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COMMUNITY COACHING
ATHLETES WITH A PHYSICAL DISABILITY
REFERENCE MANUAL

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INTRODUCTION

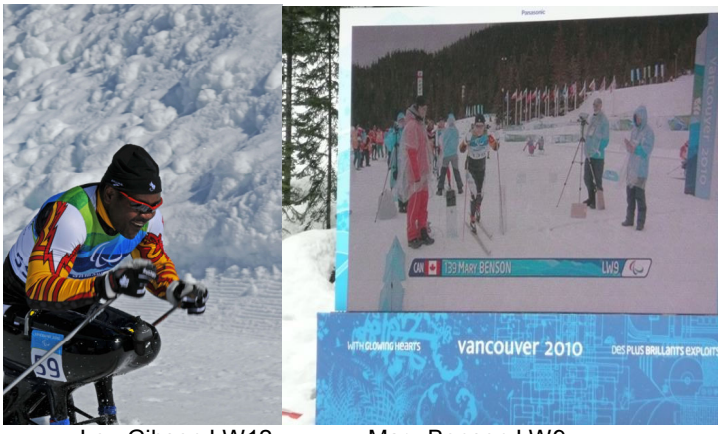
What is Para-Nordic?

Para-Nordic skiing is organized and governed by the IPC at the international level and Canada follows IPC rules and regulations. The IPC defines all Para-sport as being for those with a primary impairment that belongs to one of ten eligible impairment types. Generally this means a physical impairment but athletes with an intellectual disability (ID) are now recognized by the IPC and some Para-sports have begun to integrate ID athletes into competition. Para-Nordic competition currently does not include categories for ID athletes. Competition for ID athletes is organized separately by International Sports Federation for Para-athletes with an Intellectual Disability. In Canada local grassroots programs may include ID skiers but once a skier gets to a certain level and wants formal programming or to begin competition they should follow the appropriate path for their disability.

Though Deaf is a physical disability, it is not included in the Paralympics. Deaf skiers can compete in able-bodied competitions

As a sport Para-Nordic is further refined into three general categories:
- Blind/Visually Impaired
- Standing skiers
- Sitting skiers

[Terminology Note: throughout this manual the term Adaptive or Para-Nordic (or PN) will be used interchangeably]



Lou Gibson LW12 Mary Benson LW9
(Photos by Dave Benson)

IPC Para-Nordic Classification Summary Chart 2014-2018

(Percentages revised by IPC Sept 2014)

SPORT CLASS	% Classic	% Free	DESCRIPTION	SPORT EQUIPMENT
Standing				
LW 2	**92%**	**91%**	Impairment in one entire lower limb (leg) involving pelvis and structures distal.	Two skis, two poles
LW 3	**87%**	**89%**	Impairment in two lower limbs which include whole and/or partial limb dysfunction.	Two skis, two poles
LW 4	**96%**	**97%**	Impairment in one lower limb below the knee.	Two skis, two poles
LW 5/7	**80%**	**88%**	Impairment in both upper limbs (arms) without the use of prosthesis. The impairment must be such that the athlete is unable to use poles. If the athlete is able to use a pole they must compete as LW6 or LW8	Two skis, no poles
LW 6	**90%**	**95%**	Impairment in one entire upper limb. The athlete must not use a prosthesis.	Two skis, one pole
LW 8	**91%**	**96%**	Impairment in one upper limb below the elbow. The athlete must not use a prosthesis or use the affected arm to aid in poling in any way.	Two skis, one pole
LW 9	**89%**	**89%**	A combination of impairment in both upper and lower extremities. Impairment in one arm and one leg meeting the criteria of LW4 and LW8, or cerebral palsy or neurological impairment that presents in a similar way to cerebral palsy affecting at least one arm and one leg.	Two skis and one or two poles

Sitting				
LW 10	**86%**		Impairment in the lower limbs and trunk with minimal trunk muscle activity in flexion and extension and no functional sitting balance. Athlete is unable to stand.	Sit-Ski
LW 10.5	**90%**		Impairment in the lower limbs and trunk with some upper abdominal and trunk muscle activity and no functional sitting balance. Athlete is unable to stand	Sit-Ski
LW 11	**94%**		Impairment in the lower limbs and trunk with fair upper abdominal and trunk muscle activity with some functional sitting balance. Athlete is unable to stand.	Sit ski
LW 11.5	**96%**		Impairment in the lower limbs and trunk. With good upper abdominal and trunk muscle activity and good sitting balance. Athlete may be able to stand	Sit-Ski
LW 12	**100%**		Impairments in the lower limb(s) with normal trunk function.	Sit-Ski
Visually Impaired				
B1	**88%**	**88%**	No functional vision. Athletes must wear opaque glasses to ensure they cannot see.	two skis, two poles, opaque glasses
B2	**99%**	**99%**	Up to approximately 3-5% functional vision.	two skis, two poles
B3	**100%**	**100**	No more than 10% functional vision.	two skis, two poles

