

Prayer and Spirituality in Health: Ancient Practices, Modern Science



© Duncan Walker

People have used prayer and other spiritual practices for their own and others' health concerns for thousands of years. Scientific investigation of these practices has begun quite recently, however, to better understand whether they work; if so, how; and for what diseases/conditions and populations. The

National Center for Complementary and Alternative Medicine (NCCAM) is supporting research in this arena.

Many Americans are using prayer and other spiritual practices. This was confirmed by findings from the largest and most comprehensive survey to date on Americans' use of complementary and alternative medicine (see Barnes PM et al. in "Sources"). This survey of more than 31,000 adults, released in May 2004 by the National Center for Health Statistics and NCCAM, found that 36 percent had used complementary and alternative medicine (CAM), when prayer was not included in the definition of CAM; when prayer was included in the definition of CAM, 62 percent had used CAM (all figures refer to use in the preceding 12 months). Among the respondents:

- 45 percent had used prayer for health reasons.
- 43 percent had prayed for their own health.
- Almost 25 percent had had others pray for them.

- Almost 10 percent had participated in a prayer group for their health.

Prayer was the therapy most commonly used among all the CAM therapies included in the survey. The report also addressed the use of other CAM approaches that can have a spiritual component, including meditation, yoga, tai chi, qi gong, and Reiki.¹

Stephen E. Straus, M.D., Director of NCCAM, said, "Prayer and spirituality for the benefit of health are relied upon by many Americans. NCCAM seeks to develop strategies to bring the most rigorous and detailed scientific approaches to studying these and other CAM practices so that we can understand the health impact that these practices might have."

Catherine Stoney, Ph.D., a Program Officer in NCCAM's Division of Extramural Research and Training, oversees many grants in NCCAM's mind-body portfolio (see pg. 2). She noted: "There is already some preliminary evidence for a connection between prayer and related practices and health outcomes. For example, we've seen some evidence that religious affiliation and religious practices are associated with health and mortality—in other words, with better health and longer life. Such connections may involve immune function,

(continued on page 2)

¹ For definitions or other information on these or any other CAM therapies, contact the NCCAM Clearinghouse (see pg. 2).

INSIDE

- 3 NCCAM's New Strategic Plan
- 4 Research Roundup
- 5 Herb-Drug Interactions
- 6 News for Researchers
- 6 Acupuncture for Knee Osteoarthritis
- 7 Melatonin Report
- 7 Calendar of Events
- 8 Institute of Medicine's CAM Report

NATIONAL CENTER
FOR COMPLEMENTARY AND
ALTERNATIVE MEDICINE

NATIONAL INSTITUTES
OF HEALTH

U.S. DEPARTMENT OF
HEALTH AND HUMAN
SERVICES

CAM at the NIH:

Focus on Complementary and Alternative Medicine

is published by the National Center for Complementary and Alternative Medicine, National Institutes of Health.

Subscriptions: For a free subscription (by postal mail or e-mail), contact:

NCCAM Clearinghouse

Toll-free in the U.S.:

1-888-644-6226

TTY (for deaf and

hard-of-hearing callers):

1-866-464-3615

Web site: nccam.nih.gov

E-mail: info@nccam.nih.gov

Editorial Address:

CAM at the NIH

P.O. Box 7923

Gaithersburg, MD

20898-7923, or

info@nccam.nih.gov

Prayer and Spirituality in Health

(continued from page 1)

cardiovascular function, and/or other physiological changes.” However, she added, this is by no means proven: “For some individuals, religious practices are an effective way of coping with stress, and the beneficial health effects may come about by reducing stress. For others, religious practices may not result in reduced stress or be associated with health benefits. It can be challenging to separate out these effects because people have different ideas regarding the meaning of various practices. For this reason, we are particularly interested in understanding the impact of personal, positive meaning on health.”

