



Hughston Health Alert



6262 Veterans Parkway P.O. Box 9517 Columbus GA 31908-9517

VOLUME 16, NUMBER 2

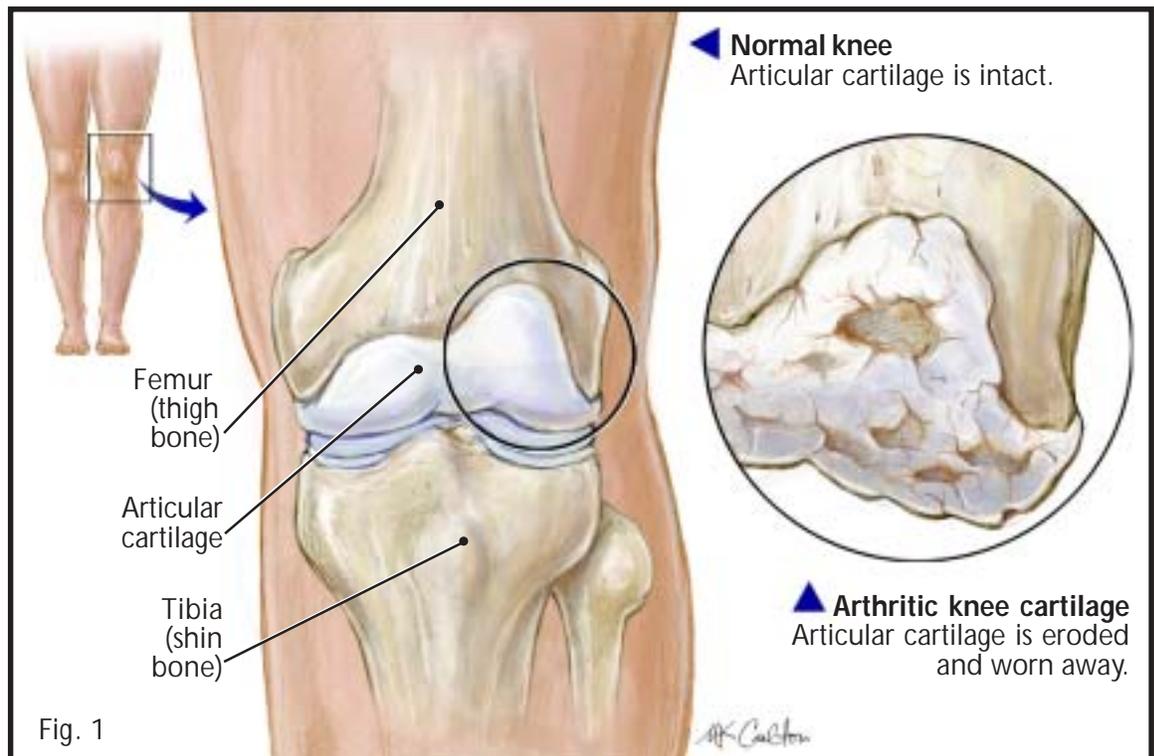
www.hughston.com

SPRING, 2004

The Weight of Obesity

As evidenced by the recent surge of media attention, it is generally agreed that for the most part Americans are overweight. In fact, hundreds of thousands of Americans are morbidly obese. Doctors use the body mass index, or BMI to measure if a person is obese.

Obesity has many wide-reaching effects on health, but one that is not discussed as much is the effect weight has on your joints. While there is some controversy as to whether being overweight or obese is a direct cause of arthritis, it is generally agreed that excess weight can affect joint health.



Inside This Issue:

- What is BMI?
- The Woes of Obesity
- Medications that Lower LDL Cholesterol
- Aspirin in the News
- No Miracle - Just Good Sense
- Carlton G. Savory, MD

For example, osteoarthritis, a common type of joint arthritis, occurs when the cartilage on the ends of your bones wears away with use. As this cushion degenerates, the bones rub against each other, causing pain (Fig.1). Since excess weight puts more force on your joints, it seems logical that you want to avoid that extra force.

