

THE SIX ADAPTIVE SKIING DISCIPLINES

Mono-ski: In adaptive skiing, a mono-ski is a piece of sit-down equipment that enables people with disabilities affecting their legs to ski sitting down in a molded seating apparatus or “bucket.” The mono-ski has one ski mounted underneath the “bucket” via a linkage system with suspension to create shock absorption. Outriggers, a short type of Canadian crutches with a ski tip on the end, are used by mono-skiers for balance, timing and basic control movements.

Bi-ski: Bi-skiing is a downhill technique whereby the skier is seated in a “bucket” seat attached to an articulating undercarriage, which is mounted on two uniquely designed skis. Skiers can ski independently with outriggers or with the assistance of an instructor via tethers attached to the back of the ski. The bi-ski enables individuals with highly-involved disabilities to ski at most ski areas.

Three-Track: Three-track skiing is defined as skiing on one ski while using outriggers to maintain balance. Candidates for three-track skiing have an amputation or disability that affects one or both legs that necessitates skiing on one ski. Some three-track students are bilateral amputees that ski on their prosthetic leg.

Four-Track: Candidates for four-track skiing have a disability that requires them to use outriggers or a walker for stability while skiing. Because these students usually experience balance problems or general weakness in their lower extremities, they must have at least four points of contact with the snow. Tailored teaching techniques, further equipment and instructor assistance may be utilized to further enhance balance and skiing prowess.

Blind/Low Vision: This discipline employs communication, guiding and kinesthetic teaching techniques designed to optimize the experience of skiing for individuals with blindness and low vision.

Cognitive Disabilities: This discipline is a collection of techniques designed to teach skiing to individuals that have difficulty learning or processing information. The discipline uses alternative learning methods focusing on kinesthetic and visual techniques.

THE BASICS OF SKIING

Skiing is a sport of balancing while in motion. Skiing can best be understood by breaking it into basic skills that can then be recombined to create various movement patterns. Adjusting the blend and complexity of skills enables the skiers to manage and manipulate the interaction between skis and snow in a way that produces a desired performance outcome. The role of an instructor and lesson assistant is to accurately assess the present ability level of students, identify their desired outcomes and develop a customized prescription for success.

<i>Fundamental Skiing Skills...</i>	<i>Lead to...</i>
Balancing Movements	Maintaining balance while in motion
Rotary Movements	Turning and guiding the skis
Edging Movements	Aiding in adjusting the edge angle of the skis in relation to the snow
Pressure Control Movements	Managing and manipulating pressure variations between the skis and the snow

Efficient and effective skiing occurs when skiers make optimal use of their abilities, their equipment, the terrain and the snow conditions. We use terms such as “efficient” and “effective” to emphasize the importance of managing energy in skiing, meaning that the skier’s energy is being directed toward the desired result with no wasted effort. This improves performance, reduces fatigue and enhances fun.

COMMON MOUNTAIN ENVIRONMENTAL HAZARDS

Frostbite

Frostbite results from exposure to sub-freezing temperatures. Damage occurs mainly to the feet, hands, ears, and nose. Frostbitten parts are seldom re-warmed outside of a medical facility because such facilities are usually nearby. If in a remote location, the wet, rapid re-warming method is preferred to slow re-warming, since the latter is associated with greater tissue damage.

Rapid Re-warming

Do not re-warm if a medical facility is nearby or if there is any chance that the part may refreeze.

Remove clothing or constricting items that could impair blood circulation (e.g. a ring).

Put affected part(s) in warm (not hot) water. Water temperature should be 102-106 F. If a thermometer is not available, test the water by sprinkling some over the inside of your arm.

Maintain the water temperature by adding warm water as needed.

Warming usually takes 20-40 minutes. Continue until the tissues are soft and pliable.

For ear or facial areas, apply warm moist cloths and change them frequently.

To control pain during the re-warming, the victim may take an analgesic.

Do not break any blisters that may have formed.

Do not rub the affected part.

Hypothermia

Hypothermia (cooling of the body core) can occur at temperatures above freezing as well as below it. Stop further heat loss by doing the following:

Get the victim out of the cold environment.

Have a source of heat (e.g., stove, fire).

Add insulation beneath and around the victim. Cover victim's head since 50 percent of body's heat loss is through the head.

Replace wet clothes with dry ones.
Handle the victim gently.
Treat any injuries.
Seek medical attention.

Mild Hypothermia (core temperature above 90 F)

Raise core temperature by whatever means available:

Use a tub of hot water (no greater than 108 F) or electric blanket. Leave victim's arms and legs out. Or,

Place hot packs against the body areas that lose heat the fastest. Do not burn the victim. Or,

Have a rescuer dressed in thermal clothing lie trunk to trunk with the victim in a sleeping bag

or
bedding.

Profound Hypothermia (core temperature below 90 F)

Do not re-warm the victim if he can be transported to a medical facility within 12 hours.

Keep the victim from getting colder.

Do not jostle or jolt the victim during transportation.

Sun Exposure

Exposure to the sun is 40% greater above timberline and 75% greater if there is snow on the ground! Why? The best filter for the burning ultraviolet rays, both type A and B, is the atmosphere and at 10,000 feet there is 40% less atmosphere. Snow reflects nearly 85% of the sun's damaging rays thus increase your chances of sunburn.

To decrease exposure for you and your student:

- Bring and wear sunscreen/sun block.
- Apply a broad-spectrum sunscreen with a sun protection factor (SPF) of at least 15 that shields both UVA and UVB rays.
- Minimize bare skin exposed to the sun.
- Be aware- the sun's rays are strongest between 10 A.M. and 4 P.M.
- Reapply sunscreen every two hours when outdoors, even on cloudy days.
- Wear protective, tightly woven clothing, such as a long-sleeved shirt and pants.
- Protect your eyes by wearing quality sunglasses that filter both UVA and UVB rays.

Dehydration

Dehydration can be defined as "the excessive loss of water from the body."

Our bodies require a certain amount of fluid intake on a daily basis to function; the minimum is about equal to four 8 ounce glasses (one liter or one quart). Requirements vary with activity and age, but most active persons need two to three times this basic amount. Basic fluid intake serves to replace the fluids which are required to perform our normal bodily functions. If we take in less or lose more fluid than is needed, the end result is dehydration.

In general, the following signs are suggestive of dehydration; increasing thirst, dry mouth, weakness or lightheadedness (particularly if worsening on standing), darkening of the urine, or a decrease in urination. Severe dehydration can lead to changes in the body's chemistry, kidney failure, and can even become life-threatening.

The best way to treat dehydration is to prevent it from occurring.

- Before the start of your lesson, drink plenty of water and check in with your student about

pre-lesson water consumption.

- Suggest water breaks during the 2.5 hour lesson.
- Bring water in a durable container of your choice with you on the lesson.
- Note that water is always free and available for you and your student in the lobby of the Program Center and at the Gentian Café.

When in doubt...return to the Program Center!