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from the National  
Institutes of Health

# NIIH MedlinePlus®

WINTER 2009

the magazine

## Healthy Family 2009

30+ ways to keep  
you and yours  
well this year

## Stress & Distress

Post-traumatic stress  
disorder (PTSD) is a  
growing military and  
civilian challenge

## Alternative Medicine

Latest research  
on acupuncture,  
massage, and  
much more



*Ugly Betty's*  
Ana Ortiz (right)  
walks the walk  
fighting heart  
disease

# Learn the Truth About Your Heart

*Act in time to save your life and others*



Photo: NLM

Donald West King, M.D.  
FNLM Chairman

# Welcome to *NIH MedlinePlus* magazine!

On behalf of the Friends of the National Library of Medicine, we wish you and your family the healthiest and happiest of New Years. Your good health is our concern. That is why *NIH MedlinePlus* is designed with you in mind.

We want to help you and your family to be healthy. In this issue, for example, you'll find a "Healthy Family" section, with many tips for making smart health and wellness decisions, at any age. You will also find a handy vaccination chart, for toddlers through teenagers, on page 5. It's a handy reference you can clip and save.

Also, to help bring the latest advances in science and medicine home to the American family, this coming May 20-21, the Friends and the National Library of Medicine together will convene many of the nation's top experts to explore how personal electronic health records (PEHRs) can be adopted most quickly and efficiently.

The goal? To assure better, lower cost, *personalized* healthcare for every American. You can read about this and many, many more topical, timely advances in future issues of *NIH MedlinePlus*.

Produced by the National Institutes of Health, the magazine and its companion Web site [www.medlineplus.gov](http://www.medlineplus.gov) are the best sources of health information for you and yours. Try them. You'll come to rely on what they can do for your good health.

Sincerely,

Donald West King, M.D., Chairman  
Friends of the National Library of Medicine



Tips for better health start on page 3.

## Help Out for Health

You can be a part of the Friends' mission to help educate the health, corporate, and public communities about NIH's many vital research initiatives.

If you or your company can help to support and expand the Library's efforts by providing sponsorship and other charitable donations for *NIH MedlinePlus* magazine's publication and distribution, many more thousands of Americans will gain valuable, free access to the world's best online

medical library, [www.medlineplus.gov](http://www.medlineplus.gov).

For more information, please visit [www.fnlm.org](http://www.fnlm.org) or call (202) 719-8094. Written correspondence may be sent to FNLM, 2801 M Street NW, Washington, DC 20007.

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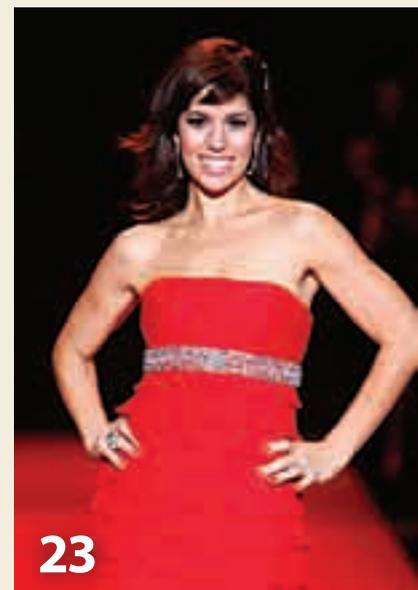
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Keep your whole family healthy with the proper care.



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Complementary and alternative medicine (CAM) can be a good addition to your regular medical care.



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Ana Ortiz, of ABC's *Ugly Betty*, shows her support of *The Heart Truth* campaign.

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(center) NCCAM;  
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# Spotlight: Health Newsmakers

**Changes to our health care system may be on the way**, as the new Obama administration health policies and players take shape.

President Barack Obama has made improving our nation's health care system a top priority of his new Administration. He has pledged to make quality health care more affordable for all Americans. And he has recognized the value of the medical research supported by the National Institutes of Health (NIH).

**“Ensuring all Americans have health care is integral to the mission of HHS and the well-being of our families—but to achieve this goal, we will have to work together to tackle tough challenges.”**

— Tom Daschle

During his presidential campaign, he stated, “I strongly support increasing funding for the NIH. Even though biomedical research costs are increasing each year, annual funding for the National Institutes of Health has not kept up. This isn't just counter-productive, it is a failure to keep faith with so many Americans who are in the fight of their lives against cancer and other diseases, and it overlooks our country's tradition of medical innovation.”

President Obama chose former Senate Majority Leader Tom Daschle of South Dakota to be the new Secretary of the U.S. Department of Health and Human Services (HHS), the federal government's principal agency for protecting the health of all Americans. NIH is a part of HHS.

At his confirmation hearing, Secretary-designate Daschle said, “Ensuring all Americans have health care is integral to the mission of HHS and the well-being of our families—but to achieve this goal, we will have to work together to tackle tough challenges.”

He spoke about the importance of the work of NIH, saying “Equally critical to protecting people by regulating drugs is discovering new drugs and treatments that can prevent, treat, and cure disease. The tremendous discoveries funded by the National Institutes of Health have often enabled us to live longer, better, more healthful lives.

“These are exciting times at NIH,” Daschle said. “We are on the cusp of numerous scientific discoveries.”

Daschle also spoke of his commitment to NIH and its mission when he said, “I will work to strengthen NIH, with leadership that focuses on the dual objectives of addressing the health care challenges of our people and maintaining America's economic edge through innovation.”



**Former Senate Majority Leader Tom Daschle, Democrat from South Dakota, was President Obama's choice to run the U.S. Department of Health and Human Services. He testified at his confirmation hearing in early January, before the Senate Health, Education, Labor, and Pensions Committee on Capitol Hill in Washington, D.C.**



# Tips for a Health-Happy New Year

**All of us can live healthier lives at any age. Good eating habits, periodic check ups with your health care provider, and regular exercise can help you stay well. Start 2009 off right with these tips for everyone from babies to teens, adults to seniors.**

# Bringing in Baby

**E**arly, regular prenatal healthcare is a must for mothers and babies during pregnancy. Mom (and dad!) get to discuss all the important issues with their health care providers, from nutrition and what to expect during birth, to basic skills for caring for your newborn. Typically, expectant mothers should visit their health care professionals once a month for the first six months, once every two weeks during the seventh and eighth months, and weekly in the last month before delivery.

If you are 35 or older, or have diabetes, high blood pressure, or other health problems, your doctor may want to see you more often. She may even suggest prenatal testing to screen for Down syndrome and other common genetic disorders, inherited family conditions, such as Duchenne muscular dystrophy, or disorders like sickle cell anemia, prevalent among African Americans.

## 8 Great Information Sources About Baby and You

1. [www.medlineplus.gov](http://www.medlineplus.gov)—“Teenage Pregnancy” and a vast array of other accessible information on pregnancy from the National Library of Medicine.
2. [www.kidshealth.org](http://www.kidshealth.org)—“Exercising During Pregnancy” and, just for kids, “Things to Expect When Your Mom is Pregnant” from the Nemours Foundation.
3. [www.acog.org](http://www.acog.org)—“Later Childbearing” and “You and Your Baby: Prenatal Care, Labor and Delivery, and Postpartum Care” from the American College of Obstetricians and Gynecologists
4. [www.marchofdimes.com](http://www.marchofdimes.com)—“Just for Dads: Helping Out,” an extensive “to do” list for expectant fathers to help them prepare for baby’s arrival.
5. [www.familydoctor.org](http://www.familydoctor.org)—Printer-friendly Q&A’s such as “Pregnancy: Should I use a Seat belt” and “Pregnancy and Exercise: What You Can Do for a Healthy Pregnancy” from the American Academy of Physicians.
6. [www.womenshealth.gov](http://www.womenshealth.gov)—In-depth pregnancy information from The National Women’s Health Information Center, Office on Women’s Health, U.S. Department of Health and Human Services.
7. [www.cdc.gov](http://www.cdc.gov)—“ABC’s ... Pregnancy Tips,” an easy-to-use alphabet soup of good tips and links to many other public and private agencies from the U.S. Centers for Disease Control and Prevention.
8. [www.niddk.nih.gov](http://www.niddk.nih.gov)—“Fit for Two: Tips for Pregnancy” and much more from the National Institute for Diabetes and Digestive and Kidney Diseases.