The field of biomechanics (the relationship between forces and motion in the body) gives us some interesting information about loads that our weightbearing joints

undergo. In the hip and the knee, two joints that are commonly affected by arthritis, joint forces are approximately 1.5 times body weight when walking on level ground. This means that when a person weighing 200 pounds is walking along a level sidewalk, the forces on the joint are the same as for a 300-pound person standing still. Other activities place even greater forces on the joints. Getting up out of a chair increases the force to approximately 2 to 3 times body weight. The same is true of going up and down stairs. With

FOR A HEALTHIER LIFESTYLE

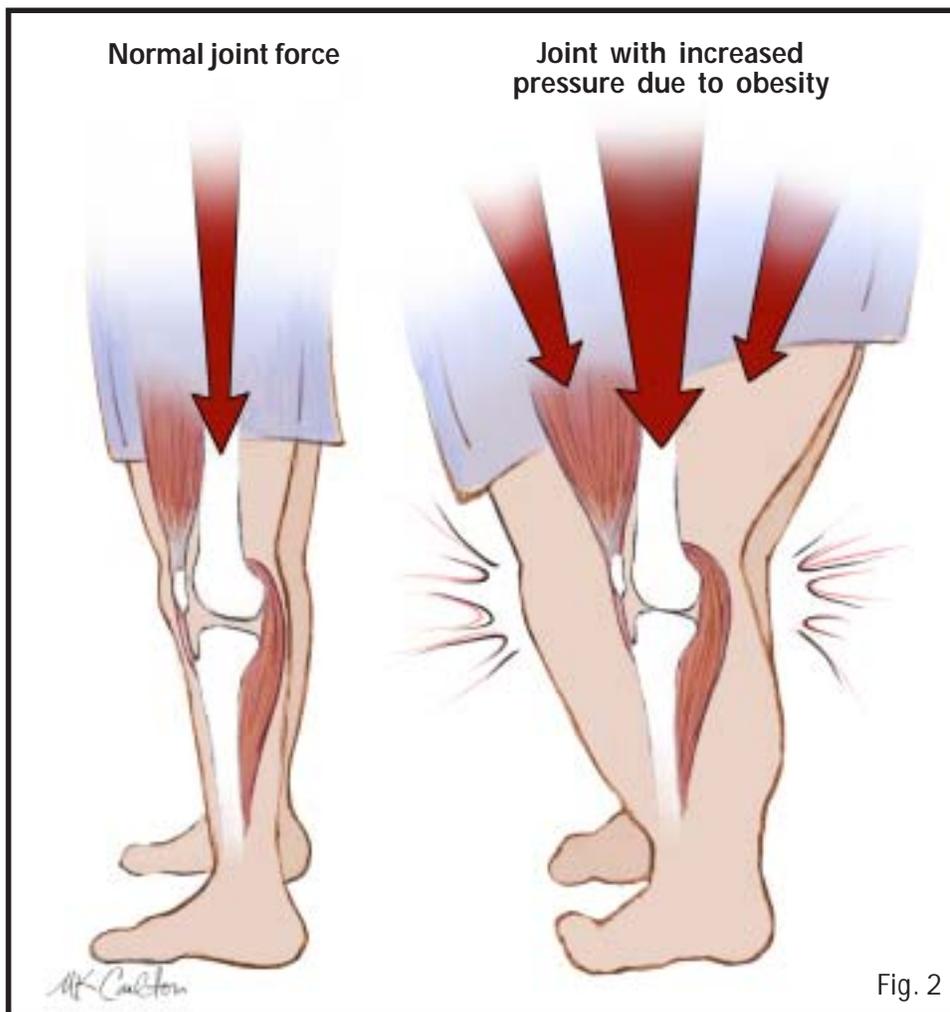


Fig. 2

more vigorous activities, such as running or jumping, the forces on the joints can approach 4 to 5 times body weight. For patients who are overweight, this means dramatically increased force on the joints (Fig. 2).

Unfortunately, obesity accompanied by arthritis creates a vicious circle of inactivity and pain that prevents exercise. Patients with arthritic joints have a tendency to be more sedentary, which leads to weight gain. The weight gain in turn can make exercise more difficult, so the patient becomes more sedentary, creating the full effect of a negative spiral.

When joints become too worn and painful, joint replacement may be necessary. However, since obesity increases other health problems, it can be a factor when patients are

considering joint replacement. Being morbidly obese increases your risk of complications after surgery. At one time it was thought that obesity increased the risk of failure of joint replacements, but this has not been proved. In fact, obese patients do quite well with joint replacement once they are over the initial operation, rehabilitation, and the healing process.

Losing weight is the best way to help your joints. But if your joint pain is so severe that it affects your daily living, then being obese does not prevent you from having a joint replacement operation.

