The formula for aerobic fitness is **F.I.T.T.: Frequency, Intensity, Time, Type.**

### Frequency

For optimal results, perform your aerobic activity 3 to 5 times a week (preferably every other day).

The improvements in insulin sensitivity that occur because of exercise last, at most only 2 or 3 days, so try to space out your workouts as evenly as possibly throughout the week.

When weight loss is the primary goal, 5 exercise sessions per week will get you the best results. If you choose to exercise more, make sure you rest at least one day each week to prevent any injuries from overuse!

### Time

The recommended duration of aerobic exercise is 20 to 45 minutes, with additional time needed for warming up and cooling down.

Your entire workout should take about one hour. Periods shorter than 20 minutes maybe appropriate if you have certain exercise limitations.

### Intensity

You should work hard enough during exercise to increase your fitness without pushing so hard that you expose yourself to unnecessary risks.

The American Diabetes Association recommends moderate activity; aerobic activity at 50% to 70% VO2 max (maximum volume of oxygen-consumption).

If you have complications of diabetes, your exercise intensity may have to be closely controlled to prevent you from running into problems. This may be less than the recommended 50% to 70% VO2 max. Ask your doctor what your intensity should be.

#### Measuring Intensity.

How do you know when you are working at 50% to 70% of your VO2 max? The most common way is to monitor your heart rate.

As exercise becomes harder, your muscles need more oxygen and your heart must beat faster to deliver it. The direct relationship between heart rate and oxygen consumption allows you to measure exercise intensity simply by counting your pulse.

People are often given target heart rates for exercise based on general formulas using age as a basis for estimating maximal heart rate. A common formula uses 220-age. There is a plus or minus factor of ten beats with this estimation.

If you take medications for your heart, blood pressure, or eyes that slow your heart rate, or if you have complications of diabetes that affect your heart rate response to exercise, such as autonomic neuropathy, an exercise test is the only way to be sure that a target heart rate is appropriate for your individual needs.

### How Hard Should You Work?

#### Talk Test

Be able to "walk and talk"!

You should be able to easily talk to a partner at all times!

#### 1 to 10 scale

On a scale of 1 to 10, with one being resting in bed and ten being as hard as you can exercise, be sure to exercise at a level equal to a 5, 6, or 7!

#### Monitoring Your Heart Rate

Find your pulse on your wrist (on the inner edge of the wrist below the base of the thumb) or neck (below the ear along the jaw) and count for 10 seconds and then multiply by 6 to find the beats per minute.

Pulse monitoring at the wrist is recommended because you can inadvertently press too hard on the neck and cause a slowing of the heart rate (with some people)! Monitor your heart rate before, after 3 to 5 minutes of aerobic exercise, and upon completion of an aerobic section.

### Type

Aerobic activities are recommended because the benefits include increased fitness of the heart, lungs, and blood vessels, improved glucose control, and better weight management. They help reduce your risk of cardiovascular problems.

To qualify as aerobic exercise, an activity must use the large muscles of the body in continuous, rhythmical, sustained movement. Some examples are walking, swimming, cycling, aerobic dance, rowing and running.

#### Resistance Training.

This is a group of activities used to develop muscular strength and endurance. Some examples are weight lifting, using special resistance machines stretching elastic bands, and calisthenics.

Resistance training can make you stronger and gives you more energy. Resistance training if done properly can be useful in injury prevention, increased muscle and decreased body fat. The risk of resistance training is somewhat different than aerobic exercise, and you need to check with your doctor to make sure it is appropriate for you.

#### Flexibility Exercises.

This can give you increased freedom of movement, decreased stress and muscular tension, and reduced risk of injury. There are many stretches to help you move freely without pain.

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Adapted from: *Anybody’s Guide to Total Fitness* by: Len Kravitz