

Volunteer Leader Training Guide

Strength Training With Resistance Bands and Tubes

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Introduction

The goal of strength training is to grow stronger. Strength training is when we work the skeletal muscles of our bodies harder than they are used to. Strength training increases strength, anaerobic endurance and muscle mass.

Most people think of strength training as lifting free weights (such as barbells and dumbbells), but there are many ways to strength train. Isometric strength training – sometimes referred to as “static” – is where the muscle develops tension but does not shorten. Examples of isometric strength training are attempting to pick up the chair you are sitting in or standing with each hand on opposite sides of a doorway attempting to push down the wall. Isotonic strength training is contractions in which a muscle shortens against a constant load resulting in movement (for example, using free weights). Besides free weights, you can use your own body weight for resistance, such as in push-ups, or other variable-resistance fitness equipment, such as stretch bands and resistance tubes or weight machines.

Target Audience

- EHC leaders and members
- Adults

Objectives

Participants will:

- Increase knowledge about the benefits of strength training with resistance tubes.
- Gain an understanding of the difference in resistance bands and tubes.
- Learn the advantages and disadvantages of using resistance tubes.
- Learn safety tips and use of resistance tubes and bands.
- Practice strength training exercises using resistance tubes.

Materials Needed

- Resistance tubes or stretch bands for each participant
- Several different resistance tubes and stretch bands to show different levels of resistance
- Strength training with stretch tubes poster
- Strength training with resistance bands and tubes handout

Optional Needs:

Fact Sheet – *Increasing Physical Activity as We Age: Strength Training*, FSFCS33
“Fit in 10” DVD

Suggestions for Teaching

- Review the lesson and gather the materials needed. Review the *Strength Training* fact sheet, FSFCS33.
- Choose a warm-up activity or use the Tai Chi segment from the “Fit in 10” DVD.
- Practice the strength training exercises using resistance tubes.

Icebreaker

Ask participants to stand as you read the following statements:

- Stand if you have done or currently do strength training exercises using free weights-dumbbells
- Stand or remain standing if you do strength training exercises two to three days a week
- Stand or remain standing if you have used resistance bands or tubes to do strength training exercises
- Stand or remain standing if you do any type of exercise for at least 20-30 minutes a day

Why Strength Training

In general, adults and senior adults should get 150 minutes of exercise a week, and this needs to be in bouts of at least 10 minutes in length. When you break this down, 150 minutes is only (approximately) 20 minutes a day 7 days a week, 30 minutes a day for 5 days a week or 50 minutes a day for 3 days a week. However, the amount and type of physical activity individuals should get each week differs based on factors such as age and special conditions, such as pregnancy and the postpartum period for women, disabilities and chronic medical or health conditions. For all individuals, some activity is better than none.

Strength training makes you stronger by building muscle. This increased strength allows you to perform daily activities on your own. In addition to increased strength and muscle mass, strength training also increases bone density. Strength training also plays a key role in keeping obesity and diabetes at bay by increasing your metabolism, which helps you maintain a healthy weight and normal blood sugar levels. Studies also suggest strength training may help prevent the progression of osteoporosis.

Sarcopenia is the technical term researchers have given to describe loss of muscle, strength and quality of muscle tissue often seen in older adults. Some experts have suggested that muscle mass declines about 1% each year from age 30. Although there are still many questions remaining about muscle loss and aging, we know that muscle-building exercises can improve strength in

most older adults, while a sedentary lifestyle contributes to muscle loss. To keep from losing muscle mass, the recommendations are to do strengthening exercises for all of your major muscle groups at least twice a week; however, do not do strength-training exercises of the same muscle group on any two days in a row.

NOTE: Have a display of different resistance bands, tubes and accessories. Show the items during the discussion below or when you talk about tips for buying resistance tubes.

Resistance Bands Versus Resistance Tubes

The terms **resistance bands** and **resistance tubes** are often used interchangeably. They both can substitute for free weights or machines to help you build muscle strength and bone density. Both bands and tubes are color-coded based on the level of resistance. However, there is not an industry standard on colors, and all companies label and color-code their bands differently. Bands and tubes are used the same; the difference is in their shape.

Resistance bands (sometimes called flat bands or stretch bands) are stretchy elastic bands that range in width from two to six inches. Resistance bands can be bought in precut lengths or on a roll and cut to your preferred length. Precut lengths usually run from three to six feet in length. The level of ‘resistance’ offered in the bands range from extra-light to extra-heavy. Many contain latex; so if you have an allergy, check the packaging for latex-free.

Exercise resistance tubing (sometimes called resistance bands, exercise bands, fit tubes, exercise tubes, or other similar names) consists of elastic tubes with handles. The design is a long, plastic or rubber tube that is hollow inside and made of a very sturdy, yet somewhat pliable material. The tubes come in various thicknesses to increase the tension. The handles are usually in a triangular shape and can be hard plastic or padded. Although resistance tubes also come in a variety of resistance levels, the elastic properties of the tubing gives you varying levels of intensity with the same tube.

Why Use Resistance Tubes?

Resistance tubes offer numerous exercise options. The resistance tube can be used by itself, with a partner, or with an anchor to add additional exercise options. Whether being used for adding muscle tone, muscle strength, burning fat, or simply increasing flexibility, resistance tubes are a very easy way to add something different to your daily exercise routine or just start a mini-workout routine.