IPC continues to revise and update the classifications and percentages. Check IPC website for the latest http://www.ipc-nordicskiing.org/Classification/

Some Common Disabilities Found in Para-Nordic

AMPUTATIONS: Congenital, surgical or traumatic loss of a limb or part of a limb. Look for the hidden causes: if due to cancer, recent or current, chemotherapy may cause fatigue or impaired temperature control. If amputation is due to Diabetes, the individual may lack sensation in other areas (often hands or feet), plus may need to eat or take medication on a certain schedule. Injuries resulting in amputation may encompass other hidden disabilities for example, minimal brain damage, need for a bladder control device, or hearing impairment. The residual limb (stump) needs to be protected while skiing. An ace wrap should be applied to prevent swelling and/or the limb should be padded and covered to avoid damage from falls or cold. Deciding whether or not to ski with a prosthesis is determined by damage from falls or cold. Deciding whether or not to ski with a prosthesis is determined by is strong enough to withstand the stresses of skiing.

BLIND/VISUALLY IMPAIRED: Partial or total loss of vision which may include, but not be limited to: tunnel vision, peripheral vision, myopia, or loss of depth or distance perception. Some causes include: Diabetes, Glaucoma, Detached Retina, Eye Injury, Multiple Sclerosis, Brain Tumor or Head Injury. Ask specific questions and define the student's range of vision.

CEREBRAL PALSY (CP): A non-progressive disorder caused by brain damage before, during or after birth. It is characterized by abnormalities of muscle tone and difficulties with voluntary motor control of one or more limbs. It usually results in delayed motor development. The individual may have one type or a mixture of types. Individuals with cerebral palsy may or may not have cognitive impairment. Common CP classifications:

> **Spastic (hypertonic)**: Increased muscle tension and difficulty with relaxation, may have lack of full mobility at some joints. Tense contracted muscles.
> **Low Tone (hypotonic)**: Decreased muscle tension, may appear floppy, often have joint hyper-mobility (double jointed). *Dirninished muscle tone*.
> **Athetoid**: Muscle tone fluctuates from high to low therefore motor control is inconsistent. *Extraneous uncontrolled movements*.
> **Ataxic**: Muscle tension often appears okay but control of movement and balance is impaired so that the individual may appear drunk. *Jerky uncontrolled movements.*
> **Rigid**: Muscle tension often is very tense. *Stiff uncontrolled movements*.

MULTIPLE SCLEROSIS (MS): A progressive disease that causes the myelin sheath around nerve cells to disappear so that they no longer transmit the necessary signals. The disease may go into remission, but generally worsens over time (varies from individual to individual). It occurs more often in women than men; initial onset is usually in the late twenties or early thirties. Fatigue and heat tends to make the symptoms worse. Muscle paralysis may be partial or full in any limb and loss of sensation may also be partial or full in any area. Visual problems are very common.

MUSCULAR DYSTROPHY (MD): A progressive degeneration of muscles. Caused by a defective gene that is passed from parent to child. MD is more prevalent in boys.

> **Duchenne Type**: The most common and most severe form of MD. Onset is usually between ages 3 - 10. Males are affected more than females. Generally a delay in learning to walk with frequent falls. A waddling gait is usually apparent by 6 years of age.
> **Facio-Scapulo-Humeral Type**: The most common form of MD in adults. Symptoms do not appear until adolescence and are not recognized until adulthood. Prognosis is good. The disease may arrest itself at any stage. Effects facial, shoulder, and arm muscles.
> **Limb Girdle Type**: This type may occur at anytime from age 10 or after. The onset

usually occurs during the second decade. Both genders are equally affected. Affects movement in upper/lower extremities including ability to move.
Mixed Type: Rapidly progressing and usually fatal within five years. Affects all voluntary muscles.

NEUROMUSCULAR DISEASES: A group of central nervous system diseases affecting the motor system, causing weakness or clumsiness with voluntary motion and involuntary movement. These diseases include: Huntington's Disease, Parkinson`s Disease, Friedreich's Ataxia, Amyotrophic Lateral Sclerosis (ALS), Guillain-Barre Syndrome, and Myasthenia Gravis.

