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| **Exercise: The 13 Benefits!** |

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Special For eFitness**

During the past few years, more and more studies have shown that sensible strength training produces many health and fitness benefits -- especially for older adults.

Key research studies, such as those conducted at Tufts University, the University of Maryland and the South Shore YMCA have provided a wealth of data on the positive physiological responses to basic programs of strength exercise. Based on current research, consider the following 13 reasons why every older adult should perform regular strength exercise.

**Benefit One: Avoid Muscle Loss**

Adults who don't strength train lose between 5-7 pounds of muscle every decade. Although endurance exercise improves our cardiovascular fitness, it does not prevent the loss of muscle tissue. Only strength exercise maintains our muscle mass and strength throughout our mid-life and senior years.

**Benefit Two: Avoid Metabolic Rate Reduction**

Because muscle is very active tissue, muscle loss is accompanied by a reduction in our resting metabolism. Information from Tufts University indicates that the average adult experiences a 2-5 percent reduction in metabolic rate during every decade of life. Because regular strength exercise prevents muscle loss, it also prevents the accompanying decrease in resting metabolic rate.

**Benefit Three: Increase Muscle Mass**

Because most adults do not perform strength exercise, they need to first replace the muscle tissue that has been lost through inactivity. Fortunately, research from the South Shore YMCA shows that a standard strength-training program can increase muscle mass by about three pounds over an eight-week training period. This is the typical training response for men and women who do 25 minutes of strength exercise two or three days per week, and represents an excellent return on a time-efficient investment.

**Benefit Four: Increase Metabolic Rate**

Research from Tufts University and the University of Maryland reveals that adding three pounds of muscle increases our resting metabolic rate by seven percent, and our daily calorie requirements by 15 percent.

At rest, a pound of muscle requires about 35 calories per day for tissue maintenance. During exercise, muscle energy utilization increases dramatically. Adults who replace muscle through sensible strength exercise use more calories all day long, thereby reducing the likelihood of fat accumulation.

**Benefit Five: Reduce Body Fat**

Campbell and his co-workers at Tufts found that strength exercise produced four pounds of fat loss after three months of training, even though the subjects were eating 15 percent more calories per day. That is, a basic strength-training program resulted in 3 pounds more lean weight, 4 pounds less fat weight and 370 more calories per day food intake.

**Benefit Six: Increase Bone Mineral Density**

The effects of progressive resistance exercise are similar for muscle tissue and bone tissue. The same training stimulus that increases muscle proteins also increases bone proteins and mineral content. A University of Maryland study demonstrated significant increases in the bone mineral density of the femur bone (upper leg) after four months of strength exercise.

**Benefit Seven: Improve Glucose Metabolism**

The University of Maryland research center has also reported a 23 percent increase in glucose utilization after four months of strength training. Because poor glucose metabolism is associated with adult onset diabetes, improved glucose metabolism is an important benefit of regular strength exercise.

**Benefit Eight: Increase Gastrointestinal Transit Speed**

Another study at the University of Maryland showed a 56 percent increase in gastrointestinal transit speed after three months of strength training. This is a significant finding due to the fact that delayed gastrointestinal transit time is related to a higher risk of colon cancer.

**Benefit Nine: Reduce Resting Blood Pressure**

Strength training alone has been shown to significantly reduce resting blood pressure. Our YMCA studies have revealed that strength plus aerobic exercise is highly effective for improving blood pressure readings. After two months of combined exercise (Nautilus and treadmill walking), the program participants dropped their systolic blood pressure by 4 mm Hg. and their diastolic blood pressure by 3 mm Hg.

**Benefit Ten: Improve Blood Lipid Levels**

Although the effects of strength training on blood lipid levels needs further research, at least two studies from excellent universities have revealed improved blood lipid profiles after several weeks of strength exercise. It is important to note that improvements in blood lipid levels are similar for both endurance and strength exercise.

**Benefit Eleven: Reduce Low Back Pain**

Several years of research on strength training and back pain conducted at the University of Florida Medical School has shown that strong low-back muscles are less likely to be injured low-back muscles. A recent study by at the University of Florida found that low-back patients had significantly less back pain after 10 weeks of specific (full-range) strength exercise for the lumbar spine muscles. Because 80 percent of all Americans experience low back problems, it is advisable for all adults to properly strengthen their low back muscles.

**Benefit Twelve: Reduce Arthritic Pain**

According to a recent edition of the Tufts University Diet and Nutrition Letter, sensible strength training eases the pain of osteo and rheumatoid arthritis. This is good news, because most men and women who suffer from arthritic pain need strength exercise to develop stronger muscles, bones and connective tissue to improve joint function.

**Benefit Thirteen: Reduce Depression**

A Harvard University study found that seriously depressed seniors responded most favorably to a basic program of strength exercise. After 10 weeks of strength training, 87 percent of the program participants no longer met the criteria for clinical depression, even though they received no other treatment. Apparently, increasing muscle strength and physical functionality is highly effective for improving emotional states in previously depressed senior men and women.

**Summary of Strength Training Benefits**

There are 13 physiological reasons why older adults should perform regular strength exercise. On a more basic level, it is important to realize that proper strength training may help us look better, feel better and function better. Understand that our skeletal muscles serve as the engine, chassis and shock absorbers of our bodies. Consequently, strength training is an effective means for increasing our physical capacity, improving our athletic performance, reducing our injury risk, enhancing our personal appearance and improving our self-confidence.

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