

# The Benefits of Strength Training and Tips for Getting Started

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*Figure 1. Strength training is important for people of all ages and for men and women alike. (© Milovan Radmanovac | Dreamstime.com)*

Most of us know that getting enough exercise in our lives is important for our health, but we may not know exactly how to get started or what kind of exercise is recommended. There are different forms of exercise, and each has its own unique benefits to our health and our quality of life. The primary types of exercise are aerobic, strength, and flexibility training. They each have their own benefits, and they are all important when it comes to staying healthy for as long as possible.

This guide will focus on strength training, which is often neglected when it comes to our exercise routines. Many people think that strength training is only important when you are young, that it is only for men, or that you should only do it when you are trying to bulk up your muscles, but that simply isn't true. All people can benefit from strength training at any age, and it is easier to start than you think (Figure 1). This guide will help you to understand why strength training is important and beneficial, give you basic guidelines on what exercises to do, and give you ideas on how to make it practical in your everyday life.

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## DEFINITION OF STRENGTH TRAINING

Strength training is a type of exercise that improves muscular fitness through the use of resistance to the muscle. It involves activities that make your muscles do more work than they usually do. In other words, they are activities that overload the muscles. An exercise counts as strength training if it involves a medium- to high-level effort and if it works major muscle groups of the body.

## HOW PEOPLE CAN BENEFIT FROM STRENGTH TRAINING

There are several benefits that strength training can provide in our lives. Here are some of the most important ones:

- **Muscle mass.** As we age, we lose muscle mass. Strength training can help you maintain and fight against the loss of muscle mass.
- **Osteoporosis.** Strength training can help prevent osteoporosis by increasing bone mass and bone strength.
- **Arthritis.** Strength training can reduce pain and disability associated with arthritis and slow or reverse bone mass loss in arthritis.
- **Heart disease.** Strength training can decrease the risk of heart disease by improving cholesterol and lowering blood pressure. It also decreases the stress placed on the heart when lifting or moving objects.
- **Overweight/obesity.** Strength training can help to lower body fat levels or improve body composition. It can also help us maintain muscle mass during weight-loss efforts.
- **Daily activities.** Regular strength training lowers the risk of having limitations in daily activities due to a lack of muscular fitness. These daily activities might include carrying children or



*Figure 2. Free weights are one method of strength training available, but they are recommended for more advanced workouts since they require more coordination and balance to use. (© Michael Flippo | Dreamstime.com)*

groceries, climbing up and down stairs, moving furniture or heavy boxes, engaging in sporting activities or hiking, and even standing for long periods of time.

- **Blood sugar.** Strength training can improve blood sugar levels and improve the use of insulin in the body.
- **Psychological stress.** Strength training on a regular basis may reduce the symptoms associated with depression and anxiety and may also help reduce fatigue. It can also contribute to improved self-esteem.
- **Brain.** Strength training can improve memory and thinking skills.

## WAYS TO DO STRENGTH TRAINING

There are many ways to accomplish strength training. The primary methods used are:

- Free weights (Figure 2)

- Machines with weights and cables (Figure 3)
- Bands, tubes, medicine balls, and other portable tools (Figure 4)
- Body weight (Figure 5)

No strength training method is better than another. The most important principle is to challenge the muscles to do more work than they normally do. You do not have to stick with only one method of strength training. You can mix up the methods you use each time you work out or even mix up the methods within one particular workout. You have as many options as you would like. The method(s) you decide on for strength training may depend on personal preference, access and availability, convenience, or comfort level with the different methods. It is important to choose methods that are safe and practical for you. Machine-based exercises are generally safer for beginners than free weights because machines are more stable and rely less on coordination and balance. As your muscular fitness improves, free weights can be added to your fitness routines.

Strength training should target the major muscle groups: chest, back, legs, shoulders, biceps, triceps, and the trunk/core (Figure 6). It is recommended that you vary your exercises in such a way that you do some that use multiple muscles at one time and some that isolate specific muscles individually.

Complete body training of all muscle groups helps to reduce muscular imbalances that can lead to injury.

For each exercise:

- Use proper form and technique (be sure that you are in the correct stance or have the right settings on the machine).
- Use controlled movements (do not swing weights or use momentum to lift weights or your body weight).
- Use the full range of motion of the joint (do not stop short of the beginning or ending point of the exercise movement).
- Use proper breathing techniques (**exhale** during the exertion portion of the repetition).



*Figure 3. Machines that use weights and cables are generally safer for beginners to use. (© Julián Rovagnati | Dreamstime.com)*

## RECOMMENDATIONS FOR HOW TO STRENGTH TRAIN

The focus in this guide is for adults who want general strength training recommendations to improve overall muscular fitness. The recommendations here are not for advanced strength training plans. The recommendations provided here are appropriate for men and women of all ages. Older persons should begin with lighter resistance and a greater number of repetitions until muscular conditioning improves, then increase resistance and follow the typical recommendations provided.





