Hughston Health Alert

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Inside...

Core Training

SEPARATING FACT FROM FICTION

Your core is the corset of muscles and connective tissue that encircles and holds your spine in place. It is extremely important because it provides joint stability and support to your organs, and your respiratory, circulatory, immune, and digestive systems.

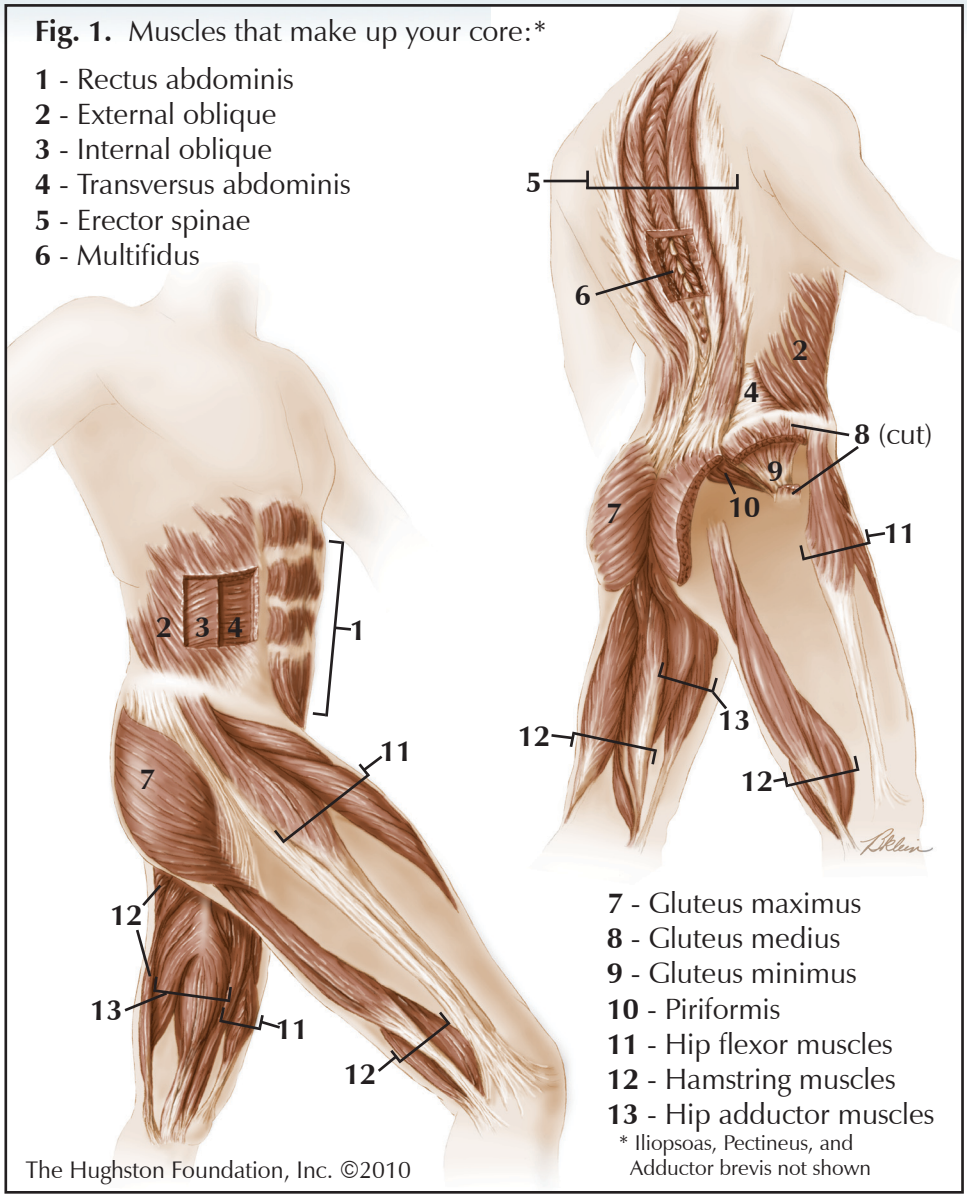
Misconceptions about the core

Contrary to popular belief, the core encompasses more than just the abdominal muscles. In our society, which is obsessed with aesthetics, the main focus of core training often is to "have six-pack abs." However, you must train both the front and back of the trunk to strengthen your core. This means strengthening not only the abdominal muscles but the back muscles, as well. Muscular balance and symmetry should be part of an effective core-conditioning program. Without muscular balance, you are setting yourself up for injury. For instance, weak erector muscles of the spine can pull the spine out of alignment, causing lower back pain.