*Carlton G. Savory, MD
Columbus, Georgia*

What is BMI?

The Body Mass Index (BMI) is a measure of an adult's weight in relation to his or her height. Your BMI can be calculated with a simple math formula using inches and pounds or meters and kilograms (see below). The BMI is not a good source for determining the weight status for children or athletes. For growing children, a height and weight chart is more appropriate. Athletes should use measurements that assess body fat such as waist circumference measurements and waist-to-hip ratio because athletes tend to have a high muscle mass. Muscle weighs more than fat, therefore, an athlete of normal weight can show an overweight BMI percentage.

Body Mass Index Formula

English formula

$$\left(\frac{\text{weight in pounds}}{(\text{height in in.}) \times (\text{height in in.})} \right) \times 703$$

Metric formula

$$\left(\frac{\text{weight in kilograms}}{(\text{height in m.}) \times (\text{height in m.})} \right) \times 10,000$$

Obesity is defined by having a very high amount of body fat in relation to lean body mass or a BMI of 30 or higher. Anything over a 40 BMI is considered to be morbidly obese.

The Woes of Obesity

There's always a lot of hype about weight loss and eating right, but lately there's much more being said about the woes of obesity in America. You, like most Americans, are probably wondering if all the talk is really something to be concerned about.

National studies

Actually, the facts are alarming and there are no simple answers. Here are the facts at the national level:

- The annual death rate in the United States is 2.33 million, and 300,000 of those deaths (13%) can be attributed to obesity.¹
- In a national health survey from 1976 to 1980, the prevalence of

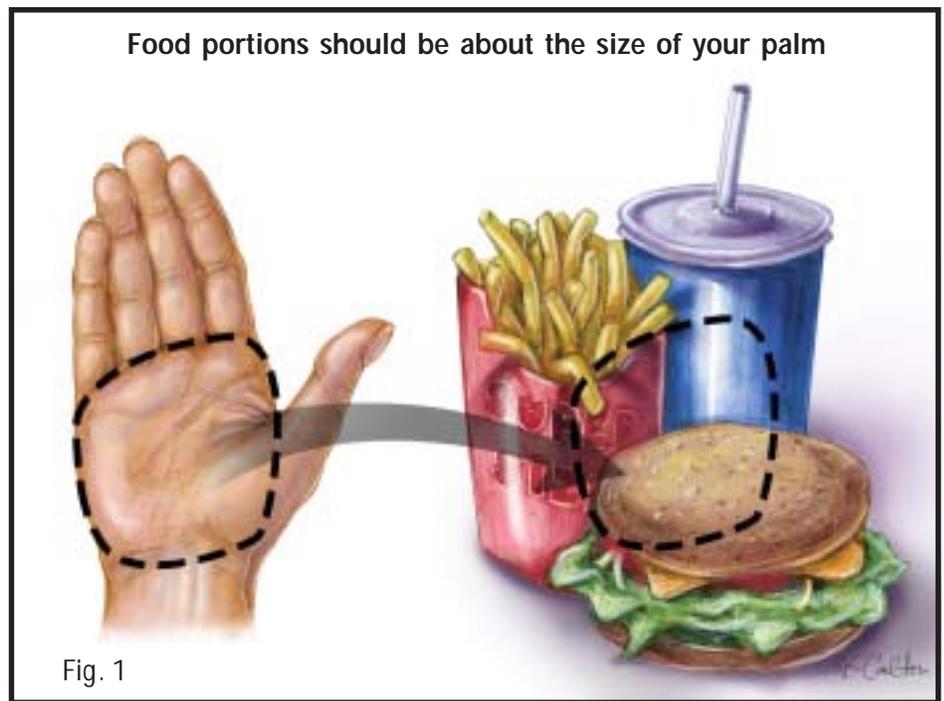


Fig. 1

obesity in adults was 14.5%, when the same type study was performed from 1988 to 1994, the prevalence of obesity had increased to 22.5%.²

- Obese men are 3 times more likely to die of cardiovascular disease when compared with men of normal weight.²

- Obesity contributes to the following negative health issues, which are from 50% to 500% more common in obese adults than non-obese adults:

- Type 2 diabetes,
- Gall bladder disease,
- Coronary artery disease,
- Osteoarthritis,
- Hypertension, and
- Elevated serum cholesterol.³

What about closer to home?

