



Skiing is for Everyone

**INSTRUCTOR'S
HANDBOOK**

Property of
London Track 3 Ski School
www.londontrack3.ca

**LONDON TRACK 3 SKI SCHOOL
INSTRUCTOR'S HANDBOOK**

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Mission Statement

To provide a safe, enjoyable and rewarding downhill skiing experience for young people and adults with disabilities.

ABOUT US

The London Track 3 Ski School is a leader in providing downhill ski programs for children, young people and adults with disabilities. London Track 3 employs and has developed many techniques to assist individuals with a disability to learn to downhill ski and enjoy this winter activity in a manner that is safe, while at the same time demanding of their physical abilities.

The philosophy of Track 3 is that individuals with disabilities should be given the opportunity to experience the joy and exhilaration of skiing with full access to high quality instruction and equipment.

All of our instructors and support staff are unpaid volunteers who share our motto “Skiing is for Everyone”.

OPERATING INFORMATION

This handbook is presented for the information of all volunteers associated with the London Track 3 Ski School. It may be revised from time to time resulting from changes in the organization. Updates will be e-mailed or posted to our web site www.londontrack3.ca so they can be downloaded and inserted into your book. This handbook remains the property of the London Track 3 Ski School and must be returned to the school should you leave the program.

GENERAL INFORMATION

The Track 3 Ski School telephone number is **519.657.2554** and is voice mail enabled for your convenience.

When to call?

1. When weather conditions may force cancellation of that day’s program. If in doubt call before each program starts.
2. If you need updates on special events such as Boler Blitz or our trip to Chicopee.
3. To leave a message for your coordinator eg. unable to attend on program day.
4. To leave a message for any Board member.

For items 3 & 4 please remember to state at the beginning of your message the person for whom the message is intended.

Instructor Code of Practice

Instructors are the front line representatives of the London Track 3 Ski School in dealing with an assigned student and the student's parents or guardians. In this capacity the instructor must exhibit appropriate professional conduct at all times. Instructors are expected to maintain up to date Track 3 training certification consistent with the student's disabilities and the equipment being used. The instructor has a personal responsibility to monitor the needs of the student and the instructor's ability to respond to those needs. In the event that an instructor may be unable to function satisfactorily with their assigned student for whatever reason, they should discuss the situation with their coordinator to attempt to find a solution.

Priorities:

The following priorities should guide the activities of all Track 3 Instructors.

1. The student's program and activities are to be organized with safety as the top priority.
2. The training program must ensure that the skier has fun. Learning advanced technique, although a desirable component of the program, must take second place to the fun aspect of the Track 3 experience.
3. The program must emphasize, through actual skiing experience, an orderly development of the key aspects (adjusted for the skier's disability) of the CSIA progression.
4. The training program where possible, should lead a skier to developing personal responsibility for their development to independent safe skiing.

Ski School Operations:

Each instructor will ensure that they are present on time for each of their scheduled instruction sessions and it is the responsibility of the instructor to arrange for a replacement. Each instructor should meet briefly with their coordinator following their lesson to discuss their skier's progress. Instructors are also responsible for the timely and accurate completion of the skier's evaluation form following each lesson.

Police Records Checks

Beginning with the 2008 season, all volunteers with the London Track 3 Ski School will be required to obtain a police records check and vulnerable position screening with the results to be reported to the President of the Ski School. These checks will be securely retained by the London Track 3 Ski School for five years after which time they will be destroyed. The cost of these checks will be borne by the Ski School.

Insurance Waivers

All students and Track 3 volunteers (both on-hill and off-hill) are required to have a signed insurance waiver on file prior to their participation in the Track 3 program. These waivers are to be renewed annually.

Driving and Off Hill Activity:

Instructor involvement with their skier is to be limited to scheduled on-hill events as approved by the Track 3 Board or its designated officials. Instructors are not permitted to schedule private lessons or other events with their skier.

Instructor responsibility and corresponding insurance coverage begins and ends at the ski hill for Track 3 sanctioned events.

Under no circumstances are instructors to transport their skier in the instructor's personal vehicles.

Student Comfort and Safety

Students are to wear and use safe, warm and comfortable clothing and equipment. It is the responsibility of the instructor to check to ensure that these conditions are met. This includes periodic checks of the skier for their personal comfort (too cold or fatigued) as well as monitoring the safe condition and operation of the equipment. Instructors should inform parents/guardians if their skier is inadequately prepared or clothed for the prevailing conditions and should be confident in recommending appropriate attire when required. Recommendations should be recorded in the student's log book. If there is an inadequate response from the parent/guardian, the instructor should request that the coordinator become involved to assist in resolving the situation. Skiers should not be allowed to participate in the program if they are not appropriately dressed for the conditions.

