Spring 2008
AMERICAN COLLEGE OF SPORTS MEDICINE
ACSM FIT SOCIETY® PAGE

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Letter from the Editor

by Jeffrey A. Potteiger, Ph.D., FACSM

Welcome to the Spring 2008 edition of the *ACSM Fit Society® Page*. Chronic diseases plague millions of Americans each year. This issue will provide tips on management and prevention of these conditions, and will also explore how persons with these diseases can best incorporate exercise into their lives.

Thanks for reading, and we look forward to making 2008 another enjoyable, informative year for the readers of our newsletter!

Jeffrey A. Potteiger, Ph.D., FACSM
Editor, ACSM Fit Society® Page Newsletter
E-mail: potteija@muohio.edu

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THEME: MANAGING CHRONIC DISEASE

Living with Hypertension

by Samuel Headley, Ph.D., FACSM

Approximately 60 million Americans have hypertension, also known as high blood pressure. An individual is diagnosed as having hypertension if their seated blood pressures on two separate occasions exceed a systolic (SBP) reading of 140 mmHg or a diastolic (DBP) reading of 90 mmHg. It is critical to treat elevated blood pressures and reduce pressures into the normal range (SBP <120, DBP < 80), since untreated hypertension is a leading cause of heart attack, stroke, and kidney failure. Hypertension is often called "the silent killer," since a person may be unaware of elevated readings. According to the *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of Hypertension* (JNC7), 30 percent of the adult hypertensive population are unaware they have elevated blood pressure. This signifies the importance of regular blood pressure screenings.

Pharmacologic Treatment

In 90 percent of hypertension cases, the cause for the elevated pressures is unknown. However, we do know that blood pressure values tend to increase with advancing age; values are higher in the overweight, obese, and sedentary; and hypertension tends to be more common in minority groups, particularly African Americans. Hypertension can be successfully treated with medications. The most commonly used ones include diuretics, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers, and beta blockers. More than 60 percent of the hypertensive population will need to take more than one type of medication to normalize their readings. Furthermore, in most cases, an individual will need to take medication for the rest of their lives to keep their blood pressure under control.

Lifestyle Modifications

There is substantial evidence to show that lifestyle factors (such as diet and regular exercise) can play an important role in helping to reduce elevated blood pressure readings. In some cases, individuals may be able to normalize their blood pressure simply by using this non-drug approach. However, in the majority of cases, lifestyle changes help to reduce the amount of medication needed to keep blood pressures under control. According to the JNC7 report, a 10-lb. reduction in weight will reduce blood pressure in hypertensive individuals and may prevent the development of hypertension in overweight individuals. Regarding dietary factors, the Dietary Approaches to Stop Hypertension (DASH) diet emphasizes the consumption of several servings of fruits and vegetables, low-fat dairy products, a reduction in dietary cholesterol, in addition to low total and saturated fat intakes. The DASH diet leads to high intakes of potassium and calcium, which have been shown to help hypertensive individuals manage their blood pressure. Sodium intake should be reduced to fewer than 2.4 grams (2,400 mg) per day, since high sodium intake has consistently been found to lead to elevations in blood pressure. Alcohol intake should be limited to no more than two drinks per day.

Hypertension (continued from page 1)

Exercise

Hypertensive individuals should be encouraged to exercise regularly as blood pressure can be reduced for up to 22 hours following a single exercise session. This observation of a reduction in pressure following a single exercise session is called post-exercise hypotension (PEH). The exact cause of PEH is not fully known but the fact that it does occur and lasts for so long in some individuals is part of the rationale for encouraging those with high blood pressure to exercise daily.

Hypertensive individuals who exercise regularly for several months can expect to see a 5-10 mm Hg reduction in both systolic and diastolic blood pressure readings. However, it is important to note that not all individuals may see these favorable responses since there is evidence that 25 to 33 percent of hypertensive individuals do not experience PEH. Therefore, there are some individuals who seem to be resistant to the blood pressure-lowering effects of exercise. These individuals should still be encouraged to exercise for the other health benefits that they are likely to gain from exercise training.

