

The F.I.T. Formula

Review:

Three principles of a good exercise program are overload, progression, and specificity.

Exercising more than normal, or **overloading** builds fitness. (Note: overloading does not mean doing “too much” of something...just doing more than what is normally done) The principle of **progression** is increasing exercise gradually. The principle of **specificity** means doing specific activities to build specific parts of fitness (like doing curl ups for abdominal strength).

The FIT Formula

The **FIT formula** helps you know how much exercise is enough to build good fitness.

Frequency = how often a person exercises. For example, you need to exercise at least three times a week.

Intensity = how hard a person exercises. Remember there's a difference between pain that comes from over exercise and the tiredness that comes from not being fit. For example, for cardiovascular fitness, the heart should beat 135 - 165 beats/minute.

Time = how long a person exercises. For example, you need to exercise 15 - 30 minutes at one time to improve fitness.

	Muscular Endurance	Muscular Strength	Isotonic	Isometric
F	Every other day at least 3 days a week	Every other day at least 3 days a week	Every other day at least 3 days a week	Every other day at least 3 days a week
I	Appropriate resistance	Appropriate resistance	Heaviest weight you can move for the required number of times	Contract muscles as tightly as you can for the required length of time
T	20 minutes 3-5 sets, 10-15 reps	20 minutes 2-3 sets, 5-10 reps	2-3 sets 5-10 reps	2 sets for 8-10 seconds

There are four types of exercise contractions. Isotonic and isometric are two of these four types. All lifting exercises require **isotonic** exercises. This happens when the muscle shortens as it contracts. An example of isotonic contraction can be seen when we flex the bicep (Popeye) muscle. Stand with one arm straight and the palm of the hand facing up. Roughly measure the length from the start of the biceps muscle to the point where it meets the shoulder. Now curl the hand towards the shoulder, the biceps muscle shortens as it contracts. When you reach the end point take another rough measurement of the biceps again. It will be much shorter.

Other examples of isotonic exercises are:

- Lifting objects above the head—the front shoulder (anterior deltoid) shortens
- Lifting object up from a lying position—chest muscle shortens
- Lifting body up from squat position—quadriceps muscle shortens as legs extend
- Doing a curl up
- Throwing a ball
- Swinging a bat

Isometric contractions happen when there is tension on the muscle but no movement is made causing the length of the muscle to remain the same. This type of contraction is also referred to as a static contraction. Some bodybuilders make up their own exercises using Isometric contraction in order to develop strength. An example of this is when someone attempts to curl one arm using equal resistance from the other arm.

Other examples of isometric exercises are:

- Attempting to lift an immovable object
 - Holding a weight at arm's length
 - Some wrestling moves.
-

Lesson Review:

On a separate sheet of paper, match the definition with the appropriate word. **You must write out the word and the definition...don't just draw connecting lines or write the letters next to the numbers.** You can find the answers in this handout.

- | | |
|---|-----------------------------------|
| 1. How often a person exercises is | a. intensity |
| 2. How hard a person exercises is | b. time |
| 3. How long a person exercises is | c. F.I.T. |
| 4. Doing more exercise than normal is | d. specificity |
| 5. Increasing exercise gradually is | e. overloading |
| 6. Doing specific exercises to build specific parts of fitness (areas of the body) | f. progression |
| 7. Name of contraction when there is tension on the muscle but no movement is made causing the length of the muscle to remain the same. | g. frequency, intensity, and time |
| 8. When a muscle shortens as it contracts. | h. isotonic |
| 9. An abbreviation/acronym that helps you know how much exercise is enough to build good fitness | i. frequency |
| 10. The F.I.T. formula stands for | j. isometric |