



## Adaptive Sports and Recreational Games

### Bowling:

Bowling is a very popular recreational and competitive activity enjoyed by individuals of all abilities. Special equipment is used to help people with disabilities adapt to the sport. Ball ramps allow individuals who are unable to throw a bowling ball to participate in bowling. The "Poss-I-Bowl" is a switch controlled device that attaches to any tubular bowling ramp. It allows individuals to release the ball by pressing a switch. When the switch is pressed, the ball is released and travels down the ramp onto the lane. Ball pushers can be used from a standing or sitting position. These provide the participant with increased control over the force of the throw and the angle in which it travels down the lane. Persons who have visual impairments have aids to help them stay oriented toward the pins such as a makeshift guide rope, a commercial bowling rail or a carpet strip.



### Fishing:

Fishing represents one of the easiest activities to adapt to someone's individual needs. There are a variety of resources, and specialized equipment including rods, reels, line, rod holders, and specialized tackle available. For individuals who use wheelchairs, the biggest barrier to participation in fishing is accessibility. Solutions include locating an accessible fishing area or pier or using a wheelchair accessible boat. Sometimes special equipment is needed to accommodate people with disabilities. Individuals with upper limb amputations, severe spinal cord injuries, and various grasp disorders will find several adaptive equipment modifications available. Harness rod holders and attachable rod holders allow the individual with limited use of either arm to participate while the attachable rod holder can mount to either a wheelchair or the side of a boat. Electric reel-in devices are also available. These devices provide an excellent solution for individuals who would have difficulties reeling in a fish. These reels are controlled by one hand and most models have a coiled cord with a plug for a battery pack and/or a cord with a clip to be attached to a battery on a boat, car, or power wheelchair.



## Swimming:

Swimming is an excellent recreational, competitive, and therapeutic activity that can be done indoors or outdoors. Aquatic exercise and therapy are used to treat and prevent several physical ailments. There are also many benefits of swimming and aquatic exercise. Swimming is also an excellent form of aerobic exercise which increases cardiovascular function. Water buoyancy reduces stress on joints and provides resistance which improves muscle strength. It also improves balance and agility as well as confidence and comfort in and around water. Several products are available for accessing the water such as stair systems and pool lifts for getting in and out of pools.



In addition, temporary accessible walkways are available to provide a smooth surface over sand or grass for everyday wheelchairs. There are also prosthetic devices designed specifically for the backstroke.

## Scuba Diving:

This activity is relaxing and can be enjoyed by individuals of all abilities. In the water, any limitations an individual may have can be adapted easily. Scuba diving enhances free movement of a limitation and reduces the force of gravity. Muscles that may not be used everyday are active underwater. One of the biggest obstacles faced by divers with disabilities is the lack of accessibility to dive boats, pools, potential dive sites and dive shops. Individuals with disabilities are trained and certified using a multilevel certification system. This system is designed for training individuals with disabilities such as paraplegia, quadriplegia, visual impairments, high-functioning brain injuries, or mild retardation. The students' diving proficiency is based on their ability to assist another diver in the water. However, there are many safety concerns for scuba divers with physical disabilities. The two main categories are, first, the standard issues of safety stressed in every scuba certification class. All divers with and without disabilities must learn about dangers and related safety techniques in these classes. The second category, personal safety issues for divers who have a disability, includes four areas of concern: use of medication, skin protection, pulmonary conditions and temperature regulation.



## Cycling:

This sport can be accomplished using either the upper or lower body and is an activity that can be done indoors or outdoors. Bicycles provide the action of a bicycle without the stability of a tricycle. One type of bike, the "Handbike" provides more mobility than a tricycle and has casters that can be raised once a comfortable speed has been reached. Hand cycling attachments are connected directly to a wheelchair. Arm driven tricycles can be used for racing or for recreation and some can tow a wheelchair.



