (0.74) | 49.5 (1.01) | 31.2 (0.89) | 20.4 (0.74) | 14.7 (0.69) | 3.1 (0.34) | 0.7 (0.15) | 8.0 (0.49) |
| 65 years and over: | | | | | | | | | |
| Private | 68.2 (0.96) | 16.0 (0.72) | 61.9 (1.04) | 27.2 (0.86) | 14.0 (0.67) | 10.6 (0.59) | 1.4 (0.23) | *0.2 (0.09) | 9.4 (0.54) |
| Public | 65.9 (1.18) | 14.6 (0.83) | 61.1 (1.26) | 21.3 (1.00) | 13.4 (0.81) | 8.4 (0.70) | 1.3 (0.26) | *0.1 (0.07) | 4.5 (0.55) |
| Uninsured | 74.4 (8.33) | 18.2 (4.64) | 73.2 (8.31) | 19.7 (4.73) | 18.2 (4.64) | *3.0 (1.52) | *0.7 (0.74) | *— | *0.7 (0.74) |
| Marital status¹⁰ | | | | | | | | | |
| Never Married | 60.2 (1.01) | 21.0 (0.76) | 52.0 (1.04) | 33.0 (0.90) | 19.7 (0.73) | 18.0 (0.74) | 2.6 (0.28) | 0.7 (0.16) | 9.4 (0.53) |
| Married | 62.4 (0.55) | 21.8 (0.43) | 52.7 (0.57) | 35.0 (0.51) | 20.5 (0.42) | 15.6 (0.39) | 2.7 (0.17) | 0.4 (0.08) | 11.1 (0.32) |
| Cohabiting | 59.4 (1.86) | 25.9 (1.47) | 47.7 (1.91) | 37.9 (1.87) | 24.6 (1.46) | 20.4 (1.50) | 2.9 (0.46) | *1.3 (0.44) | 11.1 (1.15) |
| Divorced or Separated | 65.4 (1.20) | 23.5 (0.94) | 57.5 (1.21) | 38.8 (1.15) | 22.2 (0.93) | 22.1 (1.00) | 2.6 (0.22) | 0.6 (0.11) | 11.1 (0.70) |
| Widowed | 72.8 (2.39) | 22.6 (3.90) | 65.5 (2.52) | 33.9 (4.05) | 21.0 (3.87) | 18.5 (3.68) | *2.0 (0.86) | *0.1 (0.07) | 8.4 (1.86) |
| Urban/rural¹⁰ | | | | | | | | | |
| Urban | 62.6 (0.43) | 22.9 (0.34) | 53.2 (0.44) | 36.0 (0.41) | 21.5 (0.33) | 18.0 (0.33) | 2.9 (0.14) | 0.6 (0.06) | 10.8 (0.27) |
| Rural | 60.4 (0.80) | 19.3 (0.55) | 50.9 (0.86) | 32.6 (0.76) | 18.3 (0.54) | 13.9 (0.60) | 2.1 (0.21) | 0.4 (0.09) | 11.1 (0.48) |
| Place of residence¹⁰ | | | | | | | | | |
| MSA, ¹⁶ central city | 63.5 (0.66) | 22.5 (0.55) | 55.3 (0.68) | 34.9 (0.67) | 21.1 (0.54) | 18.3 (0.55) | 3.1 (0.23) | 0.6 (0.09) | 9.9 (0.41) |
| MSA, ¹⁶ not central city | 61.2 (0.52) | 23.2 (0.42) | 50.9 (0.55) | 36.5 (0.49) | 21.8 (0.41) | 17.4 (0.40) | 2.7 (0.15) | 0.6 (0.07) | 11.1 (0.32) |
| Not MSA ¹⁶ | 62.1 (1.09) | 18.2 (0.66) | 53.1 (1.17) | 31.9 (0.97) | 17.2 (0.63) | 13.9 (0.76) | 2.1 (0.24) | 0.3 (0.07) | 11.6 (0.63) |
| Region¹⁰ | | | | | | | | | |
| Northeast | 57.9 (0.91) | 22.6 (0.70) | 46.9 (0.91) | 35.7 (0.84) | 21.1 (0.69) | 16.9 (0.69) | 3.1 (0.27) | 0.7 (0.12) | 10.9 (0.53) |
| Midwest | 61.4 (0.80) | 20.9 (0.60) | 52.0 (0.82) | 37.0 (0.77) | 19.7 (0.57) | 18.2 (0.59) | 2.2 (0.20) | 0.5 (0.10) | 13.2 (0.57) |
| South | 64.6 (0.65) | 19.3 (0.45) | 57.2 (0.66) | 29.9 (0.61) | 18.0 (0.44) | 14.0 (0.45) | 1.9 (0.15) | 0.3 (0.07) | 7.9 (0.33) |
| West | 62.1 (0.91) | 27.7 (0.70) | 50.3 (1.08) | 42.2 (0.82) | 26.4 (0.69) | 21.1 (0.82) | 4.6 (0.36) | 0.8 (0.13) | 13.8 (0.55) |
| Pacific States ¹⁷ | 64.0 (1.08) | 27.7 (0.86) | 52.4 (1.22) | 43.0 (1.00) | 26.4 (0.86) | 22.4 (0.98) | 4.8 (0.47) | 0.8 (0.16) | 13.3 (0.65) |
| Body weight status^{10,18} | | | | | | | | | |
| Underweight | 62.0 (2.55) | 18.4 (2.00) | 55.1 (2.57) | 33.6 (2.38) | 17.6 (1.96) | 20.4 (2.08) | 3.0 (0.74) | *0.5 (0.25) | 8.9 (1.38) |
| Healthy weight | 62.7 (0.60) | 23.3 (0.49) | 53.2 (0.61) | 37.2 (0.57) | 21.9 (0.47) | 19.5 (0.49) | 3.4 (0.21) | 0.7 (0.10) | 11.6 (0.39) |
| Overweight | 60.1 (0.64) | 21.9 (0.50) | 49.6 (0.66) | 34.8 (0.58) | 20.6 (0.50) | 15.8 (0.44) | 2.6 (0.18) | 0.5 (0.09) | 11.2 (0.38) |
| Obese | 64.6 (0.73) | 21.1 (0.56) | 56.3 (0.75) | 33.4 (0.71) | 19.8 (0.55) | 15.3 (0.54) | 1.9 (0.17) | 0.4 (0.09) | 10.3 (0.46) |

See footnotes at end of table.