POLIO: Muscle weakness or paralysis in any specific muscle or muscle groups caused by the polio virus. The involvement is specific to each person.

POST POLIO SYNDROME: A progressive, degenerative disease impacting nervous and skeletal systems. The disease can be disabling since resulting problems are added to preexisting damage that occurred at the initial polio infection. There is no cure. Symptoms include: fatigue, muscle atrophy, muscle spasms, disc disease, and nerve damage resulting in muscle weakness, scoliosis, and other symptoms.

STROKE - CEREBROVASCULAR ACCIDENT (CVA): Interruption in circulation to the brain that diminishes oxygen supply and commonly causes serious brain damage. Typically individuals will suffer from hemiplegia (one-sided paralysis) of either upper or lower extremities or both. Balance may also be an issue. Some stroke victims have difficulty speaking or processing auditory input.

SPINA BIFIDA: A birth defect resulting in abnormal development of the spinal which may affect the connection between the brain and the spinal cord. Damage may occur anywhere along the spinal canal. Disability may range from weakness in the legs to full paraplegia with trunk weakness.

SPINAL CORD INJURY: Spinal cord damage due to some type of insult to the spinal cord, such as trauma, infection or tumor. Individuals are classified as complete or incomplete based on preservation of function in the S4/5 spinal segment.

Paraparesis: Partial paralysis affecting the lower limbs.
Paraplegia: Paralysis of lower portion of the body and of both legs.
Quadriplegia (also called Tetraplegia): Paralysis of all four extremities and usually the trunk.

Coaches should be aware of the symptoms of **autonomic dysreflexia**: which are typically sweating, shivering, skin blotching, and headache. Since this condition can occur spontaneously and be dangerous to the athletes' health, the medical team should have a treatment plan in place should an emergency arise.

TRAUMATIC BRAIN INJURY (TBI): Acquired brain damage caused by some type of insult to the brain. TBI can affect muscular control (paralysis). In some cases it may affect cognitive functions (e.g. short term memory loss or Aphasia) but does not affect the intellectual or learning ability of the individual.

CONSIDERATIONS FOR WORKING WITH ADAPTIVES

Ski Facility Access Issues for Adaptive Skiers

In the sport of para-nordic skiing, each adaptive skier will have unique needs and abilities so the level of help required can vary greatly. However, there are some general considerations to keep in mind to make facilities more accessible for people with disabilities.

Transportation and Parking:

- Are there options for people with disabilities who cannot drive to get to the ski area, including carpools, public transportation, etc.?
  - Most ski areas are away from public transportation routes and few are served by private bus service.

- Are there designated disability parking spots close to the lodge and trail system entrance for easy access?
  - Important so athletes with limb impairments and mobility disabilities do not have to carry gear over long distances.
  - Important for wheelchair users as wheelchairs do not easily move over snowy terrain. Remember, wheelchair users have to move all of the regular gear for skiing plus a sit-ski!

- Are these parking spots large enough to accommodate wheelchair users?
  - In order to get in or out of a vehicle, a wheelchair user often has to fully open the vehicle door. Having an extra wide parking space ensures another vehicle won't inadvertently park too close.

The Ski Lodge or Warming Hut

- Is there level, snow-free access for wheelchair users? If not, is there a stable, slip-free ramp?
  - Maximum recommended grade for a wheelchair ramp is 1:12 (for every 1 foot of rise in elevation, there should be 12 feet of ramp). A ramp should be at least 36" wide

- Are the doors wide enough to accommodate a wheelchair?
  - Minimum required width is 32".

- Are there handrails on both sides of ramps and stairs?
  - Important for athletes with balance issues and/or one-sided limb impairments.

- Are there accessible washrooms?
  - There are specific requirements to making a washroom accessible, but a few key points include:
    - A washroom stall needs to be wider in order to accommodate the turning radius of a wheelchair.
    - Toilet should be 16” in height to make it easier for individuals to transfer to/from their wheelchair.
    - Sink should be designed to allow a wheelchair user to be close to the sink (i.e.: no cupboards underneath).
    - Taps should be of a lever design and not rounded, as these are easier to turn for those with limited hand and arm mobility.

- Is club information, trail maps, etc. available in large print or electronic format for athletes with low vision or who are blind?

Trail Passes and Trail System

- Does the facility have a policy that skiers with disabilities who require assistance out on the trails (i.e.: guide for blind skier) will be given complimentary passes for their support person?