Locally, the facts are just as alarming. Researchers at The Hughston Clinic conducted a study between 1994 and 2001. Over the eight years of the study, we examined a total of 12,225 women and 6,401 men with an average age of 35 to 41 and found the following:

- Women's weight, body mass index (BMI), percent of body fat, and

total cholesterol increased an average of 9.3%.

- Men's weight, BMI, percent of body fat, and total cholesterol increased an average of 9%.

Also during this period, self-reported tobacco use in women increased from 4.7% to 7.1%, and self-reported exercise of 3 times a week decreased from 56.5% to 36.7%.

Men also had an increase in self-reported tobacco use, from 4% to 8.9%, and a decrease in self-reported exercise of 3 times a week, from 68.6% to 48.6%.

The bottom line, based on these studies, is that we are eating more and exercising less. Why is this happening? A good guess is the availability of food and constraints on our time. As Americans, we can buy just about any food at any time of year. We also enjoy the luxury of fast-food restaurants. Our impulse to have more unfortunately often leads us to order the largest size soft drink or fries, which, in turn, costs us physically. And because we are much too busy, exercise that can burn off

those extra calories has become a low priority in our daily lives. This is evidenced not only by the reported decrease in regular exercise, but also by the fact that some school systems are eliminating physical education from their curriculum.

What can we do?

Here is some advice to beat away the gloom of obesity. Remember, it's important to consult your physician before starting any exercise program or drastically changing your diet.

- Knowing your percentage of body fat and your body mass index will give you a good measure of whether your weight is within a healthy range.
- Eat smaller portions (nothing bigger than the palm of your hand) except on special occasions (Fig. 1, pg 3).
- Know what you are eating by learning how to read food labels (Fig. 2).
- Stop fad dieting! These diets do

nothing but put you on a yo-yo pattern of weight loss and gain.

- Think in the long term. One pound of weight loss a week equals 52 pounds a year.
- Take some time for yourself and run, walk, dance, swim, hike, or bike 45 minutes to an hour 3 to 4 times a week.
- Don't compare yourself to anyone, set your own goals and finish the race at your own pace.
- And finally, last but not least, make a commitment. A friend once told me there ain't nothing in the middle of the road except white lines and dead chickens. Be committed to reach your goals and avoid the woes of obesity.

*William C. Etchison, MS
Columbus, Georgia*

References:

1. Allison DB, Fontaine KR, Manson JE, et al. Annual Deaths Attributable to Obesity in the United States. *JAMA*. 1999;282(16):1530-1538.

2. Flegal KM, Carroll MD, Kuczmarski RJ, Johnson CL. Overweight and Obesity in the United States: Prevalence and Trends, 1960-1994. *Int J Obes Relat Metab Disord*. 1998;22(1):39-47.

3. Must A, Spandano J, Coakley EH, et al. The Disease Burden Associated with Overweight and Obesity. *JAMA*. 1999;282(16):1523-1529.

Medications that Lower LDL Cholesterol

We are constantly bombarded with ads for products that lower cholesterol, but how do these medications work and who should be taking them? Cholesterol testing is a routine part of preventive health care. Usually, the cholesterol screening test is completed on adults at least once every 5 years, unless you are already taking medications to lower your cholesterol.

Why do I need to lower my cholesterol?

Lowering your cholesterol can reduce the risk of heart attacks caused by coronary heart disease. For every 10% reduction in LDL (low density lipoproteins) "bad cholesterol" levels, you decrease the possibility of coronary artery disease by 20% to 30%. People who have other risk factors, such as family history of heart disease, cigarette smoking, high blood pressure, and being overweight should especially watch their cholesterol levels.

How can I lower my cholesterol?

The best ways to lower cholesterol and prevent coronary artery disease are to restrict your consumption of high cholesterol foods, lose weight, limit or eliminate alcohol intake, and increase physical activity. If you have tried these methods and your cholesterol level is still high, then medication can be prescribed.

Drug options

Medications that lower cholesterol are called antihyperlipidemic agents. Hyperlipidemia is an elevation of serum cholesterol, triglycerides, or both. Using antihyperlipidemic agents can help to arrest or reverse atherosclerosis, a risk factor in developing heart disease (Fig. 1, pg. 5).

Fig. 2

Important facts about food labels for dieters

It is important to know the serving size, and compare your serving to this information.

