

Strength Training Basics

What is strength training?

Strength training, or weight training, means doing exercises that build muscle strength. To build muscle you can lift free weights, use weight machines, use resistance bands, use your own bodyweight (such as push-ups, pull-ups or sit-ups), or use a variety of other equipment. Proper strength training makes muscles stronger by asking them to do more than usual. The body responds to this challenge by becoming stronger. Strength training must be done gradually and carefully, but can be done at any age.

What are the benefits of strength training?

Strength training helps you keep and even increase the range of movement in your joints. It strengthens bones, muscles, tendons, ligaments, and improves your fitness and health. It can help prevent injuries and speed up your recovery when injuries do occur. It also improves your ability to do everyday chores and activities.

Strength training has many more benefits including:

- ✓ **Burn more calories:** Your base metabolic rate may stay elevated 18 to 24 hours after a strength workout (even higher and longer than an aerobic workout). This means that your body may burn calories at a faster rate long after you are done lifting weights.
- ✓ **Weight loss:** You lose unhealthy body fat while sparing good lean muscle mass.
- ✓ **Strong bones:** Weight bearing exercise increases bone density. This decreases your risk of having osteoporosis.
- ✓ **Better insulin sensitivity:** Your body is able to control your blood sugar levels with less insulin and puts less stress on your pancreas. This is very helpful for people with diabetes.
- ✓ **Lower cholesterol:** Training helps lower LDL (bad cholesterol) levels and triglyceride levels and raise HDL (good cholesterol) levels.
- ✓ **Lower blood pressure:** Strength training lowers your blood pressure and helps your heart work better.
- ✓ **Mood:** Your alertness, energy, overall attitude, and sex drive is likely to improve.

How many days a week should I train?

How often you should train depends on your overall health and is different from person to person. Most people can make excellent progress lifting 2 to 4 days per week for only 20 to 40 minutes per workout.

What exercises should I do?

There are many exercises to choose from. Try to select a good balance of exercises so that you are doing exercises for your upper body, lower body, and abdominal muscles.

- Good basic upper body exercises include: bench press, lat pull-downs, pull-ups, triceps extensions, dips, and curls.
- Good basic lower body exercises include: squats, lunges, calf raises, leg curls, and deadlifts. You can strengthen your abdomen by doing planks, wood chops, or medicine ball exercises.

You can use either free weights or weight machines.

- **Free weights:** Free weights use dumbbells, barbells, medicine balls, resistance bands, or your body weight for resistance (such as push-ups). Dumbbells are the weights that you hold in each hand. Barbells are the longer bars that can be used for exercises such as squats or bench press.
- **Weight machines:** There are many different types of machine exercises. The machine balances the weight load for you, which makes the exercise easier because you don't have to worry as much about balancing the weight.

What do rep and set mean?

Rep: Rep is short for a repetition. A rep means that you have completed the range of motion once for an exercise. For example, doing 1 pull-up would be 1 rep.

Set: A set is the number of reps of a particular exercise that you should do before resting or moving to another exercise. For example, if a workout calls for 3 sets of 10 reps of bench press with 3 minutes of rest in between sets, you would bench press the bar 10 times, then rest for 3 minutes before doing another set of 10. (Rest times can range from no time between sets to 5 to 10 minutes between sets.)

One rep max (1RM): 1RM is the maximum amount of weight you can lift for a given exercise for only one rep.

How much weight should I lift and how many reps should I do?

How you design your training program depends on your goal. If you want to become lean and lose body fat, you train differently than if you want to build your muscle size.

To become lean and lose body fat:

Strength training can really help you lose weight, because after a strength training workout your body burns calories at a faster rate for up to 24 hours. So, you are still helping your body lose weight hours after your workout. To lose weight you need to burn more calories than you eat. However, one of the biggest mistakes people make is not eating enough protein. You need to eat fewer calories that come from sugar or carbohydrates, but make sure that you continue to eat enough of protein. Protein helps you build lean muscle.

One good way to weight train for fat loss is to do circuit training. In circuit training, you move quickly from one exercise to the next with little or no rest between sets. Because you are not taking a rest between sets, do not try to lift a lot of weight during each set (use a weight that is 40% to 60% of your 1RM for each exercise). So, for example, if your 1RM for leg curls is 100 pounds, then you should use 40 to 60 pounds for each set. Do 2 to 4 sets of 8 to 12 reps for each exercise. Rest no more than 90 seconds between sets.

Women do not need to worry that lifting weights will make them gain weight and get bulky. Since muscle takes up much less space than fat does, women who weight lift will start to notice their clothes fit more loosely. Also women are less likely to gain muscle size compared to men who lift weights because women have much lower (nearly 20 times) testosterone levels than men. Testosterone helps muscle growth.

To gain muscle size:

If your goal is to gain muscle size, then nutrition is very important. To build bigger muscles you need to eat more calories than you burn. You want to make sure you gain quality weight (lean body muscle) by eating enough quality protein (such as lean red meat, chicken, fish, eggs and nuts) and doing a proper training program, otherwise you will just gain fat.

To gain muscle size, you need to increase the amount of weight you lift from one workout to the next. Try to train in the 4 to 8 rep range per set using a weight that is between 60% to 80% of your 1RM for a given exercise. So if your 1RM for bench press is 200 pounds, you should lift between 120 and 160 pounds for each set. Do 3 to 5 sets and rest about 1 to 3 minutes between sets.

There are many types of training programs. Ask a certified strength and conditioning coach or personal trainer to design a program that will work for you.

What else do I need to know before starting a strength training program?

Before starting any strength training program, talk to your healthcare provider. You should also make sure to:

- ✓ **Eat right:** The time your body is getting stronger is actually in between workouts, during the recovery period. If you train hard, but eat poorly, your body won't respond to the workouts as well.
- ✓ **Change the workout:** Every so often change the exercises in the workout, the rep ranges, the rest times, the exercise order, or the number of sets. If you do the same workout week after week without altering some of the variables, your progress will stall.
- ✓ **Use good form:** Do not sacrifice proper posture and form for the sake of lifting more weight. If necessary, use less weight and do the exercise correctly. Be careful toward the end of a set or workout when it is harder to have good posture and form. Exhale when you are lifting a weight, inhale when you are lowering a weight. Don't hold your breath.
- ✓ **Exercise your entire body:** Most people under-train their legs and overtrain their upper body. Be balanced in your training approach. Try to train opposing muscle equally (for example, train both biceps and triceps, quads and hamstrings, back and chest).
- ✓ **Be realistic:** Make sure you are realistic about your exercise program. It is better to workout 2 days a week regularly than to plan to workout 4 days a week and not be able to stick to your plan.
- ✓ **Don't overtrain:** Overtraining is when your body is not able to recover between workouts. You may be overtraining if you have headaches, nausea, or a fast heart rate when you wake up. If you find yourself dreading going to the gym, feeling run down, or lacking a good night's sleep—take a day or two off before training again.

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