*Figure 4.* Bands, tubes, and medicine balls are convenient strength training aids that can be used at home. (© Lunamarina | Dreamstime.com)

### Number of Repetitions

**Repetitions** or **reps** refers to the number of times you perform the exercise.

#### To emphasize muscular strength and size:

- Do 8–12 reps per set that produces muscular fatigue (to the point where another repetition would be difficult to do without help).
- Take 2–3 minutes of rest in between sets.

#### To emphasize muscular endurance:

- Do 15–20 reps per set that produces muscular fatigue.
- Take 1–2 minutes of rest in between sets.
- Do no more than 2 sets per exercise.



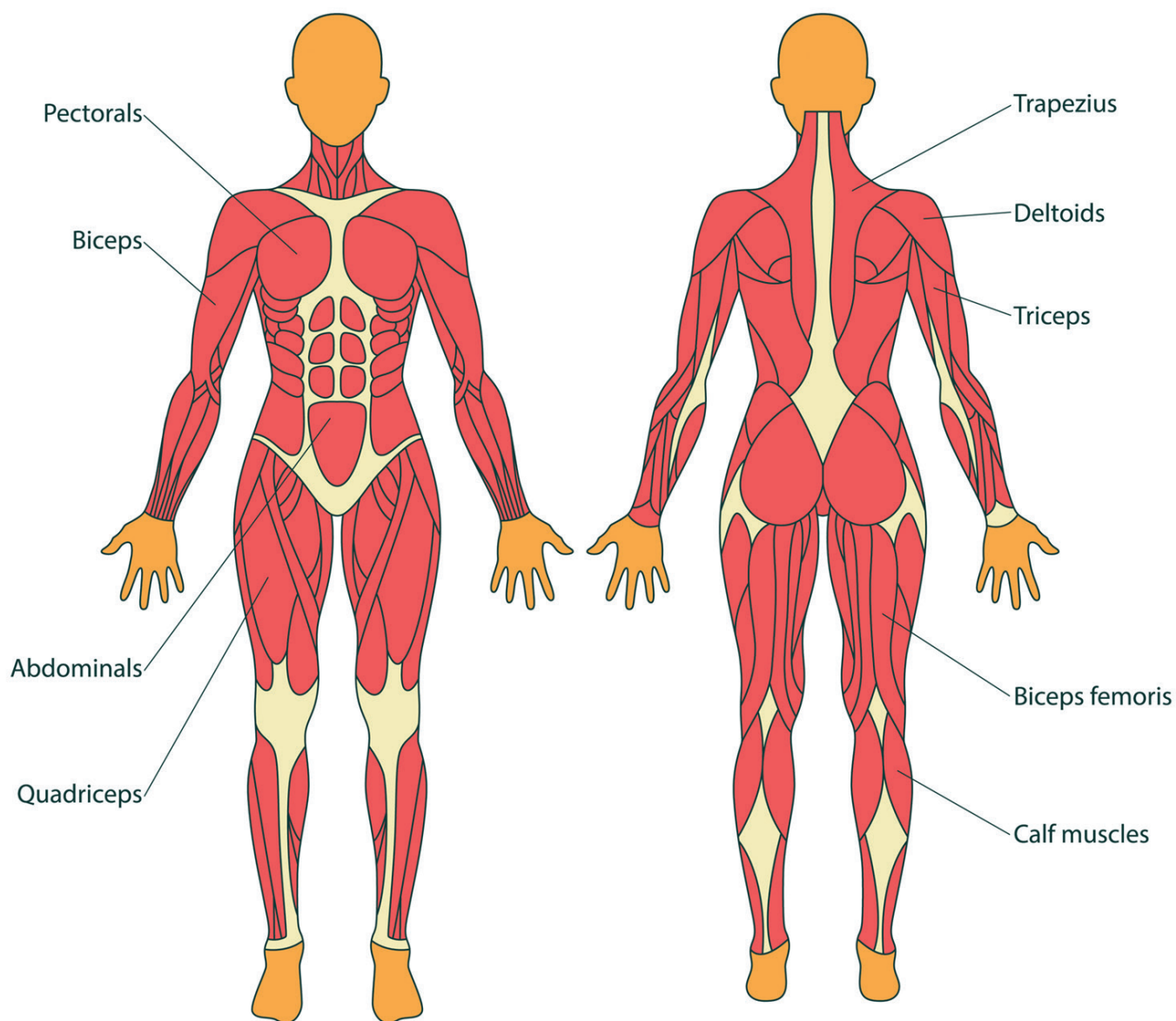
*Figure 5.* Exercises such as pushups and crunches use your body's weight for resistance. (© Suprijono Suharjoto | Dreamstime.com)

### Number of Sets

A **set** is a fixed number of repetitions. For example, you might do 2 sets of 15 reps each, with 2 minutes of rest in between sets. Most people benefit from 2–4 sets of exercises per muscle group. For beginners and/or older individuals, 1 set per muscle group can be beneficial to get started. One exercise can be used for the 2–4 sets or several different exercises, whatever is preferred. Gradually increasing the amount of resistance over time is ideal to strengthen muscles.