Table 4. Age-adjusted percents of adults 18 years and over who used selected complementary and alternative medicine categories during the past 12 months, by selected characteristics: United States, 2002—Con.

| Selected characteristic | Any use of— | | | | | | | | |
|--|---|---|---|---|---|---|--|------------------|--|
| | CAM including megavitamin therapy and prayer ¹ | Biologically based therapies including megavitamin therapy ² | Mind-body therapies including prayer ³ | CAM excluding megavitamin therapy and prayer ⁴ | Biologically based therapies excluding megavitamin therapy ⁵ | Mind-body therapies excluding prayer ⁶ | Alternative medical systems ⁷ | Energy therapies | Manipulative and body-based therapies ⁸ |
| Percents (standard error) | | | | | | | | | |
| Lifetime cigarette smoking status ^{10,19} | | | | | | | | | |
| Current smoker | 57.2 (0.81) | 19.7 (0.56) | 47.6 (0.78) | 32.9 (0.70) | 18.7 (0.55) | 16.8 (0.55) | 2.0 (0.17) | 0.5 (0.10) | 9.2 (0.42) |
| Former smoker | 66.6 (0.81) | 27.0 (0.78) | 55.6 (0.87) | 41.9 (0.88) | 25.3 (0.76) | 21.1 (0.77) | 4.0 (0.32) | 0.8 (0.14) | 13.6 (0.60) |
| Never smoker | 62.8 (0.50) | 21.2 (0.38) | 54.3 (0.53) | 34.1 (0.46) | 20.0 (0.37) | 16.1 (0.37) | 2.6 (0.15) | 0.5 (0.06) | 10.7 (0.30) |
| Lifetime alcohol drinking status ^{10,20} | | | | | | | | | |
| Lifetime abstainer | 61.6 (0.79) | 14.9 (0.54) | 56.9 (0.82) | 24.3 (0.66) | 14.0 (0.52) | 10.8 (0.47) | 1.5 (0.18) | *0.2 (0.06) | 6.1 (0.33) |
| Former drinker | 69.2 (0.96) | 20.5 (0.82) | 62.3 (0.99) | 33.4 (0.97) | 19.0 (0.79) | 16.6 (0.74) | 2.3 (0.27) | 0.5 (0.13) | 9.4 (0.57) |
| Current infrequent/light drinker | 62.2 (0.56) | 24.3 (0.45) | 51.6 (0.58) | 39.7 (0.55) | 23.0 (0.46) | 19.6 (0.45) | 3.1 (0.18) | 0.7 (0.08) | 13.3 (0.37) |
| Current moderate/heavier drinker | 57.0 (0.83) | 25.5 (0.65) | 43.5 (0.84) | 38.5 (0.76) | 24.0 (0.64) | 18.4 (0.64) | 3.4 (0.28) | 0.6 (0.11) | 12.1 (0.51) |
| Hospitalized in the last year ¹⁰ | | | | | | | | | |
| Yes | 75.9 (0.97) | 22.1 (0.91) | 70.4 (1.04) | 37.4 (1.14) | 20.5 (0.89) | 19.5 (0.91) | 3.1 (0.40) | *0.5 (0.16) | 11.2 (0.71) |
| No | 60.6 (0.42) | 22.0 (0.31) | 50.8 (0.44) | 34.9 (0.39) | 20.7 (0.30) | 16.7 (0.32) | 2.7 (0.12) | 0.5 (0.05) | 10.9 (0.25) |

*Estimates preceded by an asterisk have a relative standard error of greater than 30% and should be used with caution as they do not meet the standard of reliability or precision.

— Quantity zero.

¹CAM including megavitamins and prayer includes acupuncture; ayurveda; homeopathic treatment; naturopathy; chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; diet-based therapies; megavitamin therapy; chiropractic care; massage; biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; qi gong; prayer for health reasons; and energy healing therapy/Reiki.

²Biologically based therapies including megavitamin therapy includes chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; diet-based therapies; and megavitamin therapy.

³Mind body therapies including prayer includes biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; qi gong; and prayer for health reasons.

⁴CAM excluding megavitamins and prayer includes acupuncture; ayurveda; homeopathic treatment; naturopathy; chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; diet-based therapies; chiropractic care; massage; biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; qi gong; and energy healing therapy/Reiki.

⁵Biologically based therapies excluding megavitamin therapy includes chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; and diet-based therapies.

⁶Mind-body therapies excluding prayer includes biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; and qi gong.

⁷Alternative medical systems includes acupuncture; ayurveda; homeopathic treatment; and naturopathy.

⁸Manipulative and body-based therapies includes chiropractic care and massage.

⁹Total includes other races not shown separately and persons with unknown education, family income, poverty status, health insurance status, marital status, body weight status, lifetime smoking status, alcohol consumption status, and hospitalization status.

¹⁰Estimates were age adjusted to the year 2000 U.S. standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over.

¹¹Persons of Hispanic or Latino origin may be of any race or combination of races. Similarly, the category “Not Hispanic or Latino” refers to all persons who are not of Hispanic or Latino origin, regardless of race.