Other challenges in this very new field of research include:

- The fact that different researchers have defined prayer, spirituality, and related concepts in different ways
- A relative lack of standardized questionnaires (compared with many other fields of medicine)

The Science of Mind-Body Medicine

These practices form a small part of a large domain (area of knowledge) of CAM: mind-body medicine, which involves the interaction of mind, brain, other body systems, behavior, and, ultimately, health and disease. Some examples of other mind-body practices include relaxation techniques, hypnosis, various forms of meditation, yoga, and tai chi. Mind-body medicine is one of NCCAM’s current research priorities. Through this research, the Center seeks to discover means for enhancing and accelerating the healing process beyond the effects of conventional medicine; preventing, treating, and slowing the progression of diseases and disorders; reducing the burden of stress-related chronic illnesses; and enhancing people’s resilience and coping—all toward improving public health and well-being.

Many mind-body techniques date back to ancient times. In recent years, science has found evidence that patients faced with chronic and even terminal illnesses—particularly conditions like heart disease and cancer—can learn and utilize a variety of mind-body practices to achieve symptom relief, a better quality of life, and, in some cases, improvements in health outcomes. (To find out more, see NCCAM’s backgrounder “Mind-Body Medicine: An Overview” in “Sources.”) The clinical reports of these effects are supported by a growing body of basic and clinical research. These studies are aimed at better understanding the underlying mechanisms at work at genetic, molecular, and cellular levels. They look at markers and measures in the body and draw upon an array of high-technology tools and techniques, such as brain imaging.

“The growing body of physiological evidence about these approaches is helping to shatter a long-held cultural belief in the West that mind and body are separate,” noted Dr. Straus. “Indeed, the potential exists for safe and effective mind-body practices to add to the repertoire of conventional medicine. NCCAM is working to move study in this important field forward.”

Defining Terms

What does NCCAM mean by studies on prayer and spirituality? It is important to start by explaining what 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 as practiced in the United States.² Within CAM, prayer is defined by NCCAM

² Conventional medicine is a whole medical system practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses. Other terms for conventional medicine include allopathy; Western, mainstream, and orthodox medicine; and biomedicine. In CAM, complementary medicine is used along with conventional medicine, and alternative medicine is used instead of conventional medicine. Some practitioners of conventional medicine are also practitioners of CAM.

as an active process of appealing to a higher spiritual power, specifically for health reasons; it includes individual or group prayer on behalf of oneself or others. Spirituality is broader; it is defined by NCCAM as an individual's sense of purpose and meaning to life, beyond material values. Spirituality may be practiced in many ways, including through religion.

Snapshots of NCCAM Research

NCCAM is funding several studies of prayer and other explicitly spiritual practices. Goals range from improving quality of life, to looking at the impact of these practices on the immune system and on serious chronic health conditions, to assisting people through the end of life.

Spirituality in the Context of Chronic Illness

Joel Tsevat, M.D., Director of Outcomes Research in the Department of Internal Medicine at the University of Cincinnati, is completing a study of the will to live in patients with HIV/AIDS. His team is using several standardized tools that measure different aspects of spirituality, such as a sense of meaning and peace and faith, religious coping measures, and involvement in organized and nonorganized religious activity. They are also looking at measures of health status, health concerns, depression, self-esteem, and social support. The study involves interviews with 350 individuals with HIV/AIDS in Cincinnati and Washington, D.C.

Dr. Tsevat became interested in studying spirituality during earlier research with patients with HIV/AIDS. "Patients were telling us that they had discovered new meaning and purpose in their lives since being diagnosed with HIV," Dr. Tsevat said. "The spirituality theme emerged when we asked patients whether they would choose their health as it is or take a gamble between death and perfect health." People who were spiritual tended to be happier with their current health status and less likely to take the described risk.

"We tend to focus just on what medical professionals can address—physical functioning and mental health," said Dr. Tsevat. "In the scheme of things, I think spiritual well-being is also an important component of someone's quality of life."

