

## PLYOMETRICS: CONTROLLED IMPACT/MAXIMUM POWER

It may sound like the latest action film, but controlled impact and maximum power are the aims of a training technique called plyometrics.

Also known as jump training, plyometrics involves stretching the muscles prior to contracting them. This type of training, when used safely and effectively, strengthens muscles, increases vertical jump and decreases impact forces on the joints.

Plyometrics mimics the motions we use in sports such as skiing, tennis and basketball. If you enjoy dodging moguls, chasing down ground strokes or charging the net, plyometrics might be an appropriate training option, as these exercises are designed to increase muscular power and explosiveness. Plyometrics is not, however, for those who are in poor condition or have orthopedic limitations.

### Olympic Secrets

The Eastern Europeans first used plyometrics in the 1970s to develop greater strength and power in their Olympic athletes. They based their programs on scientific evidence that stretching muscles prior to contracting them elicits the “myotactic” reflex, or stretch reflex, of muscle to enhance the power of contraction.

This pre-stretching of muscles occurs when you perform jumps one after the other. For example, when you land from a jump, the quadriceps muscles at the front of your thighs stretch as your knees bend, and then quickly contract with the next leap. This pre-stretch enhances the power of the second jump.

### Proceed With Caution

Plyometric training has received its share of criticism due to reported cases of injury following “plyometric” programs of depth jumping and drop jumping, which involve jumping up to, and down from, boxes or benches that are as high as 42 inches.

The forces sustained from these types of jumps onto hard surfaces can be as much as seven times one’s own body weight. However, carefully considering the type of jumps selected for the program, enlisting a coach or trainer for supervision and gradually progressing to more difficult exercises can make a plyometric program both safe and effective.

Jumps should always begin from ground level, off of and onto padded surfaces such as grass or a gym mat over a wood gym floor. These types of jumps are both safe and easy to perform. Other training techniques include jumping over cones or foam barriers, and traveling bounding.

Research has consistently shown that plyometric training can help lead to improvements in vertical jump performance, leg strength, muscle power, acceleration, balance and overall agility.

These factors contribute to reducing an individual’s potential risk of injury. In addition, some studies have shown plyometrics to have a positive effect on bone density, especially in younger participants.



### Use This Tool Wisely

If you are considering plyometrics, proceed with caution. A sports medicine physician or therapist can advise you on whether this training technique is suitable for you, and may even help you get started or recommend someone who can.

But, if improving athletic performance is not a high priority, the additional risk associated with this activity may not be worth the potential benefits.

You will have a more rewarding training experience if you follow the recommendations outlined above. Use only simple ground-level jumps from soft surfaces, and train under proper supervision. Plyometric training can be a smart addition to a healthy individual’s training program, as long as it is used wisely.

### Quality, not Quantity

A safe and effective plyometric program stresses the quality, not quantity, of jumps. Safe landing techniques, such as landing from toe to heel from a vertical jump, and using the entire foot as a rocker to dissipate landing forces over a greater surface area, also are important to reduce impact forces.

In addition, visualization cues, such as picturing yourself landing “light as a feather” and “recoiling like a spring” after impact, promote low-impact landings.

When landing, avoid excessive side-to-side motion at the knee. Landing forces can be absorbed through the muscles that help support and protect the knee joint (quadriceps, hamstrings and gastrocnemius) more effectively when the knee is bending primarily in only one plane of motion.

### Additional Resources

American College of Sports Medicine Current Comment—Plyometric Training for Children and Adolescents: [www.acsm.org/AM/Template.cfm?Section=Current\\_Comments1&Template=/CM/ContentDisplay.cfm&ContentID=8649](http://www.acsm.org/AM/Template.cfm?Section=Current_Comments1&Template=/CM/ContentDisplay.cfm&ContentID=8649)

American College of Sports Medicine Current Comment—Explosive Exercise: [www.acsm.org/AM/Template.cfm?Section=Current\\_Comments1&Template=/CM/ContentDisplay.cfm&ContentID=8644](http://www.acsm.org/AM/Template.cfm?Section=Current_Comments1&Template=/CM/ContentDisplay.cfm&ContentID=8644)

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## REDUCE YOUR RISK FOR OSTEOPOROSIS NOW

**O**steoporosis is an age-related disorder in which bones become gradually thinner, more porous and less able to support the weight of the body. It has a debilitating effect on quality of life, as it limits a person's independence.

This condition attacks both men and women, but women usually suffer more severely because bone loss accelerates rapidly after menopause. About half of all women and a quarter of all men over the age of 50 will break a bone due to osteoporosis. By the time a woman reaches the age of 70, she may have lost as much as 30% of her bone density.

### Prevention Is Key

The following lifestyle-related factors may lead to the development of osteoporosis:

- Lack of exercise and physical activity
- Calcium and vitamin D deficiencies
- Prolonged use of certain medications, alcohol, caffeine and carbonated (cola) beverages
- Smoking

Other risk factors include:

- Being Caucasian or Asian
- Having a small or thin frame
- Having a family history of osteoporosis

The good news is that your risk for osteoporosis may be reduced by a combination of exercise and good nutrition. Here's how:

### Get Plenty of Exercise and Physical Activity

Weightbearing exercises can help prevent bone loss and may encourage bone growth. Specific bone sites are more prone to breaks due to the type of bone they contain, including the upper arm (at the shoulder joint), the forearm (at the wrist joint), the thigh (at the hip joint) and the spine. Exercises that load, compress and stress bones are needed to strengthen them. This process is known as "bone loading."

Before beginning any exercise program, always consult your physician, who will determine whether exercise will be beneficial to you. If you're given the go-ahead, start slowly and build up over time. If you already have osteoporosis or low bone density, your doctor may prescribe supervised exercise with a physical therapist, exercise physiologist or personal trainer who can show you safe ways to move and exercise.

An ideal program should include aerobic weightbearing exercises four days per week and resistance training two to three days a week. Include flexibility exercises on most days of the week and avoid forward bending of the spine. Weightbearing exercises include walking, running and weight training. Improving muscle strength helps conserve bone mass, but remember that the form of exercise selected should in part be based on individual preferences and previous experience, and must not generate any joint pain. Try to include a variety of exercises that will stimulate as many different bones as possible.

Perform cardiovascular exercises at low-to-moderate intensities. Perform resistance exercises for one or two sets of eight to 10 repetitions at a moderate intensity. Stick with your program and slowly progress to working out at least 20 to 30 minutes at each session. Additionally, always try to include functional exercises in your daily activities. These include exercises such as chair sit-to-stands and single-leg stands that can be performed for 30 seconds two to five times a week. These functional activities will improve your balance and your ability to perform everyday activities.

### Eat for Stronger Bones

Did you know that two-thirds of your bone is composed of calcium? You can bolster your bone strength by eating a high-calcium, high-fiber, low-fat diet. Good sources of calcium include:

- Dairy products
- Fish with bones
- Green leafy vegetables
- Almonds, seeds, beans and soy
- Fortified cereals

You also need vitamin D to help absorb calcium. The best source of vitamin D is the sun. About 15 minutes of daily exposure to the back of your hands and face is usually sufficient. People with darker skin may require more time. Sunscreen prevents your body from making vitamin D. If you're worried about skin damage, some food sources of vitamin D are fish, fortified milk, juice and cereal.



### Bones to Last a Lifetime

Bone-loading exercise and a balanced diet are important components of preventing osteoporosis. If you take care of your bones now, they will stay strong enough to carry you safely through a lifetime of health and activity.

### Additional Resources

Medline Plus—Osteoporosis: [www.nlm.nih.gov/medlineplus/osteoporosis.html](http://www.nlm.nih.gov/medlineplus/osteoporosis.html)

National Osteoporosis Foundation: [www.nof.org](http://www.nof.org)

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## PUTTING ON THE POUNDS

**N**o, you didn't misread the title. Believe it or not, there are some people who are looking to put pounds on. They want, maybe even need, to gain weight.

Since most people spend much of their lives figuring out ways to shed their extra pounds, the concept of being underweight may be difficult to comprehend. However, if you're a part of the small population that has tried everything they can to gain weight, you know that it can be just as difficult for underweight people to add pounds as it is for overweight people to take them off.

### Who needs to gain weight?

The term underweight is generally used to describe two kinds of people: those whose weight is considered below normal, but are still healthy, and those whose low weights are cause for significant health concerns.

Individuals in the former category may range from young football players who wish to create a stronger presence on the field to older adults living ordinary lives. These people usually have a genetic predisposition to thinness, and it is important that they keep this in mind when implementing strategies for gaining weight; they won't be able to change their physiology, but they may be able to enhance it.

The latter group is at high risk for respiratory diseases, tuberculosis, digestive disorders and some cancers, and underweight women are more likely to become infertile or give birth to unhealthy babies. A consultation with their physicians is recommended for these people before they embark on programs to gain weight.

### Nutrition Strategies

A useful rule of thumb is that to gain 1 pound of body weight per week, you should

consume an additional 500 calories per day above the amount you typically consume.

This number varies from person to person (depending on such factors as weight and metabolism), but you get the idea: Eating more than normal is a must if you want to gain weight.