Exercise should primarily consist of aerobic activities like brisk walking, jogging, cycling, or swimming. These activities should be performed a minimum of three days per week for 30 to 60 minutes, but could be done daily. The intensity should be in the moderate range, with heart rates representing 40 to 70 percent of heart rate reserve. Resistance training activities should be done two times per week, with an emphasis on lower weight but higher repetitions (8 to 12 per set). Static stretching should be performed during each exercise session to help minimize the risk of musculoskeletal injury.

Conclusion

Individuals should have their blood pressure checked on a regular basis to make sure their values are being kept within the desirable range. In many cases, individuals will need to be medicated to achieve desirable readings; however, lifestyle modifications, including the adoption of the DASH diet coupled with regular exercise, should be encouraged. Even if blood pressure is not reduced with exercise training, the hypertensive individual should still exercise to help with weight management, lipid control and improvement in blood sugar control.

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Q&A

By Anthony Luke, M.D., MPH

Q: My 8-year-old son has bad asthma and experiences some wheezing with exercise. Is it safe for him to exercise? I heard swimming may be better for patients with asthma.

A: As long as the asthma symptoms are not severe and can be controlled with or without medications, exercise is safe for people with asthma. Activity is a common trigger for asthma and many individuals, especially endurance athletes, suffer from "exercise-induced" asthma (EIA). EIA can be diagnosed with a drop in forced expiratory volume approximately 10 to 15 percent after a six- to eight-minute exercise challenge and a positive response to B2-agonist medication. It is typically advised that athletes with EIA take their airway opening medication inhaler (puffer) 20 minutes before exercise to see if this decreases their asthma symptoms with activity. His or her physician should be able to make recommendations on how to optimize his medications to reduce symptoms. Swimming has been shown to be helpful for many athletes, as the humid water is easier on hyper-reactive airways. Athletes may have fewer symptoms when they engage in water sports compared to dry-land sports. Individuals with asthma are able to participate in any physical activity as long as symptoms are well-controlled. They should use appropriate medications, such as inhaled B2 agonists, leukotriene inhibitors, inhaled cromolyn sodium, and/or inhaled corticosteroids for optimal disease control. Swimming is less asthmogenic and may be preferred to running.

Q: Does running cause arthritis?

A: This is always one of the biggest concerns for older runners, especially when the knees start to ache with running. Epidemiologic studies show both positive and negative support for a link between osteoarthritis and running. Certainly, impact exercise, such as running and jumping sports, theoretically apply more force to the joints and can lead to degenerative changes. However, the direct relationship of running and arthritis is difficult to quantify. An MRI study by Krampla et al. showed that runners who had existing changes in their knees, such as meniscal tears, can develop further changes to their MRI following a marathon. This suggests that there can be some damage that occurs to the bone on a cellular level when there are pre-existing problems, such as a cartilage tear. However, the improvements with muscle strength and weight control, as well as adaptation of the joints to impact, may play a protective role against the development of arthritis. Until the verdict is clearer, it should be understood that running is one of the higher-impact activities that can cause arthritis problems, especially when joints like the knee already have a problem. However, there isn't a clear reason yet that people should give up running, unless it's really becoming a PAIN!

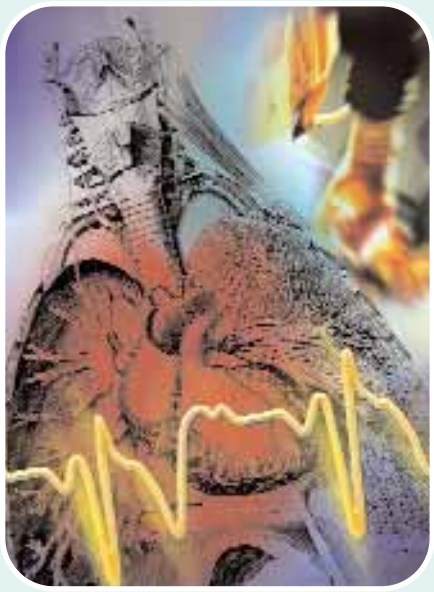
Q: I watch what I eat and exercise regularly, but I still don't lose any weight. Is there

(continued on page 7)

THEME

Exercise-induced Bronchospasm: What Is It and Who Has It?

by William Storms, M.D.