Another misconception about abdominal training is that you can work your "upper" and "lower" abs separately. The rectus muscle of the abdomen is one long band of muscle fibers extending vertically between the pubic bone and the cartilage of the fifth, sixth, and seventh ribs on the front part of the trunk. The misconception of separate upper and lower abs stems from the fact that you may feel more tension in the upper or lower region of the stomach because some core exercises put more emphasis on certain muscles. For instance, during crunches, you may feel more of the upper part of your stomach working. Conversely, reverse crunches elicit greater muscle involvement from the lower region of the stomach.

Fig. 1. Muscles that make up your core:*

1 - Rectus abdominis
2 - External oblique
3 - Internal oblique
4 - Transversus abdominis
5 - Erector spinae
6 - Multifidus



7 - Gluteus maximus
8 - Gluteus medius
9 - Gluteus minimus
10 - Piriformis
11 - Hip flexor muscles
12 - Hamstring muscles
13 - Hip adductor muscles

* Iliopsoas, Pectineus, and Adductor brevis not shown

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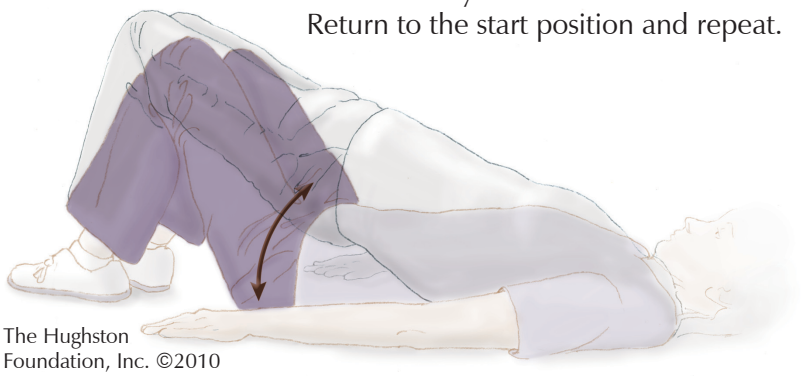
Fig. 2. Supine bridge exercise.

Step 1: Lie on your back with your knees bent.
Step 2: Tighten your abdominal muscles and raise your hips off the floor until they are aligned with your knees and shoulders. Return to the start position and repeat.



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Doing thousands of sit-ups in the hope of losing fat in the midsection is another myth. No amount of abdominal exercise will achieve that goal! Your abdominal region can appear toned and you may notice improved performance in daily activities, but in order to lose body fat, you need to do some kind of aerobic training. Walking, running, cycling, dancing, or taking aerobic classes are all good examples of aerobic activities. Before you can achieve "six-pack abs," you need to burn off the layer of fat covering your abdominal muscles.

Why do you need a strong core?

Injury prevention. A strong core can correct postural imbalances that can lead to injuries. Therefore, special care must be taken to strengthen more than one set of muscles within the core. If not, the spine could get pulled out of alignment. A stable core will ensure that the spine remains upright while the body swivels around it. This is why core training has been shown to reduce the incidence of lower back pain.

Performance enhancement. Powerful movements originate from the core or "powerhouse." The core enables the body to efficiently transfer force from the lower to the upper body and back again. A strong powerhouse is vital in sports. It helps players to perform athletic moves more efficiently and forcefully. This strength is especially important for athletes who execute quick changes in direction and powerful kicks, such as boxers and soccer players.

Functional fitness. Possessing a strong core helps in performing daily activities, such as twisting to reach your purse in the back seat of your car, bending over to tie your shoe, or reaching up for a glass in the cabinet. Without a fit core, you would not be able to perform these tasks. Functional abdominal training should be the preferred method used to strengthen the core.

Other types of training include isometric exercises (frontal plank, side plank) and abdominal isolation exercises. Abdominal isolation exercises, such as crunches, are the least effective exercises to train the abdominals. Why? Movement that isolates a single muscle almost never occurs in natural movement patterns. Therefore, to improve abdominal function and performance, functional abdominal training is the best. Functional abdominal training is performed in several planes of motion (flexion, extension, rotation), therefore, mimicking the movements of daily activities works best. The Supine Bridge (Fig. 2) and Wood Chop (Fig. 3) are examples of functional abdominal exercises.

Weak abdominal muscles often contribute to poor balance that can lead to falls or injury. When you have good core stability, the muscles in your pelvis, lower back, hips, and abdomen work in harmony.