Boost your calories by consistently consuming three larger-than-normal meals a day, plus two or more snacks during the mid-morning and mid-afternoon. Try to eat foods that are high in calories, but remember to stay away from saturated fats such as cheese, beef, butter and bacon.

It's best to stick to a high-carbohydrate, low-fat diet that you modify to include larger quantities. This also applies to your intake of protein. Many athletes seeking to gain muscle use protein powders and amino-acid supplements. This isn't necessary if you eat the recommended amount of dietary protein (15 to 20% of daily calories), which is less expensive than buying supplements.

To be sure that you are sensibly increasing your caloric intake, make an appointment with a registered dietitian who can help you plan your meals.

### The Key

To ensure that the extra calories you are eating don't simply turn into pounds of fat, it is crucial that you make strength training your primary form of exercise. If you rely only on eating calorie-dense foods to gain weight, you will only gain fat—probably not the change you are looking for.

Strength training will convert the extra calories you consume into muscle growth that will enhance your appearance as well as your performance in daily activities and athletics. Working with an ACE-certified Personal Trainer is a good way to learn which strength-training exercises will be best for you and to make sure that you are performing them correctly. Call 800-825-3636 or visit [www.acefitness.org](http://www.acefitness.org) to locate ACE-certified Personal Trainers in your area.

### Be Patient

Putting on weight can be a hard and often slow task, but if you consistently eat large meals and participate in strength training, the payoff should be worth both the wait and the work.

### Additional Resource

American College of Sports Medicine Joint Position Statement—Nutrition and Athletic Performance: [www.acsm-msse.org/pt/pt-core/template-journal/msse/media/1200.pdf](http://www.acsm-msse.org/pt/pt-core/template-journal/msse/media/1200.pdf)

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## REACHING YOUR GOALS THE SMART WAY

**A**re you one of those people who resolve to get back into shape every time the New Year comes around—but for some reason fail to accomplish that goal every year? If so, perhaps you might need to adjust the strategy you use when setting these hard-to-reach objectives.

One proven way to set effective goals is using the SMART goal method. This method will allow you to take those vague ideas and transform them into reality.

**SPECIFIC:** The goals must specifically state what is to be accomplished. They must be easily understood and should not be ambiguous or subject to interpretation. For example, rather than stating you would like to improve your fitness level, set a specific goal to be able to run a mile in 12 minutes.

**MEASURABLE:** The goals must be measurable so that there is no doubt about whether you achieved them. Measurable goals also allow you to evaluate your progress. Goals can be measured objectively or subjectively (i.e., how you feel and look), or both. For example, you could measure your percent body fat and body weight, but also monitor how your pants fit.



**ATTAINABLE:** The goals must be attainable—not too difficult or too easy. Easy goals do not motivate, and overly difficult ones may frustrate you and lead to a perception of failure.

**RELEVANT:** The goals must be relevant or pertinent to your particular interests, needs and abilities. For example, when preparing for a 5K walk, running quarter-mile sprints would not be the best approach

**TIME-BOUND:** The goals must be time-bound by specific deadlines for completion. Timelines can be both short-term and long-term and should help you stay focused and on track.

### Self-evaluation

If you feel like you are doing everything possible to attain that SMART goal but are still coming up short, perhaps you need a reality check. Try keeping a diet and exercise journal for one week and check to see if you are actually maintaining a program that will get you where you want to be. You can use websites such as [www.MyPyramidtracker.gov](http://www.MyPyramidtracker.gov), which will help you record and analyze your diet and exercise.

### Behavioral vs. Physiological

People often start a program with the intention of making a change, but struggle to stick with it. Remember, it is only when you decide that you are ready to make a real commitment to this change and do it for yourself that you expect results. Without a real resolution to change, you will likely encounter many obstacles and barriers that will make sticking with the program difficult. Consider the following tips if you are thinking about

starting a program:

- Ask yourself why you want to make this change and who you are doing it for.
- Write down a list of all the benefits you foresee with making this change and a list of costs (e.g., time, effort and money) that will be required to do so. If the balance swings in favor of the benefits, you are likely to stick with the program.
- Identify a support system. Find individuals of significance in your life who will support your desire to change and perhaps even join you.
- Select some rewards for achieving major steps in your program. Recognize your achievements with treats such as a purchase, attending a function or even taking a trip. Such rewards will help you stay motivated during the beginning of your program.
- Visibly place prompts and cues that constantly remind you of the decision you made to change, and remove any stimuli that may trigger undesirable behaviors. For example, placing visible notes or keeping a workout bag accessible will prompt good behavior, while removing ice cream from the freezer may remove a negative stimulus.

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## RESISTANCE TUBING WORKOUT

**F**or those times when you just can't make it to the gym, resistance tubing offers an inexpensive and portable way to get a full-body strength-training workout at home or on the road.

As with all exercise, it is important to warm up for five to 10 minutes and gently stretch the muscles you will be working. For beginners, it is best to do one set of 12 to 15 repetitions of each exercise.

Intermediate exercisers (those that have been lifting weights for up to three months) can perform one to two sets of each exercise. More advanced strength trainers (those who have been lifting weights or using tubing for more than three months) should try to complete two or three sets of 12 to 15 repetitions. Stretch each muscle group after each set and at the end of the entire workout to improve flexibility.

Perform the following exercises for a quick full-body workout:

**Seated row (lats)**—Sit on the floor and grasp one handle. Wrap the tubing around a bedpost or some type of anchor close to the ground and grab the other handle. Sit back so that there is tension on the elastic when your arms are extended forward. Extend your legs in front of you with your knees slightly bent. Pull the handles so that your elbows form right angles as you squeeze your shoulder blades together.

Bring your elbows back as far as you can, keeping your spine neutral. Slowly let your arms extend back to the starting position and begin your second repetition. Be sure not to slouch.

**Bench press (pecs)**—Secure the center of the tubing at chest level and face away from the anchor, grabbing the handles in each hand. Begin with your thumbs at your armpits and step far enough away from the anchor that the tube is not gapping at this starting position. Fully extend your arms in front of your body. Slowly release to the starting position and repeat.

**Military press (deltoids)**—Stand on the center of the band with your feet shoulder-width apart. With your palms facing forward and hands by your shoulders, extend your arms straight up while keeping your back straight (do not arch your back) and abdominal muscles tight. Slowly lower and repeat.

**Triceps extension (triceps)**—Step on the tubing and pull one handle up behind your head. Bring your elbow up close to your ear and, beginning with your arm bent behind you, extend straight up until your arm is straight.

### Tubing Safety Tips

Pulling on exercise tubing isn't exactly a risky activity. Still, to keep the tube from snapping into your face—and to give your muscles the best challenge—follow these important guidelines.

- Check for holes or worn spots in the tubing. Replace the tube if you see any tears.
- Do your workout on carpeting, wood floors or grass—anywhere but asphalt or cement. Abrasive surfaces can tear your tube.
- Wear comfortable, supportive athletic shoes, not sandals or dress shoes.
- Make sure the tubing is secured underfoot or on an anchor before you begin each exercise.
- Maintain good posture throughout each exercise: Keep your knees slightly bent, your abdominal muscles pulled in and your chest expanded.
- Perform the exercises in a slow and controlled manner, to work against resistance both when you pull on the tube and when you return to the starting position.

Excerpted from *Fitness for Travelers: The Ultimate Workout Guide for the Road*, by Suzanne Schlosberg (Houghton Mifflin, 2002), available at [www.acefitness.org](http://www.acefitness.org).

You may use your other arm to hold your elbow in close to your head. Slowly lower back to the starting position and switch arms.

**Biceps curl (biceps)**—Step on one end of the exercise band and grab the handle with the same hand. Be sure that there is some tension on the tubing when your arm is extended down by your side. With your palm facing forward, bend your elbow, bringing your hand up toward your shoulder. Keep your wrist straight and bend only at the elbow. Slowly release and repeat. If you are using light resistance, you

may be able to stand on the center of the tube and work both arms simultaneously.

**Squats (quadriceps, hamstrings, glutes)**—Stand on the tubing so that you are centered. Grab the handles with both hands and stand with your feet about shoulder-width apart. Hold the handles up by your shoulders and bend as if you are going to sit in a chair. Return to standing and repeat. Be sure to keep a flat back and contract your abdominal muscles.

**Kneeling crunches (abdominals)**—Anchor the tubing above your head and let the handles drop down. Kneel on the floor with the anchor behind you. Hold the handles with your hands up by your ears and elbows in. Bending from the waist, curl down, bringing your head toward your knees and keeping the handles locked by your ears. Slowly return to the starting position and repeat.

### Additional Resources

Page, P. Ellenbecker, T.S. (2003). *The Scientific and Clinical Application of Elastic Resistance*. Champaign, Ill.: Human Kinetics.

About.com: [www.exercise.about.com/cs/exerciseworkouts/l/blbandworkout.htm](http://www.exercise.about.com/cs/exerciseworkouts/l/blbandworkout.htm)

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## SCALING THE DIETARY PYRAMID

**T**he USDA Food Guide Pyramid offers personalized content based on your age, gender and activity level. It offers advice on eating plans and interactive tools to help you plan and assess your dietary choices.