- Are the trail signs easy to read and located in places that are easily accessible? For example, beside the trail versus up in a tree.

- Does the facility have a policy about guide dogs on the trails?

Adaptive Ski Equipment

As each skier will have unique needs, you may have to get creative! However, here are some basic equipment needs for skiers with disabilities:

Sit Skiers

SLED: The amount of mobility and core strength a sit skier has will in part dictate the type of sled they will use.

- Sit skis range from kneeling sleds (LW12) to knees upright in front of body (LW10).

SEATS: A good seat should fit snug and comfortable and ideally the width of the seat will correspond with the width of the skier's hips. Often padding is needed to make this fit to the person when using generally sized seats common with rental or club equipment.

- Sleds will come with soft canvas seats like the Toby or with a hard molded seat like the Sierra that can be fitted to suit the athlete.

- The canvas seats are good for clubs as they can accommodate a variety of sizes and abilities.
- The disadvantage of this type of seat is there requires more straps to reduce movement. This movement can limit control.
- The molded seats can be adapted to fit a smaller range of people by using padding

you can accommodate more. The benefits of the molded seat is that it gives more support and therefore is preferable for someone with a high spinal cord injury where the stabilizing muscles are not working.

- The molded seats can also be fitted to the athlete; this is the ideal situation as the transfer of energy from body to sled is increased.
  STRAPS: A variety of sizes of straps is needed to secure the ankles, legs, and thighs to the sled these are 2” wide with Velcro or other closing device. Be careful that you do not cross the straps over a catheter tube or bladder bag.
- Abdominal straps will be required: these should be no less than 4” wide and should have some stretch. A variety of lengths is recommended when needing to fit a variety of sizes. Abdominal belt extensions of 4-6” is good to have for larger adults.
- Strap sizing to accommodate both adult and children will be necessary.
- The abdominal belts need to be securely placed around the sled seat and the person. Some sleds come with these built in and others require additional strapping. The importance of the straps and abdominal belts is they enable the transfer of energy and movement to the sled so that the body and sled act as one thus improving efficiency.

POSITION: Leg and foot position should range from 25° - 45° angle. This serves a number of purposes. It improves circulation, helps promote maximum body mechanics for forward propulsion and reduces spastic contractions.

- When positioned properly the athlete should be able to engage their core muscles (if possible) and move to the upright position from a flexed position more fluidly. Important when double poling. This positioning also reduces fatigue.
- Adjustable seat backs are very beneficial when using sleds with a variety of athletes as these can also help with proper body position. Especially important when there is less functioning.
- The athlete should not be leaning back on the rest. At a minimum the athlete should maintain a 10° forward angle.

SKI POLES: should come to eye level when sitting in the sled with elbows at 90° angle. This is the most important piece of equipment the athlete should own as then the pole straps will fit the gloves the athlete prefers to ski in and the pole will be the correct length.

- Aluminum poles are stronger and better for club equipment as fiberglass and carbon poles are too easily broken.

- As athletes get stronger, are able to execute more techniques and want more control they will move to shorter poles.

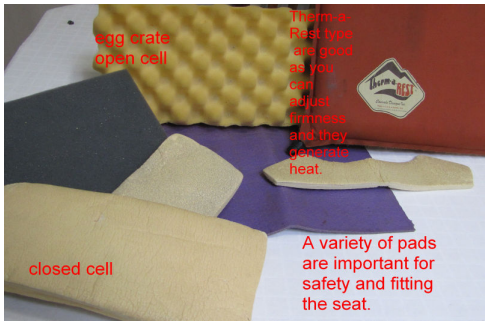
TYPE OF SKI: Choosing the right ski will depend on a variety of variables from the typical climate in your area to the type of skier using the sled.

- In colder climates or if you have a strong aggressive skier a skate ski may be preferable as these are stronger. Another advantage of the skate ski is the maneuverability is better for cornering because they are shorter.
- In warmer climates and higher moisture a classic ski works better. Also, the classic will float on top of the snow better in these types of conditions. It will not dig in like a skate ski might due to the shallow tip.
- A very aggressive skier at an LW12 level may break the softer longer classic skis when doing a tight turn at the bottom of a steep hill. So the type of skier can play a definite role in the choice of ski.
- Generally speaking a softer camber and shorter ski are best for beginners.
- Do not use waxless skis as this type reduces glide too much.
- Waxable skis that are waxed regularly are best as you want to promote glide thus reducing arm fatigue.
- Make sure the tops of the skis are flat when using sleds with only one binding and the toe grab system as these can slide if not secured by the slight suction created by the toe. This helps to prevent the ski from sliding off to the side.