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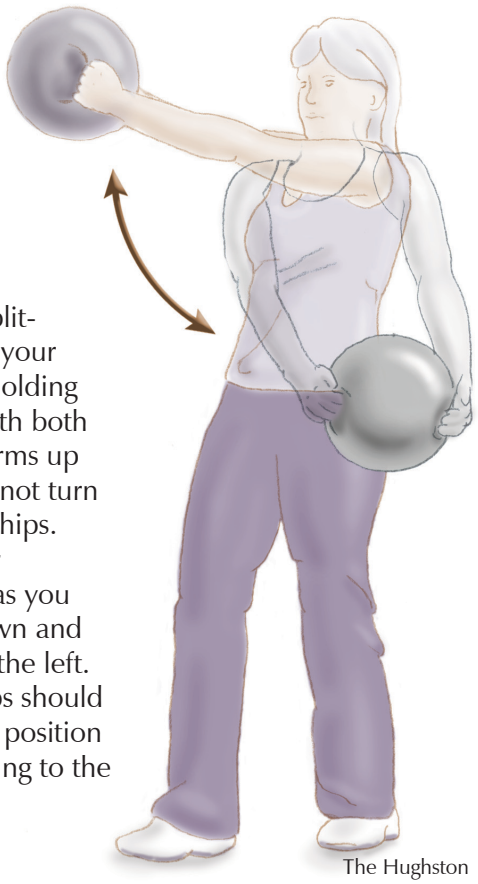
Further Reading:

Kravitz L. Super Abs Resource Manual. http://www.unm.edu/~lkravitz/Article%20folder/abdominal.html. Accessed November 18, 2009.

Fig. 3. Wood chop exercise.



Step 1: Stand in a split-stance position with your right foot forward. Holding the medicine ball with both hands, rotate your arms up and to the right. Do not turn your head, torso, or hips.
Step 2: Tighten your abdominal muscles as you rotate your arms down and across your body to the left. Head, torso, and hips should not rotate. Hold this position briefly before returning to the start position.

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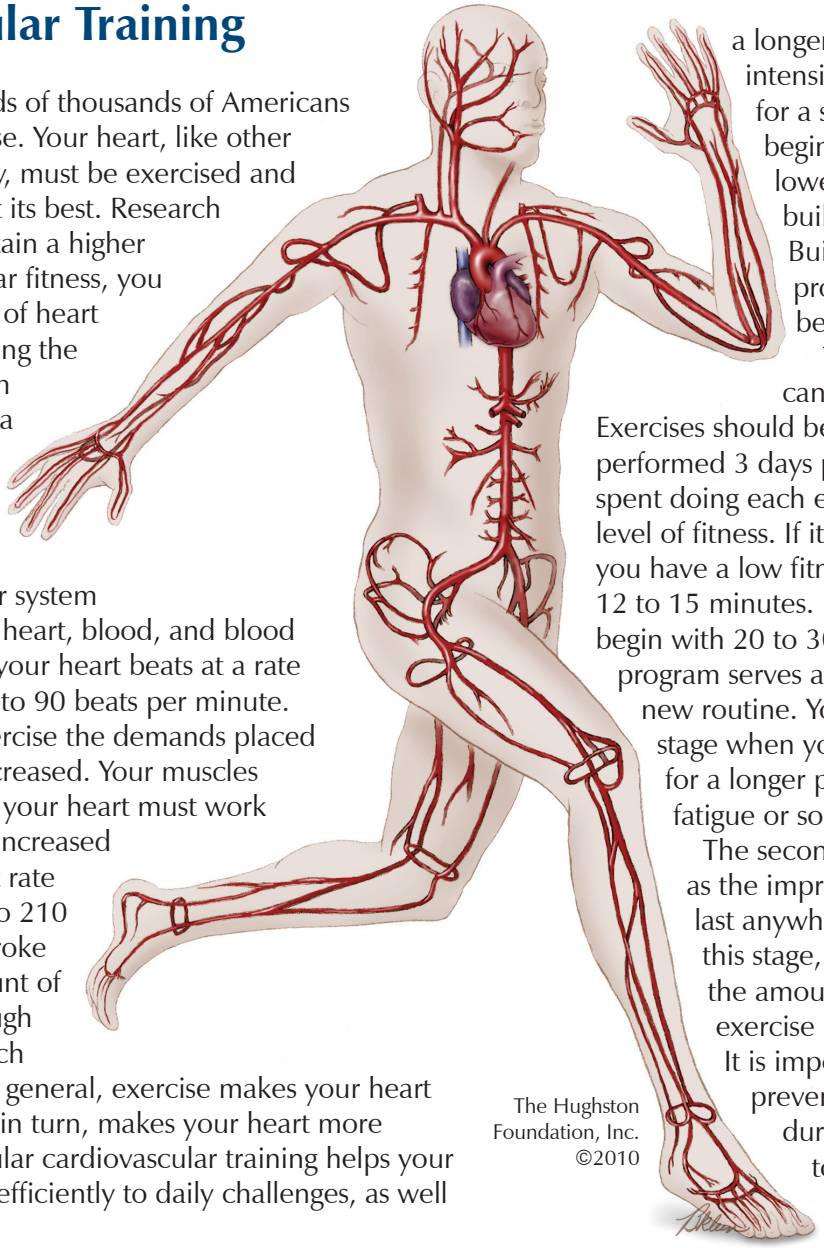
Cardiovascular Training

Each year, hundreds of thousands of Americans die from heart disease. Your heart, like other muscles in your body, must be exercised and trained to perform at its best. Research shows that if you obtain a higher level of cardiovascular fitness, you can reduce your risk of heart disease. Understanding the cardiovascular system can help you design a safe and effective training program to strengthen your heart.