Exercise-Induced Bronchospasm (EIB) is a condition of the bronchial tubes of the lungs that results in airway narrowing (bronchospasm) during or after exercise. It is found in 90 percent of patients with asthma and about 15-20 percent of the general population, many of whom are unaware that they have the condition. The typical symptoms are coughing, wheezing, chest tightness and/or shortness of breath after about eight minutes of exercise. There are some atypical symptoms that can also indicate EIB, such as prolonged coughing after exercise, poor performance, muscle cramps, nausea, or extensive fatigue with exercise.

Do I have to have asthma or allergies to have EIB?

No, many otherwise-normal individuals have EIB. There have been multiple surveys of school children, college athletes, and the general public showing that up to 15-30 percent of these groups have EIB, and one-third to one-half do not know they have it. Surveys done on Olympic athletes have shown that approximately 17 percent have EIB; many of whom were unaware of the condition until they were tested.

What tests are done to show that a person has EIB?

The most accurate test is a spirometry (hand-held electronic device measuring lung function) performed before and after the specific exercise the subject is doing. Since many doctors do not have spirometers in their office, this is not a common test. However, most allergists do have these machines. The test is commonly used by U.S. Olympic Committee sports physiologists to screen athletes for EIB.

Another test that can be done is a peak flow rate, which can be done with an inexpensive hand-held device, to measure the peak expiratory flow rate of the lungs before and after exercise. However, this is not as accurate as a spirometer. In case there is no spirometer or peak flow meter available, the physician may prescribe a treatment (inhaler) for EIB. If that treatment is effective, it usually confirms the diagnosis.

What are the treatments for EIB?

There are two forms of treatment: Non-pharmacological therapy and pharmacological therapy.

Non-pharmacologic therapy

This involves having the athlete warm-up to approximately 80 percent of their maximum heart rate before exercise or competition. Another way to accomplish this is to start the exercise very slowly and make sure that the first eight minutes are a slow warm-up; this will help partially prevent the EIB. This type of warm-up reduces EIB but does not totally prevent it.

Pharmacologic therapy

There are many forms of pharmacologic therapy, and the therapy used really depends on the individual. Some individuals respond well to one therapy and others to a different therapy.

- **Albuterol.** Most physicians will prescribe an inhaler called albuterol to be taken shortly before exercise. This is quite effective but can cause some increased heart rate and jitteriness.
- **Cromolyn.** The other inhaler that is specific for EIB is cromolyn, and it is recommended that at least four puffs be taken just prior to exercise. This inhaler does not have the side effects of albuterol.
- **Montelukast.** This is an anti-allergy/anti-asthma pill which is taken daily to control allergies and asthma. It is effective for many people with EIB if taken daily.
- **Salmeterol and Formoterol.** These are beta-agonist inhalers which are similar to albuterol but are much longer-acting, up to 12 hours. These can be taken prior to exercise (1-1/2 hours prior for salmeterol and 10 minutes prior for formoterol), with good protection against EIB. When taken every day, there may be some loss of effect with these medications in some people and if this happens then they should not be taken on a daily basis.
- **Inhaled steroids.** There are many inhaled steroids on the market (QVAR, Asmanex, Azmacort, Flovent, Pulmicort, etc.). These are inhaled products which are given once or twice every day. They take about two weeks to work for EIB and must be continued indefinitely.

Conclusion

Each person is potentially different in their response to medications; most people have a good response with cromolyn and/or albuterol. Some people respond very well to montelukast. These would be the first-line drugs that would be recommended. If these are not totally effective, then daily inhaled steroids are the next step. At this point it would be very important to have the patient be evaluated by a specialist, either a board-certified allergist or a board-certified pulmonologist, since the EIB diagnosis should be reconsidered.