BINDINGS: Two bindings on each ski provide greater control.

TETHER: for assisting new sit skiers to get up or down hills. This placed in around the back of the sled as low as possible for when you act as a brake snowplowing behind the sled.

- When placed on the front of the sled and behind your back then it will aid in the person not losing ground on an uphill climb. Younger and beginner skiers may need a rest and you can act as a brake from this perspective as well.



PADDING: Foam padding to “fit” sled seat to fit skier – should be snug. Closed cell foam is better as it does not absorb water and will not mold once warm.

Blind and Visually Impaired Skiers

- Under IPC rules, all blind and visually impaired skiers have the option to ski with a guide. Some B3 athletes may choose to ski alone.
- Communications systems are key for blind and visually impaired skiers working with a guide as factors such as snow conditions and wind can affect their ability to hear directions from their guide.
- Full-duplex radios with headsets will be useful for skiers with enough vision to see their guide while skiing.
- A personal PA system worn by the guide will work well for skiers who cannot see their guide while skiing as they can focus on following the sound of the guide’s voice.
- High visibility bibs labeled “Blind Skier” and “Guide” should help keep other skiers from interfering.

Standing Skiers

- An adapted walker mounted on skis can assist a beginner who might have difficulty with balance or spasms. Walkers are adjustable and can be fitted to many heights.
- Short skis are used so that the person can snow plow. Only classic technique is possible.
- Do not attempt hills until the person feels confident on the flats.

Adaptive Ski Technique

Adaptive skiers may face technique challenges as a result of their disability that will require extra attention to improve. These may include:

Standing Skiers

For lower limb impairments:

- Limited or no weight transfer.
- Cornering/turning is difficult.
- Snowplow braking is difficult.
- Prosthetics will “lock” the ski in a certain angle or direction; in skating that means the “V” cannot be changed and thus steep hills are difficult to climb.
- Misalignment of the skis due to asymmetrical leg length or hip position or position of the feet relative to the legs or prosthesis device(s) is common.
- Waxing of skis needs to be adjusted for the non-weight bearing leg.
- Working with specialists can be very beneficial for making the necessary changes to the prosthetic and/or the equipment to enable more movement and flexibility.

For upper limb impairments:

- Athletes with upper limb weakness or cannot hold poles will require more time perfecting their weight shift as their technique will be dependent on their lower body and core strength

Sit Skiers

[Instructors are strongly encouraged to practice these techniques themselves before coaching athletes in sit skis]

- Double poling- most used technique. Watch for A-framing the poles.
- Diagonal Stride- requires a lot more upper body strength as the movement needs to be quick to be effective.
- Getting up after falling. The lower the function the adaptive skier has, the more difficult it will be to get up. It is normal that someone designated as an LW10 will not be able to right themselves and will need assistance getting back up.
- To get up, the skier places the sit ski across the fall line with both poles uphill. The uphill hand is placed close to the body on the snow. The downhill pole is pressed against the torso and is at a 45degree angle to provide final leverage. The uphill hand first pushes off the snow, followed by a final push with the pole hand that brings the sit ski to an upright position.

- Review stopping in a hurry. If a hazard lies ahead that cannot be negotiated when going down a hill, yell “fall down”. Emphasize throwing the arms and poles away from the body to avoid pinning arms under the sit ski or breaking poles.
- Braking- There are 3 styles of braking and all of them can be used in different scenarios. The fit of the sled and the relationship to the ground is important as the skier must be able to reach the snow with their hands or top of the ski pole handle.
    - The top of the handle is the best form of braking. Make sure that they do not put their thumb in the way or they will break their thumb.
    - Dragging the poles and putting pressure on the tips can help with slowing ones speed when down-hilling.
    - A Pole-Push method can be used in front to help slow you and is often used to help with changing side to side direction by doing a push with the poles out to the side of the sled. This is a quick jab-jab motion. Using this method as a break at high speeds is not recommended as there is the risk of spearing oneself.
- Changing tracks- this is one of the most difficult techniques to learn. At a beginner level it is good to teach their assistant how to use the front of their skis to assist someone out of the tracks.
- Cornering- Based on balance, body position and braking. Need to learn to sideslip. One of the areas where the straps need to be tight but non-restricting so that the sled is like part of the body so that all of the body is used to make the turn.
- NOTE: Individuals who spend the majority of their time in a power wheelchair or scooter likely will not have the upper body strength to propel their bodyweight and that of the sled.