## Climbing:

The climbing technique an individual uses is dependent upon his or her abilities. Each climber must base the technique they use on their individual abilities. For people with little or no use of the legs, the basic technique is called the "para pull-up." The climbing motion is done not on the face of the wall but on a static rope. Not only is the climber attached to a belay\* but also to an ascender\* which is attached to the chest harness of the climber. A second, modified ascender with a bar fastened to it is attached to the static rope. With each pull-up on the bar, the chest ascender is moved up the static rope, moving the climber six inches with each pull-up. A general side orientation to the wall face is used in this technique in order to avoid skin abrasions on the knee area. **\*Belay:** The person climbing should always be clipped into a safety line. At the other end of that safety line is a person controlling the tension in the safety rope. If the climber falls, the person belaying uses a mechanical device to stop the climber from falling. This is called "belaying", and the device the person uses is called a belay device. A belay device enables a single person to hold more than his or her weight by the tips of their fingers. **\*Ascender:** An ascender is a mechanical device that lets you climb the rope without letting you slip back down.



## Boccia:

Boccia is a competitive game that can be played one-on one, in pairs or with teams of three. It is played on a specially marked court, usually with a hard surface. The goal of the game is for players/teams to throw/bowl game balls so that they get them as close as possible to a special target ball. The game begins with a player throwing the white target ball onto the court. Opponents then take turns trying to throw/bowl their game balls as close as possible to the target ball. When the game balls have all been thrown, a referee determines the points awarded to individual or teams based on measurement of how near the game balls are to the target ball. There are many benefits of playing boccia. Boccia is an activity that can be enjoyed by persons of all ages and persons with a wide variety of disabilities. It can be played for recreation, as a competitive sport, or for physical education in school programs. The game requires planning and strategy in trying to place playing balls for maximum scoring. It also can develop or increase hand-eye coordination. Finally, boccia is an activity in which individuals with severe disabilities can participate and develop a high level of skill. The game can be easily adapted to allow players with functional limitations to use chutes and ramps in order to place their game balls into play. Chutes and ramps allow many individuals to participate who might otherwise be unable to compete. A player may use an assistant when using a ramp; however, the assistant is not allowed to view the playing court and must follow specific instructions from the player at all times. Although the assistant places the ball at a certain height he/she may not initiate the throw.



## Skiing:

Skiing is a popular activity with several programs and a wide range of adaptive equipment available for individuals with disabilities.

There are several skiing events offered by various organizations to encourage individuals of all abilities to participate. Downhill alpine skiing is a sport that involves an individual sitting in a bucket style seat attached to a single ski while using outriggers to maintain stability. (Outriggers are poles that attach to the forearm and have ski tips at the base.) The skier has the ability to lift his or her body to the height of a chair lift with little or no assistance from other skiers in the same time that it takes a skier without a disability. Three track skiing involves the individual to use one ski and two outriggers for stability. Skiing with a visually impaired skier requires good communication between the visually impaired skier and guide without a visual impairment who calls out the ski instructions.



## Ice Skating:

Figure skating, ice picking, speed skating and sled ice racing are all activities enjoyed by people with disabilities. The sled is propelled by picks or shortened ski poles. Equipment is also



available to help people with disabilities enjoy the sport more thoroughly. Prosthetic skates are available for individuals with leg amputations. There are also various types of skate models depending on a person's disability. The three main types are, first, a skate designed for people with Down syndrome or surgically corrected clubbed feet and is cut wider than a standard skate. The second model is designed for skaters who wear orthopedic equipment. These include people with cerebral palsy or spina bifida. Model 3 is designed for all skaters with disabilities who would benefit from a skate with the

comfort provided by softer leather and increased ankle padding. Different varieties of walkers are also available. Model 1 can be used by beginning skaters as well as skaters with disabilities. Model 2 is designed for skaters with disabilities who are able to walk or bear weight for limited amounts of time (for example skaters with cerebral palsy or spina bifida). Model 3 is designed for skaters with disabilities who have limited or no ability to bear weight.

## Water Skiing:

Water Skiing is a summer-time activity that can be easily adapted for individuals with disabilities. It is both a recreational and competitive activity. In the competitive form of water skiing, there are three events: slalom, trick skiing, and the jumping event. USA water ski is a national governing body for water skiing and works through water skiers with disabilities association to serve individuals with disabilities. There are basically the same safety precautions for people with disabilities as there are for people without disabilities. These include: Consulting a doctor before skiing; considering the use of a wet suit so their body temperature does not fluctuate to extremes; and when learning to ski, becoming familiar with the equipment while on land. Finally, skiers with upper extremity amputations should not be attached to a ski rope with a device that cannot automatically let go.