Spirituality, Immunity, and Emotional Well-Being

Several NCCAM-supported researchers in New York City are exploring the impact of spirituality on the immune system and its role in emotional well-being among cancer patients.

Barry Rosenfeld, Ph.D., and graduate student Colleen McClain, M.A., of Fordham University, and William Breitbart, M.D., of Memorial Sloan-Kettering Cancer Center, published results in 2003 of an NCCAM-funded study on the effect of spiritual well-being on end-of-life despair in terminally ill cancer patients. They concluded that spiritual well-being offers some protection—a buffer effect—against end-of-life despair in patients for whom death is imminent. These researchers are now studying spirituality-based interventions to establish methods that can help engender a sense of peace and meaning.

"When people despair, they feel nothing they've done has had any meaning. We help them remember things they've forgotten during the throes of their illness so they can realistically place themselves in the world," Dr. Rosenfeld said. The approach is spiritually based, he said, but "we have tried to not have it linked to any particular religious framework, keeping it open to as many individuals who are interested."

To determine whether immune function is a link between spirituality and emotional well-being, the three researchers are also now collaborating, under another NCCAM grant, to measure spirituality and interleukin-6 (IL-6) levels in the blood among terminally ill cancer patients. "There is a small, but growing, body of literature linking immune function to mood, and

(continued on page 4)

NCCAM Releases New Strategic Plan

Following a year of intensive information gathering, planning, and deliberations, NCCAM released *Expanding Horizons of Health Care: Strategic Plan, 2005–2009*, charting the Center's goals and objectives for the next 5 years. Throughout the process, NCCAM invited stakeholders to participate, and several hundred contributed insights that helped to shape the plan. Thanks again to all who shared their creative ideas and critiques of successive drafts.

The final document presents a series of goals and objectives to guide NCCAM in prioritizing initiatives in four strategic areas: investing in research, training CAM investigators, expanding outreach, and advancing our organization. The plan also affirms NCCAM's original vision—to advance research to yield insights and tools derived from CAM practices to benefit the health and well-being of the public, while enabling an informed public to reject ineffective or unsafe practices.

For a copy, go to nccam.nih.gov/about/plans/2005, or contact the NCCAM Clearinghouse (see pg. 2).

Research Roundup

"Research Roundup," a new feature, presents examples of recent reports on NCCAM-funded research, published in peer-reviewed journals listed in the National Library of Medicine's PubMed database.

Do Weight-Loss Supplements Work?

More than 175 supplement products are marketed for weight loss. But are these supplements—which do not need Food and Drug Administration approval before they are marketed—safe and effective for patients to take?

In the November 1, 2004, issue of *American Family Physician*, Harvard Medical School researchers led by Robert B. Saper, M.D., M.P.H., looked at many supplements, including ephedra, ginseng, chromium, psyllium, and L-carnitine. They pointed out that ephedra is associated with serious side effects (its sale is now banned in the United States), and the long-term safety of chromium has not been determined. There is insufficient evidence or conflicting information on the safety and effectiveness of most of the other products. The authors concluded none of the products could be recommended for weight loss.

Immune System Benefits?

Many CAM therapies claim to boost the immune system and help the body protect itself from disease. What is the evidence, and how can this topic be best

(continued on page 5)

Prayer and Spirituality in Health

(continued from page 3)

IL-6 is the immune marker most highly correlated with mood states," Dr. Rosenfeld said. IL-6 is a protein that acts on other cells to regulate immune system function. It is one of several markers of inflammation, an important process in a variety of diseases like heart disease, diabetes, and stroke, and is associated with increased stress and depression.