Your cardiovascular system is composed of your heart, blood, and blood vessels. During rest, your heart beats at a rate of approximately 50 to 90 beats per minute. However, during exercise the demands placed on your body are increased. Your muscles require more fuel so your heart must work harder. To meet the increased demands, your heart rate increases from 170 to 210 beats per minute. Stroke volume, or the amount of blood pumped through your body during each beat, is increased. In general, exercise makes your heart work harder, which, in turn, makes your heart more efficient at rest. Regular cardiovascular training helps your body respond more efficiently to daily challenges, as well as to exercise.



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The best exercises for increasing your current level of cardiovascular fitness are endurance exercises, because they involve rhythmic use of large muscle groups over an extended period of time. Endurance exercises include activities such as walking, jogging, cycling, skiing, swimming, and aerobic dancing. Sports such as tennis and racquetball can also be considered endurance activities if they are played for an extended period of time. Because endurance exercises are performed over a long period of time, it is crucial to choose an activity that you enjoy. It can also be helpful to exercise with a friend. Other factors to consider when choosing an activity are expense, equipment, time required, and access to facilities.

When designing a cardiovascular training program, your exercise sessions should last from 20 to 60 minutes. The exercise can be performed in one single session, or in several smaller sessions. Lower intensity exercises, such as walking or swimming, should be performed for a longer amount of time; whereas high intensity exercises can be performed for a shorter amount of time. When beginning a program, always start with lower intensity exercises and gradually build toward more intense exercises. Building cardiovascular fitness is a process; it is not something that can be done quickly.

The first stage of your program can last anywhere from 3 to 6 weeks. Exercises should be low intensity and should be performed 3 days per week. The amount of time spent doing each exercise depends on your current level of fitness. If it is a new exercise program and you have a low fitness level, you should exercise for 12 to 15 minutes. If you have a higher fitness level, begin with 20 to 30 minutes. This stage of your program serves as a time to adjust your body to a new routine. You are ready to progress to the next stage when you can exercise at a higher intensity for a longer period of time without excessive fatigue or soreness.

The second stage of your program is known as the improvement stage. This stage can last anywhere from 4 to 6 months. During this stage, you should gradually increase the amount, type, and frequency of your exercise until you reach your fitness goals. It is important to increase gradually to prevent injury. Typically, increasing duration by 5 to 10 minutes every 2 to 3 weeks is sufficient. Signs that can indicate you are progressing too quickly are muscle aches and pains, lack of usual interest in activities, extreme fatigue, or the inability to complete a workout. You should keep a log of your activity so you can keep track of your progress and monitor your workouts.

For successful cardiovascular fitness, you must continue exercising to maintain the fitness gains you have achieved. To maintain your fitness level, continue to exercise at your level of intensity 3 days per week. To limit boredom and repetitiveness, engage in different types of activities that you enjoy. If you must take an extended time off from your exercise program, start your program again at a lower level and slowly build back up to your goal.

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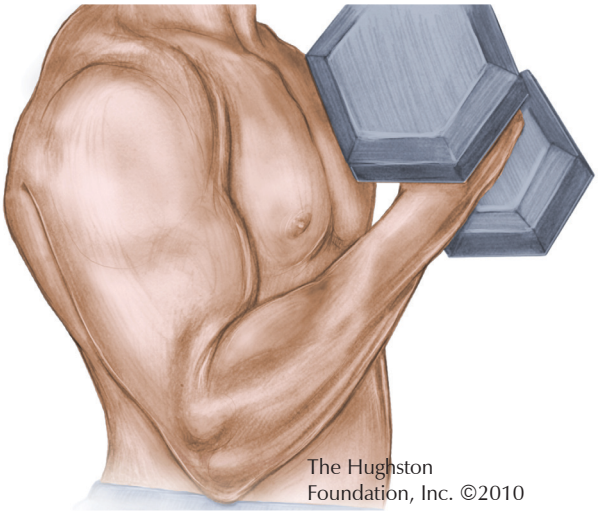
Reference:
Fahey TD, Insel PM, Roth WT. Fit and well. New York, NY: McGraw-Hill; 2009.



