

CHAPTER 5

Selection and Use of Exercise Equipment

Fitness Equipment

The basic categories of fitness equipment can be broken down into cardiovascular machines, resistance machines, and free-weight devices. New exercisers are often overwhelmed by the variety of exercise equipment available at most fitness facilities. One important role of an ACE Fitness Service Specialist is to guide participants in the proper selection and use of equipment so that exercise programs can be as safe and effective as possible. This chapter provides a basic overview of common fitness equipment, as well as tips for the proper setup and use of each piece.

Cardiovascular Equipment

The types of machines used for cardiovascular training in fitness facilities include elliptical machines, stair steppers, upright and recumbent stationary cycles, and treadmills. These popular pieces can be used by participants for warm-up, aerobic conditioning, or cool-down activities. Consequently, cardiovascular machines are an integral part of an individual's workout plan.

Most cardiovascular training equipment manufactured within the last decade features heart-rate-monitoring technology, various programming options, integrated entertainment technology (e.g., music, television), and accessories for holding items such as water bottles, reading materials, and portable music devices. Since each manufacturer develops its own unique technology, it is important to read and understand the various offerings of each piece of equipment prior to explaining them to new users. The following information should be used as a general guideline for selecting and properly using cardiovascular training equipment. However, the content presented here is not intended to be used as a substitute for each manufacturer's safety guidelines and procedures.

Elliptical Machines

Since their introduction in the mid-1990s, elliptical machines have become the fastest-growing category of cardiovascular equipment. One reason for their popularity is that they provide the same cardiovascular benefits as walking or running but impart far lower impact to the joints. This is ideal for those with joint pain due to musculoskeletal conditions such as **arthritis**. These machines may also feature designs that allow for integrated upper-body movement with lower-body movement. Elliptical machines that provide upper-body motion are sometimes called “cross-trainers.” As the name implies, the foot action during elliptical training resembles an ellipse (or elongated circle) as the

pedal moves forward and backward. This motion effectively combines the fluidity of running with the low-impact motion of bicycling.

Exercise on an elliptical trainer is ideal for individuals who can tolerate weightbearing activity, but cannot withstand impact due to bone- and muscle-related health conditions. For example, exercisers with low-back pain, knee pain, arthritis, or **osteoporosis** may find that working out on an elliptical machine provides an effective cardiovascular stimulus without the jarring of walking or running. The key to a safe and effective training session on this type of equipment is proper exercise technique. Table 5-1 lists important tips for getting a participant started on an elliptical machine.

Table 5-1
Tips for Safe and Effective Exercise on an Elliptical Machine

- The Fitness Service Specialist should assist participants by standing to the side of the machine as they are getting familiar with the equipment. This allows the Fitness Service Specialist to spot the exerciser if he or she loses balance as well as answer questions about interacting with the machine’s console.
- Instruct the participant to hold on to both non-moveable handrails and step on to the machine while facing the console. Caution the participant that the pedals and/or handrails may move once his or her full body weight is transferred to the pedal.
- To turn on the monitor, the exerciser starts pedaling by pushing the pedals in a forward motion. Initially, pedaling in a forward motion instead of a backward motion is recommended because it is easier to balance and it simulates real-life movements.
- Following the instructions on the display, the participant can select one of the preset programs or simply choose “manual” and continue with a self-paced workout. “Quick Start” is also a good option for learning the basics of the elliptical machine.
- The participant can increase or decrease the pedaling resistance by pushing the appropriate keys on the console. Some models also have the option of controlling incline, similar to a treadmill.
- Instruct the participant to stand upright on the machine, maintain a neutral posture, and avoid leaning forward or backward. Additionally, the exerciser should avoid gripping the handles too tightly or leaning on the handrails. A light grip on the bars is all that is needed to promote good balance while allowing the legs to perform the work.
- Once the participant feels comfortable on the machine, the Fitness Service Specialist should move to an area in front of the machine so the exerciser can communicate while keeping his or her focus forward instead of turning to the side.
- To avoid discomfort or numbness in the feet after prolonged exercise on the elliptical machine, instruct the participant to roll through the whole foot instead of remaining on the balls of the feet during the workout. If numbness still occurs, check to see if the shoes are the problem (e.g., shoelaces tied too tight, ill-fitting shoes, excessively worn or unsupportive shoes).
- Advanced techniques, such as using the moveable handrails (if applicable) and pedaling backward, should be attempted only after the participant has mastered the basic technique, which could take several workout sessions a week for several weeks.
- Inform participants that it is normal to feel awkward while getting used to the elliptical machine, as it takes time for muscles to get used to a new exercise. Encourage them to gradually increase duration and resistance to avoid overtraining.