

Health on-line

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"Living Well into the Next Millennium"

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Vitamin E Prevents Heart Attacks

Scientists at the University of Cambridge in England demonstrate that vitamin E can reduce heart attack risks by 75 percent. In

the Cambridge Heart Antioxidant Study (CHAOS) researchers examined 2,002 patients with confirmed coronary artery disease in a random, double-blind, placebo-controlled study. Along with their regular medication, half of the patients enrolled were given vitamin E capsules daily while the other half were given a placebo (soybean oil) for approximately 17 months.

Half the patients received 800 IU of vitamin E daily for two years; the other half received 400 IU for one year. The reduction in the amount of vitamin E given to patients who were recruited halfway through the trial was an unusual feature of the CHAOS study. Because the study was not designed as a test of the two doses, both groups were combined.

The number of heart attacks in the vitamin E group was only one-quarter of that in the placebo group. After 17 months of follow-up, 41 non-vitamin takers had suffered fatal heart attacks compared to only

14 heart attacks among vitamin takers. Vitamin E did not reduce the risk of dying from other forms of heart disease, however. Researchers

also found no difference in heart attack risk between those people taking 400 IU of vitamin E and those taking 800 IU.

Vitamin E might prevent heart attacks by slowing the oxidation of fat and cholesterol, the Cambridge researchers wrote. This oxidation is believed to create

the plaque that clogs coronary arteries. One of the researchers, Morris J. Brown, Ph.D. says, "We are enormously excited to discover that vitamin E really is as beneficial as we had all hoped. Now we can confidently say that vitamin E protects against heart attacks."

Americans receive approximately 30 IU of vitamin E on average from their diet, so the only way people can obtain the necessary dosage is from dietary supplements. "I will be recommending that patients with angina and those who are at risk of heart disease should be given supplementary vitamin E at a high dose," says Dr. Brown. ♦



MARK FUERST

Remain Active: How to Start a Workout Program Without Injuries

Study after study shows that it's never too late to benefit from changing from a sedentary to an active lifestyle. But how do you go about beginning an exercise program without getting injured? For some, the answer is "not easily." As more people incorporate regular exercise into their lifestyles, the number of people seeking care for sports-related injuries has also increased dramatically.

25 Million Recreational Athletes Seek Medical Attention Annually

The repetition of body movements leads to overuse injuries in almost all sports. Recreational athletes tend to go out and do too much too soon without instructions on how to perform properly. They often don't understand the importance of warming up and warming down, or that stretching is the single most important way to prevent an injury.

Returning to action after a long layoff may put exercisers at high risk of an injury. Overextending a joint or muscle may result in sprains or muscle pulls, causing many miserable Mondays after weekend sports. Stretching to increase flexibility is particularly important for the middle-aged athlete who tries to swing his/her golf clubs the first nice weekend in spring or who goes on a weekend ski trip after the first snowfall.

Warm up to Avoid Injuries

Warming up and stretching are initial components of any exercise program, says Allan M. Levy, M.D., team physician with the New York Gi-



ants and co-author of *Sports Injury Handbook* (John Wiley & Sons, 1993). "You should warm up and stretch before beginning any workout to prevent muscle and joint pains, and then warm down and stretch again afterward to prevent muscle soreness and heart strain," he says. (See "Work Out to Win in 5 Easy Steps.")

Pick Activities You Like

"You should not be concerned about how much you exercise, or how intensely. Your effort should be devoted to learning how you can adjust your life so that physical activity becomes as natural a part of your day as brush-

ing your teeth or eating dinner," write Ralph S. Paffenbarger Jr., M.D., Ph.D. and Eric Olsen in their new book, *LifeFit* (Human Kinetics, 1996).

Schedule exercise into your day.

For example, walking for 10 minutes at noon before lunch, or cycling 15 minutes each evening after work. Soon you will see the immediate benefits of exercise—more vitality, relaxation, a chance to think without interruption, improved mood, and a quicker mind—which will help you stick with your exercise routine.