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Weightlifting

Regardless of your age, sex, or body type, weightlifting, or resistance exercises, can be an important part of maintaining a healthy lifestyle. Coupled with a balanced diet, weightlifting can improve strength and increase metabolism and overall well-being. Often, individuals report a reduction in stress levels following a weightlifting routine. Having the proper knowledge and understanding of a weightlifting routine can help you avoid injury and can help you improve your success with the program. Some important factors you should consider before beginning a weightlifting routine are warm-up, setting goals, finding your starting point, and planning for rest and recovery.

Warm-up

Warming up before a weightlifting session can significantly decrease the chances of injury and increase the amount you are able to lift during a routine. This practice can, in turn, maximize muscle stimulation and growth.[1] A warm-up can be accomplished through slow sustained stretching or by performing a low intensity cardiovascular routine. A good warm-up increases the heart rate, loosens up muscles, and produces a light sweat.[2]

What are your goals?

Goals vary from person to person; therefore, your routine will be unique, as well. If you use weights during a workout routine to improve overall strength you should consider using heavier weights and decreased repetitions. Using light weights and increased repetitions can improve muscular endurance and burn fat.[3] The American College of Sports Medicine reports that the most effective resistance training programs are those that are designed for target-specific training goals.

How to begin your routine

The first step is to find your starting point. Because your muscles are not used to this type of workout, go a little easy on yourself at first to avoid injury. Find your starting point by beginning with a weight that you can easily lift; then, lift that weight a few times until you feel your muscles tense a bit. Put the weight down or relax the tension and let your muscles rest for 30 to 45 seconds. Then complete the set again. Complete the additional sets until your muscles are slightly fatigued. Be careful not to overdo it or push yourself too much at this point. It's important to record your starting point. So write down the exercise, the amount of weight or resistance, the number of repetitions, and the number of sets you completed.

After completing your routine for a week or two, you will find that lifting the weight is easier. That's because the more weight and exercise you do, the better trained your body becomes. To avoid muscle adaptation, you must increase your weight, number of repetitions, or the number of sets. Often, just increasing one of the parts of a routine is all you need to progress. Keep a record of your progress, as well. Each time you change your routine, you should have a record of the increase.

Give yourself a rest

Muscle development is directly dependent on a rest and recovery period. You should take at least 2 to 3 days rest between working individual muscle groups. During a weightlifting routine, the skeletal muscle cells actually incur damage. After the routine, you can feel delayed onset muscle soreness (DOMS), which is the result of the damage. While your muscles are healing and maturing, they are susceptible to further injury. Therefore, not only is the weightlifting routine itself important, but the recovery period afterward is key to a successful program, as well.

Safety must be the first consideration when undertaking any weightlifting routine. As with any new exercise program, you should consult with your physician regarding your workout routine before starting resistance exercises. Start by warming up and avoid lifting too much weight too soon. If you are lifting free weights over your head, be sure to have a spotter. Weightlifting can be a rewarding part of your exercise regimen and it can play an important role in maintaining a healthy lifestyle.

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References:

1. Nalewanyj S. The critical importance of a proper weightlifting warmup. http://www.articlesbase.com/non-fiction-articles/the-critical-importance-of-a-proper-weightlifting-warmup-39315.html. Accessed November 20, 2009.

2. Pearson M. The Importance of warming up prior to weightlifting. Ezine article July 26, 2009. http://ezinearticles.com/?id=2687708&opt. Accessed November 20, 2009.

3. Paige Waehner. Weight training 101. About.com. June 19, 2009. http://exercise.about.com/cs/exerciseworkouts/a/weight101.htm. Accessed November 20, 2009.

Low Back Pain and Hamstring Stretching

CAN STRETCHING EVER BE A BAD THING?

It has long been accepted that stretching before exercise and sporting activities can help to prevent injuries. There is also evidence to support stretching as a way to rehabilitate certain injuries that have already occurred. But are there instances where stretching can actually increase the risk of injury or make the problem or pain worse? The answer to that question is yes.

Stretching the hamstring muscle group is one of the most common recommendations for preventing injury. The 3 hamstring muscles run from the bottom of the pelvis along the back of the thigh and attach to the back of the knee. The most common stretch for the hamstring muscle is done while standing or sitting and bending forward with your feet together and knees straight, reaching toward your toes until the stretch is felt behind the thighs. The most well known function of the hamstring muscle group is flexion, or bending, of the knee. Perhaps more importantly, though less well known, is the hamstring muscles' role at the pelvis for postural control.

Looking at the back of the pelvis, the back muscles attach along the top of the pelvis, and the hamstrings attach to the bottom of the pelvis (Fig. 1). For proper postural control to exist, there needs to be balance between the muscle groups. If the hamstring muscles are overstretched, they become long which can cause an imbalance with the muscles in the lower back, causing them to pull the back of the pelvis up and tip it forward. The forward tipping of the pelvis causes the lumbar spine (lower back) to arch backward to compensate, causing increased lumbar lordosis (inward curving of the spine). Increased lumbar lordosis causes more compression and stress on the facet joints of the spine and also increases pressure on the back portions of the discs, creating an increased risk of injury to the discs (Fig. 2). Any of these occurrences can lead to low back pain.

