

# The Pumping Station



## *Strength Training for Teens*

### **What Is Strength Training?**

Strength training is much more than quickly lifting a few weights. When you strength train with weights, you're using your muscles to work against the extra pounds; this strengthens and increases the amount of muscle mass in your body by making your muscles work harder than they're used to. Regular aerobic exercise, such as running or using a stationary bike, makes your muscles use oxygen more efficiently and strengthens your heart and lungs.

Most people who work out with weights typically use two different kinds: **free weights**, which include barbells and dumbbells, and **weight machines**, which are made by companies like Nautilus. Machines are often designed to help you isolate and work on a specific muscle; free weights usually work a group of muscles at the same time.

For instance, you can do a **squat** using free weights by placing a barbell across the back of your shoulders and squatting down like a baseball catcher. (Keep your feet flat on the ground and your chest

up.) This type of exercise works multiple muscles, including the quadriceps (the front of the thigh), the hamstring (the back of the thigh), and even your behind. When you do a leg extension on a muscle isolation machine, you sit in a chair with your knee bent at 90 degrees and slowly straighten your leg against the padded bar. This particular exercise isolates and works the quadriceps muscle.

Most gyms or weight rooms set up their machines in a **circuit**, or group, of exercises that you perform to strengthen different groups of muscles.

There's a big difference between strength training, weightlifting, power lifting, and competitive bodybuilding! Also known as resistance training, strength training uses resistance methods like free weights, weight machines, and resistance bands to build muscles and strength. Olympic, or power lifting, which people often think of when they think of weightlifting, concentrates on how much weight a person can lift at one time. This type of power lifting is not recommended for people in their early teens, particularly in middle school, because a person's body is developing fast during this time and this type of activity can lead to serious injuries of growing bones, muscles, and joints.

## Why Strength Train?

With a regular strength training program, you'll be able to increase your endurance and strength for sports and fitness activities. In fact, many teens first discover strength training when a coach or physical education (PE) teacher suggests it to improve their performance in a particular sport.

Believe it or not, another benefit of strength training is that it may also help improve your grades. Did you know that any type of regular exercise can help develop your ability to focus and concentrate? And here's another surprise: strength training not only reduces your body fat and increases your muscle mass, but it can help your body burn more calories even when you're not exercising. Because increased muscle mass raises a person's resting metabolism (in other words, people with more muscle burn more calories even when they're resting), your fat-burning furnace will be working overtime.

Finally, and perhaps most importantly, strength training can help reduce the risk of injuries (short term) by protecting bones and joints, as well as helping prevent long-term medical problems such as osteoporosis (weakening of the bones) when you get older.

## Is It Safe for Teens to Strength Train?

If you've started puberty, your body will have begun making the hormones necessary to help you build muscle in response to weight training.

Any time you start a new sport or activity, you should start out slowly so that your body gets used to the increase in activity. Even if you think you're not exerting yourself very much, if you've never pumped iron before, your muscles may be sore when you wake up the next day. And, because of something called delayed onset muscle soreness, the pain may be at its worst 2 or 3 days after you first exercise.

It's important that you get some guidance and expert advice. Your coach or trainer can give you advice on how many times a week you should lift and what kinds of stretches you should do before and after lifting to avoid soreness or injury. Many trainers who work at gyms and in weight rooms are knowledgeable about strength training, but it's best to get your advice from someone who is a certified fitness expert.

It's very important to make sure that when you are lifting weights - either free weights or on a machine - that there's always someone nearby to supervise, or spot you. This person, called a spotter, can not only encourage you, he or she can also act as your coach, telling you if you're not doing a particular exercise correctly.

Having a spotter nearby is particularly important when you use free weights. Even if a person's in great shape, sometimes he or she just can't make that last repetition. It's no big deal if you're doing bicep curls; all you'll have to do is drop the weight onto the floor. But if you're in the middle of a bench press - a chest exercise where you're lying on a bench and pushing a loaded barbell away from your chest - it's easy to become trapped under a heavy weight. A spotter can keep you from dropping the barbell on your chest.

Many schools offer weight or circuit training as units in their gym classes - check to see if you can sign up. Don't be afraid to ask for pointers and tips about how much weight you should start with, how to develop a routine, and nutrition advice about how to eat to increase energy levels and build muscle.

## **What Are Some Dangers of Strength Training?**

You may love the challenge of lifting, especially if you and your friends do it together. If you've entered puberty, you'll definitely see results over a few months in your muscles and in your ability to progressively lift more weight. But there are a few things to look out for.

Because your bones, joints, and tendons are still growing and developing, it's easy to overdo it and strain or even permanently damage them. When you're in the middle of a strength-training session and something doesn't feel right to you, or if you hear or feel a "pop" when you're in the middle of a workout, stop what you're doing and have a doctor check it out before you resume training. It's possible you may need to modify your training or even stop lifting weights for a while to allow the injury to heal.

Another danger surrounding strength training is the use of anabolic steroids or other performance-enhancing drugs and preparations that supposedly help muscles develop. You may have even heard rumors about some athletes at your school who use them. Steroid use is widespread in many sports - including bodybuilding, swimming, and track and field. But because many of their long-term effects on the body are still unknown - and because they are linked to health problems like cancer, heart disease, and sterility - you should resist the urge to try them. The benefit is definitely not worth the risk!

## What Is a Healthy Routine?

If you take a few minutes to watch the guys and girls pump iron at your school, you'll see there are lots of different ways to train with weights. However, there are a few good basic routines that you can modify as you start to train harder later on.

If you're just starting out in the weight room, most fitness experts recommend you begin by training three sessions a week, ranging from 20 minutes to an hour, allowing at least a day off between sessions. It's best to work only two or three muscle groups during each session. For example, you can work your leg muscles one day, your chest, shoulders, and triceps the next, and your back and biceps on the last. Before you head for the weight bench, you should warm up your muscles by spending 10 minutes pedaling on a stationary bicycle or by taking a brisk walk around the gym.

There are many different exercises you can use for each body part, but the basics - like bench presses, lat pull downs, and squats - are great to start with. Perform three sets of 8 to 10 repetitions (or reps) of each exercise, starting out with a light weight to warm up and increasing the weight slightly with the second and third sets. Perform two to three different exercises for each body part to make sure you work each muscle in the group effectively.

Here are seven basic rules to follow in strength training:

1. Start with body weight exercises for a few weeks (such as sit-ups, push-ups, and pull-ups) before using weights.
2. Don't work out with weights more than three times a week. And never weight train on back-to-back days.
3. Warm up for 10 minutes before each session.
4. Stretch the muscles you plan to strengthen before each weight training session.
5. Spend no more than 30 to 40 minutes in the weight room to avoid fatigue or boredom.
6. Work more repetitions; avoid max lifts. (Specifics can be taught by a coach or teacher.)
7. Ensure you're using proper technique through supervision. Improper technique may result in injuries, particularly in the shoulder and back.

Don't rely on strength training as your only form of exercise; you still need to get your heart and lungs working harder by doing some kind of additional aerobic exercise at least 3 days a week for at least 20 to 30 minutes per session. If you're pressed for time, you can schedule a short jog or bicycle ride either before or after a strength-training session.

Strength training is a great way for teens to improve their strength, endurance, and muscle tone. But remember to start slowly, use proper form, avoid heavy weights, and increase your workouts gradually to prevent injury. Just a few short sessions a couple of days a week will really pay off - besides better muscle tone and definition, you may find that you have more energy and focus.

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