¹²GED is General Education Development high school equivalency diploma.

¹³The categories “Less than \$20,000” and “\$20,000 or more” include both persons reporting dollar amounts and persons reporting only that their incomes were within one of these two categories. The indented categories include only those persons who reported dollar amounts.

¹⁴Poverty status is based on family income and family size using the Census Bureau's poverty thresholds for 2001. “Poor” persons are defined as below the poverty threshold. “Near poor” persons have incomes of 100% to less than 200% of the poverty threshold. “Not poor” persons have incomes that are 200% of the poverty threshold or greater.

¹⁵Classification of health insurance coverage is based on a hierarchy of mutually exclusive categories. Persons with more than one type of health insurance were assigned to the first appropriate category in the hierarchy. Persons under age 65 years and those age 65 years and over were classified separately due to the prominence of Medicare coverage in the older population. The category “Uninsured” includes persons who had no coverage as well as those who had only Indian Health Service coverage or had only a private plan that paid for one type of service such as accidents or dental care (see “Definition of terms” for more details). Estimates are age-adjusted to the 2000 U.S. standard population using three age groups: 18–24 years, 25–44 years, and 45–64 years for persons under age 65, and two age groups: 65–74 years and 75 years and over for persons aged 65 years and over.

¹⁶MSA is metropolitan statistical area.

¹⁷Pacific states includes California, Oregon, Washington, Alaska, and Hawaii.

¹⁸Body weight status was based on Body Mass Index (BMI) using self-reported height and weight. The formula for BMI is kilograms/meters². Underweight is defined as a BMI of less than 18.5; healthy weight is defined as a BMI of at least 18.5 and less than 25; overweight, but not obese, is defined as a BMI of at least 25 and less than 30; and obese is defined as a BMI of 30 or more.

¹⁹Lifetime cigarette smoking status: Current smoker: smoked at least 100 cigarettes in lifetime and currently smoked cigarettes every day or some days; Former smoker: smoked at least 100 cigarettes in lifetime but did not currently smoke; Never smoker: never smoked at all or smoked less than 100 cigarettes in lifetime.

²⁰Lifetime alcohol drinking status: Lifetime abstainer is less than 12 drinks in lifetime; former drinker is 12 or more drinks in lifetime, but no drinks in past year; current infrequent/light drinker is defined as at least 12 drinks in lifetime and 1–11 drinks in past year (infrequent) or 3 drinks or fewer per week, on average (light); current moderate/heavier is defined as at least 12 drinks in lifetime and more than 3 drinks per week up to 14 drinks per week, on average for men and more than 3 drinks per week up to 7 drinks per week on average for women (moderate) or more than 14 drinks per week on average for men and more than 7 drinks per week on average for women (heavier).

NOTES: CAM is complementary and alternative medicine. The denominators for statistics shown exclude persons with unknown CAM information.

DATA SOURCE: National Health Interview Survey, 2002.

Table 5. Age-adjusted percents of adult users of complementary and alternative medicine specifying selected reasons for using it, by types of therapy: United States, 2002

| Therapy | Sample size | Reason ¹ | | | | |
|--|-------------|--|--|--|--|--|
| | | Conventional medical treatments would not help | Conventional medical treatments were too expensive | Therapy combined with conventional medical treatments would help | Suggested by a conventional medical professional | Thought it would be interesting to try |
| Percents (standard error) | | | | | | |
| Any CAM ² use | 6,619 | 27.7 (0.67) | 13.2 (0.46) | 54.9 (0.78) | 25.8 (0.66) | 50.1 (0.76) |
| Alternative medical systems | | | | | | |
| Acupuncture | 276 | 44.2 (3.52) | 7.4 (1.62) | 56.2 (3.30) | 24.8 (3.28) | 51.6 (3.69) |
| Ayurveda | 10 | 60.6 (16.01) | *43.2 (17.29) | *52.6 (16.98) | *17.4 (13.73) | 100.0 (0.00) |
| Homeopathic treatment | 416 | 36.7 (3.01) | 19.4 (2.34) | 43.1 (2.94) | 14.2 (2.01) | 45.8 (3.06) |
| Naturopathy | 66 | 53.1 (7.23) | 28.3 (6.31) | 62.4 (6.50) | 16.5 (4.95) | 43.9 (6.96) |
| Biologically based therapies | | | | | | |
| Chelation therapy | 6 | 28.5 (5.72) | *- | 84.6 (10.64) | 76.4 (8.72) | *18.7 (9.08) |
| Folk medicine | 32 | 43.1 (8.65) | 47.6 (9.79) | 53.5 (9.73) | *7.5 (4.45) | 49.3 (9.47) |
| Nonvitamin, nonmineral, natural products | 3,315 | 19.2 (0.80) | 14.4 (0.67) | 47.5 (1.08) | 15.3 (0.77) | 51.7 (1.03) |
| Diet-based therapies | 418 | 22.4 (2.55) | 11.3 (2.02) | 38.1 (2.92) | 26.3 (2.65) | 52.6 (2.97) |
| Megavitamin therapy | 360 | 27.5 (2.84) | 13.5 (2.19) | 55.0 (3.09) | 38.3 (2.94) | 37.7 (2.96) |
| Manipulative and body-based therapies | | | | | | |
| Chiropractic care | 1,869 | 39.6 (1.35) | 9.5 (0.75) | 52.9 (1.40) | 20.2 (1.11) | 31.8 (1.27) |
| Massage | 703 | 33.9 (2.05) | 12.6 (1.46) | 59.6 (2.17) | 33.4 (2.01) | 44.1 (2.33) |
| Mind-body therapies | | | | | | |
| Biofeedback | 37 | *22.9 (7.08) | *8.0 (5.07) | 61.0 (8.82) | 62.7 (7.17) | 45.5 (7.86) |
| Relaxation techniques | 1,406 | 20.6 (1.30) | 12.5 (1.01) | 56.1 (1.63) | 36.3 (1.61) | 54.5 (1.69) |
| Hypnosis | 74 | 30.0 (6.84) | *10.4 (3.44) | 22.9 (4.98) | 21.1 (4.83) | 65.2 (7.38) |
| Yoga, tai chi, qi gong | 315 | 30.9 (3.37) | 14.4 (2.56) | 52.3 (3.57) | 21.0 (3.09) | 59.2 (3.47) |
| Healing ritual for own health | 419 | 19.1 (2.34) | 13.6 (2.02) | 66.9 (2.95) | 8.4 (1.56) | 34.1 (2.86) |
| Energy healing therapy/Reiki | 86 | 46.5 (6.48) | 22.9 (5.25) | 60.6 (6.03) | 18.0 (5.02) | 50.4 (5.92) |