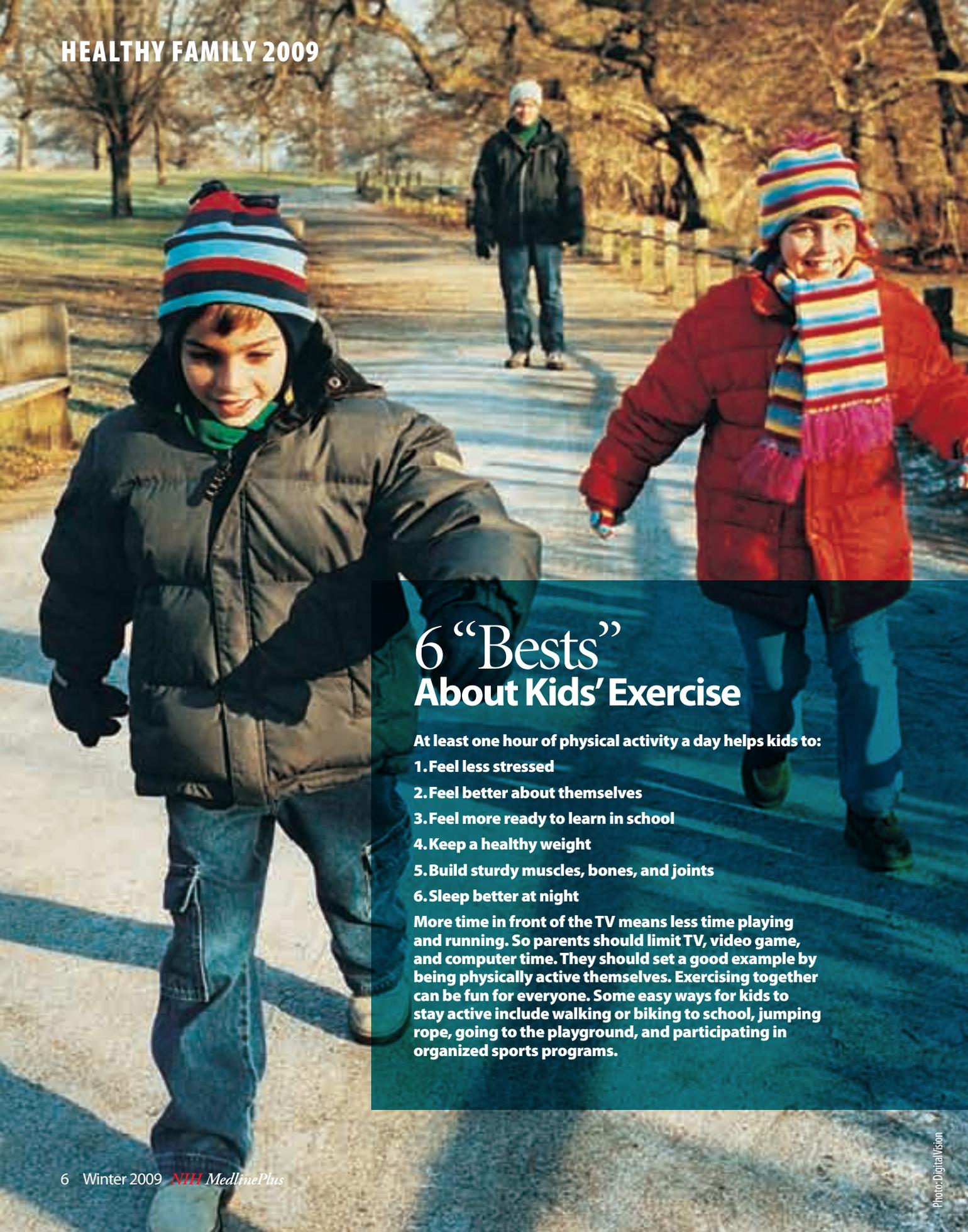
# Protecting Toddlers and Teens

Children get many infectious diseases, especially in the early months and years of life. Colds, bronchitis, or croup are difficult to avoid, as are ear infections, sinusitis, and conjunctivitis (pinkeye). Vaccines prevent many childhood diseases. The following chart shows what vaccines to take, when to take them, and why.

## Childhood Vaccine Schedule

When to Vaccinate	What Vaccine	Why
Birth (or any age if not previously immunized)	Hepatitis B (HBV) (three doses)— <b>HepB</b>	Prevents hepatitis B, a type of liver disease that can lead to liver scarring, cancer, or failure
1 to 4 Months	<b>HepB</b>	
2 Months	Diphtheria, tetanus and acellular pertussis— <b>DTaP</b>	Prevents: Diphtheria, a serious bacterial infection that can lead to breathing problems Tetanus, a bacterial illness that causes a painful tightening of the muscles, such as “lock jaw” Pertussis (Whooping cough), an infectious bacterial disease that causes uncontrollable coughing
	Haemophilus influenza type b vaccine (three doses)— <b>Hib</b>	Protects against illnesses like meningitis, pneumonia, and infections of the blood, bones, and joints
	Inactivated poliovirus vaccine— <b>IPV</b>	Protects against polio, a contagious, paralyzing, and life-threatening disease
	Pneumococcal conjugate vaccine— <b>PCV</b>	Protects against the pneumococcal bacterium, the leading cause of infections such as pneumonia, blood infections, and bacterial meningitis
	Rotavirus vaccine (three doses)— <b>RV</b>	Protects against severe diarrhea, mostly in babies and young children
4 Months	DTaP, Hib, IPV, PCV, RV	
6 Months and Annually	Influenza – Flu vaccine or flu “shot” (two doses, one month apart, for those under 9 getting a flu shot for the first time)	Protects against seasonal flu
6 Months	DTaP, Hib, PCV, RV	
6 – 18 Months	Hep B, IPV	
12 – 15 Months	Hib, PCV	
	Measles, mumps and rubella (German measles) vaccine— <b>MMR</b>	A “3 in 1” vaccine against three potentially life-threatening diseases: Measles, a virus that causes a rash, cough, runny nose, eye irritation, and fever Mumps, a virus causing fever, headache, and swollen glands; can lead to deafness, meningitis, swollen testicles or ovaries, and death in some cases Rubella, also known as German measles. A generally mild disease, it can cause serious birth defects in the child of a woman who becomes infected while pregnant
	Varicella (chickenpox) vaccine— <b>Var</b> Note: In February 2008, the Advisory Committee on Immunization Practices (ACIP) changed its recommendations. It had recommended giving the MMR and Varicella vaccines at the same time. Now it does not express a preference for giving them separately or at the same time.	Protects against chickenpox, a usually mild infectious disease characterized by an uncomfortable, itchy rash, fever, and headache; in adults, can cause shingles and other serious problems
12 – 23 Months	Hepatitis A vaccine (two doses)— <b>Hep A</b>	Protects against a type of liver disease
15 – 18 Months	DTaP	
4 – 6 Years	DTaP, MMR, IPV, Var	
11 – 12 Years	Human papillomavirus vaccine— <b>HPV</b>	In young girls, prevents most cases of genital warts and cervical cancer
	Tetanus, diphtheria and pertussis booster— <b>Tdap</b>	
	Meningitis vaccine— <b>MCV</b>	Protects against meningitis, an inflammation of the thin tissue surrounding the brain and spinal cord; there are several types of meningitis
College Entrants	Meningitis vaccine for college aged— <b>MCV4</b>	Protects against meningitis, recommended for previously unvaccinated college entrants planning to live in dormitories.

(Sources: medlineplus.gov; U.S. Centers for Disease Control; CDC Advisory Committee on Vaccine Practices)



## 6 “Bests” About Kids’ Exercise

At least one hour of physical activity a day helps kids to:

1. Feel less stressed
2. Feel better about themselves
3. Feel more ready to learn in school
4. Keep a healthy weight
5. Build sturdy muscles, bones, and joints
6. Sleep better at night

More time in front of the TV means less time playing and running. So parents should limit TV, video game, and computer time. They should set a good example by being physically active themselves. Exercising together can be fun for everyone. Some easy ways for kids to stay active include walking or biking to school, jumping rope, going to the playground, and participating in organized sports programs.

# Practicing Healthy Adult Living

## Get the screening tests you need

Mammograms, Pap smears, colorectal cancer screens, and other tests can find diseases early when they are easier to treat. Talk to your doctor about which of the following tests you should have and when. The recommendations come from the U.S. Preventive Services Task Force and NIH Institutes.

- **Blood Pressure:** Have your blood pressure checked at least every two years.
- **Cholesterol:** Women should have their cholesterol checked regularly starting at age 45; men every five years beginning at 35. If you smoke, have diabetes, or if heart disease runs in your family, begin checking cholesterol at age 20.
- **Colorectal Cancer:** Test for colorectal cancer starting at age 50. Your doctor can help decide which test is right for you.
- **Depression:** If you've felt "down," sad, or hopeless, and have taken little interest or pleasure in doing things for two weeks straight, ask your doctor about screening for depression.
- **Diabetes:** Screen for diabetes if you have high blood pressure or high cholesterol.
- **Breast Cancer:** Have a mammogram every one to two years starting at age 40.
- **Osteoporosis (Women):** Have a bone density test at age 65 to

screen for osteoporosis (thinning of the bones). If you are between 60 and 64 and weigh 154 lbs. or less, talk to your doctor about being tested.

- **Cervical Cancer (Women):** Get a Pap smear every one to three years if you have been sexually active or are older than 21.
- **Prostate Cancer (Men):** Discuss with your doctor the pros and cons of having a prostate-specific antigen (PSA) test or digital rectal examination (DRE) to screen for prostate cancer.
- **Sexually Transmitted Diseases:** Your doctor can help you decide whether to be screened for sexually transmitted diseases, such as HIV, and, for women, also chlamydia.

After age 50, people also should have an annual fasting blood sugar check for diabetes, regular colonoscopies for cancer of the colon, serum prostatic-specific antigen (PSA) tests for prostate cancer, and mammograms for breast cancer.

## Work out regularly

Physical activity burns calories. Burn more than you eat each day and the pounds will come off. Try to exercise four to six times a week for 30 to 60 minutes at a time.

# Assuring Healthy Aging

## 7 Smart Steps to Aging Well

### 1. Control Blood Pressure

You can have high blood pressure—also called hypertension—and still feel fine. Known as the “silent killer,” it does not cause symptoms that you can see or feel, but is a major health problem. Left untreated, it can lead to stroke, heart disease, eye problems, and kidney failure.

- **Normal BP**—The systolic (top, or first, number) pressure is less than 120 and the diastolic pressure (bottom, or second, number) is less than 80—for example, 119/79.
- **Prehypertension**—If the top number is between 120 and 139 or the bottom number between 80 and 89, you may be at risk for high blood pressure.
- **High BP**—Blood pressure measures 140/90 or higher at two or more checkups.