Unlike its predecessor, the current Food Guide Pyramid subscribes to a “one size does not fit all” mindset, symbolizing a personalized approach to healthy eating and physical activity. The revised tool is designed to be simple and user-friendly, and was developed to remind consumers to make healthy food choices and be active every day.

Six themes are incorporated into the Pyramid design:

- **Activity**—Physical activity is a new addition to the Pyramid, as represented by the person climbing the steps. Increasing your physical activity, while maintaining a proper diet, will expedite your journey to better health.
- **Moderation**—The structure of this Pyramid reminds us that all foods are okay in moderation and that excluding entire food groups is not the way to go. Instead, the United States Department of Agriculture (USDA) recommends that you eat a variety of foods and understand where each fits into a healthy diet. The food groups with wider bases should be selected more often, as foods in these groups have little or no solid fats or added sugars.
- **Personalization**—Personalization is illustrated by the person, the slogan and the URL.
- **Proportionality**—The concept of proportionality is conveyed via the different widths of the food group bands. Each stripe’s width roughly approximates the relative quantity of food you should consume from that group (for example, the purple “meat and beans” stripe is much narrower than the green “vegetables” stripe).
- **Variety**—The colored stripes represent the five food groups, with the sixth stripe representing oils. Together, these stripes identify the groups that are needed each day for good health.
- **Gradual Improvement**—Gradual improvement is encouraged by the slogan suggesting that individuals can benefit from taking small steps to improve their diets and lifestyles each day.

### No More Guessing on Serving Sizes

One of the more confusing aspects of the previous Food Guide Pyramids was their use of “serving sizes.” Many people simply could not determine what was considered a single serving, especially with certain foods and restaurant portions expanding before their very eyes. To combat this confusion, the USDA instead uses measurable quantities like cups and ounces to create the current Pyramid, making it much more user-friendly.

For example, a 45-year-old female who exercises 30 to 60 minutes each day may have looked at the old Pyramid and wondered where exactly her needs fell within the broad recommendation to eat six to 11 servings of bread, cereal, rice and pasta. Now she knows that she needs 6 ounces of grains each day, half of which should be whole grains. If she lengthens her workouts beyond the 60-minute mark, that recommendation goes up to 7 ounces daily.

To make things even easier, the website provides lists of foods that fall into each category (including which grains are whole), snack recommendations and key words to look for on a food label. This same level of detail is offered for each of the food groups.

### Take the Time to Understand the Pyramid

To take advantage of the many consumer-friendly tools, visit [www.MyPyramid.gov](http://www.MyPyramid.gov), enter your information and start exploring. This new Pyramid offers such details as how many orange vegetables to eat each week and how many “discretionary calories” you’re allowed each day.

While some people may miss the stick-on-the-fridge friendliness of the old Pyramid, the new Food Guide Pyramid reflects the modern fitness consumer’s need for more and more information. So take the time to really explore the site, not only for yourself but also for your loved ones. It still may be tough to choose an orange vegetable over those discretionary cookies when the time for dessert rolls around, but you’ll be armed with plenty of knowledge to make the wise decision as often as possible.



The website offers a “MyPyramid Tracker,” an in-depth assessment of your diet quality and physical-activity status. The dietary tool tracks your diet and makes recommendations, while the activity tool tracks your activity and evaluates your data to create a physical-activity score. The site provides specific recommendations for improvement based on your score, including general activities and specific exercises with detailed instructions.

The latest addition to the site is the “MyPyramid Menu Planner,” which helps you make food choices that meet your Food Guide Pyramid goals.

### Additional Resource

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

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## PILATES PRIMER

**A**re you wondering what all the fuss over Pilates is about? Used traditionally by dancers for deep-body conditioning and injury rehabilitation, Pilates (pronounced Pi-lah-teez) is an 80-year-old exercise technique first developed by German immigrant Joseph Pilates. Only in the past decade has it migrated from its long-held position at the fringes of traditional fitness methods such as aerobics and weight training. Hollywood has been a key factor in turning the spotlight on Pilates, as numerous models and actresses pay homage to Pilates for their beautifully toned, fit bodies.

### Focusing on the Core

The abdominal, hip and back muscles are often collectively referred to as the body's core. Pilates exercises are designed to strengthen this core by developing pelvic stability and abdominal control. In addition, the exercises improve flexibility and joint mobility and build strength.

How can one exercise technique claim to do so much? The Reformer, a wooden contraption with various cables, pulleys, springs and sliding boards attached, lies at the foundation of Pilates. Primarily using one's own body weight as resistance, participants are put through a series of progressive, range-of-motion exercises. Despite the appearance of this and several other equally unusual-looking devices, Pilates exercises are very low impact. Instructors, who typically work one-on-one or with small groups of two or three participants, offer reminders to engage the abdominals, the back, the upper legs and buttocks to stabilize the body's core. Exercise sessions are designed according to individual flexibility and strength limitations.

Pilates exercises are not limited to specialized machines, however. In fact, many gyms across the country now offer Pilates mat-based classes that feature exercises that also stress the stabilization and strengthening of the back and abdominal muscles.

### Connecting With Pilates

The mind/body connection associated with yoga and meditation also plays an integral part in Pilates. Unlike exercise techniques that emphasize numerous repetitions in a single direction, Pilates exercises are performed with very few, but extremely precise, repetitions in several planes of motion.

What will all this focus and stabilization get you? Well, according to its adherents, Pilates can help you develop long, strong muscles, a flat stomach and a strong back, and improve posture. Of course, these changes are dependent upon



### Selecting a Pilates Instructor

Finding a fitness instructor who is a good match for your goals and personality can be challenging. The Pilates Method Alliance suggests asking the following questions of any instructor with whom you are considering working.

- Was the instructor trained through a comprehensive training program?
- Did that training program require a written and practical test, lecture, observation, practice and apprentice hours?
- How many total hours were spent in the training program? (The Pilates Method is a knowledge-based method of exercise and training. Time spent in certification training produces qualified teachers.)
- Does the instructor have any other movement-related teaching experience?
- How long has the instructor been teaching Pilates?
- What is the instructor or studio's philosophy and specialty? Are they able to handle special needs, injuries and rehabilitation?
- Does the instructor or studio teach the full repertoire of Pilates on all types of apparatus?

other lifestyle factors, such as a well-balanced diet and regular aerobic exercise. (Though some may claim that Pilates is all you need to develop stamina and endurance as well, an additional cardiovascular component is advisable.)

An initial Pilates session typically includes a body assessment, which allows the instructor to pinpoint strength and flexibility weak spots. This is also the time to become familiar with Pilates' unique breathing patterns, which don't always follow the exhale-on-exertion pattern of traditional exercise. Sessions typically run 60 minutes, at a cost of \$50 or more for private sessions, and \$10 to \$30 for group sessions. If you're more comfortable exercising at home, there are numerous Pilates and Pilates-type videos currently available.

Several home versions of the Reformer also are currently available on the market. Whether you work out at a studio or on your living room floor, Pilates is an excellent way to challenge your muscles, improve flexibility and incorporate the mind/body element into one effective exercise session.

### Additional Resources

American Council on Exercise—*Pilates Mat Training* by Shirley Archer: [www.acefitness.org/acestore/p-290-pilates-mat-training.aspx](http://www.acefitness.org/acestore/p-290-pilates-mat-training.aspx)

WebMD Video—Yoga Pilates Studies: [www.webmd.com/video/yoga-pilates-studies](http://www.webmd.com/video/yoga-pilates-studies)

Pilates Method Alliance: [www.pilatesmethodalliance.org](http://www.pilatesmethodalliance.org)

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## SMOOTH SKATING

**T**he in-line skating industry has come a long way since 1984, when there were only 20,000 skaters in the United States.

Today that number stands at almost 11 million. The reasons for its popularity are simple. In-line skating is fun, low-impact and easy to learn. It's the perfect way to introduce exercise and an ideal activity for any fitness level.

In fact, numerous studies have indicated that skating has a significant impact on fitness levels, especially in the areas of cardiovascular development, lung capacity, muscular strength and weight loss. One hour on skates consumes almost as many calories as running, and it strengthens the muscles and connective tissues surrounding the ankles, knees and hips.

### Getting Started

Safety is your priority. When you feel safe, you're open to new experiences and you decrease your risk of injury. The number-one reported reason for in-line-related trips to the emergency room, other than for cuts and bruises, is injury to the arms, wrists and hands that occurs when no protective gear is worn.

If you don't own a pair of skates and protective gear, locate the nearest in-line rental shop, where you can rent all you need for about \$5 to \$20. Here are some more tips to help you get started:

- When renting or buying, be sure your skates fit snugly; your feet should not have a lot of room to move around. If you feel an uncomfortable pressure point anywhere around your feet or ankles, adjust the tongue of the skate. If this doesn't help, try on another pair.
- Any good rental shop will include all protective gear—wrist, knee and elbow pads and helmet—with your rental. A bike helmet works fine, too.
- If possible, stand up and take a basic stride forward, on carpet or in the rental shop. Get a feel for the support surrounding your ankles. Do small tasks to get used to the skates—shift weight from one foot to the other, step around in a small circle and move your ankles and knees from side to side to feel the wheels' edges.
- Find an outdoor location with a flat, relatively smooth surface, free from traffic or obstacles. Possible options include a parking lot, school yard or tennis court, preferably with a grassy area nearby to cushion your fall should you stumble.