*Estimates preceded by an asterisk have a relative standard error of greater than 30% and should be used with caution as they do not meet the standard of reliability or precision.

- Quantity zero.

¹Respondents may select more than one reason for using a CAM therapy.

²CAM includes acupuncture; ayurveda; homeopathic treatment; naturopathy; chelation therapy; folk medicine; nonvitamin, nonmineral, natural products; diet-based therapies; megavitamin therapy; chiropractic care; massage; biofeedback; meditation; guided imagery; progressive relaxation; deep breathing exercises; hypnosis; yoga; tai chi; qi gong; healing ritual for own health; and energy healing therapy/Reiki.

NOTES: CAM is complementary and alternative medicine. The denominators for statistics shown exclude persons with unknown CAM information. Estimates were age adjusted to the year 2000 U.S. standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over.

DATA SOURCE: National Health Interview Survey, 2002.

Table 6. Frequencies and age-adjusted percents of adults 18 years and over who used complementary and alternative medicine during the past 12 months, using the combination of complementary and alternative medicine therapies included in previous surveys: United States, 2002

| CAM therapies ¹ | Population | |
|--|----------------------------------|---------------------------------------|
| | Number in thousands ² | Percent (standard error) ² |
| Acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy/Reiki; folk medicine; guided imagery; homeopathic treatment; hypnosis; massage therapy; meditation; megavitamin therapy; naturopathy; nonvitamin, nonmineral, natural products; prayer for health reasons; qi gong; tai chi; and yoga ³ | 123,606 | 62.1 (0.40) |
| Acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy/Reiki; folk medicine; guided imagery; homeopathic treatment; hypnosis; massage therapy; meditation; naturopathy; nonvitamin, nonmineral, natural products; prayer for health reasons; progressive relaxation; qi gong; tai chi; and yoga ⁴ | 122,804 | 61.6 (0.40) |
| Acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy/Reiki; folk medicine; guided imagery; homeopathic treatment; hypnosis; massage therapy; meditation; megavitamin therapy; naturopathy; nonvitamin, nonmineral, natural products; progressive relaxation; qi gong; tai chi; and yoga ⁵ | 72,401 | 36.0 (0.38) |
| Acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; energy healing therapy; folk medicine; hypnosis; massage therapy; meditation; and naturopathy ⁶ | 23,955 | 11.8 (0.25) |
| Acupuncture; Ayurveda; biofeedback; chelation therapy; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy; folk medicine; guided imagery; nonvitamin, nonmineral, natural products; megavitamin therapy; homeopathic treatment; hypnosis; massage therapy; meditation; naturopathy; progressive relaxation; and prayer by others (5) | 97,253 | 48.8 (0.40) |
| Acupuncture; biofeedback; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy; folk medicine; guided imagery; nonvitamin, nonmineral, natural products; megavitamin therapy; homeopathic treatment; hypnosis; massage therapy; progressive relaxation; and prayer by others (1,4) | 95,921 | 48.1 (0.40) |
| Acupuncture; biofeedback; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy; guided imagery; nonvitamin, nonmineral, natural products; homeopathic treatment; hypnosis; massage therapy; progressive relaxation; and prayer by others (8) | 94,671 | 47.4 (0.40) |
| Biofeedback; chiropractic care; deep breathing exercises; diet-based therapies; energy healing therapy; folk medicine; guided imagery; nonvitamin, nonmineral, natural products; homeopathic treatment; hypnosis; massage therapy; progressive relaxation; and prayer by others (9) | 90,299 | 45.3 (0.39) |
| Acupuncture; biofeedback; chiropractic care; diet-based therapies; energy healing therapy; guided imagery; nonvitamin; nonmineral; natural products; megavitamin therapy; hypnosis; and meditation (11) | 60,425 | 30.0 (0.35) |
| Acupuncture; chiropractic care; deep breathing exercises; massage therapy; and progressive relaxation (10) | 40,984 | 20.3 (0.31) |

¹The combinations of CAM are based on selected studies.

²Numbers and percents are calculated using data from the 2002 NHIS.

³This definition of CAM comes from the study on which this report is based and consists of all the CAM therapies included in the 2002 NHIS questionnaire.

⁴This definition of CAM comes from the study on which this report is based and consists of all the CAM therapies included in the 2002 NHIS questionnaire excluding megavitamin therapy.

⁵This definition of CAM comes from the study on which this report is based and consists of all the CAM therapies included in the 2002 NHIS questionnaire excluding prayer for health reasons.

⁶This definition of CAM comes from the study on which this report is based and consists of all the CAM therapies included in the 2002 NHIS questionnaire that are practitioner-based therapies.