The problem can be very deceiving, because when the pelvis tips forward, it takes up the slack in the hamstring muscle group making it appear tight again, causing the individual to stretch it more. Stretching the hamstrings more will only contribute to the imbalance that is already occurring at the pelvis and can cause or increase low back pain.

Imbalance at the pelvis exists in many people with chronic low back pain. Until the imbalance is corrected, stretching the hamstring muscles is not an appropriate treatment for those individuals. Just because you cannot reach down and touch your toes does not necessarily mean that you need to stretch your hamstrings. In fact, strengthening your hamstrings can be a more appropriate approach. Your physician, physical therapist, or athletic trainer can provide you with more information regarding this imbalance and the proper way to treat it.

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Fig. 1 Normal posture: correct hamstring length, spine and pelvis aligned.

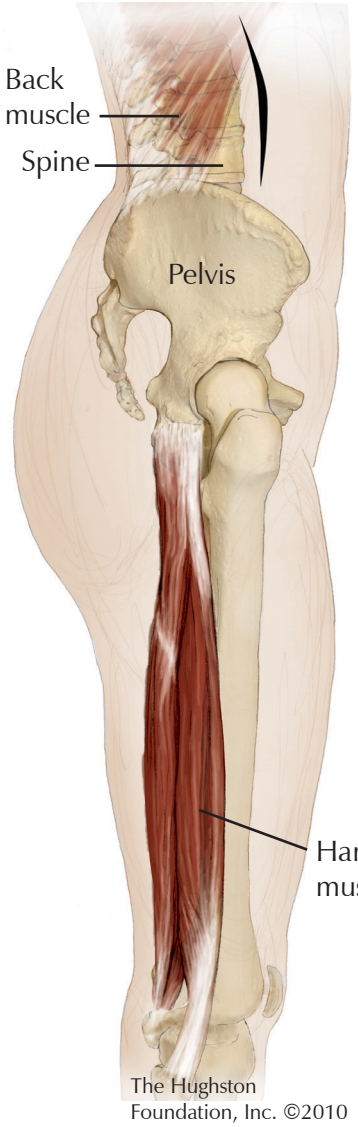
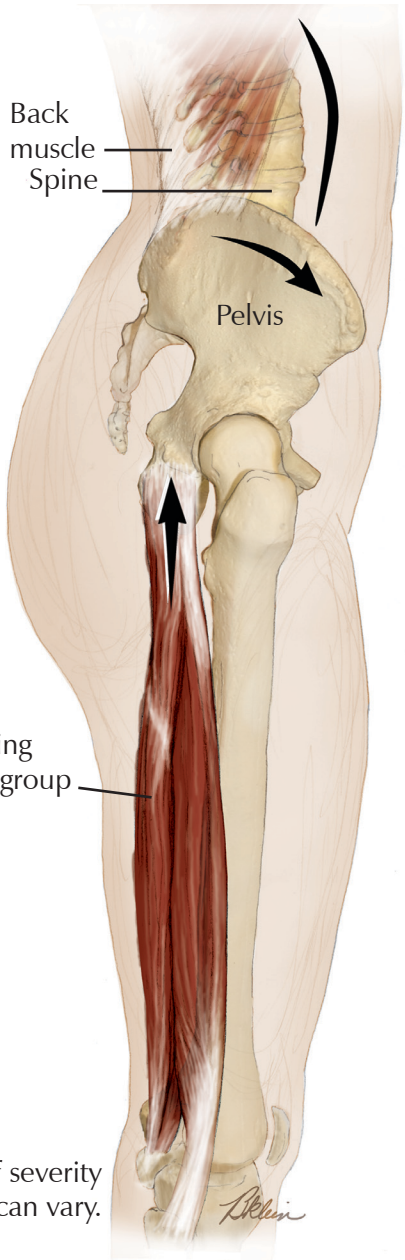


Fig. 2 Imbalanced posture: hamstring muscles lengthened, spine arched, and pelvis tilted forward.*



*Level of severity can vary.

Anorexia Athletica

BEING COMPULSIVE ABOUT EXERCISE

When the topic of disordered eating is mentioned, anorexia nervosa (limiting food intake), binge eating (can't control eating), or bulimia nervosa (binge eating and then purging) are often at the forefront of one's mind. However, another disorder known as anorexia athletica is often linked to eating disorders, but it affects athletes or individuals who exercise compulsively. Although anorexia athletica does not necessarily fall into the category of disordered eating, its characteristics and outcomes are undeniably similar to such diseases.