## Tennis:

There are two versions of tennis within disability sport: Ambulatory tennis and wheelchair tennis. Tennis is played in singles or doubles. There are also many benefits of playing tennis; for example, tennis is a cross-disability activity and is a low-cost activity that does not require a lot of equipment. Arm and leg prosthetics are available for individuals who are amputees. Arm prosthetics can be adapted in order to grasp a tennis racquet. There are several rule modifications in wheelchair tennis. The most significant rule change is the “two bounce rule.” This means that the wheelchair tennis player is allowed two bounces before the ball needs to be returned across court. The first bounce must be in bounds and the second bounce may be out of bounds. When a person in a wheelchair plays against a person who is not in wheelchair, the person who is not in the wheelchair is allowed only one bounce. Grip devices are designed specifically for players that do not have the grip strength to hold a racquet. Athletic tape and an Ace bandage wrap are two simple solutions to maintain a proper grip. Orthopedic racquet holders and “grasping gloves” are available if more support is required.



## Golf:

Do you every wonder how you will get around the golf course if you used a wheelchair, crutches or cane? If you are blind or have a visual impairment, did you know that you can still play golf? Golf can be played by anyone. There are many assistive devices on the market that enable golfers with disabilities to play the game. Specially designed golf clubs mobility devices, gripping aides, practice facility equipment such as automated ball teeing devices ball retrieval aides, etc. are available for use. Many companies are manufacturing devices that are designed to accommodate both golfers with and without disabilities. Specifically, single rider cars that are lighter in weight and that have turf sensitive tires are now available. Further, numerous rehabilitation and recreational instructional programs and national organizations provide information and conduct tournaments that include golfers with disabilities.



## Football:

There are several versions of football in which individuals with disabilities can participate. Flag and touch football can be played by individuals who are ambulatory and individuals who use wheelchairs. Wheelchair football rules vary between leagues and situations. The most popular wheelchair football tournament in the country is known as the Blister Bowl held by the Santa Barbara Parks and Recreation Department. Teams consist of 6 players which must include one female and one player who has quadriplegia. Individuals with limited use of the hands, arms, and eyes are credited with a catch if the ball hits them above the elbows. Games can be played with anywhere from 5 to 14 individuals. When the number is odd, a steady quarterback is used. Manual chairs, power chairs, and/or scooters can be used to participate.



## Basketball:

There are two major versions of basketball popular within disability sport: Ambulatory and wheelchair basketball. In wheelchair basket ball the wheelchair is considered part of the player, therefore general rules of contact apply. The height of the seat may not exceed 21 inches from the floor. Seat cushions are permitted for medical and therapeutic reasons; however, the thickness of the cushion allowed varies. Each chair must be equipped with a roll bar or other protective device to insure against damage to the playing surface. Players with the ball cannot push more than two strokes with one or two hands to advance without dribbling the basketball. However, a player may wheel the chair and bounce the ball simultaneously. Bankshot basketball involves no running, dribbling, jumping, or body contact and relies on shooting skill. A series of shooting stations are set up, each with a uniquely shaped backboard. The players must score the ball off the backboard from three different positions in order to move to the next station. Twin basketball is a game that started in Japan. In this game, players are divided into three classes based on functional level. The game court is a regular basketball court, but the players surround the free throw circle which encloses two goals: a high goal and a low goal.



## Goal Ball:

The game of goal ball was invented in 1946 by an Austrian named Hanz Lorenzen. The first idea for the sport was a rehabilitation activity for blind veterans of WWII. It was first introduced to the world during the Paralympics held in Toronto in 1978. Since that time the sport of goal ball has grown throughout the world. There are three members of each team on each end protecting the goal line. There is one center and two wings on each team. The game is 14 minutes long, made up of two seven minute halves. A rubber ball with bells inside for auditory tracking is used and each player must wear a blindfold regardless of the degree of visual impairment. An option is given to each player to wear elbow pads, kneepads, hip pads and face protection. Many individuals who are visually impaired or blind typically do not have opportunities to be involved in team sports and physical activity. One of the best benefits of goal ball is that it promotes teamwork and cooperation among teammates. In addition, because goal ball can be played by individuals with and without visual impairments together, it acts as a medium for breaking down stereotypes. A natural result of this is that it helps promote awareness within the community of what individuals who are visually impaired can do.