NOTES: CAM is complementary and alternative medicine. The denominators for statistics shown exclude persons with unknown CAM information.

DATA SOURCE: National Health Interview Survey, 2002.

Technical Notes

Sample design

The National Health Interview Survey (NHIS) is a cross-sectional household interview survey of the U.S. civilian noninstitutionalized population. Data are collected continuously throughout the year in all 50 States and the District of Columbia. The NHIS uses a multistage, clustered sample design to produce national estimates for a variety of health indicators. Information on basic health topics is collected for all household members by proxy from one family member, if necessary. Additional information is collected for one randomly selected adult and one randomly selected child in each family. Self-response is required for the Sample Adult questionnaire except in rare cases where sample adults are physically or mentally incapable of responding for themselves. Interviews are conducted in the home using a computer-assisted personal interview (CAPI) questionnaire with telephone interviewing permitted for followup, if necessary.

Response rates

In 2002, interviews were completed in 36,161 households and 36,831 families, with 31,044 adults completing the Sample Adult portion of the interview. The final household response rate was 89.6%, and the final response rate for the 2002 Sample Adult questionnaire was 74.3%. Procedures used in calculating response rates are described in detail in “Appendix I” of the Survey Description of the NHIS data files (24).

Item nonresponse

Item nonresponse for each of the sociodemographic indicators shown in table 4 was about 1% or less, with the exception of poverty status, which is based on detailed family income asked in the family component of the questionnaire. Item nonresponse for the poverty indicator was 29.0%. Item nonresponse for the health behavior items ranged from 1.0% to 5.2% and was less than 1% for hospitalization

during the past year. For the complementary and alternative medicine items, nonresponse ranged from 1.7% to 3.2%. The denominators for statistics shown in the tables exclude persons with unknown complementary and alternative medicine information for a given table. In table 4, persons with unknown sociodemographic characteristics, health behavior items, and hospitalization during the past year are not shown separately, but are included in the total. Among the 31,044 interviewed sample adult respondents in the 2002 NHIS, 427 persons were missing data for all the complementary and alternative medicine items.

Age adjustment

Data shown in this report were age adjusted using the year 2000 U.S. standard population provided by the U.S. Census Bureau (26,27). Age adjustment was used to allow comparison among various population subgroups that have different age structures. This is particularly important for demographic characteristics such as race and ethnicity, education, and marital status. It is also helpful for other characteristics. The following age groups were used for age adjustment: 18–24 years, 25–44 years, 45–64 years, and 65 years and over, unless otherwise noted (table I). Health insurance is restricted to certain age groups and is, therefore, adjusted accordingly.

Table I. Age distributions used in age-adjusting data shown in tables 1–5 and figure 1

| Age | 2000 U.S. standard population (in thousands) |
|-----------------------------|--|
| 18 years and over | 203,851 |
| 18–24 years | 26,258 |
| 25–44 years | 81,892 |
| 45–64 years | 60,991 |
| 65 years and over. | 34,710 |
| Health insurance | |
| 18–64 years. | 169,141 |
| 18–24 years | 26,258 |
| 25–44 years | 81,892 |
| 45–64 years | 60,991 |
| 65 years and over | 34,710 |
| 65–74 years | 18,136 |
| 75 years and over. | 16,574 |

Tests of significance

Statistical tests performed to assess significance of differences in the estimates were two-tailed with no adjustments for multiple comparisons. The test statistic used to determine statistical significance of differences between two percents was

$$Z = \frac{|X_a - X_b|}{\sqrt{S_a^2 + S_b^2}}$$

where X_a and X_b are the two percents being compared, and S_a and S_b are the standard errors of those percents. The critical value used for two-sided tests at the 0.05 level of significance was 1.96.

Relative standard error

Estimates with a relative standard error greater than 30% are considered unreliable and are indicated with an asterisk (*). The relative standard errors are calculated as follows:

$$\text{Relative standard error (as a percent)} = (\text{SE/Est}) 100,$$

where SE is the standard error of the estimate, and Est is the estimate.

Definition of terms

Demographic terms

Age—The age recorded for each person is the age at the last birthday.

Education—The categories of education are based on the years of school completed or highest degree obtained. Respondents were shown a flash card to choose an appropriate category. Only years completed in a school that advances a person toward an elementary or high school diploma, General Educational Development high school equivalency diploma (GED), college, university, or professional degree are included. Education in other schools or home schooling is counted only if the credits are accepted in a regular school system.

Family income—Each member of a family is classified according to the total income of all family members. Family members are all persons within the household related to each other by blood, marriage, cohabitation, or adoption. The income recorded is the

total income received by all family members in the previous calendar year. Income from all sources—including wages, salaries, military pay (when an Armed Forces member lived in the household), pensions, government payments, child support/alimony, dividends, help from relatives—is included. Unrelated individuals living in the same household (e.g., roommates) are considered to be separate families and are classified according to their own incomes.

Health insurance coverage—NHIS respondents were asked about their health insurance coverage at the time of the interview. Respondents reported whether they were covered by private insurance (obtained through the employer or workplace, purchased directly, or through a local or community program), Medicare, Medigap (supplemental Medicare coverage), Medicaid, State Children's Health Insurance Program (CHIP), Indian Health Service (IHS), military coverage (including VA, TRICARE, or CHAMP-VA), a State-sponsored health plan, another government program and/or any single service plans. This information was used to create a health insurance hierarchy that consisted of three mutually exclusive categories. Persons with more than one type of health insurance were assigned to the first appropriate category in the following hierarchy: private coverage, public coverage (includes persons with Medicare, Medigap, Medicaid, SCHIP, military coverage, a state-sponsored health plan, and/or another government program), and uninsured (includes persons with only single service plans and/or only IHS).