Blind/Visually Impaired:

- Balance. Skiers may tend to remains centered between the feet. Weight transfer and getting forward onto the balls of feet is often difficult.
- Research shows that it takes up to 8 times as many trials for a child with a visual impairment to master a new skill.
- Residual muscle tension is increased due to the absence of visual feedback. Besides creating higher energy expenditure this may pre-dispose the blind athlete to a higher risk of tension-related muscle injury.
- See below for additional information on guiding a Blind Skier.

Guiding a Blind Skier

A Guide is an Athlete's Eyes

As a sighted guide, you will assist an athlete who is blind or visually impaired by physically or verbally guiding them to keep them safe and by verbally translating visual information so the athlete has a better understanding of their surroundings. For example, you might physically guide an athlete from a ski lodge to the trailhead or give them information such as, "Your skis are beside your left boot." Information about the environment, such as "We are standing at the south end of the parking lot and the ski stadium is directly in front of us. The ski lodge is about 200m to our right and the waxing huts are 300m to our left near the finish area in the stadium."

A sighted guide can also provide information not specific to physical activity, such as "The washroom is closed for cleaning" or "There is a little cafeteria in the lodge." Information about potential hazards, including objects the athlete might trip over or posted warning signs, such as "Wet Floor" should also be relayed to the athlete so that they have a clear understanding of what is around them.

As a sighted guide, it is important to remember that sighted individuals generally learn most physical skills by watching someone else perform them. For example, though you may never have been a gymnast, you likely know what a cartwheel or somersault looks like. An athlete who is blind, however, may not have the same understanding because, depending on their level of vision, they might not have ever seen it. This can make learning a new skill very challenging, but as a sighted guide, it is your challenge to bridge this gap and give the athlete the information they need to understand a skill and perform it.

Sighted guides help both on and off the snow. Guiding starts and finishes from the parking lot and not when you are both on skis!

Guiding a Blind or Visually Impaired Skier On-Snow

A sighted skier will PROACTIVELY change their technique or body position based on the terrain they see in order to maintain balance and speed. However, a blind skier does not get the benefit of seeing this visual information, which often results in them REACTING to the terrain, resulting in loss of balance and speed.

Most important, you must talk to the athlete about the **emergency sit command.** It should only be used if the athlete is heading towards danger. If you ever say “Sit!” the athlete should immediately sit down and understand there is danger ahead.

As a guide, it is your job to **verbally describe the terrain the blind skier is approaching** so they too can make appropriate technical and body position adjustments. You will be a more effective guide if you can say something like “In three strides, we have gradual flat turn to the left. One, two, three - step left.” Or, “In three strides we are going to double pole. One, two, three, double pole!” By doing this, you will give the skier time to prepare for the change, helping keep you closer together and more in sync.

Depending on the level of vision the athlete has and the speed of travel, it may be useful to **continue to call out a command until the athlete has completely negotiated a specific action.** For example, on a sharp right turn on flat terrain, you might say, “In three strides, we have a 45 degree flat turn to the right. One, two, three - step right, step right, step right, step right, okay you’re through the turn.” You can also relate the sharpness of a turn to the face of a clock, as in “The trail is going to make a gradual turn towards 10 o’clock.” 12 o’clock is always directly in front of the skier. Remember some kids may not know what a clock face is.

Climbing hills can pose a challenge for skiers who are blind in that your stride length will be affected by the steepness of the climb. If you can’t see the grade of the hill, it’s difficult to judge your stride length as you approach it. **Calling out your cadence** may help the athlete get into the correct rhythm. Saying “pole” or “stride” each time your ski pole hits the ground or you move each foot will give the blind skier an audible rhythm they can try to mimic.

For distance, try to **relate it to specific units of time or distance** as opposed to vague terms of “long” or “short”. You could

say, “We have 30 seconds of a steep hill to go!” or “We have 50 metres more to reach the top of this hill.”

For **dips or bumps**, say “We have a small dip coming up in 5m, I’m at the dip now, you’re at the dip….NOW!” By indicating when you are at the obstacle, it may help the athlete relate your position to theirs so they better know when to expect it themselves.

When **the tracks are poor**, you might say “Messy track for 5 metres.” If one **track is wiped out completely**, you could say “Bad track on the right – follow your left ski.” If there is **something unusual on the track you can’t avoid**, describe what it is and what the athlete might feel so they can prepare. For example, “We’re going to cross bumpy snowmobile tracks in 15 metres. I’m crossing them now, keep your knees bent and hips down while you cross….and you’re over! Tracks are now 2 metres to your right.”

