



ACSM Information On...

## Selecting and Effectively Using Free Weights

Using free weights as part of an exercise program can be a safe and effective means of improving strength and fitness for all ages and fitness levels. Free weights provide a stimulus for muscle/fitness development, which can improve your health status, increase muscle size, enhance muscle strength, improve power and endurance, and increase bone strength. Increased muscle strength can especially have a positive impact on quality of life for older adults.

### A COMPLETE PHYSICAL ACTIVITY PROGRAM

A well-rounded physical activity program includes aerobic exercise and strength training exercise, but not necessarily in the same session. This blend helps maintain or improve cardiorespiratory and muscular fitness and overall health and function. Regular physical activity will provide more health benefits than sporadic, high intensity workouts, so choose exercises you are likely to enjoy and that you can incorporate into your schedule.

ACSM's physical activity recommendations for healthy adults, updated in 2011, recommend at least 30 minutes of moderate-intensity physical activity (working hard enough to break a sweat, but still able to carry on a conversation) five days per week, or 20 minutes of more vigorous activity three days per week. Combinations of moderate- and vigorous-intensity activity can be performed to meet this recommendation.

Examples of typical aerobic exercises are:

- Walking
- Running
- Stair climbing
- Cycling
- Rowing
- Cross country skiing
- Swimming.

In addition, strength training should be performed a minimum of two days each week, with 8-12 repetitions of 8-10 different exercises that target all major muscle groups. This type of training can be accomplished using body weight, resistance bands, free weights, medicine balls or weight machines.

It is important to realize that some instruction is necessary before using free weights. Technique, safety precautions and the types of exercises that can be performed with free weights are the most important considerations.

### TWO TYPES OF FREE WEIGHTS:

- **Barbells:** Long bars (4-6') with weights attached or slots to add weight plates.
- **Dumbbells/Kettlebells:** Smaller, single hand-held weights.

**Free weights** – specifically dumbbells and kettlebells – come in several varieties and are easy to use. Dumbbells styles include chrome, unfinished metal, plastic, thin foam covering and concrete. They can be purchased in weight increments of 5, 10, 25 and 45 pounds (among others).

The handles on free weights are important because they provide friction for a good grip. The handle should feel comfortable in your hand and should not cause undue muscle fatigue during lifting. It is important to practice with the weights before purchasing. An important first step in the purchase process is to decide on the correct amount of weight for your strength. The salesperson or an exercise professional should be able to help you. A



set with 110 pounds, two dumbbells, and a long barbell is a common starter set.

### SAFETY CONSIDERATIONS

- The term “free weight” means the equipment will not restrict movement. Thus, the use of barbells and dumbbells requires more muscular coordination than machines. The risk of injury is also higher. Precautions must be taken when

using free weights. Ensure you have a good grip, maintain a stable position sitting or standing, use good technique or form and solicit proper instruction from an exercise professional.

- When picking weights up or putting them down, lift with your legs, not your back.
- Most accidents occur when a weight falls on a body part. This happens when a weight plate is not secure on a bar or when a dumbbell falls out of a person's hand.
- Consider how you will use the weights. If you are using the weights for general fitness, you probably do not need a partner to spot for you. If you are hoping to greatly increase muscle size, and are lifting heavy weights, find a training partner to spot you.
- Do not attempt to lift too much weight.
- Consider your children, pets and safety hazards when storing or not using your free weights.

### MAINTENANCE AND DURABILITY CONSIDERATIONS

- Ask the sales representative if the weight set comes with a warranty.
- If you plan to use the weights often, buy a high-quality, durable product.
- Consider buying weights that are a specific weight as opposed to purchasing weights that can be changed according to your strength. For these, no assembly is required.
- Ensure you have adequate space to safely store the weights, depending on how many or how much weight you are going to purchase. Free weights can be stored on the floor or on racks.
- Consider the maintenance requirements. Chrome weights require more maintenance than metal, concrete or foam-covered weights.