Hispanic or Latino origin—Hispanic or Latino origin includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or Spanish origins. Persons of Hispanic or Latino origin may be of any race. In this report, subsets of Hispanic or Latino origin are not shown for reasons of statistical reliability.

Marital status—Respondents were asked to choose a marital status category most appropriate for their marital situation. In some cases, persons reporting their marital status as

“married” may have been living in common-law marital unions. Alternatively, these individuals could have identified their marital status as “living with partner.” Adults who were living with a partner were considered to be members of the same family (as if married) and are categorized as “cohabiting” in this report. The distinction between “married” and “living with partner” was made by the respondent.

Race—The 1997 Office of Management and Budget (OMB) Federal guidelines (36) for reporting race require that persons of “single race” be distinguished from persons of “multiple race.” “Single race” refers to persons who indicated only a single race group. Estimates for the smaller subcategories of single race persons and multiple race combinations can only be reported to the extent that the estimates meet the requirements for confidentiality and statistical reliability. In this report, three categories are shown for single race individuals (white, single race; black or African American, single race; and Asian, single race). Other subcategories of single race persons and multiple race persons are not shown due to statistical unreliability as measured by the relative standard errors of the estimates.

The text in this report uses shorter versions of the new OMB race terms for conciseness and the table uses the complete terms. For example, the category “Black or African American, single race” in the table is referred to as “Black” in the text.

Place of residence—Metropolitan statistical area (MSA), a term first used in 1983, was defined by the U.S. Office of Management and Budget and is used by the U.S. Census Bureau to classify geographic areas (37). The categories shown in this report are: (a) “MSA, central city,” which generally refers to cities with populations of 50,000 or more; (b) “MSA, not central city,” which refers to communities adjacent to the central city of an MSA that have a high degree of economic and social integration with the central city; and (c) “Not MSA,” which refers to more rural areas of the country. The classification of areas in the 2002 NHIS is based on data from the 1990 decennial census.

Poverty status—Poverty status is based on family income and family size using the U.S. Census Bureau's poverty thresholds. “Poor” persons are defined as below the poverty threshold. “Near poor” persons have incomes of 100% to less than 200% of the poverty threshold, and “Not poor” persons have incomes that are 200% of the poverty threshold or greater.

Region—In the geographic classification of the U.S. population, States are grouped into the following four regions used by the U.S. Census Bureau:

| <i>Region</i> | <i>States included</i> |
|---------------|---|
| Northeast | Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania; |
| Midwest | Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska; |
| South | Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas; |
| West | Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii. |

For this report, an additional region called “Pacific States” was created. This region is a subset of the West and consists of the following states: Arizona, California, Hawaii, Oregon, and Washington. This additional region was created because of the high concentration of CAM schools in these States, State legislation favoring CAM, and the high concentration of immigrants in these States who may be using CAM.

Urban/rural—The assignment of “urban” or “rural” is based on a block’s 1990 Census designation.

Health behavior terms

Alcohol consumption status

Lifetime abstainer—Adults who had fewer than 12 drinks in entire lifetime.

Former drinker—Adults who had 12 drinks or more in lifetime, but had no drinks in the past year.

Current infrequent/light drinker—Adults who had at least 12 drinks in their lifetime and 1–11 drinks in the past year (infrequent) or three drinks or fewer per week, on average (light).

Current moderate/heavier drinker—Adults who had at least 12 drinks in their lifetime and more than 3 drinks per week up to 14 drinks per week, on average for men and more than 3 drinks per week up to 7 drinks per week, on average for women (moderate) or more than 14 drinks per week, on average for men and more than 7 drinks per week, on average for women (heavier).

Body weight status—Body weight status is based on body mass index (BMI), which is calculated from self-reported height and weight without shoes. BMI is calculated as weight divided by height² using metric units (i.e., kilograms/meter²).

Underweight—Adults with a body mass index of less than 18.5.

Healthy weight—Adults with a body mass index of at least 18.5, but less than 25.

Overweight but not obese—Adults with a body mass index of at least 25, but less than 30.

Obese—Adults with a body mass index of 30 or more.

Smoking status

Current—Adults who had smoked at least 100 cigarettes in their lifetime and currently smoked cigarettes every day or some days.

Former—Adults who had smoked at least 100 cigarettes in their lifetime, but did not currently smoke.

Never—Adults who never smoked a cigarette or who smoked fewer than 100 cigarettes in their entire lifetime.

Complementary and alternative medicine terms

Acupuncture—Acupuncture is based on the theory that health is determined by a balanced flow of energy (*chi* or *qi*), which is thought to be present in all living organisms. This life energy circulates throughout the body along a series of energy pathways (meridians). Each of these meridians is linked to specific internal organs and organ systems. Within this system of energy pathways, there are over 1,000 acupoints that can be stimulated through the insertion of needles. This is thought to help correct and rebalance the flow of life energy, and restore health. Acupuncture has been used to treat health problems and conditions ranging from the common cold to addiction and chronic fatigue syndrome.

Alternative provider or practitioner—Someone who is knowledgeable about a specific alternative health therapy provides care or gives advice about its use, and usually receives payment for his or her services.

For some therapies, the provider may have received formal training and may be certified by a licensing board or related professional association. For example, a practitioner of biofeedback (biofeedback therapist) has usually received training in psychology and physiology and may be certified by the Biofeedback Certification Institute of America.

Atkins diet—A diet emphasizing a drastic reduction in the daily intake of carbohydrates (to 40 grams or less), it is countered by an increase in protein and fat. According to proponents of this diet, obesity results from the over-consumption of carbohydrates, and reducing the intake of carbohydrates typically consumed for energy causes the body to lose weight by burning stored fat.

