

Adventure and extreme sports have grown in popularity and accessibility over the last two decades. Advances in technology, equipment, instruction, and adaptive sports organizations have especially facilitated the growth in popularity of adapted adventure sports. This chapter will present a variety of adventure sports that are available for individuals with disabilities. It is not within the scope of the chapter to provide a detailed discussion of each of these sports. Rather, this chapter will highlight seven of the most popular sports, discuss common equipment modifications and adaptations, and provide insight into the classifications and rules for competition.

## Climbing

Climbing is a popular recreational activity and competitive sport for people of all abilities. Climbing can take place both outside on natural rock face and indoors on artificial walls, which makes it available in all areas of the United States.

### Variations and Modifications

Ever since Mark Wellman's groundbreaking climb of El Capitan in 1989, climbing has become increasingly more accessible for individuals with disabilities. Wellman, a paraplegic, completed the climb with his climbing partner, Mike Corbett, while using an adapted ascending device that allowed him to climb the 3,000-foot rock face one pull-up at a time—a total of 7,000 pull-ups over eight days. In 2013, another advance in adaptive equipment occurred when Sean O'Neill used a tentacle pulley system to lead climb in Yosemite Valley, the first known lead climb by a paraplegic climber (Campbell, 2013). Today, adapted climbing can be enjoyed by people with disabilities on both artificial rock walls and natural rock faces. Adapted climbing is also an activity that can be successfully included within physical education classes using the principles of universal design (see Grenier et al., 2018). Refer to the Application Example sidebar describing inclusion strategies in climbing for elementary physical education.

Advances in adapted equipment have made climbing accessible to more people. A combination of a standard climbing harness or a seated harness (with larger leg loops and waist belts) with a chest harness allows individuals with spinal cord injuries to maintain a position to climb. An ascending device, which can be modified to allow for functional arm or hand grip, provides the person with a means of climbing the rope. Other adapted equipment includes prosthetic climbing feet (see figure 27.1), climbing knees,

and specialized hand grips for climbers who are amputees. Sighted guides can be used for individuals with visual impairments or who are blind.

## Paraclimbing

The International Federation of Sport Climbing has been holding competitions for paraclimbing since 2006 (Vettoretti, n.d.). The first World Championship for paraclimbing took place in 2011, with 35 athletes (men and women) competing (Gripped, 2019); it now takes place every two years. In 2017, paraclimbing became a recognized sport by the International Paralympic Committee, setting the stage for paraclimbing to become a Paralympic event in the future. Within the sport of paraclimbing, athletes compete in four different categories based on the nature of their impairments (USA Climbing, 2019), resulting in 20 different classifications overall (including male and female categories). Within the visual category there are three classifications:

- B1: Completely or almost completely blind (all B1 athletes must wear a blindfold during competition)
- B2: Visual acuity up to 20/600 and/or a visual field of less than 5 percent
- B3: Visual acuity between 20/600 and 20/200 and/or a visual field of 5 to 20 percent

For athletes with limited range, power, and stability there are three classifications:

- RP1: Disability severely affects all body parts
- RP2: Disability moderately affects all body parts
- RP3: Impaired passive range of movement, noticeable hypertonia, noticeably impaired muscle power, and athetosis creating asymmetry

The amputee category includes athletes who compete in one of the following classifications:

- AU1: Upper limb amputee (two arms or one full arm to shoulder; no prosthetics in competition)
- AU2: Upper limb amputee (at least one arm up to elbow; no prosthetics in competition)
- AL2: Lower limb amputee (prosthetics allowed)

The category for athletes who are paraplegic includes only one classification:

- AL1: No usable muscle function below waist, climbs using arms only



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**FIGURE 27.1** Advances in adapted equipment, such as prosthetic climbing feet, has allowed access to individuals with a variety of disabilities.

### Application Example

## Inclusion Strategies for Indoor Climbing

### SETTING

Elementary physical education class

### STUDENTS

Students with developmental disabilities

### APPLICATION

To accommodate the needs of the students with developmental disabilities, the following strategies may be used:

- Use traverse climbing, in which the objective is to cross the wall laterally rather than scale the wall
- Use large climbing holds
- Design a route using clearly marked holds, such as holds of all one color
- Use peer partners who can provide simple guidance during the climb
- Break the traverse route into smaller sections