

Physical Education



Weight Training - All You Need To Know To Get Started

1. Introduction

Weight training has been proven to be the quickest, most effective way to increase muscular strength, muscular endurance, power and flexibility. When done properly, weight training can be very beneficial on its own or can serve as a means for enhancing skills in other activities and sports. Numerous physical and psychological benefits can be achieved by being involved in a regular weight training program. Some of the physical effects include an increase in muscular strength and endurance, an increase in muscle fibre size, an increase in muscle tone, stronger connective tissue, increased bone density, a decrease in body fat, an increase in lean body weight and improved posture. Some of the psychological benefits include an increase in body awareness, a positive body image and increased self-confidence and self-concept.

2. Weight Training Principles and "Getting Started"

- A. Begin each weight training session with a warm-up. Riding an exercise bike, light jogging or calisthenics such as skipping, jumping jacks, mountain climbers and supersets are excellent as they help to increase blood flow and create "muscle readiness". Be sure to always perform a "warm-up set" prior to progressing to heavier weights.
- B. Stretching or flexibility work is critical both before and after weight training. Start with some general stretching at the beginning of a workout concentrating on all the major muscles and joints. If needed, use some specific stretching throughout the session as you approach new stations. By working through a full range of motion before, after as well as during lifting, "muscle boundness" can be avoided. Post-exercise stretching will help to eliminate muscle stiffness resulting from lactic acid build-up which accumulates as you work-out.
- C. To experience improvement (gains) in strength, one must continuously "overload" the muscles by doing more work each session. This can be achieved by increasing repetitions, increasing the number of sets or by using more weight.
- D. Muscle tissue breaks down during a weight training session and is actually microscopically smaller at the end of the workout. However, as these muscles rest they rebuild larger than before. It is important to have a day of rest before working the same set of muscles again so that muscles can build and strengthen. To weight train every day with the same muscle groups will not produce desired gains. It is also important to get plenty of adequate nutrition and drink lots of water while working out.
- E. In order to prevent early fatigue during a workout, work the larger muscle groups first (chest, back, thighs) and smaller muscle groups last (shoulders, arms, calves, stomach).
- F. Always wear appropriate work-out clothing and training shoes. Sweat pants and sweat shirts are best as they help to keep muscles warm as you work-out.
- G. Use a smooth, steady, slow movement when lifting weights. The slower the better as this helps to isolate muscle groups. Try not to allow other muscle groups to come into play. For instance, don't rock or jerk when doing curls, don't use legs when doing military press, and don't arch the back when doing bench press.
- H. When lifting weights off of the floor always bend the knees and keep your back straight. Keep eyes focused on the wall in front of you or on the ceiling. Never twist at the waist when moving weights, move your feet instead.



I. Proper breathing is a must. Always exhale upon effort - breathe out during the hardest part of the exercise. This relieves the pressure on the chest cavity during exertion. Inhale when recovering and be certain to never hold your breath while training as this puts a severe strain on the blood vessels.

J. Always work in pairs. Work with a partner or spotter of equal strength in order to promote safety, offer encouragement, count repetitions and assist with technique. Spotting is extremely important, both when training on the universal gym and with free weights.

K. Where possible, use the universal gym prior to moving to free weights. With its cables and bars, the universal gym offers an added degree of safety although not as versatile as free weights.

3. Weight Training Terminology

Adaptation - the physical changes taking place in the body as a result of exercise. The body adapts to the demands imposed on it and therefore is capable of performing more work.

Form - the method in which an exercise is carried out. Correct form/technique is essential for safety and results.

Free Weights - barbells and dumbbells are called free weights since they can be moved freely about.

Girth - measurement around a body part.

Muscular Endurance - the ability to move or use a muscle group continuously many times in a row without fatigue.

Overload Principle - stressing the muscles to a degree greater than that to which they have already adapted. This is what produces positive changes in muscle development.

Repetitions - the number of times a movement is repeated during an uninterrupted exercise (set). Low repetitions produce strength while high repetitions produce endurance.

Set - a group of repetitions of the same exercise.

Strength - the ability to move a heavy object through a given distance one time.

Symmetry - the balanced development of the muscular system of the body.

Universal Gym - a multi-station, resistance exercise apparatus designed to replace free weights with a degree of versatility and an increased safety factor.

4. Types of Programs

Numerous muscular strength and endurance programs exist. Core programs, circuit training, strength training, pyramid training, power lifting, weight lifting and body building are some of the more popular forms of "pumping iron". An individual should select a method of training which best suits their needs or sport. A description of some of the more common programs include:

A. The Core or Basic Program - is best suited to individuals just beginning a program or individuals coming off an extended period of non-training due to inactivity or injury. The straight set workout system is used. That means three sets (including a warm-up set) of each exercise is performed in a row, with a brief rest interval between sets, before moving on to the next exercise. Each set consists of ten repetitions. Approximately eight to ten exercises are chosen concentrating on all major and minor muscles. This endurance training program is important in the transition to more advanced programs.

B. Circuit Training - is a form of endurance training in which the individual performs a series of exercises with little rest between exercise stations. Circuits may contain 10-15 exercise stations that work each major muscle group in order from larger to smaller. This type of training is effective for strength development and efficient in terms of time commitment. Generally, a circuit can be completed in less than one hour. Although not the recommended means of aerobic conditioning, circuit training may provide some cardiovascular benefits. Jogging on the spot or skipping while a partner exercises greatly enhances aerobic conditioning.