## Softball/Baseball:

There are many various ways to play this game depending on an individual's disability. Wheelchair softball requires the players to be in a wheelchair to participate and each wheelchair must have a foot platform and a smooth, hard playing surface must be used. Each base consists of a 4-foot-diameter circle surrounding a 1 foot square base in fair territory. A player cannot leave his or her chair to gain a fielding advantage. If this occurs, each base runner advances two bases. All teams must have a person who has quadriplegia in play. Beep baseball requires only two bases and they consist of 4-foot-high padded cylinders with speakers. The pitcher attempts to place the ball, which emits a beeping tone, where the batter normally swings. Once the ball is hit, the base operator activates one of the bases to emit a buzzing sound and the batter must identify the base and run to it before the defense fields the ball. Spotters attempt to aid the defense with verbal cues. It is a race between the offense and defense.



## Soccer

Soccer is an excellent activity for improving overall physical fitness and requires very little equipment. There are various types of soccer according to what an individual's disability may be. USCPAA soccer has two main modifications. First, teams are reduced from eleven players to seven players; second, the playing field dimensions are reduced along with smaller goal areas. VIP soccer is designed for children who have visual impairments, amputations, mental retardation, autism, Down syndrome, cerebral palsy, and other conditions that impair mobility, strength, and/or comprehension. VIP soccer integrates "buddies" or volunteers to help layers on and off the field. Teams consist of as few as 5 players and are balanced by size and physical ability. TOP soccer is designed for children who have mental or physical disabilities. In this game, participants are placed on teams according to ability, not age. Power soccer is played by individuals who use power wheelchairs. Games are played on a regulation size basketball court with four players composing a team. Foot guards are placed on the chairs to push the ball.



## Hockey (Wheelchair):

The wheelchair Hockey League (WCHL) was created for the enjoyment of participating in hockey and includes players in manual and electric wheelchairs. Players have disabilities such as cerebral palsy, muscular dystrophy, spina bifida, spinal cord injury, and stroke. There are a few general rules to the game that differ from NHL rules: A total of five players (including the goaltender) are required on the floor to play a game; goaltenders cannot use a manual wheelchair; goals are scored when the ball completely crosses the goal line; goals will not be allowed if the ball was kicked by an offensive player and as a result entered the goal either directly or after deflecting off any player including the goaltender. Also, the playing area is not on an ice rink. Instead, it is on the surface of a gymnasium, approximately the size of a basketball court. All sticks must be made of a plastic handle, shaft, and blade. Hockey pucks are not used in the game, either. A hollow plastic ball, two inches in diameter, with holes in it, is used as the official game ball. Participants are free to wear protective gear such as eyewear, helmet, knee or arm pads.



## Volleyball:

Volleyball is an activity that can be played by individuals with several different ability levels in either a recreational or competitive setting. Standing and sitting volleyball are the two main forms of this activity. Standing volleyball involved participants with amputations with or



without prostheses, depending on individual preferences.

In certain recreational volleyball settings, a beach ball or balloon can be substituted for a standard volleyball.

Walleyball is an adapted version of volleyball played on a racquetball court. Sitting volleyball is played with six players per team on a smaller court with a lowered net. This version of volleyball enables double leg amputees and individuals with spinal cord injuries, polio, and various other lower extremity disabilities to participate. Some part of the body from the buttocks to the shoulders must remain

in contact with the floor at all times. When hitting, players must remain seated. The use of prosthetic or orthopedic devices is not allowed. Sitting volleyball is also an excellent activity for physical education classes and to allow individuals with and without disabilities to participate together.

***Information/graphics for adaptive sports and recreation obtained from the following:***

*[www.ucp.org](http://www.ucp.org) , <http://www.therapeuticadventures.com/adapsnow.htm> , <http://www.goalball.com/> , [www.ampsoccer.org/news/3on399.htm](http://www.ampsoccer.org/news/3on399.htm) and [www.westol.com/~johnsog/pictures.html](http://www.westol.com/~johnsog/pictures.html) .*

*Please understand that people with disabilities participate in many recreational activities and sports. Descriptions of the sports above are only a few of the most popular choices. More information can be found through the UCPA website ([www.ucp.org](http://www.ucp.org)) as well as your local library.*