#### What You Can Do:

- **Keep a healthy weight.** Being overweight adds to your risk.
- **Exercise every day.** Moderate exercise can lower blood pressure.

Check with your doctor before starting a new exercise plan.

- **Eat more fruits, vegetables, whole grains, and low-fat dairy foods.** These foods, which are high in potassium, help to control high blood pressure.
- **Cut down on salt and sodium.** Most Americans eat more salt and sodium than they need. A low-salt diet might help lower your blood pressure.
- **Drink less alcohol.** Alcohol affects blood pressure. Men should have no more than two drinks a day; women no more than one.
- **Follow doctor's orders.** If lifestyle changes alone do not work, your doctor may prescribe blood pressure pills. Take them as directed.

### 2. Control Cholesterol

Cholesterol is a waxy, fat-like substance present throughout the body, including the heart. Everyone needs some cholesterol, but deposited in your blood it can raise your risk of heart disease or stroke. It builds up in your arteries, including the coronary arteries, narrowing and blocking them. Cholesterol travels through the blood in two forms: high-density lipoprotein (HDL),

# HEALTHY FAMILY 2009

the “good” cholesterol, which prevents cholesterol from building up on artery walls and carries it from throughout the body to the liver for removal. Low density lipoprotein (LDL), the “bad” cholesterol, builds arterial wall cholesterol; the higher your LDL blood level, the greater your chances of developing coronary heart disease.

**What You Can Do:** Diet and exercise to lower your LDL and raise your HDL. Failing this, you may need drugs.

- **Therapeutic Lifestyle Changes (TLC)**—Follow the cholesterol-lowering TLC diet (less saturated fat, cholesterol, sodium), be physically active, manage your weight.
- **Drug Treatment**—Take as directed by your physician, together with TLC treatment to help lower LDL.

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## 3. Control Weight

Extra weight puts people at greater risk for many health problems as they age: type 2 diabetes (high blood sugar), high blood pressure, heart disease and stroke, certain cancers, sleep apnea (when breathing stops for short periods during sleep), osteoarthritis (wearing away of the joints), and more.

**What You Can Do:** Losing as little as five to 15 percent of your body weight can improve your health. To help keep the weight off:

- **Keep a food diary.**
- **Shop when you are not hungry and from a list of approved foods.**
- **Store foods out of sight.**
- **Eat smaller portions. At restaurants, eat only half your meal and take the rest home.**
- **Turn off the TV at mealtime.**
- **Be realistic: aim for steady, modest loss.**
- **Seek emotional support from family and friends.**
- **Expect setbacks; forgive yourself.**
- **Make physical activity part of your weight-loss plan.**

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## 4. Exercise

Burn more calories than you eat each day and watch the pounds come off. As you age, muscle tissue quality decreases and you may lose up to 40 percent of muscle mass. Strength exercises can often quickly restore some mass and strength.

**What You Can Do:** Talk to your doctor about what kind of exercise and how much is right for you. A good goal is to exercise four to six times a week for 30 to 60 minutes at a time. “Exercise: A Guide from the National Institute on Aging” brochure features strength, balance, and stretching exercises you can do at home.

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## 5. Stop Smoking

Tobacco use remains the single most preventable cause of death in the United States. Cigarette smoking accounts for nearly one-third of all cancer deaths each year, for example. Smoking is

the most common risk factor for lung cancer, the nation’s leading cancer killer, and is associated with many cancers. Smoking also puts people at higher risk for chronic lung disease, heart disease, and other ailments. Smoking during pregnancy can have adverse effects on the unborn child, such as premature delivery and low birth weight.

**What You Can Do:** The best gift you can give yourself and your loved ones is to stop smoking. For help, go online to [www.cancer.gov](http://www.cancer.gov) for The National Cancer Institute’s smoking cessation guidelines; also, the American Lung Association’s “Freedom From Smoking” online program ([www.ffsonline.org](http://www.ffsonline.org)), offers a thorough approach to stopping.

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## 6. Don’t Drink Too Much

Misuse of alcohol has life-threatening consequences. Heavy drinking can increase the risk for certain cancers, especially those of the liver, esophagus, throat, and larynx (voice box). It can also cause cirrhosis of the liver, immune system problems, brain damage, and harm the fetus during pregnancy. Drinking increases the risk of death from automobile crashes as well as recreational and on-the-job injuries.

**What You Can Do:** Drink in moderation: up to two drinks a day for men, and one for women and older people. (A standard drink is one 12-ounce bottle or can of either beer or wine cooler, one 5-ounce glass of wine, or 1.5 ounces of 80-proof distilled spirits.)

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## 7. Follow Proven, Preventive Measures

Taking responsibility for your own health as you age means being an active participant with your physician and other health care professionals.

**What You Can Do:**

- **Find a “medical home.”** With the growing use of retail-based and emergency walk-in clinics, many families are in danger of seeing a succession of health care professionals who have no history of their health. Find—and stick with—a doctor you like.
- **Get vaccinated.** Pay attention to childhood immunization schedules (see page 5), as well as established and emerging vaccines for adults. Ignoring them can be hazardous to your health—at any age.
- **Save your skin.** With age come sunlight-related effects, from wrinkles and dermatitis to various skin cancers. Protect your skin from over-exposure to the sun. See your physician regularly to check for changes in your skin.
- **Take your medicine.** Take the correct amount of your prescribed medicine at the proper time.
- **Educate yourself.** Safeguarding your health as you age requires continually learning how to stay healthy. One of the best ways to do this is to visit [www.medlineplus.gov](http://www.medlineplus.gov) and [www.nihseniorhealth.gov](http://www.nihseniorhealth.gov) for the most trusted, latest health care information.

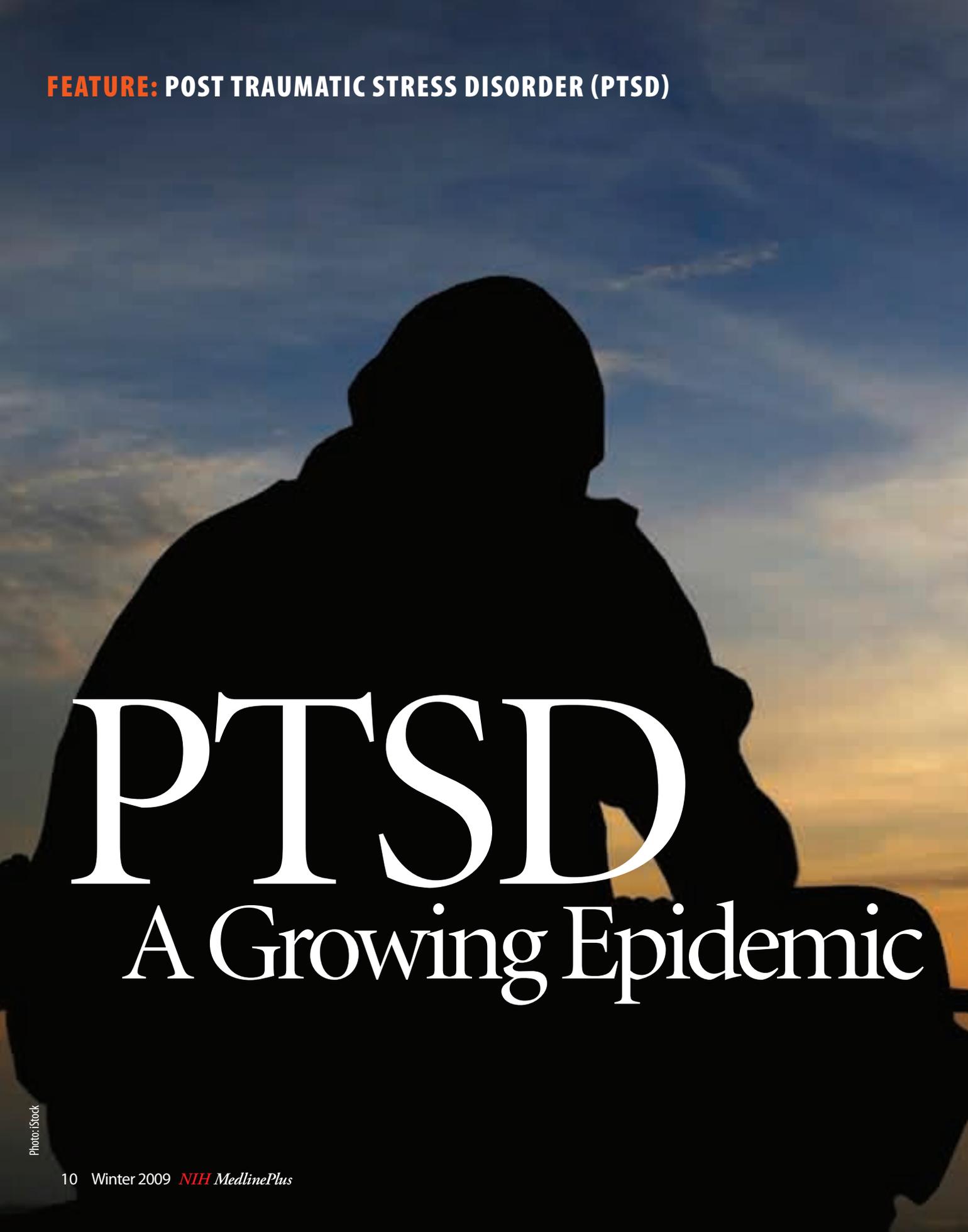


## 8 Great “Whys” Seniors Should Exercise

Older people may become sick or disabled more often from not exercising, so staying active and exercising regularly can:

- 1. Improve mood and relieve depression**
- 2. Help prevent or delay many diseases and disabilities, including some types of cancer, heart disease, and diabetes**
- 3. Improve health in the frail or those with diseases that accompany aging**
- 4. Increase strength—carry groceries, climb stairs**
- 5. Improve balance—prevent falls**
- 6. Restore flexibility—speed recovery from injury**
- 7. Build endurance—walk farther, dance longer**
- 8. Improve quality of life**

**FEATURE: POST TRAUMATIC STRESS DISORDER (PTSD)**

A large, dark silhouette of a person sitting with their back to the camera, looking out at a sunset or sunrise. The sky is a mix of blue, orange, and yellow. The person's head is slightly bowed, and their hands are resting on their lap.

