

FYI from the NHLBI



Public Interest News from the National Heart, Lung, and Blood Institute

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Studies Quantify the Value of Medical Research to the U.S. Economy

It is relatively straightforward to assess the impact of medical research on human health by measuring increases in life expectancy, decreases in infant mortality, changes in hospitalization rates, and decreases in death rates from specific diseases such as heart failure or stroke. However, establishing the monetary value of medical research is more difficult. The Mary Woodard Lasker Charitable Trust's report entitled *Exceptional Returns: The Economic Value of America's Investment in Medical Research* focuses on six independent attempts to establish this value; while the results differ as widely as the methods used, all of the values are impressive. The report is based on research papers by leading economists, each of whom concludes that medical research has produced exceptionally high returns and that the nation's continued investment is likely to deliver returns of similar magnitude in the future. The authors' remarkable conclusions include:

- "Increases in life expectancy in just the decades of the 1970's and 1980's were worth \$57 trillion to Americans - a figure six times larger than the entire output of tangible good[s] and services [in 1999]. The gains associated with the prevention and treatment of cardiovascular disease alone totaled \$31 trillion."
- "Improvements in health account for almost one-half of the actual gain in American living standards in the past 50 years."
- "Medical research that reduced deaths from cancer by just one-fifth would be worth \$10 trillion to Americans - double the national debt."
- "While it is not always possible to pin down cause and effect, the likely returns from medical research are so extraordinarily high that the payoff from any plausible 'portfolio' of investments in research would be enormous."

The full report is available through the Mary Woodard Lasker Charitable Trust's Web page (www.laskerfoundation.org/fundingfirst).

The NHLBI Pairs with Communities to Prevent Obesity and Heart Disease

This summer, the NHLBI and the National Recreation and Park Association kicked off a community-based program, Hearts N' Parks, to increase the number of children and adults practicing heart-healthy behaviors. "Hearts N' Parks builds upon the NHLBI's efforts to work with communities to reduce the prevalence of coronary heart disease," said NHLBI Director Claude Lenfant, MD. "It is a fine example of how we can apply what research has shown to improve the health of all Americans."

Hearts N' Parks The program was piloted last year in 12 North Carolina communities. Children in the communities reported learning new activities and improving their performance in others; seniors completing the program reported feeling healthier and experiencing less pain in their daily lives.

"A major goal of Healthy People 2010 is reducing obesity, as well as improving the nutritional status and level of physical activity among all Americans," said Surgeon General Dr. David Satcher. "Hearts N' Parks shows what the federal government can accomplish with community and private sector support to improve the health of Americans from all ethnic and socioeconomic backgrounds."

Organizations interested in joining the program should visit the Hearts N' Parks Web site through the NHLBI's home page (www.nhlbi.nih.gov).



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The NHLBI's Second Annual Public Interest Organization Meeting is Scheduled for 2001

For the second year in a row, the NHLBI will meet with representatives from public interest organizations (PIOs) to learn how better to meet their constituents' needs. Compared to the agenda of the first meeting, the program for the 2001 event includes more opportunities for the representatives to exchange ideas and fewer formal presentations. Although the specific topics have not been finalized, the meeting is likely to include opportunities for the groups to share ideas on fund-raising, involvement in the legislative process, and participation in medical research.

The meeting is scheduled for January 31, 2001, which is the day before the February National Heart, Lung, and Blood Advisory Council meeting. The Council members, many of whom plan to attend the PIO Meeting, hope that interested representatives will attend the public Council meeting the following day.

161,000 Volunteers Strive to Improve the Health of Women

Heart disease, breast and colorectal cancer, and osteoporosis are the major causes of death, disability, and frailty in older women of all races. Although progress has been made in understanding how to diagnose and treat these diseases, more information is needed if we are to achieve our ultimate goal - prevention.

To give women and their physicians better information, over 161,000 female volunteers, aged 50-79, are participating in the Women's Health Initiative (WHI) at 40 clinical centers throughout the country. Approximately 68,000 of these women have enrolled in clinical trials to address the effects of hormone replacement therapy, diet modification, and dietary supplements on disease prevention. Over 93,000 others are allowing their medical history and health habits to be tracked by scientists who are examining the relationships between lifestyle, health and risk factors, and specific diseases.