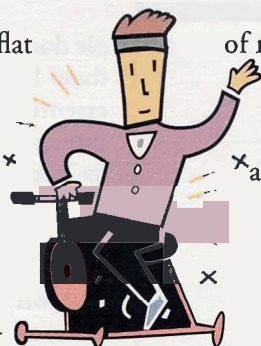
Pick one or two light activities that you might like, from gardening to walks around the block to taking the stairs at work. If you are just starting out in an exercise program, or have been only haphazardly active because you had a hard time sticking with it or became injured, then you need to know what kind of exercise you like and what works best for you.

Your body will help you decide what suits you best. Everyone has certain biomechanical deficiencies or limitations, says Thomas Scandalis, D.O., assistant professor of sports medicine at New York College of Osteopathic Medicine in Old Westbury, N.Y. If you identify your anatomical abnormalities, you can adapt to them accordingly.

Good Shoes are a Must in Starting an Exercise Program

Levy recommends a gradual walk-jog routine to prepare the body for regular exercise. One of the most common causes of overuse injuries in the lower body is an abnormality in the way the foot hits the ground. A quick test is to look at your foot print when you step out of the shower, Scandalis says. If the foot print is completely flat-

tened, you probably have flat feet, and need to walk or jog in a stable running shoe to prevent your foot from pronating, or rolling to the outside. If you primarily see your heel and forefoot, this suggests a rigid foot that requires a highly cushioned walking or running shoe.



of motion a day or two later. Liniments such as Ben-Gay and Hot-Stuff may also help relieve the aches and pains of exercise, he says.

Start Exercising at a Low Pace

One of the principles of prescription in medicine is "start low and go slow," says Scandalis, who thinks of exercise as medicine. "For safety, start exercising at a low pace and progress slowly," he says. He suggests using a simple talk test to know whether you are pushing your-

self too hard at first. "If you can exercise and have a comfortable conversation, that's the right intensity," he says. "If you are gasping for air and can't talk, you are going too hard. If you can sing, that's too easy."

Start a strength training program with light weights. Levy suggests using light weights and seeing what you can do comfortably. Once you can easily do a set of 12 repetitions of a particular exercise, increase the weight by 5 percent. "If you follow this program at least twice a week, each month you should be able to safely

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Start by walking 100 paces and then jogging 100 paces, alternating this routine for 10 minutes each day. After several days, walk 10 fewer paces and jog 10 more paces. Continue to add 10 jogging paces and cut 10 walking paces every other day until you are jogging for a total of 10 minutes. Gradually increase your jogging speed until your heart rate is within the training range (*see box below*), and jog one more minute

USE YOUR MAXIMUM HEART RATE

The training range is 70 percent to 85 percent of your maximum heart rate, which can be calculated by subtracting your age from 220. So a 40-year-old with a maximum heart rate of 180 would have a training range of 126 to 153 beats per minute.

every other day until you reach 20 minutes. "Now you are training your heart to become stronger," Levy says.

Take Aspirin, Liniments to Reduce Muscle Aches

Extreme muscle soreness from an initial workout often dissuades people from continuing. Levy suggests taking two aspirin right after exercising, which can help reduce muscle soreness and improve range

Work Out to Win in 5 Easy Steps

If you plan to engage in any fitness activity, you can minimize strains, sprains, tears, and other hidden hazards of exercising by following five simple steps, says Allan M. Levy, M.D., team physician with the New York Giants.

"The goal of the program is to help you become stronger and more fit so that you can gradually reach your peak condition," Levy says. "If you follow the program below, you will be at your best when it comes time to play your chosen sport."

1. Warm up properly with easy exercises such as a brisk walk, light calisthenics, or riding a stationary bicycle for five to 10 minutes.

2. Take time (five to 10 minutes) to stretch and lengthen muscles and improve range of motion.

3. Do conditioning or strengthening exercises as part of your regular fitness activity for at least 20 minutes, three times a week.

4. Warm down gradually with continued, mild activity after strenuous exercise, such as walking for five to 10 minutes.

5. Stretch again to restore full range of motion and flexibility to muscles.

This five-step program allows your muscles and joints to function better. The warm up increases blood flow so that muscles are softer and more flexible. Warm, loose muscles stretch more easily, which makes them much less likely to pull or tear. Warming down after exercising washes out lactic acid that causes the soreness in overworked muscles. It also prevents the pooling of blood away from the heart, which can lead to heart attacks or strokes, particularly in older people. Stretching again after exercise relengthens muscles and prevents them from pulling the next time you exercise.