# PTSD

## A Growing Epidemic

Photo: iStock

**Years of war in Afghanistan and Iraq have brought post-traumatic stress disorder (PTSD) among military personnel to the attention of the American people as never before.** But PTSD is also found among survivors of natural disasters, victims of crime, and many others who have experienced traumatic events.

## **FASTFACTS**

- PTSD affects about 7.7 million American adults.
- PTSD can occur at any age.
- Women are more likely to develop PTSD than men, and there is some evidence that the potential for the disorder may run in families.
- PTSD is often accompanied by depression, substance abuse, or other anxiety disorders.
- Members of the military exposed to war/combat and other groups at high risk for trauma exposure are at risk for developing PTSD.
- Among veterans returning from the current wars in Iraq and Afghanistan, PTSD and mild to moderate traumatic brain injury (TBI) are often linked and their symptoms may overlap. Blast waves from explosions can cause TBI, rattling the brain inside the skull.

**P**ost-traumatic stress disorder (PTSD) may develop after a terrifying ordeal involving physical harm or the threat of physical harm. You don't have to be physically hurt to get PTSD. You can get it after you see others—a friend, a family member, even a stranger—harmed or threatened.

War veterans brought PTSD to public attention. But PTSD can stem from traumatic incidents, such as mugging, rape, torture, being kidnapped or held captive, child abuse, car accidents, train wrecks, plane crashes, bombings, or natural disasters such as floods or earthquakes. The majority of people exposed to such events experience some symptoms of distress (sleep problems, jumpiness). Most fully recover in a few weeks or months. PTSD is currently the subject of many research studies that are funded by the National Institute of Mental Health (NIMH) at the National Institutes of Health (NIH).

People with PTSD may become emotionally numb, especially in relation to people with whom they used to be close. They may lose interest in things they used to enjoy. They may startle easily or be irritable, become aggressive, and

“I was raped when I was 25 years old. For a long time, I spoke about the rape as though it was something that happened to someone else. I was very aware that it had happened to me, but there was just no feeling. Then I started having flashbacks. They kind of came over me like a splash of water. I would be terrified. Suddenly, I was reliving the rape. Every instant was startling. I wasn’t aware of anything around me. I was in a bubble, just kind of floating. And it was scary. Having a flashback can wring you out.

“The rape happened the week before Thanksgiving, and I can’t believe the anxiety and fear I feel every year around the anniversary date. It’s as though I’ve seen a werewolf. I can’t relax, can’t sleep, don’t want to be with anyone. I wonder whether I’ll ever be free of this terrible problem.”

—A PTSD patient (Source: NIMH)

may have trouble falling asleep and staying asleep. They avoid situations that remind them of the original incident, and often find anniversaries of the incident to be very difficult.

PTSD symptoms seem to be worse if they were triggered deliberately by another person, as in a mugging or rape. Most PTSD sufferers repeatedly relive the trauma in their thoughts

during the day and in nightmares when they sleep. These are called flashbacks. Flashbacks may consist of images, sounds, smells, or feelings. They are often triggered by ordinary occurrences, such as a door slamming, a car backfiring, or being in a place that looks like where the trauma took place. A person having

*continued on page 14*

## Questions to Ask Your Health Care Professional

- How do I know I have PTSD?
- Can I be cured?
- What treatments are available?
- What should I do if I feel I might hurt myself?
- Are there things that can make my PTSD symptoms worse?
- If I have had a blow to the head, is there a chance that I could have PTSD or even mild traumatic brain injury? How can I tell?

# Neuroscience and PTSD Treatments

**D**r. Barbara Rothbaum believes current research is leading to better treatment of PTSD and may one day help to prevent it. Rothbaum is Professor in Psychiatry and Director of the Trauma and Anxiety Recovery Program at the Emory University School of Medicine. She notes that the Institute of Medicine recently reported that only exposure treatment, a type of therapy in which PTSD patients confront their traumatic memories through talking, has sufficient evidence to recommend it.

With funding from NIMH, she is studying how D-cycloserine, an antibiotic, affects how Iraq war veterans experience fear. “We know how fear is turned on and off, where in the brain it occurs, and what drugs facilitate or inhibit it,” she says. “D-cycloserine has been shown to reduce fear and make exposure therapy go faster.”

Also with NIMH support, Dr. Rothbaum is beginning to look at ways to change traumatic memories before they are consolidated in the brain, and perhaps prevent PTSD altogether. Her new study will focus on intervening to help rape victims in the emergency room.

“I do think there are things we can do in the immediate aftermath of a trauma that can help,” she says.

## FEATURE: POST TRAUMATIC STRESS DISORDER (PTSD)



Photo: iStock

a flashback is likely to feel the emotions and physical feelings that occurred when the incident happened despite no longer being in danger.

Not every traumatized person develops full-blown or even minor PTSD. Symptoms usually begin within three months of the incident, but occasionally may only emerge years later. They must last more than a month to be considered PTSD. The condition varies from person to person. Some people recover within months, while others have symptoms for much longer. In some people, the condition becomes chronic.

### PTSD and the Military

Today, hundreds of thousands of service men and women and recent military veterans have seen combat. Many have been shot at, seen their buddies killed, or witnessed death up close. These are types of events that can lead to PTSD.

The U.S. Department of Veterans Affairs estimates that PTSD afflicts:

- Almost 31 percent of Vietnam veterans

- As many as 10 percent of Gulf War (Desert Storm) veterans
- 11 percent of veterans of the war in Afghanistan
- 20 percent of Iraqi war veterans

### To Find Out More

- **MedlinePlus**  
[www.medlineplus.gov](http://www.medlineplus.gov)
- **National Institute of Mental Health (NIMH)**  
[www.nimh.nih.gov](http://www.nimh.nih.gov)
- **National Center for PTSD (U.S. Dept. of Veterans Affairs)**  
[www.ncptsd.va.gov/](http://www.ncptsd.va.gov/)
- **MedlinePlus Go Local (for PTSD treatment centers near you)**  
[www.nlm.nih.gov/medlineplus/golocal](http://www.nlm.nih.gov/medlineplus/golocal)
- **National Institute of Neurological Disorders and Stroke**  
[www.ninds.nih.gov](http://www.ninds.nih.gov)

# Symptoms, Diagnosis, Treatment

## Symptoms

As with mild traumatic brain injury (TBI), PTSD symptoms can be very subtle. “For example, some people can go even months after a mild head injury feeling a little different and not really relating it to a previous injury,” says Leighton Chan, M.D. chief of the Department of Rehabilitation Medicine at the NIH Clinical Center. Generally PTSD symptoms include:

- Flashbacks—feeling like the traumatic event is happening again
- Uncontrollable, frightening thoughts
- Avoidance of places and things that remind you of what happened
- Feelings of worry, guilt, or sadness
- Feeling alone
- Trouble sleeping
- Being on edge
- Angry outbursts
- Thoughts of hurting one’s self or others

## Diagnosis

As with other mental disorders, there are no biological tests for diagnosing PTSD. There are psychiatric and physical exams that can help rule out similar conditions. PTSD diagnosis is made based on a certain set of symptoms that begin or continue after a traumatic experience.

## Treatment

Research is yielding new, improved therapies that can help most people with PTSD and other anxiety disorders lead productive, fulfilling lives. Current treatment includes:

- “Talk” therapy, medication, or both
- Treatment might take six to 12 weeks. For some people, it takes longer. Treatment is not the same for everyone. What works for you might not work for someone else.
- Drinking alcohol or using other drugs will not help PTSD go away and may make it worse.

## NIH Research to Results

- Researchers funded by the National Institute of Mental Health (NIMH) have been studying why some people can be overwhelmed by stress and others are less affected by it. Initial findings show that the ability to adapt to stress is affected by environmental and individual factors, which may be a key to a better understanding of PTSD and early identification of those at risk.
- Early results from an NIMH-sponsored study of 24 Iraq war veterans with PTSD show a marked reduction in what’s called “acoustic startle”—the reflex response to sudden loud sounds—in those treated with “virtual reality” (VR) exposure therapy. The VR therapy combines traditional therapy and exposure via VR technology that depicts scenes such as a Humvee on a desert highway and a soldier on foot patrol in an Iraqi city.
- The emotional shocks of disasters can have long-term mental health consequences. NIMH-funded researchers have found that mental disorders, including PTSD, persist for those affected by 2005’s Hurricane Katrina. This is important because previously researchers found that mental disorders usually decrease and fade after about two years. Ongoing research is studying what causes this extended distress. Other researchers are also studying stress disorders and resilience among survivors in Texas of 2008’s Hurricane Ike.
- Other research is exploring whether certain drugs and brief talk therapies can be used immediately after a trauma to decrease the risk of developing PTSD.
- The NIMH Team on Addressing the Mental Health Needs of Returning Combat Veterans in the Community received the 2008 Hubert H. Humphrey Award for Service to America. The team was recognized for focusing attention on the mental health needs of military, veterans, and their families.