Community programs are another facet of WHI. The NIH and the Centers for Disease Control and Prevention are supporting health promotion programs in seven states to develop community-based efforts encouraging healthful behaviors in women aged 40 and over.

The WHI is one of the largest U.S. prevention studies of its kind. It is in its ninth year and is expected to report its main results in 2005. It is administered by the NHLBI; other NIH institutes contribute their expertise by participating in the consortium that runs the program. To read more about the WHI, visit the WHI Web site at www.nhlbi.nih.gov/whi.



News From Capitol Hill

The House and Senate have passed the FY 2001 appropriations bills that include funding for the NHLBI. The Senate gave the NIH a 15 percent increase over FY 2000, with slightly more than \$2.3 billion allotted to the NHLBI. The House currently has allocated only enough funds to give the NIH a 5.6 percent increase, the same as President Clinton's request. At the 5.6 percent level, the House would give the NHLBI about \$2.1 billion. However, the House remains committed to a 15 percent increase for the NIH and is trying to find sufficient funding to provide it. If successful, the House, too, would provide somewhat more than \$2.3 billion to the NHLBI. Members of the House and Senate have negotiated a compromise bill that will be voted on by the full House and Senate after their August recess. If approved, the bill will then be sent to the President for signature.

The House and Senate Appropriations Reports urged the NHLBI to give top priority to cardiovascular disease (CVD) and to expand CVD research in women. They expressed interest in asthma, the NHLBI Thalassemia Clinical Research Network, hemophilia gene therapy, and development of a workshop on hypertension and kidney disease. The reports also encouraged studies of weight loss maintenance and examination of behaviors that influence obesity and weight loss; basic research, gene therapy, and clinical trials of promising drugs for the treatment of primary pulmonary hypertension; and research on innovative theories about behavioral, cultural, social, psychological, and environmental methods to increase adherence to lifestyle and medical regimens. You can check the status of these bills online at lcweb.loc.gov/global/legislative/appover.html, under "Labor, HHS, Ed."

Presidential Action Promotes Clinical Trials

On June 7, President Clinton issued an Executive Memorandum directing the Medicare program to (1) reimburse providers for the cost of routine patient care associated with participation in clinical trials and (2) to promote participation of Medicare beneficiaries in clinical trials for all diseases. The June 7 press release on this topic can be accessed at www.whitehouse.gov/WH/Work/060700.html.

New NHLBI Research Initiatives

From time to time, the NHLBI invites investigators to submit grant applications or contract proposals for specific research programs. We currently are soliciting applications for the following programs. Unless a due date is noted below, applications are accepted for February 1, June 1, and October 1 deadlines each year. For a full description of these and other research initiatives, visit www.nhlbi.nih.gov/funding/inits/index.htm.

Ancillary Studies in Heart, Lung, and Blood Disease Trials (RFA-HL-00-012)

- Application Due: see announcement
- Objective: To promote cost-effective utilization of resources collected in the course of clinical trials.

Biobehavioral Research for Effective Sleep (PA-00-046)

- Objective: To support research related to sleep-related problems found in healthy and chronically ill individuals with acute and chronic sleep deprivation.

Cellular and Molecular Mechanisms of Primary Pulmonary Hypertension (PA-00-043)

- Objective: To promote research in primary pulmonary hypertension with an emphasis on understanding the disease mechanism.

Immunopathogenesis of Chronic Graft Rejection (RFA-AI-00-013)

- Application Due: 10/23/00
- Objective: To elucidate the cellular and molecular mechanisms involved in chronic allograft rejection; to implement new, or improve existing, approaches to enhance graft survival; or, to develop new tools to aid in diagnosing the outcome of allograft transplant.

Network for Large-Scale Sequencing of the Rat Genome (RFA-HG-00-002)

- Application Due: 9/21/00
- Objective: To generate a working draft sequence of the rat genome in two years.

Pediatric Heart Disease Clinical Research Network (RFA-HL-00-013)

- Application Due: 11/20/00
- Objective: To promote the evaluation and communication of novel treatment management strategies for children with heart disease.

SCOR: Molecular Medicine and Atherosclerosis (RFA- HL-00-015)

- Application Due: 6/15/01
- Objective: To support molecular research on the etiology and pathophysiology of atherosclerosis.

Self-Management Strategies Across Chronic Diseases (PA-00-109)

- Objective: To expand research on established self-management interventions, such as those used in treating blood disorders, and understand their implications in treating other chronic diseases.