THEME

Living with Diabetes

by Brian B. Parr, Ph.D.

Diabetes mellitus is a metabolic disorder characterized by high blood glucose (sugar) caused by a lack of insulin production or impaired insulin action. Insulin is a hormone produced by the pancreas that regulates blood glucose by causing the body's cells to take

Diabetes (continued from page 3)

glucose out of the blood. There are three major types of diabetes:

- Type 1 diabetes is usually diagnosed in childhood. Damage to the pancreas by the immune system results in a lack of insulin production, so type 1 diabetics require insulin injections.
- Type 2 diabetes tends to occur in adults and is associated with being overweight, particularly in the abdomen. In type 2 diabetes, the pancreas produces insulin but the cells do not respond to it (insulin insensitivity).
- Gestational diabetes occurs during pregnancy in women who are not diabetic. Although this condition tends to resolve itself after childbirth, it may lead to a higher risk of type 2 diabetes in the future.

Diabetes is diagnosed based on blood glucose level and symptoms including excessive thirst and hunger, frequent urination, blurred vision, and weight loss. It is estimated that more than 20 million Americans have diabetes, the vast majority of which are type 2. Additionally, another 50 million have pre-diabetes, meaning that blood glucose is above normal but not high enough to meet the criteria for diabetes. Pre-diabetes often leads to developing diabetes in the future.

In all types of diabetes, control of blood glucose through diet, exercise, and medication is essential. Over time, high blood glucose levels can cause nerve and blood vessel damage leading to vision problems, lack of sensation in the hands and feet (neuropathy), kidney damage, and poor wound healing. In fact, diabetes is a leading cause of blindness, foot amputation, and kidney dialysis and transplants. Additionally, type 2 diabetes tends to be associated with high blood pressure, high triglycerides, low HDL (good) cholesterol, and obesity. This combination is called the metabolic syndrome. Furthermore, diabetics are at higher risk for heart disease and stroke. The treatment of diabetes involves several approaches: blood glucose testing, proper use of medications, planning healthy meals, and regular exercise.

Blood glucose is typically tested several times throughout the day in order to maintain normal blood glucose levels. Type 1 diabetics (and some type 2 diabetics) require injections of insulin. Type 2 diabetics may also take medications known as oral hypoglycemics, which also lower blood glucose. In order to be effective and to prevent hypoglycemia (abnormally low blood glucose), medications must coordinated with meals, exercise, and other activities.

Exercise is important for blood glucose control because exercise causes an increase in the uptake of glucose into cells and can improve glucose tolerance and insulin sensitivity. In addition, exercise has the added benefits of promoting weight loss and improving strength and fitness. Some specific recommendations include:

- Test blood glucose before exercise. If it is too low, additional carbohydrates should be consumed prior to exercise. If it is too high, exercise should be postponed.
- Keep a record of blood glucose before and after exercise, including when food and medications were taken and the type, duration, and intensity of exercise.
- Include endurance, strength, and flexibility exercises in the workout regimen.
- Make exercise a daily habit to gain the greatest benefits and to make it easier to plan meals and medications.
- Wear comfortable, supportive shoes and socks to minimize the chance of foot injury. After exercise, inspect feet carefully and treat sores to prevent infection.

Be mindful of diabetic complications. Avoid very strenuous exercise, especially weight lifting, which could raise blood pressure and be aware that impaired sensation in the fingers may make measuring heart rate difficult.

Meal planning involves selecting healthy foods to help maintain consistent blood glucose levels while meeting energy needs for exercise and other activities. The diet should also promote weight loss and weight maintenance, especially for overweight patients. Some recommendations:

- Include a variety of whole grains, fruits, vegetables, and low-fat dairy and meat in your diet.
- Minimize the intake of saturated fat, cholesterol, and sodium, especially if you have high cholesterol or high blood pressure.
- Both sugar and alternative sweeteners are safe when consumed in moderation, as part of a healthy diet.
- Plan meals with regard to medications and exercise. Extra snacks may be needed before or after exercise.

