



Why Every Adult Should Strength Train

The average American adult adds about one pound of body weight every year. Many periodically address this problem by following calorie-restrictive diets. Others also try various forms of endurance exercise – such as walking, jogging, cycling, dancing – to help reduce weight by burning additional calories. Unfortunately, many of these same adults ignore strength training. Some don't have access to the proper equipment and others believe they will become larger rather than smaller.

There are many misconceptions regarding the basic facts about body weight and body composition. While it is true that we add an average of one pound of body weight annually, the fact is that we also lose about one-half pound of muscle and gain one and one-half pounds of fat. That is, our body weight changes by one pound, but our body composition changes by two pounds in the wrong direction.

What is even less understood is that muscle loss is largely responsible for the fat gain. Muscle is very active tissue, both during exercise and at rest. A pound of muscle uses about 45 calories per day for maintenance processes. So a loss of muscle tissue means a lower caloric utilization and a reduced resting metabolism. Assuming we eat about the same number of daily calories, those that were previously used for muscle maintenance now go into fat storage.

Consider this analogy: our muscles are similar to the engine of an automobile. Losing muscle is similar to going from an eight-cylinder engine to a six- or four-cylinder engine. We have less power (strength) and need less fuel (calories).

More specifically, our resting metabolic rate decreases about 0.5% per year in response to our diminishing muscle mass. This is just one of the degenerative processes associated with aging that is actually related to muscle mass. If we maintain our muscle mass, then we can better maintain our metabolic rate, bone mass, physical ability and personal appearance throughout our mid-life years. And who doesn't want that?

Unfortunately, in our modernized and mechanized society, our daily activities involve too little muscle effort to provide strength benefits. Even regular endurance exercise does not prevent muscle loss. For example, a ten-year study of America's best masters distance runners showed a five pound muscle loss between their 40s and 50s.

For all practical purposes, the only way to maintain our muscle mass is to perform regular strength exercise. Consider the following benefits of a sensible strength training program:

Muscle maintenance – A basic strength training program (45 minutes of exercise, two or three days per week) has been shown to add about three to four pounds of muscle after only two months of training.

Strength training can effectively replace muscle loss over the years from lack of use. Age does not seem to be a barrier with respect to muscle replacement. It was found that senior citizens (men and women in their 80s) who participated in a research study were able to add muscle tissue at about the same rate as younger adults.

Metabolic maintenance – If we add muscle tissue, our metabolism rate increases as well. Experts have noted that three pounds of new muscle may raise our daily energy requirements by 135 calories due to the high maintenance of muscle tissue. If we perform regular strength training and eat reasonably, we may not need to reduce our food intake to maintain body weight during mid-life years.

Bone maintenance – Muscle and metabolism are not the only things that work together. Our bone proteins, called osteoproteins, respond to resistance exercise in the same manner that our muscle protein, or myoproteins, do. That is, the stress applied to our muscles through strength training is transferred through our tendons to our bones. Increases in muscle mass are accompanied by increases in bone density. Greater bone density means greater tensile (breaking) strength, which is important for injury prevention. Of course, stronger, denser bones are also more resistant to osteoporosis.

Physical ability and functional fitness – Our ability to perform any physical activity is dependent upon our muscle strength. Because muscles are the engines of our body, they provide the power to lift heavy objects – or bicycle 20 miles. Naturally then, stronger muscles are advantageous for everyday living and for athletic pursuits.

For example, if your maximum biceps strength is 25 pounds, then lifting a 25-pound bag of dog food is an all-out effort. If you increase your maximum biceps strength to 50 pounds, then lifting a 25-pound bag of dog food is a relatively easy task.

The same rationale holds true for bicycling. Every push on the pedal requires a certain percentage of your maximum quadriceps' strength. As you strengthen your quadriceps muscles, the same pedal push takes less effort and you can cycle longer without fatigue. Of course, as you become stronger, you can also shift to a higher gear and cycle faster with the same level of effort as before.

Similarly, every athletic event involves performance power. Because performance power equals muscle force multiplied by movement speed, an increase in muscle strength enhances our athletic potential.

Personal appearance – According to published research, less than 10% of Americans exercise enough to receive any fitness benefits. However, most people are certainly concerned about their personal appearance, as evidenced by the fact that approximately 40% of Americans are presently dieting.

Unfortunately, dieting only deals with one half of our personal appearance problem – namely, too much fat. An equally important problem is too little muscle. Most diets result in muscle loss, which is why people don't usually look, feel or function well during or after dieting. It also explains why 95% of dieters soon regain the lost weight.

Without question, strength training belongs in the personal appearance equation. Strength training is the only means for replacing and maintaining our muscle tissue. Strong muscles present a fit, firm appearance, whereas weak muscles present an unfit, soft appearance.

Other health benefits

There are numerous benefits to strength training regularly, as we age some of these conditions become more likely. Strength training can be very powerful in prevention as well as reducing the signs and symptoms of numerous diseases and chronic conditions, among them:

- Arthritis
- Diabetes
- Osteoporosis
- Obesity
- Back pain
- Depression

Studies confirm benefits

Scientific research has shown that strength exercise can slow the physiological aging clock. While aerobic exercise, such as walking, jogging, or swimming, has many excellent health benefits (by maintaining the heart and lungs and increasing cardiovascular fitness and endurance), it alone does not make your muscles strong. Strength training does. Studies have shown that working with weights two or three times a week increases strength by building muscle mass and bone density.

One 12-month study conducted on postmenopausal women at Tufts University demonstrated 1% gains in hip and spine bone density, 75% increases in strength and 13% increases in dynamic balance with just two days per week of progressive strength training. The control group that did no strength training had losses in bone, strength, and balance.

Perfectly Fit

**5805 Post Road, Suite 2
East Greenwich, RI 02818**

Phone: (401) 885-8500

FAX: (401) 885-8517

www.perfectly-fit.com