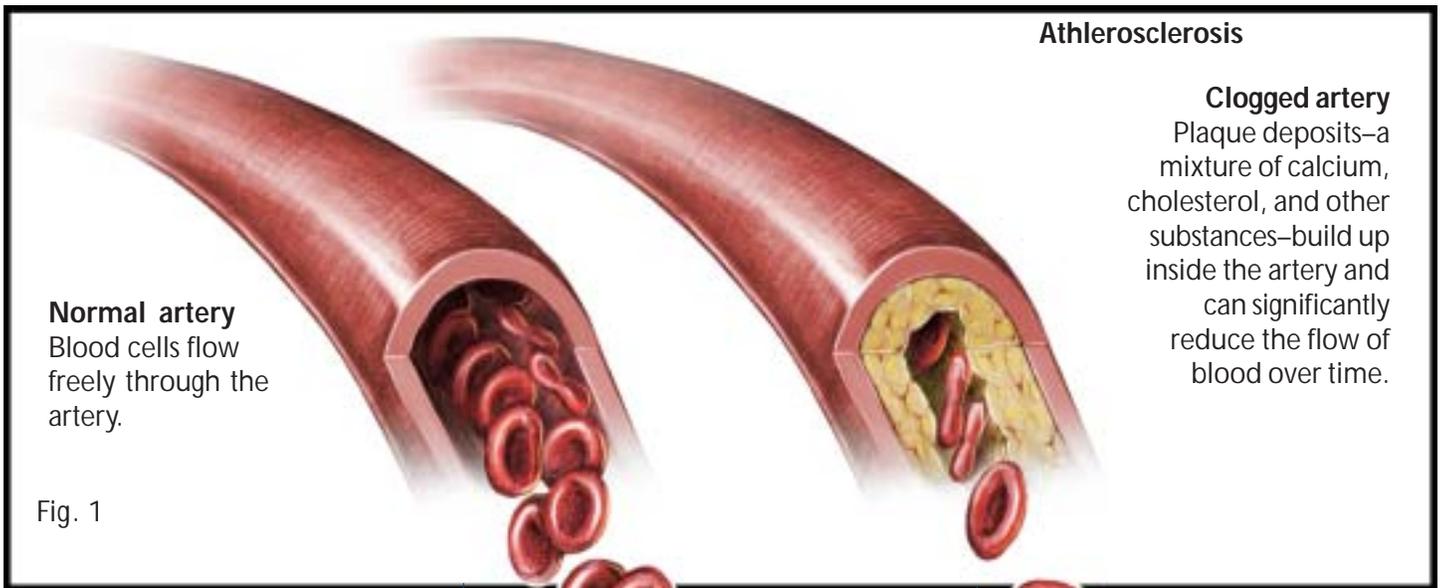
For dieters, try to keep total fat intake down to 33-35 grams (this is for 1,500 calories a day).

High fiber foods are important. Foods high in fiber usually have a low calorie count.

These facts are based on a 2,000 calorie diet. If you are dieting, your calorie intake probably will be lower, which will require some calculating.

Nutrition Facts	
Serving Size 1/2 cup (115g)	
Servings Per Container About 3.5	
Amount Per Serving	
Calories 35	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 320mg	13%
Total Carbohydrate 7g	2%
Dietary Fiber 3g	12%
Sugars 2g	
Protein 1g	
Vitamin A 2%	Vitamin C 6%
Calcium 4%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet.	
INGREDIENTS: ITALIAN BEANS, WATER, SALT.	

Source: *Dieting for Dummies* by Jane Kirby, RD, The American Dietetic Association, December 1998.



Normal artery
Blood cells flow freely through the artery.

Athlerosclerosis

Clogged artery
Plaque deposits—a mixture of calcium, cholesterol, and other substances—build up inside the artery and can significantly reduce the flow of blood over time.

Fig. 1

The most widely used medications are the statins (lovastatin, simvastatin, pravastatin, fluvastatin, and atorvastatin), marketed under names like Lipitor, Mevacor, and Zocor. These drugs inhibit an enzyme, HMG-CoA reductase, that controls the rate of cholesterol production in the body. Besides reducing LDL cholesterol and triglycerides, they also produce a slight increase in the “good cholesterol” HDL (high density lipoproteins).

Nicotinic acid or niacin, a form of vitamin B, can also lower total

cholesterol and triglyceride levels. You should use nicotinic acid to lower cholesterol

only under the supervision of a physician because of potential complications and side effects.