- Learn how to stop! There are a variety of braking systems currently available, depending on the manufacturer. The box below offers basic instruction that works well with all of these systems.

### Braking Basics

The heel brake is usually situated on the heel of the right skate.

- Step 1—Roll slowly forward on both feet, your posture upright with arms in front and knees and ankles relaxed.
  - Step 2—Stagger (scissor) your right foot forward several inches while maintaining your posture.
  - Step 3—Still scissoring your feet, lift the right toe up to feel the brake engage. Keep your knees and ankles flexed and relaxed. It takes a few feet to stop completely and several tries to become proficient.
- Improve your stride, and try to get some type of rhythm going. With each stride, concentrate on the feel of your hips balancing over one foot, then over the other. The better your balance, the longer you'll be able to glide on that foot. Next, assume a slightly more flexed athletic position to improve your "stroke," or the pushing phase of striding. Concentrate on pushing off from the inside of the whole foot (not just off the toes). Once you've pushed off, return (regroup) that foot back under your hips; push off with the other foot.
  - Turning can strike fear into the hearts of novice skaters, but the following progression makes it seem simple.
    - First, look in the desired direction, and then point your big toes in that direction. Keep the ankles and knees flexed and relaxed and the arms in front for balance. Continue your turn in the shape of a C until you roll to a stop. Try the same technique in the other direction; then try linking turns together.



- The distance between your feet will vary; some might stand wider than others.

Once you master the basics, it's possible that you will be able to redefine your potential for safe participation, as well as your fitness level.

### Additional Resource

Inline Skating Resource Center: [www.iisa.org](http://www.iisa.org)

*If you are interested in information on other health and fitness topics, contact: American Council on Exercise, 4851 Paramount Drive, San Diego, CA 92123, 800-825-3636; or, go online at [www.acefitness.org/GetFit](http://www.acefitness.org/GetFit) and access the complete list of ACE Fit Facts.™*



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## SNEAKER SAVVY

If you've tried to buy a pair of athletic shoes recently, you probably noticed the wide range of high-tech, state-of-the-art athletic gear. Consumers are faced with so many options that the task of choosing a pair of shoes has become increasingly complicated and confusing, not to mention expensive. By attaining a good working knowledge of athletic footwear, you'll help yourself find the perfect pair of affordable shoes.

### Guidelines for Buying Shoes

When shopping for athletic shoes, the first step is deciding what type you need. If you engage in a specific activity two or three times each week, such as running, walking, tennis, basketball or aerobics, you'll want a shoe designed specifically for that sport. Multipurpose shoes such as cross trainers may be a good alternative for those who participate in several sports or activities, such as cardiovascular and weight training, in a single workout.

Ideally, you should look for a specialty athletic shoe store with a good reputation in your community. Their sales staffs are more likely to be knowledgeable about selecting appropriate shoes.

When purchasing shoes for a specific sport or fitness activity, consider your foot type. People with high-arched feet tend to require greater shock absorption than those with a normal-arched foot. People with high-arched feet also suffer from lateral instability and are more prone to ankle sprains. Conversely, people with low-arched ("flat") feet require shoes with less cushioning, but greater support in the mid-foot region and better heel control.

Test the shoes for basic stability:

- Grab the shoe at the ball and heel. Bend the shoe from front to back. The shoe should bend right near the ball of the foot, because that's your foot's natural hinge point, but the shoe must not be too flexible.
- At the heel of the shoe, find the "heel counter," a stiff cup sewn into the back of the shoe to provide heel support. Squeeze this cup into the shoe. It should be very stiff and not easily collapse inward.
- Hold the shoe at each end and twist it. A shoe that offers good lateral support to the foot should only twist a little bit.
- Place the thumb of one hand inside the heel of the shoe and the other hand under the sole of the shoe near the heel. Compress your hands together to feel the



amount of cushioning offered by the shoe. The more compression you feel, the more shock absorption the shoe offers.

### Fit Tips

- General recommendations include get fitted for footwear toward the end of the day. It's not unusual for an individual's foot to increase by half a shoe size during the course of a single day. However, if you plan to exercise consistently at a specific time, consider getting fitted at that exact time.
- Allow a space up to the width of your index finger between the end of your longest toe and the end of the shoe. This space will accommodate foot size increases, a variety of socks and foot movement within the shoe without hurting your toes.
- The ball of the foot should match the widest part of the shoe and you should have plenty of room for your toes to wiggle without experiencing slippage in the heel.
- Shoes shouldn't rub or pinch any area of your foot or ankle. Rotate your ankles when trying on shoes, and pay attention to the sides of your feet and the top of your toes, common areas for blisters.
- Wear the same weight of socks that you intend to use during activity. Look for socks that are made with synthetic fibers such as acrylic, polyester or Coolmax® for better blister prevention.

### Some Final Considerations

It is important to be aware of when your shoes need to be replaced. If they are no longer absorbing the pounding and jarring action, you are more likely to sustain ankle, shin and knee injuries. Athletic shoes will lose their cushioning after three to six months of regular use (or 350 to 500 miles of running). However, look at the wear patterns as a good indicator for replacement. Any time the shoe appears to be wearing down unevenly, especially at the heel, it is time to replace the shoes. Additionally, if the traction on the soles of the shoes is worn flat, it is time for new shoes.

A final consideration when buying athletic shoes is price. It is possible to spend anywhere from \$19.99 for no-name brands to more than \$200 for the latest technological wonder from a top brand name. A high price doesn't always guarantee the right fit or best features. You can find a pair that provides excellent support, cushioning and fit in the middle of that price range.

### Additional Resources

American Association of Podiatric Sports Medicine: [www.aapasm.org](http://www.aapasm.org)  
WebMD: [www.webmd.com/fitness-exercise/features/10-tips-choosing-athletic-shoes](http://www.webmd.com/fitness-exercise/features/10-tips-choosing-athletic-shoes)

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## SO, YOU WANT TO SPOT REDUCE? HERE'S HOW

**B**esides launching millions of sit-ups, leg lifts and torso twists, the desire for a toned and taut physique has led to the purchase of a long line of exercise devices of dubious worth. Countless inventions, such as vibrating belts and “gut-busting” contraptions, have claimed to miraculously tighten and tone certain trouble spots.

But the miracles people were expecting never materialized, and those “spots” remained “unreduced.”

### What's wrong with spot reduction?

Where did we go wrong? In the effort to tone their bodies, people neglected the most important factor: fat. Exercises such as crunches or leg lifts improve the tone and endurance of the muscles, but they don't burn fat. On the other hand, when you do exercises that elevate the heart rate, such as bicycling, walking or aerobic dance, the body will draw upon its fat stores for energy.

### Alternative Solutions

Eating a low-fat diet and following an exercise program that combines aerobic activity and strength training is the key to changing the shape of your body.

In addition to burning calories through aerobic activity, strength training will increase the amount of muscle, which burns even more calories. But many people shun the idea of intensive exercise, scared off by the idea of five-mile runs, barbells or aerobic classes.

Thankfully, any aerobic activity that elevates your heart rate can help you burn fat and take off unwanted pounds. Many experts recommend doing at least three sessions of 30 minutes of aerobic activity per week. Ideally, for long-term weight control, you should perform a 60-minute aerobic exercise session most days of the week.

For example, these enjoyable alternatives to traditional aerobic exercise are effective fat burners:

- Mountain biking
- In-line skating
- Walking
- Country line dancing
- Hiking
- Martial arts
- Boxing



- Cross-country skiing
- Downhill skiing
- Water sports

In addition to these activities, which can be done solo or with friends and family, you should take advantage of the wide variety of fitness tapes currently on the market. You can learn everything from martial arts to swing dancing. Choose an activity because it interests you, not because it is touted as a great workout. Remember, the most effective exercise is the one you will stick with for the long haul.

A few things to keep in mind when starting any new activity:

- Don't start out too hard or too fast or you may injure yourself or quit before seeing any benefit.
- Always concentrate on enjoying yourself, rather than on what a particular exercise might do for you.

- Keep your exercise comfortable and only increase intensity after your body becomes accustomed to new activity levels.

Finally, always check with your doctor before beginning any exercise program, especially if you're a male over 45 or a female over 55, or have cardiovascular risk factors, such as smoking, high blood pressure, high cholesterol, diabetes or a family history of heart disease.

### A Final Word About Toning Exercises

Just because exercises like leg lifts and crunches won't budge the fat does not mean that they are not beneficial. Unlike some aerobic activities, these exercises can strengthen and tone specific muscles of the body.

The best way to shape up is to incorporate strength and toning exercises with aerobic exercises. Before you know it, you'll be on your way to looking and feeling better.

### Additional Resource

American Council on Exercise—Why is the concept of spot reduction considered a myth?