Proper diet, blood glucose testing, medication use, and regular exercise can improve blood glucose control, reduce the risk of other health problems, and improve quality of life in diabetics. In those with prediabetes, these efforts can delay the progression to diabetes and may even result in a return to normal blood glucose.

THEME

Obesity and Exercise

by Stacy Schmidt, M.S.

Obesity is a significant health problem in the United States, affecting close to one-third of all adults. Although genetics can play a role in the likelihood that a person will become obese, the condition occurs when the amount of calories consumed exceeds the amount of calories expended over a long period of time. Excess calories are stored as fat in the body, and with long-term caloric excess, an individual eventually becomes obese. Exercising regularly and eating a healthy diet are ways in which to combat obesity.

Benefits of Regular Exercise

Regular exercise (and proper nutrition) can help reduce body fat as well as protect against chronic diseases associated with obesity. If you are looking for a reason to start an exercise program, listed below are five of the many benefits of regular physical activity.

Exercise lowers risk for chronic diseases

Concerned about heart disease? Regular exercise is a proven way to decrease risk for these and other chronic diseases. It will help to prevent or manage high blood pressure. It also raises high density lipoprotein (HDL) cholesterol, known as the "good" cholesterol, and lowers low density lipoprotein (LDL) or "bad" cholesterol. This combination will decrease the amount of harmful plaques that can buildup on your artery walls and keep blood flowing smoothly. Regular exercise can also help prevent type 2 diabetes, osteoporosis, and certain cancers.

Exercise improves your mood

Feeling a little edgy? A quick workout will help calm you down! Exercise stimulates chemicals in your brain that make you feel happy and relaxed. It also makes you feel better about yourself and helps reduce feelings of depression and anxiety.

Exercise helps manage weight

It's a no-brainer. Exercise burns calories. The more you exercise, the easier it is to keep your weight under control. But remember that exercise is not a free pass to eat everything in sight! To burn 100 calories, most people need to walk or run about one mile. And one little chocolate M&M candy contains the amount of calories it would take to run or walk the length of a football field! So be sure not to overestimate the amount of calories you're burning.

Exercise promotes better sleep

Having a hard time falling and staying asleep? A good night's sleep can improve your concentration and productivity throughout the day, and exercise might be the key to getting better sleep. It can help you fall asleep faster and sleep deeper.

Exercise can be FUN

Tired of spending your Saturday afternoons watching TV or doing laundry? Looking for an activity that the whole family can enjoy? Get moving! Exercise doesn't have to be grueling. Take a dancing class, push your kids on the swing, or try something new. Find an activity you enjoy, and have fun with it!

Starting an Exercise Program

For obese persons, the focus of the exercise program should be based on low-intensity aerobic activity with progressively increasing duration. Aerobic exercise provides overall health benefits, including fat loss, an increase in daily energy levels, and reduced risk of health problems. At the beginning of the program, the frequency and duration of the activity is more important than the intensity. Aim for exercising four or five days a week for 30 to 60 minutes. If you were previously sedentary, these sessions can be broken up into three 10-minute sessions, with gradual increases in duration.

In addition to aerobic activity, resistance or weight training can also provide some benefits to overall health. Not only does weight training make you stronger, but it also raises your muscle-to-fat ratio, which increases the amount of calories you burn at rest.

Despite all your inclinations to monitor your weight on the bathroom scale, try to resist focusing on weight loss. The body has a tendency to gain muscle or lean weight initially, so although your body is benefiting from the exercise, the pounds might not drop off right away. Focus on the quality and quantity of the exercise instead.