Earlier Studies

Since its founding in 1999, NCCAM has supported a small number of research grants on prayer and spirituality. Examples of published research results include:

- Kathi Kemper, M.D., et al., of Wake Forest University School of Medicine, researched how to make clinical practice in pediatrics most effective in light of the spiritual diversity within this population.
- Whitney Dessio, et al., of Stony Brook School of Medicine, studied the prevalence and patterns of the use of religion and spirituality for health reasons among African-American women, as part of a larger study of CAM use among women. Among their findings were that 43 percent of participants had used religion/spirituality for health reasons in the past year; that they most often used these practices for serious conditions such as cancer, heart disease, and depression; and that compared with the other study participants, they were more likely to have used CAM and to have seen a medical doctor during the previous year.
- Anne M. McCaffrey, M.D., et al., of Harvard Medical School, analyzed data on the use of prayer from a survey published in 1998 (also done at Harvard) of the use of CAM. Among their findings were that out of 2,055 participants, 35 percent used prayer for health concerns; among them, 75 percent prayed for wellness and 22 percent prayed for specific medical conditions.

Future Directions

Looking toward the future, Margaret A. Chesney, Ph.D., NCCAM's Deputy Director and Director of the Division of Extramural Research and Training, said, "We at NCCAM look forward to finding out more from studies that examine ways that positive psychological states (including those that may occur in prayer) may be associated with positive health outcomes. We are also interested in finding out more about the health-enhancing effects that occur for persons who are able to experience serenity, positive meaning, and personal growth when confronted with challenge—such as daily stress or serious or chronic illness." She added, "The advantage of focusing our research on positive psychological states, such as positive meaning, is that people can be trained to increase these states, and the subsequent effects on well-being and health can be directly measured. By advancing the focus of research from prayer and spirituality to positive meaning and personal growth, NCCAM will be in a far better position to apply scientific rigor to this domain and to make discoveries that will be applicable to the widest range of people." ■

Sources

Barnes PM, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults: United States, 2002. *CDC Advance Data Report #343*. 2004. Accessed at <http://nccam.nih.gov/news/report.pdf> on January 17, 2005.

Dessio W, Wade C, Chao M, et al. Religion, spirituality, and healthcare choices of African-American women: results of a national survey. *Ethnicity & Disease*. 2004;14(2):189-197.

Kemper KJ, Barnes L. Considering culture, complementary medicine, and spirituality in pediatrics. *Clinical Pediatrics*. 2003;42(3):205-208.

McCaffrey AM, Eisenberg DM, Legedza AT, et al. Prayer for health concerns: results of a national survey on prevalence and patterns of use. *Archives of Internal Medicine*. 2004;164(8):858-862.

McClain CS, Rosenfeld B, Breitbart W. Effect of spiritual well-being on end-of-life despair in terminally-ill cancer patients. *Lancet*. 2003; 361(9369):1603-1607.

National Center for Complementary and Alternative Medicine. *Mind-Body Medicine: An Overview*. National Center for Complementary and Alternative Medicine Web site. Accessed at <http://nccam.nih.gov/health/backgrounds/mindbody.htm> on December 2, 2004.

Lecture: Nuclear Receptor's Role in Herb-Drug Interactions

The potential for interactions between herbs and drugs is of interest to many researchers, clinicians, and consumers. Much of that interest is focused on St. John's wort, an herbal remedy for depression, which can affect the metabolism of various drugs—including birth control pills and drugs used to treat high blood pressure, depression, asthma, and immune system disorders.

"The question is," said Stephen Kliewer, Ph.D., "is St. John's wort unique, or is this going to come up with other herbs?" On October 26, 2004, Dr. Kliewer spoke at NIH on "Reverse Herbology: Predicting and Preventing Adverse Herb-Drug Interactions," as part of NCCAM's Distinguished Lectures in the Science of Complementary and Alternative Medicine. He is professor of molecular biology and pharmacology and holds the Nancy B. and Jake L. Hamon Distinguished Chair in basic cancer research at the University of Texas Southwestern Medical Center's Graduate School of Biomedical Sciences.

Dr. Kliewer's research has focused on nuclear receptors, proteins that set off certain body functions and play an important role in metabolism and disease. His study of PXR, a nuclear receptor for foreign substances (called xenobiotics), has led to an increased understanding of some herb-drug interactions, especially with St. John's wort.