[www.acefitness.org/blog/44/why-is-the-concept-of-spot-reduction-considered-a/](http://www.acefitness.org/blog/44/why-is-the-concept-of-spot-reduction-considered-a/)

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## WHAT YOU NEED TO KNOW ABOUT GROUP INDOOR CYCLING

Some call it torturous, others exhilarating. But there's no denying the popularity of group indoor cycling. What sets these classes apart from the usual boredom of stationary cycling is the visual imagery provided by instructors. Participants are led on a "virtual" outdoor road race, complete with hills, valleys, straight-aways and finish lines. But before you reserve your spot (many classes are so popular that reservations are a must) and start composing your victory speech, there are few questions to ask yourself, as well as a few precautions to take, to make your first ride a smooth and enjoyable one.

### What kind of shape am I in?

This question is crucial. Despite its heavy promotion as a workout for even the most uncoordinated participant, indoor cycling is by no means for everyone. The intensity levels of many classes are far beyond what most novices or part-time exercisers can achieve and maintain, particularly for 40 minutes or more (see sidebar).

It's easy to get caught up in an instructor's chant of "Faster RPMs!" and "Don't sit down!" even if your body is telling you otherwise. And because not all fitness facilities are able to offer classes tailored for beginning exercisers, it's important that participants either be in very good cardiovascular condition or have the ability to monitor, and adhere to, their body's cries for moderation.

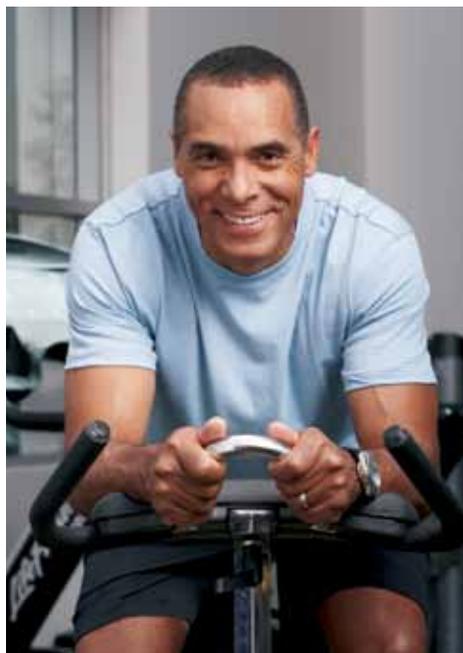
### Get in Cycling Shape

Just because you may not be ready for a cycling class now doesn't mean you can't be in the very near future. Consider doing some cycling-specific training before you take your first indoor cycling class. Spend some time on a stationary bike, but make it interesting by creating your own virtual experience by "traveling" some of your favorite road trips in your mind as you listen to music. You can increase your endurance by interspersing periods of higher-intensity cycling (faster speed, greater tension) with more leisurely pedaling. In just a few short weeks you'll be ready to sign up for your first indoor cycling class.

### Indoor Cycling Essentials

The following helpful tips can make your first cycling experience a positive one:

- Don't make the dreaded mistake of showing up in running shorts or heavy sweats; there's no better way to make your ride unbearable. Opt instead for bike shorts, preferably padded ones like most outdoor cyclists wear. While this won't eliminate the



### What a Workout!

In terms of heart rate, oxygen uptake and energy expenditure, group cycling compares favorably to other aerobic-type workouts. The caloric output associated with a standard 45-minute group cycling class can range from 350 to 600+ calories depending on the size of the participant and the intensity level of the class. Clearly, group indoor cycling classes provide a challenging, high-intensity workout.

possibility of chaffing and discomfort altogether, it helps a lot.

- Your second most important item is a full water bottle. Get ready to consume plenty of fluids before, during and immediately following your workout.
- Adjust the seat to the appropriate height. If the seat is too low, you won't be able to get enough leg extension on the downstroke and your legs will tire out faster. If

it's too high, you'll be straining to reach and might injure yourself. Here's a good rule to follow: Your upstroke knee should never exceed hip level, while your downstroke knee should be about 85% straight. And don't grip the handlebars too tightly, as this will increase the tension in your neck and shoulders.

- Ask your instructor about his or her training. In addition to cycling knowledge, an instructor should have experience teaching group exercise and have earned a primary certification such as the only NCCA-accredited Group Fitness Instructor certification, which is offered by the American Council on Exercise (ACE). Look for an instructor who encourages perceived exertion measures and/or heart-rate monitoring and is willing to get off his or her own bike to coach beginners.
- Above all, concentrate on exercising at your own pace. Don't be intimidated by the high speeds and furious intensity of your cycling mates. Listen to your body and adjust the tension and speed accordingly, and don't be afraid to slow down or take a break when necessary.

### Additional Resource

Francis, P.R., Witucki, A.S., & Buono, M.J. (1999). Physiological response to a typical studio cycling session. *ACSM's Health & Fitness Journal*, 3, 1, 30-36.

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## STEP TRAINING FOR FITNESS AND FUN

**W**ithin the last few years, step training's popularity has climbed rapidly. An estimated 10 million people have tried step training.

Could 10 million steppers be wrong? On the contrary—vigorous stepping provides the cardiovascular benefits of running but stresses the joints little more than walking. Performed to invigorating music with creative choreography, this low-impact workout is also lots of fun.

### The First Step to Stepping

Before beginning a step-training class, be sure that your step—the platform—is secure and at the proper height for your fitness level. If you are new to step training, or just beginning a fitness program, start with a platform height of 4 to 6 inches. (Regardless of fitness level, the platform height should not require bending your knees more than 90 degrees.)

Keep the area around your platform dry and remove objects that could interfere with your workout.

### Align Your Body

Proper body alignment during step training helps prevent injuries. While stepping:

- Relax your neck and keep it straight.
- Always keep your knees soft and don't lock the knee joints.

- Maintain good posture with the shoulders back, chest lifted and pelvis tucked under.
- Lean from the ankles, not the waist, as you step onto the platform; do not bend from the hips.
- Don't arch your back.

### Proper Stepping Techniques

Correct stepping technique also prevents injuries and improves your workout:

- Always place your entire foot on the platform; no part of the foot should hang over the edge.
- Step close to the platform, allowing the heels to contact the floor. *Note:* Only the ball of the foot, not the heel, should touch the floor during lunges or other rapidly repeated movements (called "repeaters").
- Step quietly. Pounding can unduly stress the ankles and knees.

- Keep an eye on the platform at all times.
- Don't use hand weights. They may increase the risk of injury and provide no significant benefit.

### Stepping Out

If you initially find step training difficult to follow, focus on learning the foot patterns and omit arm movements. You can add arm movements later.

Remember that raising your arms above shoulder level makes your heart work harder and can leave you breathless. So, if you have a hard time keeping up, lower your arms and catch your breath.

To avoid injuries caused by too much stepping, alternate step-training classes with a variety of aerobic workouts like bicycling, walking or other recreational activities.

Step-training workouts may seem difficult at first, but beware—they're habit-forming! Just remember to maintain proper body alignment and stepping technique to keep you stepping injury-free for years to come.

### Additional Resource

American Council on Exercise—*Step Training* by Sabra Bonelli: [www.acefitness.org/acestore/p-587-traditional-aerobics-and-step-training.aspx](http://www.acefitness.org/acestore/p-587-traditional-aerobics-and-step-training.aspx)

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## STRENGTH TRAINING 101

**Y**ou do not need to be a bodybuilder to benefit from strength training. A well-designed strength-training program can provide the following benefits:

- *Increased strength of bones, muscles and connective tissues (the tendons and ligaments)*—This increased strength decreases the risk of injury.
- *Increased muscle mass*—Most adults lose about one-half pound of muscle per year after the age of 25, largely due to decreased activity. Muscle tissue is partly responsible for the number of calories burned at rest (the basal metabolic rate, or BMR). As muscle mass increases, BMR increases, making it easier to maintain a healthy body weight.
- *Enhanced quality of life*—As general strength increases, the performance of daily routines (carrying groceries, working in the garden) will be less taxing.

### The Core Curriculum

Many exercises can be combined into a program that works all the major muscle groups. Neglecting certain groups can lead to strength imbalances and postural difficulties. A certified fitness professional can help you develop a safe, effective program.

You may also wish to consult with a certified fitness professional to learn safe technique before beginning a strength-training program. One set of eight to 12 repetitions, working the muscles to the point of fatigue, is usually sufficient. Breathe normally throughout the exercise. Lower the resistance with a slow, controlled cadence throughout the full range of motion. Lifting the weight to a count of 2 and lowering it to a count of 3 or 4 is effective.

When you are able to perform 12 repetitions of an exercise correctly (without cheating), increase the amount of resistance by 5 to 10% to continue making safe progress.

### Staying Motivated

An encouraging aspect of strength training is the fact that you'll likely experience rapid improvements in strength and muscle tone right from the start of your program. Don't be discouraged, however, if visible improvements begin to taper off after a few weeks.

It's only natural that, as your fitness level improves, improvements in strength and

appearance will come at a slightly slower pace. To help keep your motivation up, find a partner to train with you.

Aim to exercise each muscle group at least two times per week, with a minimum of two days of rest between workouts. Training more frequently or adding more sets may lead to slightly greater gains, but the minimal added benefit may not be worth the extra time and effort (not to mention the added risk of injury).

### Vary Your Program

Machines and free weights are effective tools for strength training, and a combination of the two is generally recommended. Utilizing both machines and free weights provides exercise variety, which is important for both psychological and physiological reasons. Variety not only reduces boredom, but also provides subtle exercise differences that will enhance progress.