# Expanding Horizons of Health Care



Photo: NCCAM

The National Center for Complementary and Alternative Medicine (NCCAM) is this year celebrating 10 years of medical research at NIH, notes Dr. Josephine Briggs, NCCAM Director. About four out of every 10 Americans use some form of CAM.

This year, the National Center for Complementary and Alternative Medicine (NCCAM) celebrates its 10th anniversary. We explore complementary and alternative medicine (CAM) using rigorous research to provide reliable information to the public and health professionals. Since our beginning, we have made great progress developing a growing body of evidence about CAM therapies.

People can use this information to make informed decisions about their healthcare. This is important because about four out of 10 U.S. adults depend upon some form of CAM to treat various health conditions or maintain overall well being. They turn to CAM most to relieve back and neck pain, arthritis or other recurrent problems conventional medicine often fails to remedy.

In this special section, you will read about who uses CAM, how it can alleviate low back pain, how an ancient Chinese treatment works for some of today's common ailments, and why it is important to tell your health care providers about your use of CAM. We hope this information will be interesting and useful, and that you will turn to our Web site [www.nccam.nih.gov](http://www.nccam.nih.gov) for more information.

Josephine P. Briggs, M.D.  
Director, National Center for Complementary and Alternative Medicine

## NCCAM Timeline—A Decade of Progress

### February 1999

U.S. Congress establishes NCCAM as the 25th independent NIH unit.

### April 2002

NCCAM's first large clinical trial shows that an extract of the herb St. John's wort is no more effective than placebo for major depression.

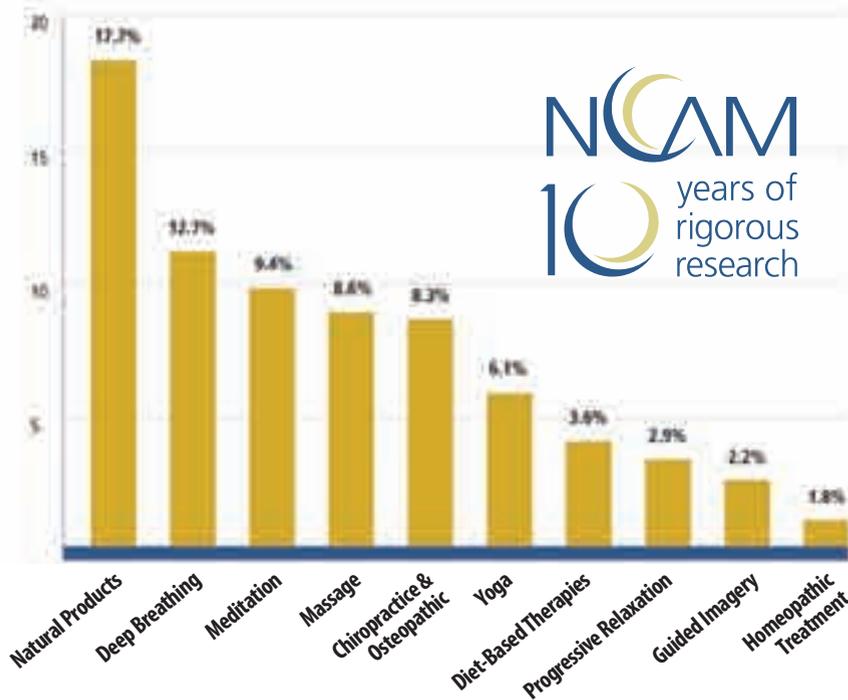
### December 2004

Longest, largest randomized clinical trial of acupuncture ever conducted concludes it relieves pain and improves function for people with osteoarthritis of the knee and serves as an effective complement to standard care.



Photo: iStock

## 10 Most Common CAM Therapies Among Adults - 2007



## Use of CAM in the United States

Each year, millions of Americans use some form of CAM. In fact, 38 percent of American adults and approximately 12 percent of U. S. children use CAM, according to the 2007 National Health Interview Survey.

"Millions of Americans every year are turning to complementary and alternative medicine," says Richard L. Nahin, Ph.D., MPH, Acting Director of the Division of Extramural Research, who helped design the survey.

The most common reasons people use CAM are to treat back, neck, and joint pain, arthritis, and anxiety.

Source: Barnes, PM; Bloom, B; Nahin, R. *CDC National Health Statistics Report #12*. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007. December 2008.

## What is CAM?

CAM is a group of diverse medical and health care systems, practices, and products not generally considered to be part of conventional medicine. The various types of CAM therapies are grouped as follows:

- **Natural products** use substances found in nature such as herbs and botanicals.
- **Energy medicine** involves the use of magnetism or biofields (energy fields believed by some to surround and penetrate the body). Examples include magnet therapy, healing touch, and Reiki (life energy).
- **Manipulative and body-based practices** involve manipulating or moving one or more body parts. Examples are massage, chiropractic care, osteopathic manipulation, and reflexology.
- **Mind-body medicine** focuses on ways to harness emotional, mental, social, spiritual, and behavioral factors to affect a person's health. Examples are meditation, hypnosis, and yoga.
- **Whole medical systems** are built upon complete systems of health theory and practice. Some have evolved apart from, and earlier than, conventional Western medicine. Examples are homeopathy, traditional Chinese medicine, and Ayurvedic medicine.

### February 2006

Research shows that the popular dietary supplement combination of glucosamine plus chondroitin sulfate did not provide significant relief from osteoarthritis among all participants but did relieve moderate-to-severe pain among a subgroup of participants.

### June 2008

NCCAM launches Time to Talk, first educational campaign.



### December 2008

NCCAM releases new statistics on use of CAM among American adults and children from CDC's 2007 National Health Interview Survey.

### February 2009

NCCAM marks its 10th anniversary.



### November 2008

NCCAM's largest clinical trial to date, the Ginkgo Evaluation of Memory Study, finds the dietary supplement *Ginkgo biloba* does not delay development of dementia and Alzheimer's disease in older people.

Photo: iStock

# Acupuncture

## From Ancient Practice to Modern Science



**Adeline Ge, M.D., O.M.D.**  
Senior Chinese Medicine Acupuncture Consultant  
NIH

**A**cupuncture intrigued Charles White. The 66-year-old cancer patient from southern Maryland thought it might lessen his pain, and reduce the nausea and fatigue from his pain medications and chemotherapy. But he wasn't sure.

**Dr. Adeline Ge adjusts placement of acupuncture needles in the hand of a patient at the NIH Clinical Research Center.**



Then he enrolled in an acupuncture study at the Clinical Research Center at the National Institutes of Health (NIH) in Bethesda, Maryland. Now he's convinced. "I always feel better—less in need of pain medications—after I've had acupuncture," says White. He feels calmer and less fatigued, too.

His acupuncturist is Adeline Ge, M.D., O.M.D., a Senior Chinese Medicine Acupuncture Consultant at NIH. She says, "Acupuncture can control or stop some symptoms which lessen quality of life, even some medical problems conventional care cannot help."

Acupuncture is one of the oldest healing practices in the world. It originated in Asia more than 2,000 years ago. According to the 2007 National Health Interview Survey, an estimated 1.4 percent of U.S. adults use acupuncture.

### What Is Acupuncture?

- Acupuncture aims to restore and maintain health through the stimulation of specific points on the body. An acupuncturist places thin needles in these points in the body that lie along pathways known as meridians.
- Acupuncturists, as well as some physicians, dentists, chiropractors, and other health care professionals, practice acupuncture.
- Most people feel little or no pain during acupuncture. Some feel energized by treatment; others feel relaxed.
- Acupuncture is used for a wide range of conditions, from arthritis and low back pain to infertility. Scientific evidence suggests it may be helpful for some conditions, but not for others.

### Research on Acupuncture

Over the past 10 years, NCCAM has supported extensive research on acupuncture. Studies have looked at its effect on specific health conditions and how it affects the brain and nervous system; the neurological properties of meridians and acupuncture points; and methods for improving the quality of acupuncture research.

Recent studies have found that acupuncture:

- Helps alleviate nausea in cancer patients undergoing chemotherapy.
- Relieves pain and improves function for some people with osteoarthritis of the knee and complements standard medical care.
- Helps in treating chronic lower back pain.
- Can be useful in treatment of post-traumatic stress disorder (PTSD) symptoms.
- May improve pregnancy rates following in vitro fertilization (IVF).
- May or may not be of value for many other conditions, including irritable bowel syndrome and some neurologic disorders.

# Low Back Pain and CAM

“Oh, my aching back,” is an all-too-familiar complaint. Low back pain is one of our most common medical problems. At least one-quarter of all U.S. adults suffer from it every year. It’s also the number two reason for visiting the doctor, as Glenn Scimonelli can attest.

“My problems are chronic,” says the 22-time marathoner. He used to find relief in running but may have to cut back because of the way he feels. To ease his lower back, he has used conventional and complementary and alternative medicine (CAM) approaches, including regular visits to the chiropractor and massage therapist to address his pain. “I’m looking for something so that I don’t have to feel like I’m walking on eggshells,” says Scimonelli.

Pat Wilkerson, a certified massage therapist in Columbia, Maryland, says “Many of my clients use massage therapy in conjunction with other alternative and traditional therapies to help them resume normal activity and reduce discomfort.”

According to the 2007 National Health Interview Survey, back pain and related conditions are the top reasons adults use CAM. Research on CAM therapies for low back pain suggest that:

- Spinal manipulation can provide mild-to-moderate relief. It appears to be as effective as conventional treatments.
- Acupuncture is more effective than sham or no treatment in relieving pain and improving function. It is an effective complement to conventional treatments.
- A 2008 review of 13 clinical trials found evidence that massage might be useful for low back pain.
- Yoga is more effective than a self-care book for improving function and reducing pain. The benefits persist for at least several months.