- Engage in activity that puts minimal stress on the joints, such as walking, swimming or water exercises, and cycling.
- Ease into your workout. Start slowly for the first five minutes to give your body time to adjust to the activity.
- Work at a comfortable pace that allows you to talk without too much difficulty.
- Focus on increasing duration first, then increasing intensity.
- Slow down for the last five minutes to allow your body to ease back into its resting state
- Finish with stretching exercises.

Precautions

- It is important to gradually increase the duration and intensity of the exercises, while understanding that you will have to build up to longer and more strenuous workouts.
- Jogging can cause stress on the knees and joints and is generally not recommended for the obese because of risk for injury. Instead, stick to lower impact aerobic activities until you are in better shape.
- Obese people should be especially careful about heat exhaustion given that they are less able to adapt to temperature changes. Wearing light clothing will allow for better heat exchange while exercising.
- Hydration is very important for the obese, since they are susceptible to dehydration. Be sure to drink fluids frequently before, during, and after exercise.
- Slow down or stop if you experience chest pains, shortness of breath, palpitations, nausea, pain in the neck or jaw, or major muscle or joint pain.

Integrate physical activity into daily activity:

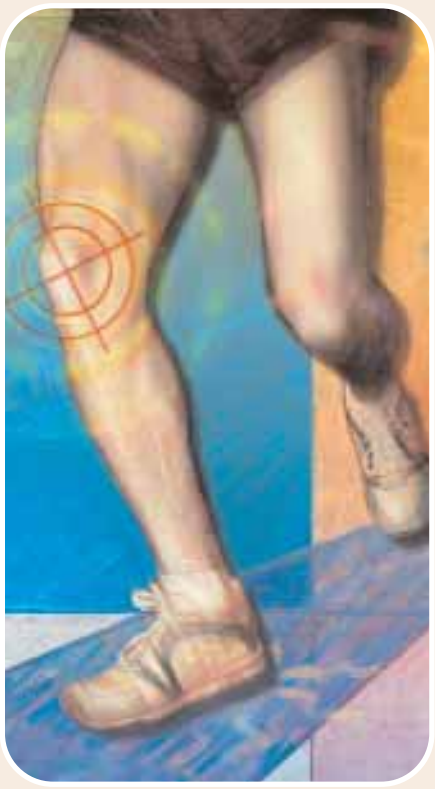
- Take the stairs
- Park farther from the door
- Take a short walk at lunch
- Turn off the TV
- Take walk breaks from work
- Wear a pedometer for monitoring your activity

People don't just have time to exercise… they MAKE time to exercise. Be in control of your life. Make exercise a part of your day, everyday!

THEME

Exercise and Arthritis

by A. Lynn Millar, PT, Ph.D., FACSM



If you have arthritis, you may think that exercise will increase your joint pain or speed the joint breakdown; however, regular exercise is actually beneficial for the person with arthritis. Often the joint pain and stiffness that are the primary symptoms of arthritis cause us to reduce our activity.

Unfortunately, this actually will lead to an increase in symptoms and loss of normal function, and may even speed the breakdown within the joint. Regular exercise will actually decrease symptoms and enable you to continue with normal activities. In fact, one study found that a group arthritic patients who exercised regularly had less joint replacement surgeries when compared to a group of similar-aged persons who did not exercise.

Most experts agree that participating in a regular exercise program that follows ACSM guidelines is important and safe for those with arthritis. This means your program should include aerobic conditioning (30 to 60 minutes on five days per week), resistance training (one set, major muscle groups, two times per week) and flexibility activities. Some benefits relevant to arthritis include:

Arthritis (continued from page 5)

- Decreased joint pain and stiffness
- Improved or maintained joint motion
- Decreased risk of cardiovascular disease (higher in those with rheumatoid arthritis)
- Improved ability to do activities such as getting in and out of a car or going up and down stairs
- Decreased disease activity

You may need to make a few modifications to your program based upon the type and severity of arthritis that you have. If you have a systemic type of arthritis, such as rheumatoid arthritis, the immune system is affected. Thus you may need more rest, especially when you are having a flare-up. Other modifications are usually activity specific.