The benefits of strength training are no longer in question. Research continues to demonstrate that strength training increases both muscle and bone strength and reduces the risk of osteoporosis. A safe strength-training program combined with cardiovascular and flexibility training will give you the benefits of a total fitness program.

### Additional Resource

About.com: [www.exercise.about.com/cs/exerciseworkouts/a/weight101.htm](http://www.exercise.about.com/cs/exerciseworkouts/a/weight101.htm)

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## STRENGTH TRAINING FOR KIDS: A GUIDE FOR PARENTS AND TEACHERS

**M**any parents and physical education teachers have traditionally shied away from strength training with their children or students. However, there is sufficient research to suggest that strength training is a suitable—and safe—option for most youth.

### Correcting the Misconceptions

There are a number of common myths about youth strength training that continue to cause concern among parents and educators. Two of the most common misconceptions are that strength training may stunt the growth of children and that children should not lift weights until they are 12 years old. There is simply no evidence to support either of these statements. In fact, all of the major fitness and medical organizations in the U.S. recommend strength training for youth, assuming that basic guidelines are adhered to and that appropriate leadership is present. And about the question of age, children can begin to train with weights as soon as they are able to accept and follow directions—usually around the age of seven or eight.

### The Benefits

The benefits of youth strength training are similar to those for adults, though the importance of getting an early start cannot be overemphasized—the most important benefit of any youth fitness program is an improved attitude about lifelong activity. Improvements in muscular fitness, bone mineral density, body composition, motor fitness performance and injury resistance should be compelling evidence for all parents, though children will likely focus on things like enhanced sports performance and the social aspects of exercise. In fact, children don't usually have the ability to comprehend long-term concepts until the ages of 11 to 14, so abstract ideas like healthy bones and disease prevention will do little to motivate them, and may in fact demotivate some children. Stick with ideas like self-improvement and individual success, and always make sure everyone is having fun. Fun is the number one motivator in almost every aspect of a child's life.

Another compelling argument for youth strength-training programs is that significant improvements have been seen in the self-esteem, mental discipline and socialization of children who participate. Think back to your days in P.E. What games did you play? What types of physical attributes and skills were most often rewarded with success? Most likely, you are thinking of



team games that featured speed, agility, jumping ability and overall athleticism. And those things should be rewarded! But a glaring omission in that list is muscular strength, and it is often overweight and obese children who will excel in that area. Weight training provides an opportunity to let children who typically struggle with group activities stand out from their classmates and perform well on an individual basis. What a tremendous way to boost self-esteem in the children who need it most.

### How to Get Your Kids Started

It is important that parents and teachers do not impose training techniques and philosophies on children just because they may have worked for their own routines. Listen very closely to kids' concerns and address them with care. Instructor attitude is of the utmost importance when working with kids. Start slowly and lean toward underestimating rather than overestimating the strength of young exercisers. Not only is it safer

to do so, but it also leaves plenty of room for progress—and tangible progress is essential in the early stages of a youth strength-training program. The initial focus should be on developing good form and learning the basics of strength training.

Introduce children to a variety of exercises and types of resistance. Most kids love to learn new things, so working with medicine balls and resistance tubing in addition to the more traditional free weights and machines is a great idea—and a much more affordable one. Just be sure that all the major muscle groups are addressed in a balanced, full-body workout.

Finally, remember that your goals when exercising with children are simple: Be safe, have fun and help kids learn to love physical activity.

### Additional Resources

American Council on Exercise—*Youth Strength Training* by Avery D. Faigenbaum & Wayne L. Westcott: <http://www.acefitness.org/acestore/p-269-youth-strength-training.aspx>

About.com: [www.sportsmedicine.about.com/cs/kids/a/aa060500.htm](http://www.sportsmedicine.about.com/cs/kids/a/aa060500.htm)

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## STRENGTHEN YOUR ABDOMINALS WITH STABILITY BALLS

One of today's most versatile pieces of exercise equipment looks more like an overgrown beach ball than a useful fitness tool.

The stability ball—an extra-large, inflatable orb designed to improve balance while targeting specific muscle groups—has grown in popularity since its mainstream introduction in the late 1980s and early 1990s.

The stability ball can be adapted for many uses, including developing core strength, improving posture and facilitating stretching, among others. Its application is particularly widespread in the physical therapy industry, where it was first put to use in the 1960s.

Thanks to fitness professionals' interest in the stability ball and its numerous benefits, there have been several exercise programs developed for just about every need, desire and body part.

### The Stability Ball and Your Core

So much of the exercise that people do, such as running and cycling, focuses on the lower body. Not much attention is paid to the trunk, or core, of the body. It is the muscles of the core—the abdomen, chest and back—that stabilize the rest of the body.

Think of your core as a strong column that links the upper body and lower body together. Having a solid core creates a foundation for all activities, and is especially important when you add a heavy load, such as weights, to your workout.

It is important when you are strengthening the core that you create balance between the muscles of the abdomen and the back. Many people will naturally have an imbalance between the strength of their abdominal muscles and the lower-back muscles. Exercising with stability balls helps to develop and strengthen those muscles.

Infomercials and magazine advertisements seem to be targeting individuals who want to strengthen their abdominal muscles. However, the stability ball is well equipped to help you safely and effectively develop a strong, stable well-functioning core.

Here are three exercises that can be performed with a standard stability ball that target all three major sections of the abdominal muscles:

**Supine trunk curl**—Start with the top of the ball beneath the center of the back. Press



the lower back into the ball and tighten the abdominals as you curl the rib cage toward the pelvis. Slowly return to the starting position.

**Supine oblique curl**—Start with the top of the ball beneath the center of the back, then stagger your feet and rotate your hips to one side. Anchor the lower hip to the ball and move the rib cage in a diagonal direction toward the legs (for example, right elbow to left inner thigh). Make sure your neck and pelvis are stable.

**Forward transverse roll**—Kneel on the floor and place your forearms on the ball, making sure your hips and arms form a 90-degree angle. From this starting position, roll the ball forward as you simultaneously extend your arms and legs. Contract your abdominals to help support your lower back, which should not be strained.

Roll as far forward as possible without compressing the spine, drooping the shoulders or rounding the torso. Return to the starting position.

### The Benefits of Balls

Besides providing balance training, stability balls work the trunk in almost every exercise that is performed. By concentrating on the abdominal section, your posture will improve and you will find that you are generally more balanced and aware of your body movements. Your core will be more prepared to support the rest of your body in whatever activity you choose to do.

### How to Choose a Ball

It is important to buy the right size ball and maintain the proper air pressure. The firmer the ball, the more difficult the exercise will be. The softer the ball, the less difficult the exercise will be.

If you are just beginning, overweight, an older adult or you are generally deconditioned, you may want to consider using a larger, softer ball. When sitting on the ball, your knees and hips should align at a 90-degree angle.

Following are general guidelines for buying the right size stability ball:

- Under 4'6" (137 cm): 30 cm ball (12 inches)
- 4'6"–5'0" (137–152 cm): 45 cm ball (18 inches)
- 5'1"–5'7" (155–170 cm): 55 cm ball (22 inches)
- 5'8"–6'2" (173–188 cm): 65 cm ball (26 inches)
- Over 6'2" (188 cm): 75 cm ball (30 inches)

### Additional Resources

American Council on Exercise: *Stability Ball Training* by Sabra Bonelli: <http://www.acefitness.org/acestore/p-292-stability-ball-training.aspx>

About.com: [www.exercise.about.com/cs/exerciseworkouts/l/aa121200b.htm](http://www.exercise.about.com/cs/exerciseworkouts/l/aa121200b.htm)

American Council on Exercise—ACE Exercise Library: [ACE Exercise Library www.acefitness.org/exerciselibrary](http://www.acefitness.org/exerciselibrary)

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## PARENTS...EAT YOUR WORDS!

**A**re you pleased with your progress toward healthful nutrition and fitness habits, but frustrated with that of your children?

Do you suspect that the lunches you send to school are traded or thrown away? Do you shudder at the sight of your pantry shelves displaying high-fat snacks and sugary cereals that you vowed you would never buy? Can you really win the battle against advertising, peer pressure and kids' love affairs with sugar and fat?

### The Bad News and the Good News

Kids today are fatter and less fit than previous generations. The rates of childhood obesity began to level off around 2006, but are still high at around 16%. And research shows that overweight children are more likely to become overweight or obese adults. Being overweight as a child even puts youngsters at risk for cardiovascular disease and type 2 diabetes at a young age.

Food companies spend millions of dollars on television advertising to convince children that high-fat, high-sugar, processed foods are worth eating. Food is consumed because it's cool, fun or comes with a free toy, rather than for its impact on health or even for its taste.

So what's a parent to do? Eat your words! The fact is that parents who have adopted a lifestyle that includes healthful foods and regular exercise are living role models for their children.

We know that the behaviors children see most often at home are the ones they will be most likely to adopt for themselves, and parents' efforts to promote healthy food habits do make a difference. Eat at least one meal together as a family each day, so that your children can regularly observe healthy eating habits.

### Stack the Deck

It is a good idea to stock the kitchen with a majority of healthy items, keeping in mind that kids want some of their favorite foods, which may be sweet and/or salty. Save these foods for once-in-a-while treats, and make their regular snacks healthier.