Recently, the American College of Physicians and the American Pain Society said these CAM therapies can serve as options for chronic back pain that does not improve with self-care.

**A chiropractor practices spinal manipulation on a patient.**



**Even super-fit athletes, like marathoner Glenn Scimonelli (above), can benefit from CAM treatment for conditions such as low back pain.**



## TIME TO TALK.

TELL your health care providers about your use of complementary and alternative medicine (CAM).

If you are considering a new CAM therapy, ask your provider about its safety, effectiveness, and possible interactions with medicines (both prescription and over-the-counter).

PATIENT NAME \_\_\_\_\_

BLOOD TYPE \_\_\_\_\_

EMERGENCY CONTACT \_\_\_\_\_

EMERGENCY PHONE \_\_\_\_\_

ALLERGIES \_\_\_\_\_

PRIMARY PHYSICIAN \_\_\_\_\_

PHYSICIAN PHONE \_\_\_\_\_

MEDICAL CONDITIONS \_\_\_\_\_

List medicines (prescription/over-the-counter), therapies, vitamins, herbs, dietary supplements, homeopathic remedies, other

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SPECIAL SECTION: COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

# Time to Talk

**For your safety, check with your health care provider before using CAM.**

Almost two-thirds of adults 50 and older use some form of complementary and alternative medicine (CAM). But less than one-third who use CAM talk about it with their health care providers. Doing so helps to ensure your coordinated, safe care. NCCAM's Time to Talk program is just right for talking openly and clearly about CAM.

"It's very important that health care providers know about your CAM use so they can really be partners in your health care," emphasizes NCCAM director Josephine Briggs, M.D. "Health care providers need to know and patients need to talk."

### Tips for Talking to Your Health Care Provider about CAM

- For filling out health history forms, make a list in advance of your CAM therapies, including all dietary supplements and vitamins.
- Be proactive. Tell your health care providers what you do to maintain your health. Don't wait for them to ask about your CAM use.
- In considering a new CAM therapy, first ask about its safety, effectiveness, and possible interactions with medications (both prescription and nonprescription).



Photo: NCCAM

**It is important to discuss with your health care providers any complementary and alternative medicines you take or are thinking about starting.**

**For more information about Time to Talk, please visit [nccam.nih.gov/timetotalk](http://nccam.nih.gov/timetotalk).**



NATIONAL CENTER FOR COMPLEMENTARY AND ALTERNATIVE MEDICINE  
National Institutes of Health  
U.S. Department of Health and Human Services

Clip and Save 

# Quiz on Complementary and Alternative Medicine

## 1. Yoga originated in:

- a. China
- b. Thailand
- c. India
- d. Russia

## 2. Research has shown that acupuncture may provide pain relief for people with:

- a. Migraines
- b. Broken bones
- c. Digestion problems
- d. Osteoarthritis

## 3. Research indicates that spinal manipulation can provide mild-to-moderate relief for low back pain.

- a. True
- b. False

## 4. Complementary and alternative medicine (CAM) includes:

- a. Meditation
- b. Chiropractic
- c. Use of natural products, such as herbs
- d. All of the above

## 5. According to the 2007 National Health Interview Survey, meditation is the CAM therapy most commonly used by U.S. adults.

- a. True
- b. False

## 6. NCCAM's Time to Talk campaign encourages:

- a. Discussion between patients and health care providers about the use of complementary and alternative medicine.
- b. Use of key words to express your emotions and relieve stress
- c. Trying a new technique that increases verbal skills in children
- d. Spending quality time with your family and friends

Source: NCCAM

Answer key: 1-C; 2-D; 3-True; 4-D; 5-False; Natural products are the most commonly used CAM therapy by U.S. adults at 17.7%; 6-A

## CAM Resources from NIH

### National Center for Complementary and Alternative Medicine

[www.nccam.nih.gov](http://www.nccam.nih.gov) or 1-888-644-6226

Research-based information on CAM treatments.

### NIH Office of Dietary Supplements

[www.ods.od.nih.gov/Health\\_Information/Health\\_Information.aspx](http://www.ods.od.nih.gov/Health_Information/Health_Information.aspx)

Health information on dietary supplements, including vitamins and minerals.

### National Cancer Institute Office of Cancer Complementary and Alternative Medicine

[www.cancer.gov/cam/health\\_patients.html](http://www.cancer.gov/cam/health_patients.html)

Information on CAM specifically for cancer patients.

### MedlinePlus.gov

[www.nlm.nih.gov/medlineplus/druginfo/herb\\_All.html](http://www.nlm.nih.gov/medlineplus/druginfo/herb_All.html)

Find a list of herbs and supplements

[www.nlm.nih.gov/medlineplus/complementaryandalternativemedicine.html](http://www.nlm.nih.gov/medlineplus/complementaryandalternativemedicine.html)

Information on CAM

## Herbs

*Herbs at a Glance: a Quick Guide to Herbal Supplements* is an easy-to-read booklet with profiles on more than 40 herbs—basic scientific information, some potential side effects, and additional sources of information. For more about herbs or to order *Herbs at a Glance*, go to [www.nccam.nih.gov/health/herbsataglance.html](http://www.nccam.nih.gov/health/herbsataglance.html) or call NCCAM's Clearinghouse at 1-888-644-6226.



Photo courtesy: Juanita Stancliff Kuhn

## The American Family, 1909

William Cole Harrison, left, and family, 837 South Lake Street, Los Angeles, California, summer of 1909. Daisy, left rear, and Ray, right, were the only two of the Harrisons' nine children to have survived into adulthood.

**U.S. Population:** 90,500,000

**Life Expectancy:**

Male – 50.5 years; Female – 53.8 years

**Top 3 Causes of Death:** Tuberculosis, Heart Disease, Diarrhea and Enteritis

“Taking first the division by decades of age, diarrhea, and enteritis is by far the most important cause of death of children under 12. This disease is even more important in the first five years, and especially in the first and second. Tuberculosis is supreme for the four decades covering the ages 10 – 49...”

— *Census Report for 1909*

## The American Family, 2009

**U.S. Population:** 306,000,000

**Life Expectancy:**

Male – 75.2 years; Female – 80.4 years

**Top 3 Causes of Death:** Heart Disease, Cancer, Stroke

“...death rates for eight of the 10 leading causes of death in the United States all dropped significantly in 2006, including a very sharp drop in mortality from influenza and pneumonia.”

— *National Center for Health Statistics, 2008*

### To Find Out More

Despite the progress of the last 100 years, the U.S. health care system faces ongoing challenges, such as a gap in mortality rates between whites and people of color. To learn more about disease, mortality rates, and life expectancy, go to:

[www.medlineplus.gov](http://www.medlineplus.gov)

[www.census.gov](http://www.census.gov)

[www.nlm.nih.gov/hmd](http://www.nlm.nih.gov/hmd)



# Learn the Truth About Your Heart



**February is American Heart Month.** Now is the time to make sure that you and your loved ones are following a heart-healthy lifestyle. You should also know the signs of heart attack, what to do about them, and how to talk to your health care provider about heart health.

**H**eat disease is the leading cause of death in the United States and is a major cause of disability. The most common heart disease in the United States is coronary heart disease, which often appears as a heart attack. About every 26 seconds, an American will have a coronary event. One American will die from a heart attack every minute.

There are many ways that Americans can learn more about staying heart healthy and understanding heart attacks. There are also important terms for you to understand—from acute coronary syndrome and angina to digitalis and diuretics. The following pages offer information to help you better understand your own heart truth.

## **FASTFACTS**

- Each year over a million people in the United States have a heart attack. About half of them die.
- It's important to know the symptoms of a heart attack and call 9-1-1 if someone is having them. Symptoms include—chest discomfort, such as pressure, squeezing, or pain; shortness of breath; discomfort in the upper body, such as the arms, shoulder, neck, back; nausea, vomiting, dizziness, light-headedness, and sweating. Any symptoms that cause you concern should be checked with a health care professional as soon as possible.
- As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to experience some of the other common symptoms, particularly shortness of breath, nausea/vomiting, and back or jaw pain.
- Most attacks happen when a clot in the coronary artery blocks the supply of blood and oxygen to the heart. Often this leads to an irregular heartbeat—called an arrhythmia—that causes a severe decrease in the pumping function of the heart. If the blockage is not treated within a few hours, the affected heart muscle dies.

# The Heart Truth Campaign 2009



Since 2002, the Red Dress has been the national symbol for women and heart disease awareness through a national campaign, *The Heart Truth*. Sponsored by the National Heart, Lung, and Blood Institute (NHLBI) and partner organizations, *The Heart Truth* includes the annual Red Dress Collection Fashion Show in New York City. The campaign was created to spread the message that heart disease is the No. 1 killer of American women. In fact, one in four women dies of heart disease.

“Many women do not make the connection between risk factors for heart disease—and their personal risk for developing it,” says Elizabeth G. Nabel, M.D. director of NHLBI. “Fortunately, we have made major progress in increasing awareness among women.”