Recent Advances from the NHLBI

Advisory for Treating Hypertension in Patients with Type 2 Diabetes Could Affect Millions of Americans

In May, the *Journal of Clinical Hypertension* published a clinical advisory from the NHLBI National High Blood Pressure Education Program recommending that physicians be more aggressive in lowering the blood pressure of patients who have both hypertension and diabetes. Both conditions are independent risk factors for cardiovascular disease and coexist in over 5 million Americans.

Patients with both hypertension and diabetes should work with their physicians to lower their blood pressures to 135/80 mm Hg. The goal blood pressure for a patient with hypertension but without diabetes should be 140/90 mm Hg.

Researchers Discover Gene for Primary Pulmonary Hypertension

Two groups of scientists funded by the NHLBI have identified a genetic mutation associated with primary pulmonary hypertension (PPH), a rare but devastating lung disease. The discoveries, published in *Nature Genetics* and the *American Journal of Human Genetics*, provide new insights regarding the molecular basis of PPH and open new avenues for studying both familial and sporadic PPH.

Said NHLBI Director Dr. Claude Lenfant, "This research is the culmination of nearly 20 years of work to identify possible immunologic and genetic factors in the cause and progression of PPH. Now that we have pinpointed a gene, we can focus on learning how it works. That information should enable us to devise better treatments and perhaps eventually a preventive therapy or cure."

The National Heart, Lung, and Blood Advisory Council's May 2000 Meeting

The National Heart, Lung, and Blood Advisory Council met May 18 in Bethesda, MD. Full minutes of Council meetings are available at www.nhlbi.nih.gov/meetings/nhlbac/index.htm.

Of great interest was the presentation on the Rat Genome Sequencing Project by Dr. Francis Collins, Director of the National Human Genome Research Institute, and Dr. Howard Jacob of the Medical College of Wisconsin. The sequencing of the human genome is nearly completed and sequencing of the mouse genome started in 1999; Drs. Collins and Jacob believe that it is appropriate to begin sequencing the rat genome. Having a trio of mammalian genomic sequences, i.e., the human, mouse, and rat, would facilitate identification of individual genes and increase the speed of medical research. The project is especially applicable to NHLBI research because of the large number of existing rat models for diseases within the purview of the NHLBI and the vast amount of data associated with these models.

The Council received updates on several ongoing NHLBI activities. Dr. Carl Roth reported on follow-up activities to the February meeting of the public interest organizations (PIOs). He described the May issue of the *FYI from the NHLBI*, which was provided to the Council. The Council is enthusiastic about working with the PIOs, and many members plan to attend the next PIO meeting on January 31, 2001.

Dr. Roth also presented the NHLBI Strategic Plan for Health Disparities Research, introduced by Dr. Ruth Kirschstein, Acting Director of NIH, at the previous Council meeting.

Dr. Teri Manolio reported on the NHLBI Research Training and Career Development workshop. The dwindling number of clinical

researchers will have a dramatic impact on future research if the trend does not reverse. Through implementation of the workshop's recommendations, the NHLBI's training programs will match the needs of 21st century researchers and the opportunities available to them.

In recognition of National High Blood Pressure Education Month, Dr. Lenfant introduced the National High Blood Pressure Education Program's campaign to improve control of systolic hypertension by increasing awareness of the problem among patients and their physicians.

The Council met with NHLBI representatives to discuss proposed research initiatives that have been reviewed by the Board of Extramural Advisors. In the Report of the Director, Dr. Lenfant described the projected impact of President Clinton's proposed budget for FY 2001. In 1999, the average cost of a grant rose by about \$50,000. This increase was not only because of inflation, but also due to the increasing costs of performing research. If the NHLBI budget is the 5.6 percent increase proposed by the President, the NHLBI would be forced to decrease the number of competing grant awards.

At this meeting, the Council awarded 370 grants for a total cost of \$139,342,000.

The Council's next meeting is scheduled for September 7, 2000, at 8:30 AM. The meeting is open to the public and will be held at the NIH in Building 31C, Conference Room 10.

The *FYI from the NHLBI* staff thanks Mrs. Judith Simpson, member of the NHLBAC and Vice President, Pulmonary Hypertension Association, for her efforts in preparing this article.