### Number of Days Per Week

- Strength training of each muscle group is recommended two to three times per week.
- Whole body workout sessions, so that all muscles are trained, are recommended at least two times per week.
- Forty-eight to 72 hours of rest time in between training sessions is recommended.



**Figure 6.** The major muscle groups of the body. (© Anastasiia Koreshkova | Dreamstime.com)

Improvements gained through strength training reverse quickly when you stop strength training; therefore, staying consistent with these routines is critical.

Table 1 gives examples of a beginner workout and an intermediate/advanced workout. Note that these are just examples. The number of total sets can vary from 8 up to 30 or more and anything in between. Generally, the more advanced you are, the greater number of sets required to challenge the muscles.

### **Preventing Injury**

- **Warm-up:** Begin each exercise of a new muscle group with a lighter resistance and higher number of repetitions.
- **Stretching:** Stretch any muscle worked at the end of the exercise session. Generally, you will need to stretch every major muscle group at the end if you have completed a full body workout as recommended here.

<b>Table 1. Example Strength Training Workouts for Beginner and Intermediate/Advanced</b>		
<b>Muscle Group Targeted</b>	<b>Beginner</b>	<b>Intermediate/Advanced</b>
<b>Chest</b>	Pushups: 1 set of 12 reps	Bench press: 2 sets of 8–10 reps
	Chest fly machine: 1 set of 10 reps	Chest fly dumbbell: 2 sets of 8–10 reps
<b>Back</b>	Cable rows: 1 set of 12 reps	Pull-ups: 2 sets of 8–10 reps
	Assisted pull-ups: 1 set of 10 reps	Bent-over rows: 2 sets of 10 reps
<b>Legs</b>	Leg extensions: 1 set of 12 reps	Squats: 2 sets of 10 reps
	Leg curls: 1 set of 12 reps	Lunges: 2 sets of 8–10 reps
<b>Shoulders</b>	Overhead press: 1 set of 12 reps	Military press: 2 sets of 10 reps
		Lateral raises: 2 sets of 8–10 reps
<b>Biceps</b>	Dumbbell curls: 1 set of 10 reps	Preacher curls: 2 sets of 8 reps
		Concentration curls: 1 set of 10 reps
<b>Triceps</b>	Cable pushdowns: 1 set of 10 reps	Overhead extensions: 2 sets of 10 reps
		Triceps dips: 1 set of 12 reps
<b>Core</b>	Crunches: 1 set of 15 reps	Russian twists with weight: 2 sets of 12 reps
	Superman: 1 set of 15 reps	Hyperextensions: 2 sets of 12 reps
		Plank: 2 sets of 30 seconds
<b>Total</b>	<b>11 sets</b>	<b>28 sets</b>

- Gradual progression of volume and intensity: Increase slowly over time the amount of resistance and the number of sets.
- Choose appropriate exercises: If you are working out alone without a partner, avoid exercises in which you might need help from a partner. If you do have a partner, you can ask them to “spot” you. As you perform the exercise, your partner will watch to see if you need help lifting a weight and will help you if needed.
- Use equipment properly: Ask for help if you do not know how to use equipment or are not sure of the proper settings. Avoid equipment you do not know how to use.
- Use correct form and technique for each exercise.
- Listen to your body: Stop if you feel pain or anything that does not feel right.

### **TIPS FOR OVERCOMING BARRIERS AND INCORPORATING STRENGTH TRAINING IN YOUR LIFE**

- Find a partner to work out with.
- Attend a group fitness class that emphasizes strength training.
- Make the exercises accessible and fun.
- Choose exercises that are convenient and practical in your environment.
- Break up your workout into segments throughout the day if you are at home. It does not have to be done all at one time.
- Do your exercises at home during your favorite television shows.
- Schedule your exercise sessions in your day just like you would any other important appointment.
- Pack your gym clothes ahead of time and have them ready to go when you start your day.

- Download free apps on your phone for body weight workouts. If you don't do your regular routine, you can always do a body weight workout in 12 minutes or less.

## BEFORE GETTING STARTED

Speak with your doctor to make sure that you do not have any medical conditions that would limit your ability to engage in strength training. Strength training may not be recommended if you experience chest pain, lose your balance due to dizziness, or have specific medical conditions. You may also need to modify the types of exercises you do if you have a bone or joint problem that could be aggravated or worsened by certain types of exercises. If you are cleared for exercise by your doctor but experience pain or discomfort during exercise, you should stop the exercise and talk with your doctor.

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