### USING FREE WEIGHTS

Free weights are one of the most user-friendly types of exercise equipment. Gains in confidence and knowledge of the exercises that can be performed come quickly. Consult a certified personal trainer to learn more about techniques and exercises that are right for you.

Free weights improve different components of muscle-fitness depending on use.

- **Muscle Strength:** 5-8 repetitions, 1-3 sets (group of repetitions)
- **Muscle Endurance:** 15-20 repetitions, 1-3 sets
- **Muscle Power:** 3-5 repetitions, 1-3 sets

A set should make the muscles worked fatigued. Rest at least one minute between sets of each exercise.

### MUSCLE GROUPS TO TRAIN

Exercising the major muscle groups is important for developing fitness.

- **Upper body:** front and back of arms, shoulders, chest and upper back. Use bicep curls, tricep extension, shoulder press, or bent over row.
- **Torso:** abdominals, sides of torso (obliques) and lower back. Use abdominal curls, "Bird-Dogs" and sideplank.
- **Legs:** front and back of thighs, calf muscles and buttocks. Use squats, lunges and heel raises.

### TECHNIQUE

- Learn the proper technique for each exercise before proceeding.
- Exercise both sides of the body. After completing an exercise for the front of the body, proceed with a corresponding exercise for the back of the body.
- Breathe. Exhale when it is hardest, and inhale when it is the easiest.
- Move your joints through a full range of motion when performing each exercise.
- Move in a controlled manner. Lower weight slowly. Do not let momentum move the weight.

### POSTURE

- Keep your spine straight.
- Do not hyperextend your spine.
- When picking weights up or putting them down, use your legs, not your back.

### USING A SPOTTER

- When lifting heavy weights or trying a new exercise, use a spotter.
- Spotters can offer feedback about technique while providing a margin of safety.

### IMPORTANT POINTS TO REMEMBER

- Before you buy: Consider the space available to safely engage in a weight training program.
- Consider your level of fitness before you purchase your weights. Be careful not to buy weights that are too heavy or too light.
- Make it a habit: Since you are considering buying exercise equipment, structure your lifestyle to make time to exercise, and it will eventually become a life-long habit.

### STAYING ACTIVE PAYS OFF!

Those who are physically active tend to live longer, healthier lives. Research shows that moderate physical activity – such as 30 minutes a day of brisk walking – significantly contributes to longevity. Even a person with risk factors like high blood pressure, diabetes or even a smoking habit can gain real benefits from incorporating regular physical activity into their daily life.

As many dieters have found, exercise can help you stay on a diet and lose weight. What's more – regular exercise can help lower blood pressure, control blood sugar, improve cholesterol levels and build stronger, denser bones.

### THE FIRST STEP

Before you begin an exercise program, take a fitness test, or substantially increase your level of activity, make sure to answer the following questions. This physical activity readiness questionnaire (PAR-Q) will help determine if you're ready to begin an exercise routine or program.

- Has your doctor ever said that you have a heart condition or that you should participate in physical activity only as recommended by a doctor?
- Do you feel pain in your chest during physical activity?
- In the past month, have you had chest pain when you were not doing physical activity?
- Do you lose your balance from dizziness? Do you ever lose consciousness?
- Do you have a bone or joint problem that could be made worse by a change in your physical activity?
- Is your doctor currently prescribing drugs for your blood pressure or a heart condition?
- Do you know of any reason you should not participate in physical activity?

If you answered yes to one or more questions, if you are over 40 years of age and have recently been inactive, or if you are concerned about your health, consult a physician before taking a fitness test or substantially increasing your physical activity. If you answered no to each question, then it's likely that you can safely begin exercising.

### PRIOR TO EXERCISE

Prior to beginning any exercise program, including the activities depicted in this brochure, individuals should seek medical evaluation and clearance to engage in activity. Not all exercise programs are suitable for everyone, and some programs may result in injury. Activities should be carried out at a pace that is comfortable for the user. Users should discontinue participation in any exercise activity that causes pain or discomfort. In such event, medical consultation should be immediately obtained.



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