Spotlight on Our Web Site

An Interactive Guide to Lowering Cholesterol: The NHLBI National Cholesterol Education Program has a Web page, "Live Healthier, Live Longer," at www.nhlbi.nih.gov/chd. The site, which is both for people who want to prevent heart disease and for those who already have coronary heart disease, includes interactive tests and quizzes and features such as Cyber Kitchen, Virtual Grocery Store, Create a Diet, and Virtual Fitness Room. The site has new tips for lowering cholesterol and a link to the Web-based version of the community kit sent to health planners for National Cholesterol Education Month. To help you lower your cholesterol or maintain an already heart-healthy lifestyle, the pages also contain tools to help you plan heart-healthy menus and cut down on saturated fat in your diet, and practical tips on relevant topics such as how to eat right when dining out or attending social events.

New Publication for Primary Care Physicians Available

Online: The NHLBI National Center on Sleep Disorders Research has announced the publication of *Restless Legs Syndrome: Detection and Management in Primary Care*. Restless Legs Syndrome (RLS) is a common, underdiagnosed, and treatable condition. A neurological movement disorder, RLS is often associated with a sleep complaint. This publication provides science-based information about RLS and its assessment and management in the primary care setting. This new report can be obtained in PDF file format from www.nhlbi.nih.gov/health/prof/sleep/rls_gde.htm.

Need More Information?

- For **health related questions and publications**, please contact the trained information specialists at the NHLBI Information Center (NHLBInfo@rover.nhlbi.nih.gov) or write to the Information Center at P.O. Box 30105, Bethesda, MD 20824-0105.
- For communications pertaining to NHLBI **policies and priorities**, contact the NHLBI Office of Legislative and Public Liaison (SL34V@nih.gov).
- For **additional information regarding NHLBI's Calendar of Events**, consult the references provided or www.nhlbi.nih.gov/calendar/nhcal.htm. Most NIH Institutes also maintain calendars, accessible through their Web sites. Links to the Institutes' Web pages are at www.nih.gov/icd.

Upcoming Events			
Date	Activity	Description	For Additional Information
9/5/00 - 9/6/00	Workshop: Nitric Oxide as a Therapeutic Agent for Sickle Cell Disease and other Vascular Diseases	NIH Main Campus, Lister Hill Auditorium, Bethesda, MD. The workshop will focus on the role of nitric oxide in various diseases and conditions and how this knowledge can be applied to developing treatments for sickle cell disease and other vascular diseases.	www.nhlbi.nih.gov/meetings/workshops/NOinSCD.htm
9/7/00	National Heart, Lung, and Blood Advisory Council	8:30am - 2:00pm, NIH Main Campus, Building 31C, Conference Room 10, Bethesda, MD.	www.nhlbi.nih.gov/meetings/nhlbac
9/18/00	Workshop: CNS Disease in Children with Sickle Cell Disease	8:45am - 5:00pm, NIH Main Campus, Natcher Conference Center, Bethesda, MD.	call Dr. Bonds at (301) 435-0055
9/21/00 - 9/24/00	American Association of Cardiovascular and Pulmonary Rehabilitation Annual Meeting	Tampa, FL. Targeted toward physicians and other health care professionals, this meeting focuses on advances in the cardiovascular and pulmonary rehabilitation field.	www.aacvpr.org
10/2/00 - 10/3/00	National Asthma Education and Prevention Program	Reston, VA. The goal of the NAEPP is to decrease asthma-related morbidity and mortality by educating patients, health professionals, and the public.	www.nhlbi.nih.gov/about/naepp
10/7/00- 10/10/00	46th International Respiratory Congress	Cincinnati, OH. The purpose of the meeting is to provide opportunities for health care providers to exchange information about patient care.	www.aarc.org/education/congress
10/16/00- 10/19/00	American Dietetic Association Annual Meeting and Exhibition	Denver, CO. Topics include the latest research on functional foods, genetics, complementary medicine, obesity, diabetes, and ethnic cuisine.	www.eatright.org/ame
10/19/00	National Heart, Lung, and Blood Advisory Council	8:30am - 2:00pm, NIH Main Campus, Building 31C, Conference Room 10, Bethesda, MD.	www.nhlbi.nih.gov/meetings/nhlbac
10/22/00 - 10/26/00	American College of Chest Physicians 66th Annual International Scientific Assembly	San Francisco, CA. The focus of CHEST 2000 is pulmonary and critical care medicine, cardiac and thoracic surgery, sleep disorders, home care, practice administration, hypertension, and allergies.	www.chestnet.org/CHEST/2000/
11/12/00 - 11/15/00	American Heart Association 73rd Annual Scientific Session	New Orleans, LA. The program is directed towards educating medical professionals about advancements in medical research.	www.scientificsessions.org
11/12/00 - 11/16/00	American Public Health Association 128th Annual Meeting	Boston, MA. "Eliminating Health Disparities" is the theme of this year's meeting, which is targeted towards public health professionals.	www.apha.org/meetings
12/1/00- 12/5/00	American Society of Hematology 42nd Annual Meeting	San Francisco, CA. This meeting, which is directed toward the research community, is to promote the exchange of information and ideas relating to blood, blood-forming tissues, and blood diseases.	www.hematology.org/meeting/
12/6/00	Sleep Disorders Research Advisory Board Meeting	8:00am - 1:30pm, NIH Main Campus Building 31C, Conference Room 10, Bethesda, MD.	email Dr. Twery at twerymj@nhlbi.nih.gov