Ayurveda—This comprehensive system of medicine, developed in India over 5,000 years ago, places equal

emphasis on body, mind, and spirit. The goal is to restore the natural harmony of the individual. An ayurvedic doctor identifies an individual’s “constitution” or overall health profile by ascertaining the patient’s metabolic body type (Vata, Pitta, or Kapha) through a series of personal history questions. Then the patient’s “constitution” becomes the foundation for a specific treatment plan designed to guide the individual back into harmony with his or her environment. This plan may include dietary changes, exercise, yoga, meditation, massage, herbal tonics, and other remedies.

Biofeedback—This method teaches clients, through the use of simple electronic devices, how to consciously regulate normally unconscious bodily functions (e.g., breathing, heart rate, blood pressure) to improve overall health. Biofeedback has been used to reduce stress, eliminate headaches, recondition injured muscles, control asthmatic attacks, and relieve pain.

Chelation therapy—This therapy involves a series of intravenous injections of a binding (chelating) agent, such as the amino acid EDTA, to remove toxic metals and wastes from the bloodstream. Following injection, the binding agent travels through the bloodstream attaching itself to toxic metals and wastes, which are subsequently excreted through the patient’s urine. Used initially to treat lead poisoning, chelation therapy is used by a growing number of practitioners to treat and reverse the process of arteriosclerosis (hardening of the arteries).

Chiropractic care—This care involves the adjustment of the spine and joints to influence the body’s nervous system and natural defense mechanisms to alleviate pain and improve general health. It is primarily used to treat back problems, headaches, nerve inflammation, muscle spasms, and other injuries and traumas.

Complementary and alternative medicine—Therapies not usually taught in U.S. medical schools or generally available in U.S. hospitals, it includes a broad range of therapies and beliefs such as acupuncture, chiropractic care, relaxation techniques, massage therapy, and herbal remedies.

Deep breathing—Deep breathing involves slow, deep inhalation through the nose, usually for a count of 10, followed by slow and complete exhalation for a similar count. To help quiet the mind, one generally concentrates fully on breathing and counting through each cycle. The process may be repeated 5 to 10 times, several times a day.

Energy healing therapy/Reiki—This method helps the body's ability to heal itself through the flow and focusing of healing energy (Reiki means universal healing energy). During treatment, this healing energy is channeled through the hands of a practitioner into the client's body to restore a normal energy balance and health. Energy healing therapy has been used to treat a wide variety of ailments and health problems and is often used in conjunction with other alternative and conventional medical treatments.

Folk medicine—These systems of healing (such as Curanderismo and Native American healing) have persisted since the beginning of culture and have flourished long before the development of conventional medicine. Folk healers usually participate in a training regimen of observation and imitation, with healing often considered a gift passed down through several generations of a family. Folk healers may employ a range of remedies including prayer, healing touch or laying on of hands, charms, herbal teas or tinctures, magic rituals, and others. Folk healers are found in all cultures and operate under a variety of names and labels.

Guided imagery—This method involves a series of relaxation techniques followed by the visualization of detailed images, usually calm and peaceful in nature. If used for treatment, the client may visualize his/her body as healthy, strong, and free of the specific problem or condition. Sessions, conducted in groups or one-on-one, are typically 20–30 minutes and may be practiced several times a week. Guided imagery has been advocated for a number of chronic conditions, including headaches, stress, high blood pressure, and anxiety.

Healing circles—These spiritual gatherings usually occur in informal

settings, may involve invocations (calling upon a higher power or authority), and may use other healing approaches such as prayer, energy healing therapy/Reiki, and natural herbs.

High dose or megavitamin therapy—This therapy refers to the use of vitamins in excess of the Recommended Daily Allowances (RDA) established by the National Academy of Sciences, Food and Nutrition Board. Although these therapies have been used for the prevention and treatment of diseases and illnesses such as cancer, heart disease, schizophrenia, and the common cold, some high dose or megavitamin regimens can produce adverse or toxic effects.

Homeopathic treatment—This system of medical practice is based on the theory that any substance that can produce symptoms of disease or illness in a healthy person can cure those symptoms in a sick person. For example, someone suffering from insomnia may be given a homeopathic dose of coffee. Administered in diluted form, homeopathic remedies are derived from many natural sources, including plants, metals, and minerals. Numbering in the thousands, these remedies have been used to treat a wide variety of ailments including seasonal allergies, asthma, influenza, headaches, and indigestion.

Hypnosis—An altered state of consciousness, it is characterized by increased responsiveness to suggestion. The hypnotic state is attained by first relaxing the body, then shifting the client's attention toward a narrow range of objects or ideas as suggested by the hypnotist or hypnotherapist. The procedure is used to access various levels of the mind to effect positive changes in a person's behavior and to treat numerous health conditions. For example, hypnosis has been used to lose weight, improve sleep, and reduce pain and stress.

Laying on of hands—This religious ceremony involves the placement of hands, by one or more persons (lay or clergy), on the body of the recipient. Usually including prayer, the ceremony may occur in a church or less formal

setting and may be used for minor as well as more serious ailments and illnesses.

Macrobiotic diet—This low fat diet emphasizes whole grains and vegetables and restricts the intake of fluids. Consumption of fresh, unprocessed foods is especially important. Daily intakes break out as follows: 50–60% whole grains; 25–30% fresh vegetables; 5–10% beans, soy-based products, and sea vegetables; and 5–10% soups. Meat, poultry, dairy products, eggs, alcohol, coffee, caffeinated tea, sweets and sugar, and strong spices are to be avoided.