When triggered, PXR sets off a series of reactions in the body to clear out potentially dangerous substances. While most nuclear receptors are triggered by specific substances, many different chemicals can set off PXR, making it "ideally suited to protect the body from a



Dr. Steven Kliewer (left) with Dr. Stephen E. Straus, NCCAM Director

wide range of foreign chemicals," Dr. Kliewer said.

However, when drugs or herbs (such as St. John's wort) trigger PXR, this causes the body to speed up metabolism, resulting in potentially dangerous changes in drug levels in the body. By analyzing the types of substances that trigger PXR, Dr. Kliewer and other researchers can now predict what herbs are likely to interact with drugs. For example, Dr. Kliewer reported that recent studies have shown that guggulipid (a traditional Indian herb used to treat high cholesterol and obesity) and hops (an herb promoted for insomnia, anxiety, and indigestion) also trigger PXR.

"The important take-home message," Dr. Kliewer said, "is that we have the tools to predict and prevent this class of drug interactions." ■

To view a videocast of this lecture on the Internet, go to videocast.nih.gov, select "Past Events," and use "Search" to locate the lecture.

Research Roundup (continued from page 4)

studied in the future? In *Nature Reviews Immunology* (November 2004), Martin H. Goldrosen, Ph.D., Director of NCCAM's Office of Scientific Review, and NCCAM Director Stephen E. Straus, M.D., examined these questions in a review article. They noted issues with many previous studies on CAM and the immune system (such as using tests in the laboratory which may have uncertain relevance to effects in the human body, and small studies in which effects on immunity could not be proven to be connected with meaningful clinical changes). They identified some areas that may merit future study, such as probiotics, some mind-body therapies, and brain-body interactions. Using new, powerful technologies as study tools will be important.

Do Cancer Survivors Take More Supplements?

People with a history of cancer seem to use a similar number of dietary supplements as those who never had cancer. However, they are more likely to choose supplements based on their specific cancer diagnosis and to take these at higher doses. That's the conclusion of Heather Greenlee, N.D., M.P.H., and a team of researchers who compared supplement use in the two groups. The researchers' findings are published in the August 2004 issue of the *Journal of Alternative and Complementary Medicine*.

(continued on page 7)



Visit nccam.nih.gov/research/announcements/active for more information on NCCAM funding opportunities and notices. Researchers may also be interested to know that the “Research” section of NCCAM’s Web site (nccam.nih.gov/research) has been reorganized and expanded for easier use.

PA-05-035: Probiotics for Pediatric Illnesses.

Sponsors: NCCAM and the NIH Office of Dietary Supplements. Probiotics are microorganisms that when administered in sufficient quantities may support health—for example, by defending the body against viral and bacterial infections or by supporting a healthy digestive system. One example of a source of probiotics is yogurt. This initiative will support studies to find out more about how probiotics work, their safety, and their effectiveness, and to explore their use for preventing and treating certain illnesses in children for which there have been some encouraging preliminary data.

PA-05-027: Research on Mind-Body Interactions and Health. *Sponsors:* NCCAM and 10 other components of NIH. This program is designed to encourage understanding of the relationships between health and emotions, personality, thoughts, and social relationships, particularly between stress and health. ■

Acupuncture Found To Be of Benefit in Knee Osteoarthritis

On December 21, 2004, the *Annals of Internal Medicine* published the results of an NCCAM-funded study of acupuncture for osteoarthritis of the knee. The study team was led by Brian M. Berman, M.D., Director of the Center for Integrative Medicine and Professor of Family Medicine at the University of Maryland School of Medicine in Baltimore.

Acupuncture is one of the oldest, most commonly used medical procedures, having originated in China more than 2,000



years ago. The term acupuncture describes a family of procedures involving stimulation of anatomical points on the body by a variety of techniques. American practices of acupuncture incorporate medical traditions from China, Japan, Korea, and other countries. The acupuncture technique that has been most studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation.

