

Another benefit of strength is that it can help prevent muscle injuries and muscle soreness. Strong muscles can help you look your best and give your body a firm appearance. Muscles also burn more calories than fat does, so having strong and fit muscles can help in fat control. Strong muscles also help you maintain good posture.

## Strength for Preteens and Teens

Until recently, experts felt that muscle fitness exercises such as those done in weight training were inappropriate for preteens and teens. Recent evidence suggests that, when done properly, PRE can have health benefits for teens similar to those for adults. Still, concerns exist about doing too much PRE too soon, especially for some people.

We know that for preteens and young teens, the body does not produce enough hormones to allow the body to build big muscles (hypertrophy), even with PRE. For these people, PRE can result in strength improvement but these improvements may not result in noticeable increases in muscle size. The strength gains are mostly because the body learns to use more muscle fibers when lifting rather than because of increases in muscle size. Placing emphasis on PRE may be discouraging for many teens because even if they give a lot of effort they may not see many benefits. This is especially true if the goal is to build big muscles. Even older teens who are late developers may have difficulty building large muscle until they get older.

The American College of Sports Medicine (ACSM) and other groups (see address by the Web icon in the FitFact) recommend a program involving moderate resistance that builds both strength and muscular endurance if the goal is to improve health. This program is effective for teens of both sexes. A program recommended for most teens, especially those just beginning PRE, is described later in this chapter. Those who intend to perform sports that require strength and power and who have experience in PRE can choose a program of greater intensity when done under the supervision of a qualified teacher or coach. Programs for teenagers should be designed especially for their age group. Teens are encouraged to avoid seeking advice from people who are unknown to them including people who have a good physique, or figure. Just because a person has a body that looks strong does not mean that he or she uses healthy exercise practices. In fact, many violate sound exercise guidelines and more than a few use unhealthy supplements.

## FitFACTS

In addition to the ACSM, several other groups of experts have now prepared statements indicating that resistance training can be safe for teens when performed properly. Some of the groups include the American Academy of Pediatrics (medical doctors who specialize in youth) and the American Orthopaedic Society of Sports Medicine (medical doctors who specialize in bone problems associated with sports and activity). Self-assessments and muscle fitness exercises as described in this book follow guidelines outlined by these organizations.



[www.fitnessforlife.org/student/11/7](http://www.fitnessforlife.org/student/11/7)

## Myths and Misconceptions

The amount of strength you need to stay healthy and to do what you want depends on your own personal needs and interests. For example, people who have jobs requiring a lot of lifting need more strength than people who work at a desk. Despite the fact that muscle fitness exercise has many benefits, many people still hold misconceptions about them.



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### No Pain, No Gain

Some people still cling to the myth that exercise must hurt if it is going to result in improvement. Some of the worst offenders are people who are hooked on strength-building exercises. In fact, you should listen to your body. If you feel pain, it is your body's way of telling you that it is hurting. When doing PRE, it is true that you will become quite fatigued and feel a sensation sometimes called the exercise burn. It is important to learn the difference between this feeling and pain. If in doubt, it is best to back off to avoid injury.

### Body Dysmorphia

*Body dysmorphia* is a term used to identify a condition that occurs when people become obsessed with building muscle. This psychological disorder, sometimes referred to as reverse anorexia, often begins with reasonable amounts of exercise to build muscle fitness. At some point those with this problem get carried away wanting to build more and more muscle. The disorder is an obsessive-compulsive disorder and often requires treatment