Another type is the fibric acid derivatives, or fibrates. These drugs, like gemfibrozil (Lopid) and fenofibrate (Tricor), lower triglyceride levels but are less effective at lowering LDL cholesterol.

Finally, bile acid sequestrants, like

cholestyramine (LoCholest) and colestipol (Colestid), bind with cholesterol-containing bile in the intestines and cause the cholesterol to be eliminated from the body.

Because the different medications act differently to reduce cholesterol and triglyceride levels, your physician may prescribe a combination therapy of 2 medications. These medications are taken once to twice daily and should only be taken as directed by your physician. Never take any medication more often than prescribed.

Once you start taking any of these medications, your doctor will measure your LDL cholesterol levels after 4 to 6 weeks and then again after 3 months. When the cholesterol levels are within normal range, testing is done every 4 months until the therapy is stabilized.

Side effects

All medications can have side effects, and the antihyperlipidemic agents are no exception. The medications may cause sensitivity to sunlight, so you should avoid prolonged exposure to the sun or ultraviolet light. Wear sunscreen and protective clothing to avoid sunburn and sun glasses to protect your eyes.

Evaluation of total cholesterol level:

- Under 200 is desirable
- 200 to 239 is borderline to high risk
- Over 239 is high risk

If you experience unexplained muscle pain, tenderness, or weakness or have an elevated temperature, you should call your doctor. Other reported side effects include digestive system disturbances and skin flushing (redness of the face or neck).

Watching your diet, exercising, and taking prescribed medications can get your cholesterol levels and triglyceride levels into normal range and provide a lifestyle that reduces the risk of heart disease.

*Nancy Chaffee, RPh, MSHA
Columbus, Georgia*

Further Reading:

Practical Lipid Management Newsletter published by *AstraZeneca*. June 2003.

Drug Facts and Comparisons, published by *Wolter Kluwer Company*, updated monthly. November 2003.

National Heart, Lung, and Blood Institute – *National Institutes of Health*. <http://www.nhlbi.nih.gov/index.htm>.



Aspirin in the News

Aspirin was developed over 100 years ago as a treatment for arthritis. And over the years aspirin has been used to reduce mild to moderate pain and fever and to treat symptoms of rheumatoid arthritis and osteoarthritis. But today, aspirin is touted as being able to prevent a number of health problems.

How aspirin works

Aspirin is in a class of drugs called salicylates. These drugs work as anti-inflammatory agents and have the ability to lower body temperature. The difference between aspirin and other salicylates is that it is better at inhibiting prostaglandin synthesis, which is the action that causes inflammation. Aspirin can also inhibit platelet formation, delay blood clotting, and shows some positive effects in preventing thromboembolic disease (blood vessel blockage).

Heart disease

We now know that aspirin can help to reduce the risk of recurrent TIAs (transient ischemic attacks), or strokes, in men. Unfortunately, it has not been found to be as effective in reducing strokes in women. We also know that aspirin can reduce the risk

of death or nonfatal myocardial infarction (heart attack) in patients who have previously had a heart attack or unstable angina (chest pain).

New studies underway

Aspirin is currently being studied to determine its long-term effect in preventing cataracts. Other studies underway are looking at the use of low-dose aspirin to help prevent toxemia (toxins in the blood) during pregnancy and if aspirin can have a beneficial effect in women with inadequate uteroplacental blood flow.

Warning: Aspirin and Reye's Syndrome

Although aspirin is useful in many situations, it should not be given to children or teenagers with influenza or chickenpox. Under these conditions, aspirin can cause the development of Reye's syndrome, a rare and life-threatening disease. The symptoms of Reye's syndrome are vomiting, lethargy, and belligerence, and these symptoms can progress to delirium and coma.

Today, scientist continue to study the effects of this "wonder drug" on arthritis, but they are also looking to aspirin to help patients live longer, healthier lives.

*Nancy Chaffee, RPh, MSHA
Columbus, Georgia*

Resources:

Drug Facts and Comparisons, published by *Wolters Kluwer Company*, updated monthly, November 2003.

No Miracle – Just Good Sense

100 calories a day = 10 pounds a year

There are so many “miracle” weight-loss formulas, pills, solutions, rubs, diets, and plans out there today that it’s hard to make sense of it all. The best advice is to go back to the basics.

