

## Jefferson Cardiology Association Happenings

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### Exercise and Weight Loss

Many of our patients talk to us about weight loss and exercise. Guidelines from the American Heart Association, American College of Cardiology and Obesity Society recommend a comprehensive life style program for weight loss including a low calorie diet and increase in exercise

One published study found that with no change in caloric intake, low intensity exercise for 60 minutes most days of the week will result in weight loss of one half pound per week. More vigorous exercise may result in up to 3 pounds per week. Several other studies yielded similar findings. Also found was loss of body fat as measured by CT in those persons doing aerobic exercise for 3 months.

What about comparing aerobic exercise with resistance exercise? Studies found that programs using aerobic exercise or combining aerobic and resistance exercise had greatest reduction in body fat. Resistance exercise alone increased lean muscle more than losing fat and weight.

Apart from weight loss, there are other benefits of exercise. Low intensity exercise such as walking 30-60 minutes daily will improve cardiovascular fitness and may benefit blood pressure, blood sugar levels and fat levels in the blood. With multiple benefits, exercise has been shown to reduce the risk scores for cardiovascular events such as heart attacks and strokes. Fit obese people have lower cardiovascular risk than unfit people with normal weight.

What is being recommended by health professionals for exercise programs? A program should target 30-60 minutes most days of the week or 150-300 minutes per week. In the beginning, people may start with lower goals and progress slowly to avoid injury.

Combining aerobic and resistance exercise is recommended by the American College of Sports Medicine. Combining these forms may have greater influence in reducing abdominal fat. Aerobic exercise will improve functional capacity and resistance exercise may strengthen muscle and joint supporting structures reducing chance for injury.

For obese people, aerobic exercise especially walking should be the foundation of cardiopulmonary exercise. Bike riding is also effective. For those persons for whom weight bearing is a problem, swimming or water aerobics are options.

As an exercise prescription, persons should exercise 5-6 days per week at low to moderate intensity for 150-300 minutes per week. Such activities as walking, riding a stationary bike or swimming could be pursued to meet these target goals. Greater loss of body fat is associated with longer duration of exercise or up to 60 minutes per session. Using a pedometer or smart phone app may help walkers measure the amount of exercise.

A typical aerobic exercise program may start with the first two weeks of walking or riding a stationary bike for 5 days per week for 10 minutes per day. This program may increase by 10 minute increments every two weeks. By week

10 of this program, people can be exercising for 60 minutes per day for 5 day per week.

Similarly, resistance exercise could start with one set of 12 repetitions working 10 muscle groups initially performed one day per week. After two weeks, the frequency may increase to twice per week. By the fifth week the repetitions can be increased to 2 sets of 12 repetitions and to 4 sets of 12 repetitions by the 12<sup>th</sup> week of the program.

Flexibility exercise involves stretching to improve movement of muscles, joints and ligaments. These exercises may not involve burning energy but can reduce muscle and joint pain associated with exercise. It is recommended that stretching be done after a brief warmup. Muscles should be stretched for at least 15 seconds 2 to 4 days per week. Yoga is an excellent way to improve strength and flexibility.

Other benefits may include blood pressure, heart rate, lipids and exercise capacity improvement.

Balance exercise may improve stability and reduce chances of falling. Balance exercises could include standing on one foot for fifteen seconds or standing and sitting without use of hands. Equipment such as physio balls, balance boards etc may enhance balance. Balance training is recommended for 10 minutes 3 days per week.

A comprehensive exercise program should be thought of as a long term activity. Support from health professionals as well as family and charting progressive progress can keep an individual on track to continue to exercise and benefit.



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