As individuals have become more health conscious, exercise has become more popular than ever. Athletes who suffer from anorexia athletica tend to exercise for long periods of time. Unlike anorexia nervosa, which primarily affects adolescent girls and young women, anorexia athletica does not seem to affect one certain group or population. It can affect anyone. However, athletes who play a sport that stresses leanness, such as ski jumping, cycling, climbing, gymnastics, and long distance running, often have a higher occurrence of the disorder.

Athletes who suffer from anorexia athletica do not necessarily choose to exercise but instead feel compelled to exercise. If the athlete does not exercise, he or she can feel guilty and may increase the intensity or duration of the next workout. The athlete is driven more by performance than by body shape. These athletes often skip family events or gatherings with friends in order to exercise. Because exercising is of the utmost importance, the athlete will exercise despite bad weather or injury.

Unlike eating disorders, anorexia athletica can often be observed while athletes are participating in sports. Cycling occurs as athletes routinely go from in-season to out-of-season and then back to preseason. However, if an athlete always stays prepared for the upcoming season, more than likely he or she does not take time off. If the athlete does not take time off and exercises continuously, it can be hard to recover from the disorder. Therapy can be a good option, as well as interventions that stress decreasing the length of time spent exercising and changing the type of exercise. When possible, it is best to stop exercise altogether for at least a month to give the body time to rest before coming back with an exercise routine that is less vigorous.

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COMMON HEALTH CONSEQUENCES OF ANOREXIA ATHLETICA:

- Fatigue
- Dehydration
- Reduction in performance
- Decreased concentration or loss of emotional vigor
- Increased compulsivity
- Soreness or stiffness
- Stress to the heart and/or low blood pressure
- Stress fractures and injuries not healing correctly
- Weight cycling
- Vitamin/mineral deficiencies
- Female Athlete Triad: amenorrhea (loss of menstrual cycle), an eating disorder, and osteoporosis

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References:

Sudi K, Ottl K, Payerl D, Baumgartl P, Tauschmann K, Muller W. Anorexia Athletica. Nutrition [serial online] 2004;20:657-661. Available from Science Direct. Assessed August 22, 2009.

Shannon JB. Eating Disorders Sourcebook, Healthy Reference Series. 2nd ed. Detroit, MI: Omnigraphics; 1998.

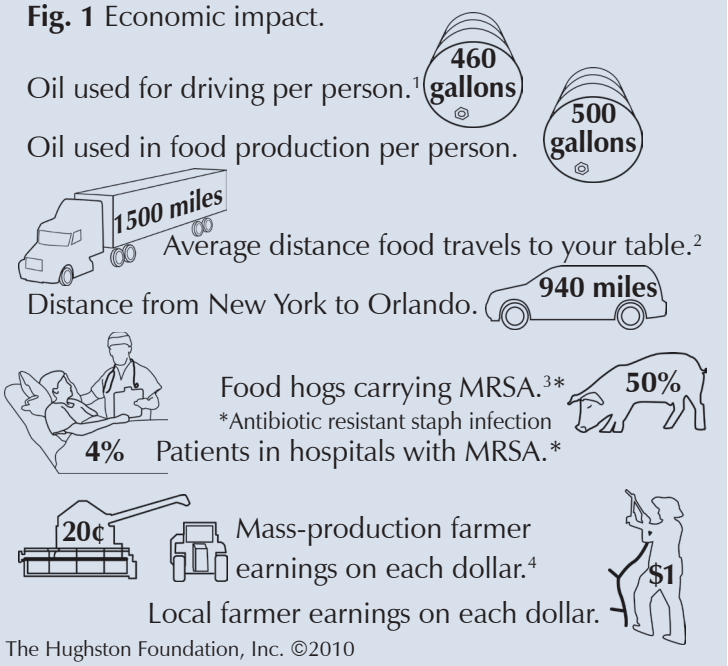
Costin C. The Eating Disorder Sourcebook. 3rd ed. New York, NY: McGraw Hill; 2007.

Eat Healthy, Eat Local

Good nutrition and a balanced diet keep us healthy, active, and happy. Unfortunately, obesity and poor nutrition are reaching epidemic levels in our country. Some of the most prevalent and problematic disorders are related to obesity: diabetes, back pain, arthritis, some cancers, and heart disease. The burden of disease caused by our poor eating habits costs Americans trillions of dollars annually on healthcare. Our waistlines are ever expanding, fad diets come and go, and diet book sales are soaring. As a nation, we have given up on eating properly and race through life eating from the drive-through of fast food restaurants. We follow our mothers' advice to eat everything on our plate, but we don't put anything good on it.