While some individuals can successfully jog for their aerobic training, and it does not speed up the breakdown within the joint, others find that the impact of jogging starts to become too stressful for their joints. Brisk walking, cycling or elliptical training are exercise activities that will reduce the joint impact. If you have not been very active, it is very important that you start out slowly and you will find that doing two to three short sessions a day will help you get used to the activity, without increasing your joint pain. Good shoes with proper arch support and cushioning are necessary. Another concern during aerobic activities is joint alignment and stability. Alignment may be improved with shoe inserts and joint stability is often addressed by use of a splint or brace.

Resistance training is especially useful – it will help with functional activities, absorb stress around a joint, and help support unstable joints. Training moves for the legs that do not support the extremity, such as putting a weight around your ankle and straightening the knee when sitting, can put a lot of stress on a joint. A modified squat is a good alternative; either doing only a partial move or altering the position to keep your body weight behind the knee. A good alternative to training with machines are body weight activities, such as the modified squat.

While flexibility is very important, you should make sure that the stretch is gentle. If you have joint instability you should not stretch beyond normal range for that joint. Probably more helpful than stretching are range of motion (ROM) activities. Moving your joints through the normal motion on a daily basis will help to prevent loss of motion and will also decrease the sensation of stiffness. You should do five to 10 moves for each joint that is affected, and can even do such activities a few times a day.

If you enjoy group activities there are classes developed for people with arthritis. The "PACE" program (People with Arthritis Can Exercise) is a class that combines aerobic, flexibility and some muscular toning. Aquatic classes are great for reducing stress to the joints, although the aerobic benefits are not as great as some other activities. Tai chi, which is often promoted for balance and fall prevention, provides good conditioning and flexibility and there is a form which was specifically developed for individuals with arthritis. If you opt for a traditional class you may need to modify moves based on your specific limitations. Avoid extreme motions or positions – anything that may increase your pain.

Regardless of the activity you choose, make sure you warm-up and cool-down properly. This means you start with smaller, slower movements and gradually increase the intensity of movement. Doing some range of motion prior to and following aerobic or resistance training is a good way to get the joints ready for the activity and to slow down afterwards. As noted in other issues and in many articles, the most important thing is for you to get started. If you are not sure about your medical limitations, check with your physician prior to starting. Find a partner or support group to help you and get moving.

THE ATHLETE'S KITCHEN

Weight Reduction Tips

by Nancy Clark, MS, R.D., FACSM

As an athlete, you are likely lean and fit. But with more than 60 percent of Americans being overweight or obese, you undoubtedly know someone who struggles with how to shed undesired body fat. At the American Dietetic Association's annual convention last fall, nutrition researchers presented alternatives to the standard "eat less and exercise more" diet advice. Here's some food for thought on non-dieting ways to tackle weight problems.

Curbing the Obesity Epidemic

James Hill, Ph.D., believes we need to focus on stopping weight gain, as opposed to advocating for weight loss. One simple way to limit weight gain is to eat 100 to 200 fewer calories at the end of the day. This small calorie deficit contrasts to standard diets that severely restrict calories and are no fun. People on strict diets tend to stop losing weight after six months. Hill believes they dislike the drudgery of always being on a diet.

Yet, during the first six months of dieting, most dieters create new health habits — such as regular exercise — that they maintain. Exercise helps prevent (or reduce) weight regain. Surveys with "successful losers" indicate they include exercise as a part of their daily routine. For some, exercise offers spiritual benefits. For others, it provides a handy opportunity to socialize with friends. Some diet-and-exercisers even become

Weight Reduction (continued from page 6)

"athletes." (Sound familiar to anyone you know?)

Dr. Hill also recommends we address the obesity epidemic by changing the way people think about weight. For example, Denver wants to become known as "America's Healthiest City." City leaders are working to create a culture where healthy eating and daily activity are the sustainable norm. Healthier employees will hopefully attract businesses to Denver because of lower healthcare costs. For health promoting strategies, visit http://aom.americaonthemove.org.