The randomized clinical trial at the University of Maryland followed 570 participants for 6 months, making it the longest and largest study of acupuncture to date. In the study, 190 of the participants received acupuncture treatment and 191 received a “sham” acupuncture procedure that the team had developed and tested in earlier research. A third group (189) attended an educational program developed by the Arthritis Foundation. All participants

could continue to use some conventional care for osteoarthritis, such as certain anti-inflammatory medicines, if they so chose.

By week 8, the acupuncture group had better function than either the sham or the education group. By the 14th week, the acupuncture group also reported significantly less pain than the two other groups.

CAM at the NIH spoke to Dr. Berman about this study.

NCCAM: *Why did you choose to study acupuncture for knee osteoarthritis?*

Dr. Berman: Arthritis costs about \$86 billion each year in direct and indirect costs in the United States. Osteoarthritis is the most common form of arthritis, affecting 20 million Americans a year. The knee is a common site. Osteoarthritis is also a problem for which we don’t have all the answers in conventional medicine. And the available drugs have side effects, particularly in the elderly. We wanted to see if acupuncture could make a difference.

NCCAM: *How do your findings add to our knowledge about the use of acupuncture for osteoarthritis?*

Dr. Berman: In this study, we developed a model of a progression for acupuncture trials [from phase I to phase II and III studies]. Also, the outcomes are important. We found that traditional Chinese acupuncture is effective for reducing pain and improving physical function in patients with symptomatic knee osteoarthritis who were having moderate pain despite conventional medical therapy. The patients receiving true acupuncture had a 40 percent decrease in pain from baseline and a 40 percent increase in function—which was significantly better than those receiving the sham procedure. We also found that the acupuncture was

well tolerated. Our conclusion is that acupuncture may have an important role as adjunctive [i.e., added] therapy in a multidisciplinary, integrative approach to patients with osteoarthritis of the knee.

NCCAM: *How common is the use of acupuncture for different types of arthritis? Have you seen any trends in its use?*

Dr. Berman: Surveys say 2.1 million Americans use acupuncture, accounting for around 5 million visits a year to practitioners, and most visits are for pain and musculoskeletal problems. When we started our center in 1991, acupuncture was very much outside the realm of conventional medicine. Now we're seeing pain clinics, primary care doctors, orthopedic surgeons, and rheumatologists making more referrals for this type of procedure. In an article we published in the journal *Pain* in 2000, we surveyed pain specialists to see what they thought of different nonpharmacological therapies. Acupuncture had more acceptance than we realized.

There is no cure for arthritis; the goals of the American College of Rheumatology's treatment guidelines are to improve function and to decrease pain. Now acupuncture is one of the methods that can be used for first-line treatment for osteoarthritis along with some of the non-drug treatments. Also, acupuncture doesn't have a lot of side effects.

NCCAM: *Do you have any advice for people who may have arthritis and wonder whether acupuncture could help them?*

Dr. Berman: I think they ought to talk to their physicians. It's worth giving acupuncture consideration as part of a multidisciplinary approach—not necessarily to forgo other treatments that have been recommended, but as part of a whole approach to osteoarthritis. Also, in acupuncture treatment, it's important to find a good, licensed practitioner. ■

For an NCCAM fact sheet on acupuncture, go to nccam.nih.gov/health/acupuncture or contact the NCCAM Clearinghouse (see pg. 2).

Calendar of Events



This calendar lists events on complementary and alternative medicine (CAM) in which NCCAM or other components of NIH are sponsors or participants, and includes information available at press time.

March 2005

NIH State-of-the-Science Conference on Management of Menopause-Related Symptoms: March 21–23. *Location:* Natcher Conference Center, NIH, Bethesda, Maryland. See consensus.nih.gov/ta/025/menopausalsymptomsintro.html.