Weight loss is based on a simple formula of calories in and calories burned. It takes 3,500 calories to produce one pound of body weight. We think of it in terms of fat, but it’s not always fat that is being gained. Our body weight increases when we consume more calories than we burn. Thus, our body weight decreases when we burn more calories than we consume. It’s that simple.

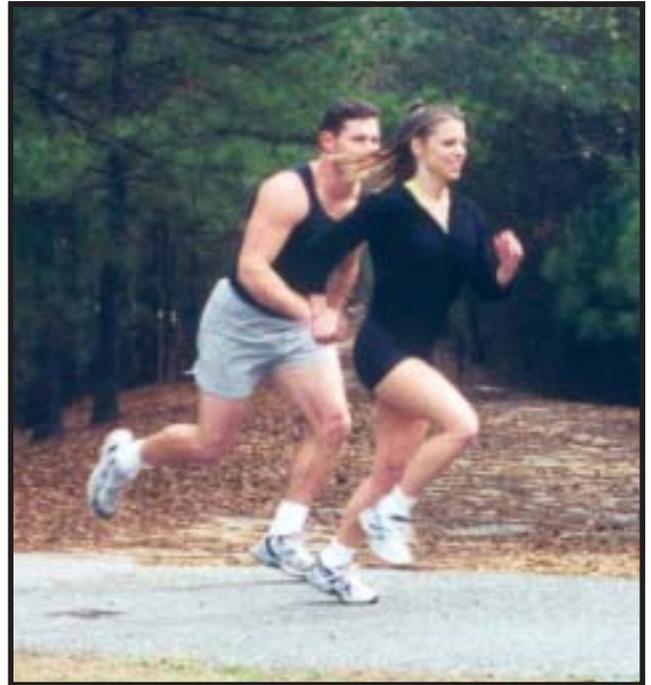
So, if you want to lose weight, all you have to do is consume fewer calories or burn more. For example, say you want to lose 10 pounds. If you consume 100 calories less every day or if you burn 100 calories more every day, your weight loss for the

year will be 10 pounds. Do the math: 100 calories less \times 365 days or 1 year = a 36,500 calorie deficit = 10.4 pounds. If you think about it, 100 calories is not much; eat just half of that donut, or drink only half of your can of soda (Fig. 1) and you have eliminated 100 calories from your diet. You can switch to low fat salad dressing or cut it out completely, or you can jog for 15 minutes to burn the calories. You can drink a diet soft drink or walk your dog for 30 minutes. You either reduce the intake or burn it off. If you slip and consume more calories one day, then make up for it the next day by either cutting the calories or burning more.

If you do nothing more than eliminate this small amount from your diet, and nothing else changes in your calorie balance, you will lose 10 pounds in one year.

Most people who gain weight are doing just the opposite. They are slowly consuming more and more calories each day. Remember, when you reduce the 100 calories from one source be sure not to add it with another. Weight loss doesn’t take a miracle—just good sense.

*Bruce Getz, ATC
Columbus, Georgia*



Burn an extra 100 calories a day in 20 minutes!

It doesn’t take dedication to a specific sport or activity, such as running or walking, to burn calories and control your weight. You can burn 100 calories by simply completing your household chores.

- Mow the lawn with a manual mower
- Sweep, vacuum, and mop the floors
- Rake leaves
- Wash and wax your car
- Stack firewood
- Shovel or blow snow
- Weed or till your garden