Curbing Mindless Eating

Brian Wansink, Ph.D., of Cornell University's Food and Brand Lab is campaigning to end mindless eating. You know, munching entire tubs of popcorn without even being hungry; nibbling on M&Ms while waiting for someone; unknowingly finishing the kid's leftovers. Just 100 extra mindless calories a day can contribute to gaining 10 pounds of undesired body fat a year.

Dr. Wansink recommends we curb weight gain by making mindful decisions about the calories that end up in our mouths. He reported we make about 250 food decisions a day. We decide not only what we eat (turkey or tuna sandwich? Low-fat or regular mayo?), but also how much (half or whole sandwich?). He has determined that we eat 92 percent of what we serve ourselves. We generally stop eating when our plate is empty. That means we eat with our eyes, not with our stomachs! Think about it: When do you stop eating? Chances are you stop eating when your plate is empty (or when the TV show ends). We don't always stop when our stomach signals it is full.

To prove this point, Wansink masterminded an interesting experiment with a refillable soup bowl that never emptied. (It was refilled via hidden tubing connected to a big soup pot.) Compared to the group who ate from standard bowls, the 30 adults who (unknowingly) ate from the refillable bowls consumed about 73 percent more soup. And believe it or not, they did not rate themselves as feeling any fuller than normal. (How can you be full if the bowl still has half the soup in it?) Only two people realized the bowl refilled — one dropped his napkin (and noticed the tubing); the other tried to pick up the bowl (surprise!).

Wansink created another experiment to determine if serving size influences the amount of food a person eats. He arranged for a movie theater to announce that all customers would receive free popcorn and soda on a certain day in honor of "Illinois History Month." The movie-goers were given five-day old popcorn (yucky). Yet, even though the popcorn tasted bad, the people still ate 35 percent more when they were given a big bucket of popcorn compared to a smaller bucket. They mindlessly ate the stale popcorn slowly (in contrast to a previous experiment in which the movie-goers quickly devoured fresh popcorn).

Based on these and other experiments, Wansink believes a simple way to cut calories (and control weight) is to buy smaller bowls, plates, and also glasses. He reports you'll drink less if you pour your beverage into a tall, thin glass compared to a short, fat glass. And you'll eat less pasta if it's served from a small dish rather than a large platter.

Wansink has noticed that mindless eaters fall into categories of those who:

- Eat too much at meals
- Graze mindlessly throughout the day
- Overeat at restaurants or on special occasions
- Mindlessly eat at their desks or in their cars

If you relate to one or more these areas (and if you want to lose body fat), your goal should be to focus on that bad eating habit. You don't have to change your whole lifestyle. You just might need to cook less dinner so there are no leftovers, or take the candy jar off your desk.

Wansink recommends mindless eaters commit to 28 days of changing their fattening eating habit. Then, after 28 days, they can go on to improve another bad habit (such as drinking less soda, or crunching on baby carrots instead of chips). On www.mindlesseating.org, Wansink offers a free chart to help monitor daily success. You might also want to read his book, *Mindless Eating: Why We Eat More Than We Think*. Perhaps it can help you fight fat with less effort than a harder workout.

Q&A (continued from page 2)

anything else I can do? I do like soda. Is this a problem?

A: The biggest preventable chronic disease today is now obesity. How we deal with weight loss is the huge challenge. One of the forgotten sources of empty calories are sweetened beverages. A study on population drink consumption done at University of North Carolina estimated that from 1965 to 2002, the average increase in calories from beverages was 222 calories per person per day. The average calorie intake from a 12-ounce can of soda is 150 calories. The average amount of energy expended by a woman biking approximately 12-14 mph for 30 minutes is around 250 calories. This means for every couple of cans of soda taken per day, to keep the pounds off (not even lose weight), you may need to bike around 40 minutes extra per day. So unless you can fit an extra workout slot into your schedule (which is almost never a bad idea), limit the daily soda intake, especially for kids, or consider diet sodas in your effort to keep calories down and pounds off.