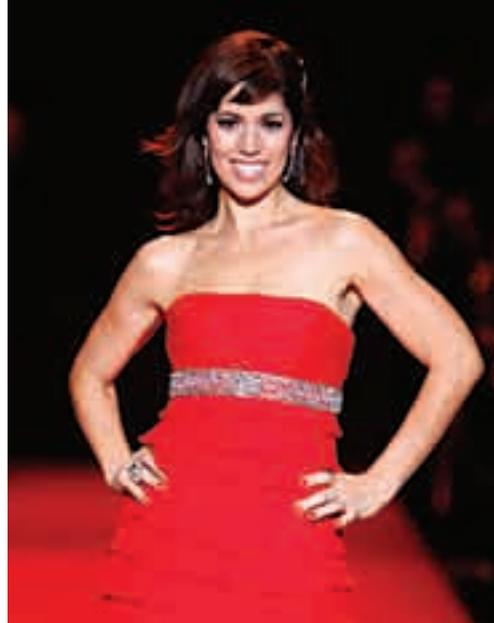
In 2000, only 34 percent of women knew the risk factors for heart disease. That number went up to 62 percent in 2008.

*The Heart Truth* campaign aims to increase awareness even more. National Wear Red Day, held on Friday, February 6, 2009, unites Americans across the country in the fight against heart disease. The Red Dress pin is another way to remind women of their risk. It is available online at [www.hearttruth.gov](http://www.hearttruth.gov).

A highlight of American Heart Month is *The Heart Truth's* annual Fashion Week Red Dress Collection Fashion Show. The show features celebrities and designers who help spread the message to women about heart disease. Participants in the 2008 show included Allison Janney for Donna Karan, Ana Ortiz for Badgley Mischka, Ashanti for Tracy Reese, Camryn Manheim for Ali Rahimi, Heidi Klum for Marc Jacobs, and Rita Moreno for Lily Samii.

“The Red Dress Collection Show is our way of helping to spread the word about the importance for women to understand heart disease,” says actress Ana Ortiz, one of the stars of the hit television comedy, *Ugly Betty*. “Everyone is touched in some way by heart disease, and we have to work together to help fight this epidemic among Americans—both women and men.”

**Actress Ana Ortiz (top), one of the stars of the hit television comedy *Ugly Betty*, is one of the celebrities supporting this year's *The Heart Truth* campaign. Both R&B singer Ashanti (center) and Allison Janney (bottom), formerly on *The West Wing*, have also supported *The Heart Truth*. The Red Dress, symbol of the campaign about women and heart disease, is part of a showcase fashion event held every February as part of National Heart Month.**



Photos: The Heart Truth, NHLBI

# Heart Disease: Symptoms, Diagnosis, Treatment

## Symptoms

It is very important to learn the signs of a heart attack. Fast action can save lives—maybe your own.

- **Chest pain or discomfort**—It may feel like pressure or a squeezing pain in your chest. It may feel like indigestion. You may also feel pain in your shoulders, arms, neck, jaw, or back.
- **Shortness of breath**—often comes along with chest discomfort but can also occur before.
- **Other symptoms**—breaking out in a cold sweat, nausea, or light-headedness, upper body discomfort in one or both arms, the neck, jaw, or stomach.

## Diagnosis

Key heart tests include:

- **Electrocardiogram (ECG or EKG)**—This records the electrical activity of the heart as it contracts and relaxes. The ECG can detect abnormal heartbeats, some areas of damage, inadequate blood flow, and heart enlargement.
- **Blood test**—Checks for enzymes or other substances released when cells begin to die. They are “markers” of the amount of damage to your heart.
- **Nuclear scan**—Reveals the damaged areas of the heart that lack blood flow. It also can show problems with the heart’s

pumping action. The test uses radioactive tracers to study how blood flows in your heart.

- **Coronary angiography (or arteriography)**—A test that uses dye and special X-rays to show the inside of your coronary arteries.

## Treatment

You will need to change your lifestyle to help prevent or control coronary heart disease (CHD) and so reduce the risk of a first or repeat heart attack. Sometimes, though, you may need medicines.

- **Antiplatelet** drugs, such as aspirin, keep blood clots from forming. These drugs help to keep arteries open in those who have had a previous heart bypass or other artery-opening procedure, such as coronary angioplasty.
- **Anticoagulants (blood thinners)** prevent blood from clotting or prevent existing clots from getting larger. They can keep harmful clots from forming in your heart, veins, or arteries. Clots can block blood flow and cause a heart attack or stroke. Common names for anticoagulants are “warfarin” and “heparin.”
- **Digitalis** makes the heart contract harder when the heart’s pumping function has been weakened. It also slows some fast heart rhythms.

- **ACE (angiotensin converting enzyme) inhibitors** stop production of a chemical that narrows blood vessels. They help control high blood pressure. You may also take an ACE inhibitor after a heart attack to help the heart pump blood better. People with heart failure, a condition in which the heart is unable to pump enough blood to supply the body’s needs, may also take them.

- **Beta blockers** slow the heart and make it beat with less contracting force, so blood pressure drops and the heart works less hard. They are used for high blood pressure, chest pain, and to prevent repeat attacks.

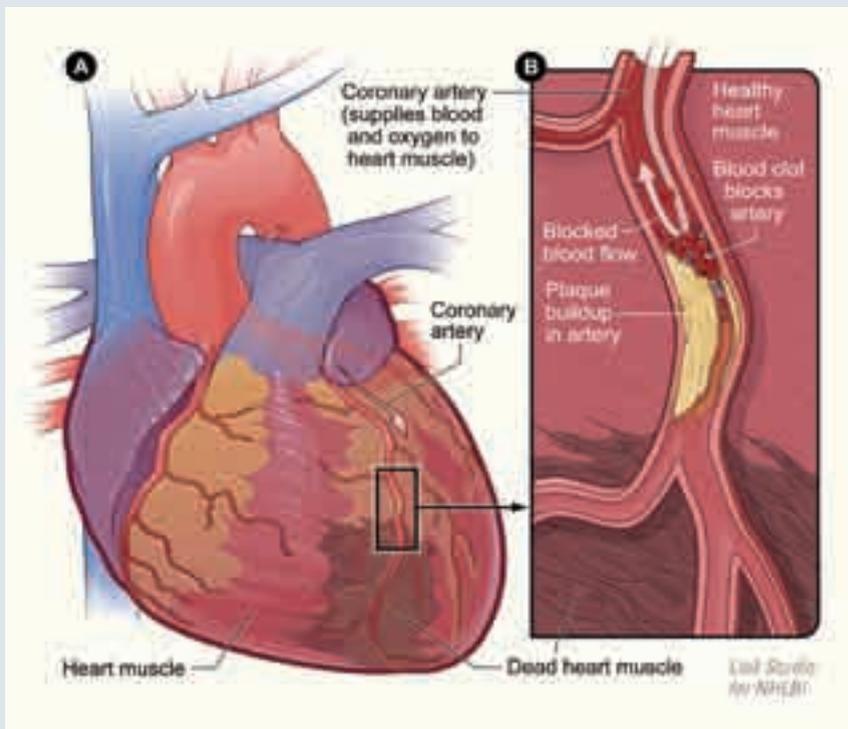
- **Nitrates (nitroglycerin)** relax blood vessels and stop chest pain.

- **Calcium channel blockers** relax blood vessels. They are used to treat high blood pressure and chest pain.

- **Diuretics** decrease fluid in the body. They treat high blood pressure. Diuretics are sometimes referred to as “water pills.”

- **Blood cholesterol-lowering agents** decrease LDL (“bad”) cholesterol levels in the blood.

- **Thrombolytic agents (clot busting drugs)** are given during a heart attack to break up a blood clot in a coronary artery and restore blood flow.



Most heart attacks happen when a clot in the coronary artery blocks the supply of blood and oxygen to the heart. A blockage that is not treated within a few hours causes the affected heart muscle to die.

Image: National Heart, Lung, and Blood Institute, Diseases and Conditions Index

# Brave Heart

**Robert Borum has suffered three heart attacks**, but is living a good life thanks to steps he took to live a heart-healthy lifestyle and his volunteer efforts to help other heart patients.

By Mary Best

“Robert is walking proof that you can have a good life after a heart attack,” says Sue Borum about her husband, a survivor of three heart attacks and numerous surgeries. But the couple, married 56 years and now retired from the naval shipyard in Charleston, S.C., have traveled a rocky road to safeguard Robert’s health.

## Three Strikes

Robert’s heart troubles began in September 1999, when he was getting luggage out of the car after visiting their daughter. He felt chest pains severe enough to prompt a visit to the area hospital. After being checked out, the doctor sent Robert home with nitroglycerine tablets. But later that evening, he returned to the emergency room and went into cardiac arrest. A catheterization

“Robert is walking proof that you can have a good life after a heart attack.”

showed multiple blockages. Robert had immediate surgery and received five bypasses.

His second heart attack came two months later, when one of the bypasses closed. This time, in addition to a catheterization, the surgeon performed an angioplasty and implanted a stent. Three days later, Sue drove Robert home through the snowy Southern Appalachian Mountains.

“I figured if that drive didn’t give me a heart attack, I was in great shape,” Robert adds.

In the summer of 2001, doctors discovered another irregularity in his heart. During the examination, he went into cardiac arrest. “It scared the heck out of my wife,” Robert remembers. He was operated on and doctors installed a pacemaker, which was replaced after five years.



Following Robert’s (left) three heart attacks, he and his wife Sue began volunteering for The Mended Hearts, a heart patient support organization that is allied with the National Heart, Lung, and Blood Institute (NHLBI) and is affiliated with the American Heart Association (AHA).

## Lifestyle Changes

Surviving—and thriving—after such extensive heart damage required dramatic changes in the Borum household. Robert’s family background and previous habits were special challenges.

“Heart disease is rampant in my family,” says Robert. “My grandfather and all my uncles died of heart attacks. Before mine, I ate what I wanted, as much as I wanted. Other than playing golf, I didn’t really exercise,” Robert adds.