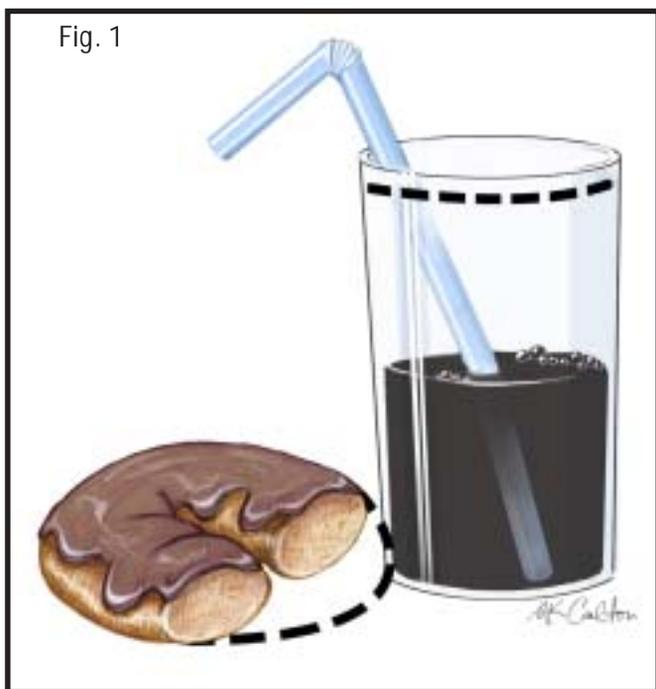


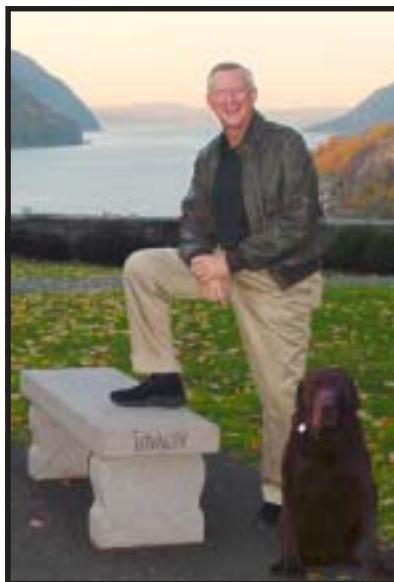
Fig. 1

Carlton G. Savory, MD, graduated from the United States Military Academy at West Point, New York, and earned his medical degree at the University of Arizona. He completed an orthopaedic residency at Letterman Army Medical Center in San Francisco, California, as well as a fellowship in adult reconstructive surgery at Johns Hopkins University School of Medicine.

Certified by the American Board of Orthopaedic Surgeons, he holds memberships in many professional societies including the American Orthopaedic Association, the American Academy of Orthopaedic Surgeons, and the American Orthopaedic Society for Sports Medicine.

Dr. Savory is a veteran of the Vietnam War, in which he served as an Infantry officer. He also served in Desert Storm and has received many military awards during his 20 years of service in the United States Army.

Although he has research interests in many areas of orthopaedics, Dr. Savory specializes in adult reconstructive surgery and joint replacement. When he has free time, he fishes, hunts, and enjoys sports.



The *Hughston Health Alert* is a quarterly publication of the Hughston Sports Medicine Foundation, Inc. The Foundation's mission is to help people of all ages attain the highest possible standards of musculoskeletal health, fitness, and athletic prowess. Information in the *Hughston Health Alert* reflects the experience and training of physicians at The Hughston Clinic, PC, of physical therapists and athletic trainers at Hughston Rehabilitation, of physicians who trained as residents and fellows under the auspices of the Hughston Sports Medicine Foundation, Inc., and of research scientists and other professional staff at the Foundation. The information in the *Hughston Health Alert* is intended to supplement the advice of your personal physician and should not be relied on for the treatment of an individual's specific medical problems.

Special written permission is required to reproduce, by any manner, in whole or in part, the material herein contained. **Send inquiries** to Medical Writing, Hughston Sports Medicine Foundation, Inc., P.O. Box 9517, 6262 Veterans Parkway, Columbus GA 31908-9517 USA.

Copyright 2004, Hughston Sports Medicine Foundation, Inc. ISSN# 1070-7778

Editor

David C. Rehak, MD

Managing Editor

Dennise Brogdon, BA

Art Director

Mary Kate Carlton, MSMI

Editorial Board

Mark A. Baker, PT
Thomas N. Bernard, Jr., MD
Carol M. Binns, MA
Carol M. Capers, MSMI, CMI
William C. Etchison, MS
Bruce A. Getz, ATC
Steven M. Haywood
Sharon T. Johnson, RN, COO
David L. Keese, PT
Cholly P. Minton, BA
William E. Roundtree, MD

For complete articles from the
Hughston Health Alert or for
information about the Hughston
campus visit www.hughston.com.



6262 Veterans Parkway
P.O. Box 9517
Columbus GA 31908-9517

Hours of Operation:
M-F 8:30-5:30

Appointments:
706-494-3121
1-800-331-2910

www.hughston.com



Hughston Health Alert

P.O. Box 9517
Columbus GA 31908-9517



U.S.
POSTAGE PAID
COLUMBUS, GA
PERMIT NO. 99
NONPROFIT ORG.