April 2005

Distinguished Lectures in the Science of Complementary and Alternative Medicine: April 22, 11 a.m. "Integrative Medicine: A Foundation for Prospective Health Care." *Speaker:* **Ralph Snyderman, M.D.**, Chancellor Emeritus and James B. Duke Professor of Medicine, Duke University. *Location:* Masur Auditorium, Building 10, NIH, Bethesda, Maryland. See nccam.nih.gov/news/lectures/upcoming.

June 2005

Meeting of the National Advisory Council for Complementary and Alternative Medicine: June 3. *Location:* Natcher Conference Center, NIH, Bethesda, Maryland. See nccam.nih.gov/about/advisory/naccam. ■

New Review on Melatonin

A new report based on an analysis of the available scientific evidence, *Melatonin for Sleep Disorders*, has found that melatonin supplements appear to be safe for short-term use and may have limited benefits for people with certain sleep problems. The authors (scientists at the University of Alberta, Canada) noted that more research is necessary to confirm these conclusions. In its natural form, melatonin is a hormone believed to help regulate the body's sleep cycle; many people try melatonin supplements to self-treat sleep disorders. The report, produced by the Agency for Healthcare Research and Quality and funded and requested by NCCAM, is available at www.ahrq.gov/clinic/epcsums/melatsum.htm or by calling toll-free 1-800-358-9295. ■

Research Roundup (continued from page 5)

More than 75,000 men and women who took part in the study filled out questionnaires about their use of certain vitamins, minerals, and supplements. Results indicated that bladder cancer survivors, for example, were more likely to take cranberry pills and prostate cancer survivors were more likely to take soy supplements. The authors noted that further studies should look at whether these supplements are safe and effective for people who have had cancer.

A Chemical Analysis of Ginger

In the July 2004 issue of the journal *Phytochemistry*, researchers from the University of Arizona presented an up-close look at the components of fresh ginger, *Zingiber officinale Roscoe* (Zingiberaceae). Ginger has been reported to decrease symptoms of rheumatoid arthritis; it contains gingerol, which has been said to reduce inflammation. The researchers used complex techniques to analyze the compounds that make up ginger. They confirmed 31 previously reported compounds and found 20 others that had not been described before. ■

CAM at the NIH:

Focus on Complementary and Alternative Medicine

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

NCCAM, NIH

31 Center Drive MSC 2182

Building 31, Room 2B-11

Bethesda, MD 20892-2182

Official Business

Penalty for Private Use \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
DHHS/NIH
PERMIT NO. G-826

Institute of Medicine Releases Report on CAM

On January 12, 2005, the Institute of Medicine (IOM) released a report on a study by an expert committee on many aspects of the use of CAM in the United States. NCCAM and 16 other Federal cosponsors had requested the study, to assist in developing research methods and setting priorities for evaluating CAM therapies. The IOM, part of the National Academies, is a nonprofit, nongovernmental institution created by Congress as an advisory body to the nation on scientific and technological matters. The study examines what patients and health care providers need to know about both conventional treatments and CAM to make the best decisions about their use, including issues of safety, effectiveness, regulatory oversight, and the impact of new therapies. Among the committee's major findings:

- Health care should strive to be both comprehensive and evidence-based.
- Treatments, whether conventional medicine or CAM, should be tested according to the same general research principles and standards. However, innovative methods to test some therapies may need to be devised.
- Dietary supplements, such as herbal products and vitamin pills, are increasingly popular. However, there is a lack of consistency and quality to supplements that hinders both health care providers' abilities to advise patients about their use and researchers' abilities to study them. The committee recommends that Congress work with stakeholders to amend regulation of supplements to better ensure quality and encourage more studies.

New Look for the New Year

NCCAM's quarterly newsletter, formerly *Complementary and Alternative Medicine at the NIH*, has some new features—such as a new title (*CAM at the NIH: Focus on Complementary and Alternative Medicine*), a new design, and a longer length for more news. Thanks to our readers for their input.

Complementary and Alternative Medicine in the United States is available free on the Web at www.nap.edu/catalog/11182.html or at a charge by contacting 1-888-624-8373.