Some situations require you to **describe how the athlete needs to correct something**. For example, if a skier has their right ski in the left track, you might say, “Your right ski is in the left track. You need to move to your right so that your right ski is in the right track.”

Try to **avoid non-specific directions** such as “straight ahead” or “around this way”. If you cannot see, you have no reference point for what “straight ahead” or “around this way” means. It is better to say, “Follow me” or “Follow my voice” depending on the skier’s level of vision.

Each skier will have unique needs and the more you work together, the more better you will work together as a team. Never be afraid to communicate any concerns you have or suggestions to make things easier for both of you. Also, be open to hearing and acting on feedback from the athletes. The more each of you understand what the other needs to be effective, the more enjoyable the experience will be for both of you.

TECHNIQUES FOR CONVERSING WITH A BLIND PERSON SKIER

By Penny Hartin, CEO of the World Blind Union.

Introductions: When being introduced to people who have vision loss, say hello and wait for them to offer their hand to be shaken. When introducing yourself, simply say something like "Hi, my name is Kevin Jones. Great to meet you. Let's shake hands."

Conversing: Treat people with vision loss as people first. Relax and be yourself and speak the way you usually do. There's no need to shout or alter your voice. Also, feel free to use the words "see," "look" or "read" - people with vision loss use them too!

Introducing Others: Participants with vision loss may not know who else is in the room, or how many people there are. Introduce each person by name and indicate where he or she is in the room relative to the person with vision loss. For example, "To your left is Jack Smith; two metres in front of you is Susan Taylor."

Room Orientation: Describe the layout of the room, whether it is square or narrow, how many tables and chairs there are, how they are arranged, whether there are objects such as water glasses or candies on the table, and where the refreshments and washrooms are located. Use specific directions such as "straight ahead," "forward," "left," and "right" (instead of something vague such as "over there"). For example, you might say, "There is a table in the middle of the room, about six feet in front of you." Or "There is a coffee table on the left side of the door as you enter."

Leaving: Tell the person with vision loss when you're leaving their presence, even if it's just for a moment - "I'm just going to the ladies' room - back in a moment," or "Goodbye, Andrea. I'm heading off now!" will usually do the trick. Make sure that they're in contact with a tangible object such as a wall, table or chair. Not only is this good manners but it means they're not left stranded in an open space, talking to someone who's already left the room.

A Note about Guide Dogs: Do not pet a guide dog in harness, as tempting as this may be! Guide dogs are working animals and distracting them can be hazardous for the people they are guiding.

PLANNING AN ACTIVITY/PRACTICE

With some careful thought, many of the able-bodied ski techniques and training methods can be adapted for persons with a disability. Some other considerations for a successful session include:

Before the Session

- Have the skier or their parent/guardian complete the Assessment Form (see below). Educate yourself about the disabilities that your athletes have. The more information you have the better equipped you will be modify, change and improve their experience and equipment as necessary.
- Ask the athlete about their expectations and goals.
- If possible, perform an initial assessment of the athlete so that there is adequate time to purchase, prepare and/or modify equipment.
- Prepare a Facility Safety Checklist.
- Describe in detail where to meet for the ski session, how they are getting to the meeting point and how to get hold of you (phone or text).

During the Session

- Remember that athletes with limb paralysis, especially wheelchair users, will not be aware of frostbite setting in on the affected limbs. Be aware! Pressure points need to be watched for as these can lead to painful slow healing pressure sores. During a session make sure that these areas are protected by using proper fitting clothing and padding.
- Ask your athlete what works best for them. Remember they are the experts when it comes to their bodies and how things are working.
- An awareness of Post Traumatic Stress Disorder may help you to support an athlete who is new to the sport and early in their recovery; particularly if their disability was due to an accident or other traumatic event. This is a highly specialized field in medicine and mental health; however, a basic understanding will be invaluable to you as a coach. For example, if your athlete was in a car accident they may have fear of going fast. Going downhill fast will pose a challenge. Phobias and fears are part of the symptomology and it can have a huge impact on an athlete even from the point of being able to get proper rest and sleep. People suffering from PTSD often have a sleep disorder. You do not have to know how to treat this. Having a discussion will help both of you and a referral to a sports

psychologist will benefit this athlete. They may not have made this connection of old trauma and current performance.

See the person not the disability! They will often surpass your and their expectations of their capabilities if no limits are imposed on them!