Fortunately, there are individuals who are waking up to this reality and doing something about it. A movement that has taken hold across the country is the "locavore" diet. Unlike fad diets, it is a change in lifestyle—not just a way to fit in a dress or tuxedo next week. At its core, the locavore movement is about returning to our agricultural roots and rediscovering how food that is good for you can taste good, too. Being a locavore means eating food grown as close to home as possible. There are small-scale farmers living and growing food very close to us, and these farmers are finding new ways to get their food to consumers. Farmers' markets, CSA (Community Supported Agriculture) food co-ops, and local produce sections in grocery stores are popping up all over the country. These vegetables are often cheaper,

Fig. 1 Economic impact.



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readily available, and nearly always taste better than their mass-produced counterparts.

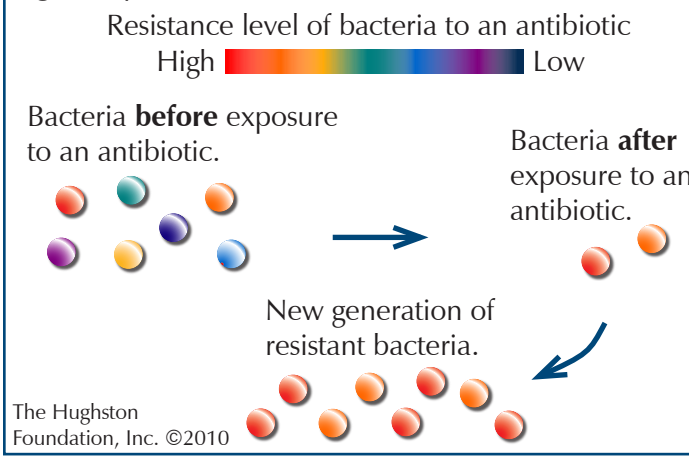
Because they have rarely tasted how good they can be, some people don't like vegetables. They assume that the under ripe, woody, flavorless fruits and vegetables available in the average grocery store are what they are supposed to be. The truth is the vegetables have been selected to look pretty on the shelf and survive the hundreds of miles that they often travel; unfortunately, flavor has been left out of the equation. Eating food grown locally exposes us to fruits and vegetables that have often been picked the same day they are purchased. And they are from ancient varieties selected by farmers over generations for their taste, not just ease of transport and long life. Often, those who detest vegetables have had their minds changed by simply trying vegetables picked at their peak and prepared the same day. And locally grown vegetables aren't the only food getting the small-scale treatment. Farmers are raising beef, chicken, pork, and turkey on small family farms for sale in local markets.

In most cities, you can find a weekly farmers market open throughout the entire growing season. Farmers are also participating in Community Sponsored Agriculture groups. For a monthly subscription during the spring, summer, and fall, a farmer will deliver crates of fresh produce to a location near you. They often come to a central location once a week, and your vegetables can be picked up on the way home from work or running errands. Often, the farmers send out an e-mail or letter describing the more unusual vegetables available and give you delicious recipes on how to prepare them. Even a small delivery can be more than a family can eat in a week, but it's fun to try! Of course, there is always the option of sharing your produce with friends or neighbors.

Tasting and eating produce at its best can have a wonderful impact on your waistline. Often, you will find your vegetable intake going up, your weight going down, and your satisfaction with your diet increasing. After a few weeks, my family was surprised to find how unappetizing fast food had become, and we felt better about where our food came from, too.

As a nation, we spend more in gas and oil per person moving our mass-produced food than we spend driving our own cars (Fig 1). This system sends our money overseas to farmers who get pennies on the dollar. Additionally, farms that mass-produce a single type of vegetable or breed of animal often produce genetically weak food. Mass-produced fruits and vegetables can become susceptible to disease. Animals bred in this manner may not be able to reproduce without human intervention or survive for long without a constant supply of antibiotics. These types of animal facilities are one major cause of the development of antibiotic resistance (Fig 2).

Fig. 2 Representation of how antibiotic resistance evolves.



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Eating food grown or raised locally can help keep money in our communities, protect us from food shortages, improve our diet, and decrease our burden of disease. For additional information, please visit the Web site localharvest.org, or read any of the books available on the locavore lifestyle. One popular and well-written book is *Animal, Vegetable, Miracle: A Year of Food Life* by Barbara Kingsolver.

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References:
1. Pirog, R. *Food, Fuel, and Freeways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions. Ames, Iowa: Leopold Center for Sustainable Agriculture; 2001.*
2. Living on Earth. Food is Fuel: Interview with Professor David Pimentel. http://www.loe.org/shows/segments.htm?programID=08-P13-00037&segmentID=5. Accessed December 21, 2009.
3. Kristof ND. Our Pigs, Our Food, Our Health. New York Times. March 11, 2009. http://www.nytimes.com/2009/03/12/opinion/12kristof.html. Accessed December 21, 2009.
4. Starr, A, et. al. Barriers and Opportunities to Local Agricultural Purchasing by Restaurants and Institutional Food Buyers. Colorado State University, Department of Sociology; 2002.

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