

Free Weights vs. Resistance Machines

After talking to a fitness expert, you discover that a good exercise program must incorporate aerobic exercise such as running, aerobic dance or cycling, and some form of strength training. You have been to the gym and noticed some people were using dumbbells and some were using the machines. So, are weight machines the best way to build strength? Or are free weights (barbells and dumbbells) more effective? The truth is both have advantages and disadvantages.

Free weights

For many people, dumbbells and barbells are used to provide a great workout. Free weights, together with a bench and a rack, offer a great variety of exercises. But as with machines, free weights have advantages and disadvantages.

Advantages

- Can be used at home or at a gym.
- Functional to everyday movements.
- You can increase strength through a full range of motion.
- Sport specific movements can be trained with free weights.
- You can strengthen large muscle groups at once, saving time and increasing heart rate.
- Free weights require more coordination and control than machine weights which guide you through a fixed range of motion.
- Free weights are more challenging. It is more difficult to bench press 100 lbs. of free weights than 100 lbs. on a machine press due to machine assistance.

Disadvantages

- May need a spotter if lifting a heavy weight.
- Knowledge of proper form during the lift is vital for injury prevention.

Resistance machines

Many machines use a stack of weight as a means of resistance. By the use of cams, cables, gears and pulleys, the resistance from the weight stack can be controlled by one specific movement. Still other machines may require giant springs or rubber bands to provide resistance, and may be less capable of gradual increases in resistance. Some large multi-station weight machines allow a variety of exercises for a full body workout.

Advantages

- Focuses on one muscle group at a time.
- Goes through a guided and specific range of motion, which can be great when starting strength training or rehabilitating from an injury.
- Assists with control of movement.
- If the machine is properly adjusted it can provide proper form through the lift.

Disadvantages

- Must have a membership to a gym or place where you can use machines.
- Not functional to everyday movements.
- Focuses on one muscle group at a time. However, during sport and daily living activities we use various muscle groups simultaneously.
- When increasing weight, you must add a whole or half plate (usually 10 or 15 lbs. respectively) which may be too large of an increase for some individuals.

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.uiuc.edu>