Buy pretzels, which are low in fat, instead of greasy chips. Keep cut-up vegetables and ready-to-eat mini-carrots in the refrigerator. Sprinkle air-popped popcorn with grated parmesan cheese



instead of butter. Check out [www.eatright.org](http://www.eatright.org) for a list of more healthy snacks for kids.

A good way to get kids involved and committed to healthy eating habits is to involve them with the food shopping and preparation. There are lots of children's cookbooks on the market; select one that emphasizes ways to modify your kids' favorite foods rather than eliminate them. Children who feel competent to select and prepare food will make more intelligent food choices. [www.MyPyramid.gov](http://www.MyPyramid.gov) has some great educational tools for teaching children about balanced nutrition and physical activity.

### Balance Is Everything

The key to keeping kids happy and healthy is to strike a balance between foods that are good

for them and those that just taste good, and between leisure or TV time and physical activity.

This brings us to the other side of the healthy living equation. The most obvious impact of inactivity on kids is the strong association between the number of hours spent watching TV or playing computer games and the level of obesity among youngsters.

Children should engage in 60 minutes of moderate-intensity physical activity on most, if not all, days of the week. Encourage kids to get outside and play tag, jump rope or get involved in sports.

Make physical activity a family affair. Go for a bike ride together, play catch or walk the dog. This will motivate you to get some exercise in, while simultaneously setting a great example for your kids—and creating lifelong memories. It's a win-win-win situation!

### Additional Resources

American Dietetic Association:  
[www.eatright.org](http://www.eatright.org)

MyPyramid Food Guidance System:  
[www.MyPyramid.gov](http://www.MyPyramid.gov)

*If you are interested in information on other health and fitness topics, contact: American Council on Exercise, 4851 Paramount Drive, San Diego, CA 92123, 800-825-3636; or, go online at [www.acefitness.org/GetFit](http://www.acefitness.org/GetFit) and access the complete list of ACE Fit Facts.™*



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## SUCCESSFUL WEIGHT CONTROL

**E**ating less, or cutting back on fat in your diet, won't keep the weight off. What you really need to do is strike a good balance between the number of calories you consume and the number you burn. And the only way to do that is to exercise.

Don't groan! By exercising, you can lose weight while you eat more calories than if you simply went on a diet. Regular physical activity is much more effective at keeping the weight off in the long run than any diet.

### One Choice Is Aerobic Exercise

With aerobic exercise, you can lose weight without drastically reducing the calories you consume or sacrificing important nutritional needs. One reason for this is that aerobic exercise not only elevates your metabolism while you're exercising, but it can also keep it elevated even after you're done, depending on how long and how strong you exercise.

You've probably heard about exercise programs that actually turn your body into a "fat-burning machine." Aerobics can do that. An aerobic program that you stick with can help you lose weight more easily because it can stimulate your body and make it burn calories.

If weight control is your goal, some types of aerobic activity will work better than others. Low-impact aerobic exercise, like walking, step aerobics and low-impact aerobic dance, is your

best bet. Some good non-impact aerobic activities you can benefit from include swimming, bicycling and rowing.

If you're just getting started, begin with as little as 15 minutes of low-impact aerobics three times a week. Gradually increase to 30 minutes of moderate-intensity aerobic activity four times a week.

### Strength Training = Weight Management

Your muscles burn calories during physical activity. What you may not know is that your muscles also burn calories when your body is at rest. Increase your muscle mass, and you'll be increasing your body's capacity to burn calories both during activity and at rest.

Add to that the fact that diets which substantially restrict calories can cause the loss of lean muscle mass, along with the loss of fat. By incorporating strength training into your activity program while also following a moderate diet, you'll be able to maintain lean muscle mass while you lose fat.

Start any strength-training program with

one set of exercises and a weight that allows you to complete eight to 12 repetitions. Your program should exercise your legs, trunk, shoulders, arms, chest and upper back. When strengthening your abdomen and lower back, increase the number of repetitions with weights that offer less resistance.

### Success Means Good Eating and Good Exercise

Follow a moderate low-fat diet and an exercise program that combines aerobic activity and strength training. That's the key to losing weight—and keeping it off.

Begin slowly with exercises you find comfortable and build as your body becomes accustomed to the activity level. Don't start out too hard or too fast, or you may injure yourself or quit before you've done yourself much good.

And remember, you can't lose weight overnight. Set a realistic weight-loss goal for yourself—like 1 to 2 pounds a week—eat healthy and get going on a program of regular physical activity, and you'll be delighted by what you accomplish.

Maintaining a lower, healthier body weight is something you can accomplish. So start now and keep on going!

### Additional Resource

About.com: [www.exercise.about.com/od/gettingweightlossresults/a/successweight.htm](http://www.exercise.about.com/od/gettingweightlossresults/a/successweight.htm)

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## TAKE YOUR WORKOUT OFF THE BEATEN PATH

**T**here's nothing like getting away from it all.

But vacations seem to be too few and far between. One way to escape the pressures and hectic pace of "city" life is to head to the hills. Hiking as a form of fitness is surging in popularity and it isn't hard to see why—it's a great mind/body exercise.

Not only can you get a great workout, but taking a hike, alone or with a friend, is also a great way to forget your cares and spend a little time with Mother Nature.

### Safety First

The essentials of hiking are similar to walking—they are simply taken off-road. The best way to get started is to find a safe, cleared path—many state parks have trails marked out with distances and the approximate time it takes to go from point A to point B. For added safety, take a friend or your dog along, and never go hiking after dark.

Another reason to stick to the trails: poison oak or ivy. Your best defense against these skin irritants is to stay clear of them. Don't trust yourself to identify these pesky plants; stick to the trail and avoid brushing against foliage whenever possible.

### Shoe Essentials

Shoes with good traction are an absolute must, particularly if you plan to head up or down any hills. Many manufacturers make shoes designed specifically for trail walking,

although you can get by with a good pair of running or walking shoes.

Hiking boots, particularly the lightweight variety, are great for keeping your feet dry—streams and ponds often appear unexpectedly after a rainfall. The most important thing to consider when choosing a shoe is the fit; you don't want blisters or chafing to keep you from enjoying yourself.

### Keep Your Energy Up

It's always a good idea to bring along some water and even a snack when heading out, even for shorter hikes. Don't let yourself get so distracted by the beautiful sights around you that you forget to drink fluids and become dehydrated. Drink at least 7–10 ounces of water every 20 minutes, even when the weather is cold.

Dress in layers, particularly during unpredictable weather seasons such as spring and fall. Insect repellent and plenty of sunscreen also are essential. You may want to invest in a day pack that straps around your waist to keep these items close at hand.

### Pacing Yourself

How fast you take to the trails is up to you and what you want to accomplish. A hike can be an intense workout or a time to relax your mind and enjoy nature, or both—the choice is yours.

If you want to increase the intensity of your workout, hills are a great way to do it. When starting out, take it easy and give your muscles, particularly your quadriceps (the front of the thigh) and calves, time to adapt to the increased demands of hiking.

Once you've been hiking regularly for a few weeks, give yourself a challenge by tackling a hill or two. Not only will this increase your muscular strength and endurance, you'll notice a big improvement in your cardiovascular endurance as well.

### Ready, Set, Hike!

Hiking is a great activity to add to your existing fitness regimen. Not only can it add variety and spice up your routine, but integrating hiking into your workouts also will give you the benefits of cross-training.

Rather than giving the same muscles the same workout day after day, hiking will challenge your muscles to perform in a whole new way. But perhaps the greatest benefit of hiking is the chance to get away from it all, if only for just a short while.

### Additional Resource

American Hiking Society: [www.americanhiking.org](http://www.americanhiking.org)

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## TEENS, FITNESS AND YOU

**W**ith all the pressures today's teenagers have to deal with, it's no wonder so many are in trouble.

Statistics show that teen suicide and teen pregnancy are on the rise, as is the firearm-homicide rate for teens. In 2007, the Centers for Disease Control and Prevention reported that an average of 23% of teens smoke and 17% of eighth graders have tried alcohol. And only about 30% of them get enough exercise, which means the other 70% are setting themselves up for a sedentary life and all the problems that come with it.

Now's the time to change these statistics. Research has shown that kids who play sports, or who are physically active, are less likely to have these problems. But getting kids to exercise is no easy task unless you're willing to spend time with them and learn to speak their language.

### Quality Time, Quality Talk

It's impossible to have good relationships with teenagers if you don't spend time with them. Don't expect teens to automatically think you're cool and trustworthy—you'll have to prove it.

Accept them for who they are and show them that you are genuinely concerned about them. Look past the way they dress or wear their hair, and learn to understand their language so you can relate to what they have to say.

A person who is a good listener has a good chance of developing relationships with teens, since most of them would rather talk than listen. Whatever it takes, learn to listen to teenagers, and offer your words of wisdom only when necessary. It's the only way to figure them out.

### They're Listening— What do you say?

The number one thing you can do to help teens get active is to be a good role model. Live the life that you advocate; show them that being active can be fun and they will follow your example. Let them know that being physically active does not necessarily mean going to exercise classes or playing sports, although these are two great options.