But all that changed after nearly losing his life. He began a program of regular rehabilitation, as well as walking and playing golf several days a week. And with wife Sue’s help, he modified his eating habits.

Robert and Sue’s life has changed in other ways, as well. Since February 2001, they have been active members of Mended Hearts, a National Heart, Lung, and Blood Institute (NHLBI) partner organization and affiliate of the American Heart Association that offers support to heart patients and their families. The couple regularly visits hospital patients, offering empathy and compassion, attends monthly meetings, and travels to the organization’s annual conference.

“We have a deep faith,” Sue says, “and we want to return the help we received.”

“It’s a real high to leave the hospital after you have helped someone,” Robert adds.

For more than 50 years, Mended Hearts has offered services to heart patients and through visiting programs, support group meetings, and educational forums. For more information, visit [www.mendedhearts.org](http://www.mendedhearts.org)

## Questions to Ask Your Doctor

- Am I at risk of having a heart attack?
- What lifestyle changes can I make to prevent a heart attack?
- How do I know if I am having a heart attack?

## What Is Acute Coronary Syndrome (ACS)?

Many people hear the term “acute coronary syndrome” related to heart attack. But just what is it? Acute coronary syndrome (ACS) is a life-threatening form of coronary heart disease (CHD) that occurs when the heart muscle does not receive enough oxygen-rich blood. ACS includes myocardial infarction (MI), also known as a heart attack, and unstable angina, or sudden, severe chest pain that typically occurs when a person is at rest.

Every year, ACS affects an estimated 1.4 million people in the United States and another 1.4 million people in Europe. Even though patients receive intense ACS management while in the hospital, new treatments are needed to reduce the risk of acute heart attack, stroke, and cardiovascular death. ACS patients receive anticoagulant drugs but this treatment is limited to the hospital.

## NIH Research to Results

- For years, growing evidence has suggested that inflammation plays a strong role in developing cardiovascular disease, especially atherosclerosis, or hardening of the arteries. NHLBI is working to review and update the scientific evidence regarding the assessment and management of cardiovascular risk factors. Findings will become part of the set of guidelines for health care providers to help adult patients reduce their risk for heart disease.
- Signs of heart attack in women are often very different from those associated with men (shortness of breath, tightening in the chest). If women of any age experience things like dizziness or discomfort in the upper body, they should immediately contact 9-1-1.
- A patient care program in North Carolina shortened the time it took to treat heart attack patients with either clot-busting drugs or percutaneous coronary intervention (PCI) by up to 32 minutes, according to research by the American Heart Association.
- The typical Western diet—fried foods, salty snacks and meat—accounts for about 30 percent of heart attack risk across the world, according to an American Heart Association study of dietary patterns in 52 countries.

## To Find Out More

- [www.nlm.nih.gov/medlineplus/heartattack.html](http://www.nlm.nih.gov/medlineplus/heartattack.html)
- [www.nlm.nih.gov/health/dci/Diseases/HeartAttack/HeartAttack\\_WhatIs.html](http://www.nlm.nih.gov/health/dci/Diseases/HeartAttack/HeartAttack_WhatIs.html)
- [www.americanheart.org](http://www.americanheart.org)

# HEALTH LINES

By Shana Potash, NLM Staff Writer

## Skip the Coffee, Take a Nap

Want to improve your memory and learning? Take a nap, don't drink coffee a new study suggests. Researchers compared caffeine (the stimulant in coffee, tea, soda, and energy drinks) and naps to see their effect on memory and learning.

Researchers taught people in the study to perform tasks associated with three types of memory: verbal, motor, and perceptual. Study participants memorized words, tapped keys on a keyboard in a particular order, and identified shapes on a computer screen. They were divided into three groups. One group took a nap, another took a pill with caffeine, and the third took a dummy pill with no stimulant. Everyone was then retested on the tasks. The people who napped did better in all three areas than those who had caffeine. The upshot: caffeine either hurt performance or did not improve it.

A team at the University of California, San Diego did the study, which was supported by the National Institute of Mental Health.

## Colorectal Cancer Screening: Just Do It

Colorectal cancer is the second leading cause of cancer deaths in the U.S. It can be caused by growths (called polyps) that turn into cancer. Colonoscopies are performed to find problems early. A recent, large study compared a newer technique, known as "virtual colonoscopy," with the standard colonoscopy. The study found the virtual test about as accurate as the standard colonoscopy at finding larger polyps. This method could be an initial screening option for some people.

Virtual colonoscopy uses X-ray and computer technology to create three-dimensional images of the colon. It is less invasive than standard colonoscopy. The standard test uses a long, flexible tube with a camera inserted into the colon. Standard colonoscopy remains the gold standard and is better at finding smaller polyps.

Each method has its advantages and drawbacks. People should talk with their health care provider about which screening method is best for them.



"The most important advice we can give is to get screened," says Dr. Paul Limburg, of the Mayo Clinic in Rochester, Minnesota, one of the study's authors. "How they get screened should be an individual decision based upon discussions between patients and their providers." It is generally recommended that people aged 50 or older be screened.

Researchers at 15 locations across the country did the study, which was sponsored by The National Cancer Institute.

## Older Adults Risk Dangerous Drug Combinations

A new survey finds older people in the United States are taking more drugs than ever before. And many seniors may be at risk of dangerous drug interactions.

More than half of older adults use five or more prescription drugs, over-the-counter medicines, or dietary supplements. One in 25 seniors, about 2.2 million people, are in danger of health problems that can happen when certain drugs are taken together.

Researchers say people should let their doctors know about all the drugs and supplements they take. People also should ask their doctor or pharmacist about possible drug interactions when they start taking something new.

The National Institute on Aging, the Office of Research on Women's Health, the Office of AIDS Research, and the Office of Behavioral and Social Sciences Research supported the research.

# NIH Quickfinder

For more information or to contact any of the following NIH institutes, centers, and offices directly, please call or go online as noted below:

## Institutes

- **National Library of Medicine (NLM)**  
www.nlm.nih.gov 1-888-FIND-NLM
- **National Cancer Institute (NCI)** www.cancer.gov  
1-800-4-CANCER (1-800-422-6237)
- **National Eye Institute (NEI)** www.nei.nih.gov  
(301) 496-5248
- **National Heart, Lung, and Blood Institute (NHLBI)**  
www.nhlbi.nih.gov (301) 592-8573
- **National Human Genome Research Institute (NHGRI)** www.genome.gov (301) 402-0911
- **National Institute on Aging (NIA)** www.nia.nih.gov  
Aging information 1-800-222-2225  
Alzheimer's information 1-800-438-4380
- **National Institute on Alcohol Abuse and Alcoholism (NIAAA)** www.niaaa.nih.gov  
(301) 443-3860
- **National Institute of Allergy and Infectious Diseases (NIAID)** www.niaid.nih.gov  
(301) 496-5717
- **National Institute of Arthritis and Musculoskeletal and Skin Diseases** www.niams.nih.gov  
1-877-22NIAMS (1-877-226-4267)
- **National Institute of Biomedical Imaging and Bioengineering (NIBIB)** www.nibib.nih.gov  
(301) 451-6772
- **Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)**  
www.nichd.nih.gov 1-800-370-2943
- **National Institute on Deafness and Other Communication Disorders (NIDCD)**  
www.nidcd.nih.gov 1-800-241-1044 (voice)  
1-800-241-1055 (TTY)
- **National Institute of Dental and Craniofacial Research (NIDCR)** www.nidcr.nih.gov  
(301) 480-4098
- **National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)** www.niddk.nih.gov  
Diabetes 1-800-860-8747  
Digestive disorders 1-800-891-5389  
Overweight and obesity 1-877-946-4627  
Kidney and urologic diseases 1-800-891-5390

- **National Institute on Drug Abuse (NIDA)**  
www.nida.nih.gov (301) 443-1124
- **National Institute of Environmental Health Sciences (NIEHS)** www.niehs.nih.gov  
(919) 541-3345
- **National Institute of General Medical Sciences (NIGMS)** www.nigms.nih.gov  
(301) 496-7301
- **National Institute of Mental Health (NIMH)**  
www.nimh.nih.gov 1-866-615-6464
- **National Institute of Neurological Disorders and Stroke (NINDS)** www.ninds.nih.gov  
1-800-352-9424
- **National Institute of Nursing Research (NINR)**  
www.ninr.nih.gov (301) 496-0207

## Centers & Offices

- **Center for Information Technology (CIT)**  
www.cit.nih.gov (301) 594-6248
- **Center for Scientific Review (CSR)**  
www.csr.nih.gov (301) 435-1115
- **Fogarty International Center (FIC)**  
www.fic.nih.gov
- **National Center for Complementary and Alternative Medicine (NCCAM)**  
www.nccam.nih.gov 1-888-644-6226
- **National Center on Minority Health and Health Disparities (NCMHD)** www.ncmhd.nih.gov  
(301) 402-1366
- **National Center for Research Resources (NCRR)**  
www.ncrr.nih.gov (301) 435-0888
- **NIH Clinical Center (CC)**  
www.cc.nih.gov (301) 496-2563
- **Office of Research on Women's Health (ORWH)**  
http://orwh.od.nih.gov (301) 402-1770

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## ¡A su salud!

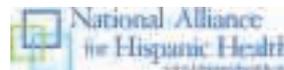
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Para obtener una suscripción gratis de la revista *NIH MedlinePlus Salud*, por favor envíe un fax con su nombre y dirección al (336) 547-0768 o envíe un email a [Traci.Marsh@vitality.com](mailto:Traci.Marsh@vitality.com)

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