Strength Training: the Best Overall Exercise Program

Everyone knows that exercise is good for you. Regular physical activity is important for maintaining a strong mobile body. As we grow older, our bodies change: we experience muscle weakness and gain fat. We may suffer more aches and pains, but in reality it's a sign of inactivity – of using our muscles less. And it's never too late to start exercising!

The phrase, "Use it or lose it" aptly describes what happens to our bodies as we age. With so many different types of workouts, how do you know what's best?

Walking and other aerobic activities help to improve sleep and decrease symptoms of depression, the risk of developing heart disease and Type II diabetes. Walking also can help reduce obesity, decreasing body fat and improving circulation.

However, the most beneficial exercise program is strength training. Researchers at Tufts University exercise lab say that strength training is a potent age eraser and the No. 1 weapon for fighting the physical declines associated with aging.

It is the most effective way to increase muscle mass and bone density. Fitness experts are recommending strength training for everyone: women as well as men, older and younger adults. Strength training also helps reduce the signs and symptom of several diseases and chronic conditions including:

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

Arthritis Relief

A recent 16-week program at Tufts University for older men and women with moderate to severe knee osteoarthritis showed strength training decreased pain by 43%, increased muscle strength and general physical performance, improved the clinical signs and symptoms of the disease and decreased disability. It was as effective, if not more so, as medication at easing pain.

Diabetes

More than 14 million Americans have Type II diabetes and are at greater risk for heart and renal disease and blindness. Strength training has been shown to be effective in helping in diabetes management. In a recent study of Hispanic men and women, 16 weeks of strength training resulted in dramatic improvements in glucose control similar to taking diabetes medication.

Heart Disease and Aerobic Health

Resistance training offers several cardiovascular benefits improving heart disease risk factors. It also is beneficial in cardiac rehabilitation after a heart attack and can also improve heart failure.

A Canadian cardiac rehabilitation study demonstrated that strength training was not only beneficial but may be safer than aerobic exercise for heart attack survivors.

Another study found that both high and low intensity strength training resulted in a 20% increase in peak oxygen consumption, a marker of heart and lung health.

Resistance Training and Bone Density

For years, women were told by their doctors that aerobic, weight-bearing exercise would increase their bone density and prevent the osteoporosis that can follow menopause. Post-menopausal women can lose 1-2% of their bone mass annually. Recent studies have shown that resistance training (weight training) may be more effective at increasing bone density. A Tufts University study found an increase in bone mineral density of the hip and spine in post-menopausal women participating in a resistance training program.

Another study, this one conducted in Australia, had similar results. Post-menopausal women were divided into three groups: strength training, fitness training and no exercise.
All were given calcium supplements. Both the strength and fitness training groups experienced increases in their bone mineral density, but the strength group had the greater increase in bone density at the hip joint.

Weight Control and Obesity

Physical inactivity causes muscle loss, an average of 5-7 pounds in 10 years. Strength training builds muscle and is crucial to weight control. People who have more muscle mass have a higher metabolic rate, which causes the body to burn more calories throughout the day.

One study on older adults participating in a three-month basic strength training program had dramatic results: they added three pounds of muscle, lost 4 pounds of fat while eating 15% more calories.

It's Never too Late

Several studies among the frail elderly have shown that even the very oldest among us may benefit significantly from resistance training.

Pennsylvania State University researchers studied 100 elderly nursing home residents, randomly assigning them to a high intensity resistance training program or a control group. The trained group had significant gains in strength, functional status and spontaneous activity levels.

A smaller study at Tufts enrolled 10 frail, 90-year-old or older nursing home residents in an eight-week high intensity resistance training program. Nine who finished experienced an average gain in strength of 174%. They also developed larger thigh muscles (9% size increase) and walked faster (speed increased by 48%).

A more recent study at Yale with 188 participants 75 years or older, most with a disability, divided them into two groups. Half received physical therapy for six months and then exercised at home for another month; the rest, assigned to the control group, received no therapy. The group that exercised had an average disability rating score 45% lower than the control group.