September is National Cholesterol Education Month

"Keep the beat - Cholesterol counts for everyone" continues to be the theme for Cholesterol Education Month 2000. To spread the word about how people can reduce their risk of coronary heart disease by keeping their cholesterol levels down, the National Cholesterol Education Program is reaching out to program developers in health departments, hospitals, and community organizations who are interested in helping to raise cholesterol awareness. The NHLBI also is distributing an article to newspapers and magazines about the benefits of lowering cholesterol for all adults - young, middle-aged, and seniors - and is producing an online kit that can be accessed through the NHLBI's home page (under "Highlights"). In addition to news articles, the kit contains ideas for cholesterol education activities, recipes, samples of education materials, and a Cholesterol Education Month Pledge.

Although September is National Cholesterol Education Month, we hope you continue to make and maintain heart-healthy lifestyle changes throughout the year. Please, help us raise awareness about preventions and treatments for coronary heart disease and the other diseases mentioned in this issue by circulating *FYI from the NHLBI* to people who might be interested. This and future issues can be accessed from the NHLBI's Web site (www.nhlbi.nih.gov).

Constituents' Corner

We are reserving space for you, our readers, to share ideas and broadcast opinions. We invite you to submit your comments, thoughts, and suggestions via email (NHLBI.Listens@nih.gov) or snail mail (Public Interest News, c/o Office of Science and Technology, Building 31, Room 5A03, 31 Center Drive, MSC-2482 Bethesda, MD 20892-2482). We also are considering the addition of a separate "Bulletin Board" where organizations can announce upcoming activities. For now, those announcements also can be sent to the above addresses.

Cholesterol Counts for Everyone

Coronary heart disease (CHD) is the number one cause of death for both men and women in the United States. The risk of getting CHD is very high; one out of every two men and one out of every three women will develop CHD in their lifetime. Up to three-quarters of Americans over the age of 65 have either obvious or subclinical disease. Fortunately, most people can reduce their risk of getting this debilitating and often fatal disease by making simple lifestyle changes. One such change is to reduce their cholesterol levels.

Blood cholesterol plays an important part in determining a person's likelihood of getting CHD. The higher the cholesterol level, the greater the risk. Clinical trials have shown that cholesterol lowering by both men and women can prolong life. It reduces the risk of having a heart attack and dying of CHD.

The early stages of cholesterol buildup in the arteries that lays the groundwork for CHD begin during the teen years and early 20s. Establishing a healthy eating pattern and other positive habits early in life are important steps for keeping CHD risk low. It is important for young adults to have their cholesterol levels measured and adopt habits that decrease their likelihood of getting CHD. Waiting until mid-life to measure and treat cholesterol is risky. Approximately one-third of first CHD events are fatal, leaving no second chance.

Lowering cholesterol also is beneficial for middle-aged adults and seniors. One in three men who reach 70 years of age without developing CHD will develop it within his remaining years. For women who are CHD-free at age 70, the risk also is high; one in four such women will go on to have CHD.

The basic steps to lower cholesterol are simple: follow a diet low in saturated fat and cholesterol, be physically active, and maintain a healthy weight. For help on implementing these lifestyle changes, visit the National Cholesterol Education Program Web site at www.nhlbi.nih.gov/chd.