

Newsletter

January 2010

The Best Workout: Free Weights vs. Machines

Wellness Letter, Vol. 9, Issue 6

Are weight machines, such as those by Nautilus or Cybex, the best way to build strength? Or are "free weights," meaning barbells and dumbbells, more effective – or are they only for bodybuilders? If you want to heed the advice of fitness experts – who now believe that a well-rounded fitness program should include some form of strength training in addition to aerobic exercise such as running or cycling – you'll have to decide between free weights and machines.

Virtually any health club or Y has both types of equipment these days, as do sporting-good stores. Both types of weight training have advantages and disadvantages:

RESISTANCE MACHINES

The machines' resistance usually comes from a stack of weights. Some utilize heavy springs or giant rubber bands, which may be less capable of the gradual increases in resistance suitable for weight training. Some large machines, called multi-station gyms, allow you to do a variety of exercises a full-body workout – from arm curls to legs extensions.

Advantages

↑ **Safety.** There's less chance of injury when you work out with machines, since most of them guide your motions, control the weights' movements, and make you maintain the right posture. You can't, for instance, drop a weight on your foot. Your lower back is protected, since you are usually seated and belted. You can start at a very low level and increase the load in small increments.

↑ **Focus on a single muscle group.** This lets you isolate one group – for instance, the biceps or quadriceps (in front of the thigh) – for effective training.

↑ **Consistency.** Machines force you to contract a muscle through its full range of movement.

↑ **Easy to use and fun.** For novices, machines are not as intimidating as free weights and are thus a good way to get started. No skill is required. Well-suited for the elderly.

↑ **Calibrated resistance.** Some machines are designed so that the resistance varies appropriately as you move through the arc.

Disadvantages

↓ **Expensive.** Many machines cost more than a thousand dollars and are thus likely to be seen only at health clubs or schools. Less costly machines may be unstable or require changing cables to switch from one exercise to another.

↓ **Less versatile.** Each machine has a limited number of functions. Each maneuver takes place on only one plane. You usually can't vary an exercise slightly to work the muscles differently.

↓ **Bulky.** Unlike free weights, you can't put machines in the closet or under your bed.

↓ **Poor Fit.** Though they are adjustable, machines can be uncomfortable or even unsafe if you are small.

FREE WEIGHTS

A dumbbell is a short bar with a weight (sometimes adjustable) on each end. A barbell is longer, has adjustable weights, and is generally used with a padded bench and rack.

Advantages

↑ **Cheaper than machines.** A basic set costs about \$100 on sale, double that if you include the rack and bench – so free weights are the natural choice for home equipment.

↑ **Unlimited variety.** Anything you can do on even the most elaborate machine can also be done with free weights – and more. While machines are limited in the number of exercises they permit, you can work virtually any muscle from any angle with a set of free weights.

↑ **Whole-body workout.** Free weights work more than one muscle group at a time – for instance, lifting a barbell over your head works muscles in your arms, shoulders, and upper back. They allow movement in three dimensions.

↑ **Balance.** Long-term training improves overall balance.

Disadvantages

↓ **Injury.** If you lift free weights incorrectly, you can easily injure yourself.

↓ **Spotter.** To lift weights safely, you need a training partner, or “spotter,” to guide your movements.

↓ **Skill required.** Requires some skill and practice to balance the weight, especially at first. A qualified instructor should teach you proper technique.

What to do? Most beginners who belong to a health club or gym start with weight machines and supplement them eventually with free weights. If you’re buying equipment for home, you probably should start with a basic set of free weights, unless you are certain that the investment in costly machines is worth it.