Hiking and camping, body surfing and playing Frisbee™ or paddleball are activities the whole family can enjoy. And, since they're having so much fun, teens will hardly realize that what they're doing is actually good for them.

Teenagers can participate in just about any fitness activity, whether it is weight training, moun-



tain biking or martial arts. Many gyms are lowering their age requirements and offering family memberships and discounts to reach the younger market. Organized sports also are an excellent means of improving socialization and developing discipline and teamwork skills.

### Competing With the Negative

It's not easy to get your message of good health and fitness across when you're competing with the lure of television and video games. That's why it's so important to appeal to a teenager's sense of fun and need for social interaction.

Whenever possible, include others, such as their friends, in your fitness activities. Encouraging

a teenager (or an adult, for that matter) to become more active can be discouraging, particularly when he or she seems to be tuning you out.

At some point, that encouragement may become counterproductive. Instead, continue to serve as a role model for an active lifestyle and perhaps one day he or she will follow your lead.

The most important thing you can do for today's youth is to help them value their lives. Being healthy and fit will put them in touch with their bodies, increase their self-esteem and help them to establish a desire to set personal goals.

The bottom line, however, is that to get anyone to exercise, teenager or not, it has to be fun. Teenagers aren't likely to do something just because they're told it's good for them. But with your support and encouragement, you can help put them on a path to better health that lasts a lifetime.

### Additional Resources

Centers for Disease Control and Prevention—Health, United States, 2007: [www.cdc.gov/nchs/data/hus/07.pdf#067](http://www.cdc.gov/nchs/data/hus/07.pdf#067)

Ornelas, I.J., Perreira, K.M., & Ayala, G.X. (2007). Parental influences on adolescent physical activity: A longitudinal study. *International Journal of Behavioral Nutrition and Physical Activity*, 4, 3.

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## 10 FUN SUMMER FITNESS ACTIVITIES FOR KIDS

**S**ummer is here and children need to stay active, healthy and busy during their break from school. Parents need to encourage their children to warm up properly and use dynamic stretches that mimic their sport activity. Parents should tell children never to play through any type of pain or make winning the reason for playing any sport. Let them choose the activity and keep the focus on having fun.

To keep kids moving, the American Council on Exercise suggests 10 fun fitness summer activities.

1. **Soccer**—This highly active game involving both agility and teamwork has grown increasingly popular in the U.S. in recent years. To keep kids injury free, be sure they are geared up in appropriate protective equipment, such as shin guards. Soccer players should also wear shoes with cleats or ribbed soles to prevent slipping.
2. **Martial arts**—With a variety of forms to choose from, martial arts are a great way to get kids involved in a sport that incorporates strength, coordination and mental discipline. Proper training and equipment to prevent injury are a must.
3. **Bike riding**—Bicycle riding is a fun activity for the whole family. Experts suggest that children ride on sidewalks and paths until they are at least 10 years old, show good riding skills and are able to follow the rules of the road. Helmets, of course, are a necessity for both children and adults.
4. **Swimming**—Nothing beats splashing around a pool with friends, and swimming offers the benefits of a full-body workout for both young and old. The American Academy of Pediatrics recommends swimming lessons for children ages four and up, although classes are available for babies and toddlers as well.
5. **Basketball**—Whether it's a round of HORSE, a game of one-on-one or a full-court competition, basketball is ideal for developing hand-eye coordination and teamwork. Encourage children under the age of seven to use a smaller foam or rubber ball, and lower the height of the basket if possible.



6. **Obstacle courses**—Challenge kids to use a variety of different skills by setting up an obstacle course at the park using playground equipment or other items, such as jump ropes, balls and cones.
7. **Dancing**—Whether your kids like ballet or hip-hop, dancing encourages them to be creative and move their bodies freely. For video arcade fans, innovative games can challenge opponents to follow a dance routine while watching the video. Kids can spend time learning new moves while also getting a great workout.

8. **Board sports**—Whether snowboarding in the winter, surfing in the summer or skateboarding year-round, kids love to be on the board. Injury risk, however, is higher for these sports. For both snowboarding and skateboarding, kids should wear helmets to prevent head injuries, and surfers or boogie-boarders should always be accompanied by an adult.

9. **Jumping rope**—Jumping rope is still a favorite on most playgrounds. Whether alone or in a group, jumping rope challenges both coordination and stamina.

10. **Ice skating/inline skating**—Ice skating, inline skating and hockey can be both fun and safe, as long as appropriate protective gear such as a helmet, wrist guards and knee pads are worn. Hockey players should wear a helmet with foam lining and a full facemask; a mouth guard; pads for shoulders, knees, elbows and shins; and gloves.

### Additional Resource

American Council on Exercise: *Youth Fitness* by Avery D. Faigenbaum & Wayne L. Westcott: <http://www.acefitness.org/acestore/p-295-youth-fitness-aces-group-fitness-specialty-series.aspx>

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## TEST YOUR SUPPLEMENT SAVVY

**A**dvertised throughout the media, displayed in grocery stores and pharmacies, and promoted widely on the Internet, dietary supplements look like just another consumer product on the shelf. But are they?

Take this quiz created by the Federal Trade Commission to find out how much you know about safely using dietary supplements.

1. A supplement labeled “natural” means that it also is \_\_\_\_\_.  
A. Mild  
B. Without any risk of side effects  
C. Safe to use with other medications  
D. None of the above
2. Since dietary supplements are so readily available and don’t require a doctor’s prescription, they are much safer than drug products and can be used to self-treat illnesses without a health professional’s advice or supervision.  
A. True            B. False
3. Testimonials in dietary supplement promotions give a good idea of the supplement’s benefits and safety because they’re based on first-hand accounts.  
A. True            B. False
4. Many supplements have proven health benefits.  
A. True            B. False
5. Before you start taking a dietary supplement, talk it over with a knowledgeable person, such as \_\_\_\_\_.  
A. Your doctor or healthcare professional  
B. Your pharmacist  
C. A supplement salesperson  
D. A friend who takes them

### Answers:

1. D. The term “natural” may suggest to consumers that the supplement is safe, especially when compared with prescription drugs that are known to have side effects. But natural is not necessarily safe. Although many supplements can be used safely by most people, other supplements, including some herbal products, can be dangerous. Aristolochic acid, which has been found in some traditional Chinese herbal remedies, has been linked to severe kidney disease. And the herb ephedra has been linked to serious, even fatal, cardiovascular complications. Even certain vitamins can be toxic at high doses. And certain supplements have been found to interact with other medications in ways that could cause injury.

2. False. Studies have shown that some herbal products interact with drugs and can have a wide range of effects. For example, St. John’s Wort can lower the effects of indinavir, a protease inhibitor for treating HIV. St. John’s Wort also may interfere with drugs used by organ transplant patients and drugs used to treat depression, seizures and certain cancers. In addition, there are concerns that it may reduce the effectiveness of oral contraceptives. Garlic, ginkgo, danshen and dong quai can cause blood to thin, which could cause serious problems for people on drugs like warfarin or aspirin. Dietary supplements are not required to go through the same pre-market government review for quality, safety and efficacy as drug products. But that doesn’t mean they should be taken lightly—or without consulting your healthcare professional, especially if you have a medical condition or are taking other drugs.
3. False. It’s unwise to judge a product’s efficacy or safety based only on testimonials. First, it is very difficult to verify the accuracy of the account: Some marketers may embellish or even make up testimonials to sell their products. Second, you can’t generalize one person’s experience to others. Anecdotes are not a substitute for valid science.
4. True. Studies suggest that several popular supplements, including herbal products, may provide health benefits. For example, calcium can reduce the risk of osteoporosis, folic acid during pregnancy can prevent birth defects, and there is some evidence suggesting that glucosamine may be helpful in reducing inflammation and pain for some people with mild or moderate osteoarthritis. Check out any health claims with a reliable source, such as the National Institutes of Health’s Office of Dietary Supplements, a public health or scientific organization like the American Cancer Society or the Arthritis Foundation, and your health provider.
5. A or B. Talk to your doctor, pharmacist or other healthcare provider about any medicines you

take, as well as any dietary supplements you’re using or thinking about using. Though some doctors have limited knowledge of herbal products and other supplements, they have access to the most current research and can help monitor your condition to ensure that no problems develop or serious interactions occur. Retailers or marketers can be good sources of information about their products and their ingredients, but bear in mind that they have a financial interest in their products. If your doctor or pharmacist has a financial interest in the product, get a second, independent opinion.

### Additional Resource

For more information about the safe use of dietary supplements, visit the Federal Trade Commission’s Virtual Health Treatments page at [www.ftc.gov/healthclaims](http://www.ftc.gov/healthclaims)

The Federal Trade Commission works for the consumer to prevent fraudulent, deceptive and unfair business practices in the marketplace and to provide information to help consumers spot, stop and avoid them. To file a complaint, or to get free information on any of a variety of consumer topics, call toll-free, 1-877-FTC-HELP, or use the complaint form at [www.ftc.gov](http://www.ftc.gov).

The FTC enters Internet, telemarketing, identity theft and other fraud-related complaints into Consumer Sentinel, a secure, online database available to hundreds of civil and criminal law enforcement agencies in the U.S. and abroad.

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