Massage—This therapy involves pressing, rubbing, and otherwise manipulating muscles and other soft tissues of the body, causing them to relax and lengthen and allowing pain-relieving oxygen and blood to flow to the affected area. Using their hands and sometimes feet, elbows, and forearms, massage therapists may use over 75 different methods, such as Swedish massage, deep-tissue massage, neuromuscular massage, and manual lymph drainage. Massage is considered effective for relieving any type of pain in the body's soft tissue, including back, neck, and shoulder pain, headaches, bursitis, and tendonitis.

Meditation—Mental calmness and physical relaxation is achieved by suspending the stream of thoughts that normally occupy the mind. Generally performed once or twice a day for approximately 20 minutes at a time, meditation is used to reduce stress, alter hormone levels, and elevate one's mood. In addition, a person experienced in meditation can achieve a reduction in blood pressure, adrenaline levels, heart rate, and skin temperature.

Natural products—See Nonvitamin, nonmineral, natural products.

Naturopathy—This broad system of medicine is based on the theory that the body is a self-regulating mechanism with the natural ability to maintain a state of health and wellness. Naturopathic doctors, who generally reject invasive techniques and the use of synthetic drugs, try to cure illness and disease by harnessing the body's natural healing powers. This is done with the use of various alternative and traditional techniques, including herbal medicine,

homeopathic treatment, massage, dietary supplements, and other physical therapies.

Nonvitamin, nonmineral, natural products—These products are taken by mouth and contain a dietary ingredient intended to supplement the diet other than vitamins and minerals. They include herbs or herbal medicine (as single herbs or mixtures), other botanical products such as soy or flax products, and dietary substances such as enzymes and glandulars. Among the most popular are echinacea, ginkgo biloba, ginseng, feverfew, garlic, kava kava, and saw palmetto. Garlic, for example, has been used to treat fevers, sore throats, digestive ailments, hardening of the arteries, and other health problems and conditions.

The text in this report uses a shorter version of the CAM therapy nonvitamin, nonmineral, natural products for conciseness and the tables use the complete term. The therapy nonvitamin, nonmineral, natural products is referred to as natural products in the text.

Ornish diet—This is a high fiber, low-fat vegetarian diet that promotes weight loss and health by controlling what one eats, not by restricting the intake of calories. Fruits, beans, grains, and vegetables can be eaten at all meals, and nonfat dairy products such as skim milk, nonfat cheeses, and egg whites are consumed in moderation. Products such as oils, avocados, nuts and seeds, and meats of all kinds are avoided.

Pritikin diet—This diet (or Pritikin Principle) is a low-fat diet (10% fat or less) that emphasizes the consumption of foods with a large volume of fiber and water (low in caloric density), including many vegetables, fruits, beans, and natural, unprocessed grains. According to this diet, weight loss will occur if the average caloric density of a meal is kept below 400 calories per pound.

Progressive relaxation—This therapy involves the successive tensing and relaxing of each of the 15 major muscle groups. Performed lying down, one generally begins with the head and progresses downward, tensing each muscle as tightly as possible for a count of 5 to 10 and then releasing it completely. Often combined with deep

breathing, progressive relaxation is particularly useful for reducing stress, relieving tension, and inducing sleep.

Qi gong—This ancient Chinese discipline combines the use of gentle physical movements, mental focus, and deep breathing designed to integrate the mind, body, and spirit, and to stimulate the flow of vital life energy (qi). Directed toward specific parts of the body, qi gong exercises are normally performed two or more times a week for 30 minutes at a time and have been used to treat a variety of ailments including asthma, arthritis, stress, lower back pain, allergies, diabetes, headaches, heart disease, hypertension, and chronic pain.

Reiki—See Energy healing therapy/ Reiki.

Tai chi—This Chinese self-defense discipline and low-intensity, low-impact exercise regimen is used for health, relaxation, and self-exploration. Usually performed daily, tai chi exercises include a set of forms, with each form comprising a series of body positions connected into one continuous movement. A single form may include up to 100 positions and may take as long as 20 minutes to complete. Some of the proposed benefits of tai chi include improved concentration, circulation, and posture, reduction of stress, and prevention of osteoporosis.

Vegetarian diets—These diets are devoid of meat. There are, however, numerous variations on the nonmeat theme. For example, some vegetarian diets are restricted to plant products only, and others may include eggs and dairy products. Another variation limits food consumption to raw fruit, sometimes supplemented with nuts and vegetables. Some vegetarian diets prohibit alcohol, sugar, caffeine, or processed foods.

Yoga—This combination of breathing exercises, physical postures, and meditation, practiced for over 5,000 years, calms the nervous system and balances body, mind, and spirit. It is thought to prevent specific diseases and maladies by keeping the energy meridians (see acupuncture) open and life energy (qi) flowing. Usually performed in classes, sessions are conducted at least once a week and for

approximately 45 minutes. Yoga has been used to lower blood pressure, reduce stress, and improve coordination, flexibility, concentration, sleep, and digestion. It has also been used as supplementary therapy for such diverse conditions as cancer, diabetes, asthma, and AIDS.

Zone diet—Each meal in this diet consists of a small amount of low-fat protein (30%), fats (30%), and carbohydrates in the form of fiber-rich fruits and vegetables (40%). The basic goal is to alter the body's metabolism by controlling the production of key hormones. According to proponents, this will aid in weight loss, help prevent heart disease, high blood pressure, diabetes, and enhance athletic performance.

Complementary and alternative medicine questions

The 2002 National Health Interview Survey Sample Adult questionnaire included questions on complementary and alternative medicine (CAM). Each question is preceded by its question number, beginning with ALT. ALT is the acronym for the CAM section of the Sample Adult questionnaire. Due to the unusually large number of questions used to produce the data used in this report and the complexity of the question skip patterns, CAM questions have not been included in this report. The CAM questions, which are located in the Sample Adult questionnaire, and information about other components of the NHIS are available at www.cdc.gov/nchs/nhis.htm.

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