These are the steps that winning athletes take. They can help anyone become a winner," says Levy.

Melatonin may also boost the immune system and act as an antioxidant. There is even a little scientific

Roughly 10 million Americans see their physician each year for relief from their insomnia.

speculation that it might prevent and treat cancer and extend life by resetting our biological clocks. Austrian researchers have found that men and women with coronary artery disease have lower night time blood levels of melatonin than people without coronary heart disease. (*The Lancet*, June 3, 1995; 345 (8962): 1408)

In addition, researchers at Stanford University School of Medicine in California have found that difficulty falling asleep is a strong predictor of coronary heart disease, so the research seems to be corroborative. (*Modern Medicine*, May 1995, 63: 6)

In short, to ensure a good night's sleep remember the four basic tips (see box on page 14). Wishing you the best of health and the sweetest of dreams! ♦

Dr. Goldstrich is Board Certified in Cardiology and a Diplomate of the American Board of Internal Medicine. He is a graduate of the American Heart Association Lipid Disorders Training Centers Program, a member of the American College of Nutrition and a member of the Editorial Board of *The Journal of Optimal Nutrition*. He is an expert in nutrition and nutritional supplements and a Fellow of the American College of Cardiology. His most recent book, **Healthy Heart, Longer Life**, is available by calling (800) 903-1199.

FITNESS

WORKOUT WITHOUT INJURIES

(continued from page 11)

add about 5 percent more weight," Levy adds.

Gradually Increase Resistance

Exercise machines found in health clubs are a good place to start. You can set the resistance to zero on most machines and then increase the resistance one pound at a time. By gradually increasing the resistance, you can undertake a progressive resistance strength training program that's dictated by your abilities, not the machine's.

In addition to better conditioning, increased strength will not only help you enjoy your chosen sport or activity but help to prevent injuries.

"A stronger athlete tires less quickly as well, which puts off fatigue, the cause of many sports injuries," notes Levy.

The key is to not push yourself to the point of fatigue. "Beginning exercisers always complain that they are not working hard enough. They believe that they can do more, and they probably can, but that's not good at first," says Levy. If you do too much too fast, you will probably become sore and will more than likely quit before exercise becomes incorporated into your lifestyle. Starting slowly won't guarantee that you won't get hurt, but it will give your body a chance to adapt to activity and you a chance to meet your goal of improved health and fitness. ♦

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By the Numbers

► **The amount of different foods consumed by the 1996 Olympic athletes, coaches and staff:**

- 61,958 strip steaks
- 50,000 pounds of pasta
- 46,560 bunches of green onions
- 48,000 dozen eggs
- 34,000 pounds of rice
- 23,342 pints of strawberries
- 15,498 pounds of asparagus
- 3,333 pounds of black-eyed peas
- 665 pounds of anchovies

(Source: Environmental Nutrition)

► **The Olympic athletes' daily caloric intake ranges from 1,712 to 6,065 calories for the male Olympians and from 1,235 to 4,854 calories for the female Olympians.**

► **52 percent of all the male and female Olympians report routine use of supplements.**

(Source: American Journal of Clinical Nutrition)

"When you buy a pill and buy peace with it you get conditioned to cheap solutions instead of deep ones"

Max Lerner (1902-present) U.S. Author

► **The tropical rain forest is disappearing at the rate of 99 acres per hour.**

► **During the 1980s, forests diminished at a yearly average rate of 42 million acres—a geographical area the size of Austria.**

► **During the 1980s, topsoil losses were approximately 24 billion tons, equivalent to the topsoil covering Australia's wheat lands.**

► **During the 1980s, the desert lands have increased by 296 million acres.**

(Source: A Textbook of World Health: A Practical Guide to Global Health Care, Parthenon Publishing Group, 1995)

"If I had my way I'd make health catching instead of disease."

Robert G. Ingersoll (1833-1899) U.S. Lawyer and Agnostic