Advantages and Disadvantages

There are many advantages to using resistance tubes.

- They are very effective in strength training exercises.
- They can be used almost anywhere: home, office, and outdoors.
- They are portable and storable – they take up little space and are lighter than free weights.
- They are less expensive than free weights.
- They are durable.
- They are versatile.
- They are relatively safe.

There are also some disadvantages to using resistance tubes as compared to free weights.

- The amount of weight you are lifting is not as precise with resistance tubes.
- They lose some of their elasticity as they age.
- They may snap or break if rubbed against a sharp object.
- There is not as much research to back their effectiveness compared to free weights.

Performing isotonic exercises using free weights is recommended over other methods. Research studies have shown that, compared to other methods of weight training, free weights produce greater strength gains during short-term training periods, provide greater movement abilities and involve both balance and stabilizing factors.

Tips for Buying Resistance Tubes

Resistance tubes should be bought based on the following criteria:

Selection Criteria for Resistance Tubes
Resistance Level
Length
Choice of Handle

Other tips for buying resistance tubes include:

- **Buy a variety of tubes.** It's best to have at least three – light, medium and heavy – since different muscle groups will require different levels of resistance.
- **Buy comfortable, easy to use tubes.** Some stores offer tubes with interchangeable handles (which means you have to take them off and on to use different tubes), and some have handles that are larger than normal or made of hard plastic.
- **Buy accessories.** One key to using tubes is having different ways to attach them. Examples of accessories include door attachments, ankle cuffs, and different handles.
- **Keep it simple.** As with the accessories, there are multiple options when it comes to the tubes themselves. Examples include figure 8s, double bands, and circular bands. When first starting tubing, stick with the basic long tube with handles. You may want to buy other types later for variety.

Safety Tips for Using Resistance Tubing

As with all forms of exercise, there is some risk of injury. Use the following tips to help keep you safe while you give your muscles their workout.

- Check for holes or worn spots in the tubing. Replace the tube if you see any tears.
- Do your workout on carpeting, wood floors or grass. Abrasive surfaces, such as asphalt or cement, can tear your tube.
- Wear comfortable, supportive closed-toed athletic shoes.
- Make sure the tubing is secured underfoot or on an anchor before you begin each exercise.
- Make sure you have a secure grip on the handle before you begin an exercise.

- Maintain good posture throughout each exercise: Keep your knees slightly bent, your abdominal muscles pulled in and your chest expanded.
- Perform the exercises in a slow and controlled manner, to work against resistance both when you pull on the tube and when you return to the starting position.

NOTE: If you plan to have participants practice hand/foot holds and exercises, you will need to have one resistance tube for each participant. First demonstrate each hand/foot hold and then have participants practice the proper hand/foot hold as you do each exercise. (Refer to the “Stretch It Out” exercise poster for examples of each hold and exercise).

Hand and Foot Holds for Using Resistance Tubes and Bands

Before you can begin to exercise with stretch bands or resistance tubes, you need to know how to hold them.

Hand Holds

To hold a stretch band:

1. Lay the band flat in your hand with the end toward your pinky finger.
2. Wrap the long end of the band around the back of your hand.
3. Grasp firmly.

Since resistance tubes have handles, you will want to hold on to the handle so it does not slip out of your hand.

Standard Hold

Grasp the handle with a firm grip. Four fingers wrap around one side and the thumb comes across from the other. Resist the temptation to excessively squeeze the handle.

Choke Hold

If the resistance tube is too long to properly perform the exercise, loop the tube around and lay it beside the handle. Grasp both the handle and the tube together.

Foot Holds

When performing exercises using the feet as the anchor point for the stretch tube, it is very important that the tube does not slip out from under your feet. This could cause the tube to snap up like a rubber band and possibly hit you.

The way you stand on the stretch tube will affect the tension in the tube. Typically, an exercise will call for you to step in the middle of the tube with feet together. Standing with only one foot offers the least resistance, while standing hip width apart offers more of a challenge.

Some exercises may also call for securing the tube around your ankle. To do this, thread the handle of one end of the tube through the handle of the other end to make a loop. Place one foot through the loop and secure slightly above your ankle.

Exercise Demonstration and Practice

Remind participants that it is important to always warm up and cool down when doing strength training exercises. For those who have participated in Strong Women or other strength training programs, you will want to remind them that these exercises are the same or similar to many of the exercises they have learned. They may want to do these exercises using resistance tubes or bands when they travel or instead of using free weights.

You will want to do some type of warm up before having participants practice the exercises (walking in place, movement of arms and legs or use the “Fit in 10” DVD Tai Chi segment. Finish up with cool down – stretching exercises. (Stretching exercises should be performed when muscles are warm – after endurance and strength exercises or another activity to warm up muscles).

Using the handout and poster, demonstrate each exercise. If you have resistance tubes for participants, show how to properly do the exercise and then have participants complete 3-5 repetitions of each. Check hand/foot holds and posture/form as they do the exercises.

Conclusion

The National Institute on Aging and the U.S. Department of Health and Human Services both recommend performing different types or kinds of exercise. Participation in all four types of exercise – balance, endurance or aerobics, strength training or weight lifting, and stretching or flexibility – is needed for the full health benefit of physical activity. The key to fitness is to do all four of the major types of exercise regularly and to increase your level of intensity over time.