ASSESSMENT FORM

Name:_____ Phone: (_____)

Address: _____

City: _____ State:__ Zip:_____
E-mail address: _____Date of Birth: ___
Sex: _____ Height: _____ Weight: *_____ (ski equipment limit 200 pounds)

Describe your disability: _____

Current physician and his phone #: _____

Medications (dosage, frequency, reason for use):

Recent surgical procedures (include dates):

General physical condition: Excellent Good Fair

Do you have seizures? Yes No

Date of last seizure: _____Type:_____

Do you have a shunt? Yes No

Do you have allergies? Yes No

Please list: _____

Do you have bladder or bowel adaptations? Yes No

Type: _____

Mobility: walker crutches braces wheelchair
Other:

Motor status: Please list any problems with muscle tone, range of motion, or strength. Also note any spasticity or paralysis area affected.

Please check any of the following that apply to you:

❑ Poor circulation in limbs ❑ Diabetes

❑ Cardiovascular problems ❑ Vision loss

❑ Hearing loss ❑ Sensory loss

❑ Respiratory loss ❑ Low endurance (tire easily)

❑ Communication Difficulties ❑ Other

BEHAVIOR & GENERAL ATTITUDES:

1 = normal

2 = mild problems, interferes infrequently

3 = moderate problems, interferes frequently

4 = severe problems, interferes constantly

❑ Frustration tolerance	❑ Hospitality
❑ Confusion	❑ Anxiety
❑ Distractibility	❑ Impulsivity
❑ Following directions	❑ Problem solving
❑ Slowness of speech	❑ Spatial disorientation
❑ Memory loss (short-term)	❑ Memory loss (long-term)
❑ Temper	❑ Ability to self-correct
❑ Aphasia (expressive)	❑ Aphasia (receptive)

ADDITIONAL ASSESSMENT CONSIDERATIONS

- Functional musculature determines which muscle groups the student can or cannot use.

- Strength: Evaluate the primary muscle groups needed for a specific discipline.

- Balance: Have the student lean to one side and return to upright, repeat to the other side, and then try it with eyes closed.

- Coordination: Watch the student perform physical tasks, with an eye for fluidity and efficiency of motion. Watching the student move around the room, open doors, or put on a jacket will help you assess gross motor movements. Watching the student write will give you an idea of the level of fine motor movements.

- Flexibility and range of motion: Adaptive students often have restricted range of movement due to joint fusion, muscle hype tonicity (rigidity), or muscle atrophy.

- Motor and Sensory Deficits: Use questions and simple tests to determine what parts of the body the student can feel and control. If the student has feeling in body parts with limited function, determine the types of sensations felt: heat, cold, pain, or pressure. If the student has incomplete sensation, determine the extent and consider the consequences.

- What is the person's emotional state: motivated, confident, timid, anxious, eager, elated, reserved, confused, or patient?

- Is the student easily distracted? Lack of concentration and reduced attention span are characteristic of some disabilities.

- Can the student easily process information, follow directions, and stay focused?

- What are the student's long-term goals and the goals for the day? Motivation is key to developing the lesson plan for the day and for the future.

ESTABLISHING A PROGRAM FOR ADAPTIVES

Funding Sources to Start A Para-Nordic Program

Canadian Paralympic Committee
http://www.paralympic.ca/en/Sports/Para-Equipment-First-Contact-Funding.html

Cross Country Canada
http://cccski.com/Para-Nordic/Funding-Sources.aspx

Where to Purchase Equipment

Full Duplex Radios:
http://www.eartec.com/FullDuplex/24g.html

Speaker Belts:
http://www.ampli.com/s206.htm

Sit Skis:
Recommend renting skis from Saski until club is more developed and ready to purchase sit skis.
http://www.saski.ca/mainpage.htm

Bibs:
http://www.reliableracing.com/detail.cfm?edp=10791804

Para-Nordic Contacts

The most up to date list of persons with experience in Para-Nordic programming and coaching can be found at CCC's website
http://cccski.com/Para-Nordic/Para-Nordic-Contacts.aspx

Coaching Resources

Cross Country Canada Long Term Athlete Development Guide for Athletes with a Disability

(Available in print from CCC or your division office)
http://www.cccski.com/Programs/Athlete-Development/LTAD-Long-Term-Athlete-Development.aspx

Canadian Sport for Life

- Training Athletes With a Disability
- No Accidental Champions (second edition)

http://www.canadiansportforlife.ca/resources/ltad-resource-papers