Instructors are to ensure that their skier has adequate break periods through consultation with their student.

Skiers are expected to be able to take themselves to the washroom should they require it. **Under no circumstances will a Track 3 instructor be permitted to assist with the washroom requirements of their skier unless they are personally related to the skier.** Parents or guardians must make the necessary arrangements to be present to assist with this if necessary.

Confidentiality

A skier's disability, abilities and even their achievements in the ski training program are personal matters between the skier, their parents/guardians, Track 3 and the instructor. An instructor shall not divulge private student information to any person except to an authorized London Track 3 official or instructor in accordance with the need to develop and deliver an appropriate training program for the skier.

INSTRUCTOR ATTENDANCE

As a volunteer member of the London Track 3 Ski School, you have made a commitment to your student, your Program Coordinator and your fellow instructors. In particular your student counts on you to be there for their program and they don't always understand if you're not.

If you are unable to attend on program day.

1. Advise your coordinator/co-coordinator.
 - a. 1st choice Home telephone number

- b. 2nd choice Work telephone number
 - c. 3rd choice Track 3 telephone number
2. If you share a student with another instructor or have an assistant let them know also.
3. Advise the student and make alternate plans for a make up date.
4. Advise the coordinator of the make up day. Try to make it the same time period. i.e. no show Saturday a.m. week 2, reschedule for Saturday a.m. week 7. If another day is picked for the make up you will need to contact the coordinator of that program day to see if equipment is available and then confirm with your student.
5. If alternate plans cannot be arranged, it is **your responsibility as an instructor**, to arrange for a replacement and to advise your coordinator of the change.

NOTE: An Assistant may not conduct a class by themselves. A fully qualified instructor must be present!

HELMET POLICY

It is the policy of the London Track 3 Ski School that all students must wear an approved ski helmet while participating in the program. It is also ***strongly recommended*** that all instructors wear a helmet. While it is not mandatory for instructors at the present time, they should be setting the example for their students.

COORDINATOR RESPONSIBILITY

The coordinator is responsible for the program day along with their co-coordinator. Instructors will be contacted prior to the start of the on-hill season and informed of their start day and time, the name of their student and any additional meetings or training required. They will also be supplied with a list of Track 3 contact numbers. The voice mail will be checked daily for messages.

LONDON SKI CLUB

As users of the London Ski Club we are given the privilege of skiing during program hours at no cost. This privilege is extended only to Track 3 members in recognition of their contribution.

At Boler Mountain the Snow School lift lines are for the exclusive use of the London Ski Club Snow School with the exception, for safety reasons, of sit ski students. Track 3 students and their instructors are to use the regular lines at all times. The ski school lines are reserved for the regular ski school as their lesson time with their students is much shorter than ours.

SKI PASS PROCEDURES

All instructors will be issued a lift ticket by their coordinator at the start of each program session or event. This is for the instructor's personal use only for your class but you may continue to ski with the pass once your class has finished.

You may purchase a discounted season pass subject to terms in effect at the time between Track 3 and the London Ski Club. Generally the season pass is discounted 50% for Track 3 Ski School instructors. Just go to the Ski Club main desk, identify yourself as a Track 3 Instructor and pay the fee.

PUBLIC/SEPARATE SCHOOL SKI TRIPS

At various times throughout the year local schools bring their students to the London Ski Club for a ski day. Occasionally there is a need for Track 3 instructors to assist the regular ski school that day by working with a student with disabilities. **Please advise your program coordinator if you are interested in participating in this program.**

LONDON TRACK 3 SKI SCHOOL **STUDENT EVALUATION**

Procedures

1. Instructors are required to complete the Progress Report form in their student's progress book following each instruction session.
2. The Program Coordinator is responsible for ensuring that the instructor completes this evaluation after each session.
3. The instructor must *return the progress book to the coordinator* after completing the evaluation form. The book must not be left out as it contains confidential information regarding the student's health.
4. The Program Coordinator will discuss progress, problems etc, of each student in his/her program with that student's instructor on a weekly basis.
5. The Program Coordinator will conduct periodic on-hill audits of the progress of each student and of the training techniques employed by each instructor in his/her program.
6. At the end of the season an evaluation of each student will be conducted by the Program Coordinator with all instructors in the program to ensure that problems, achievements, innovative instructional techniques are noted by all program instructors.
7. The Program Coordinator, in concert with their instructors, will determine graduation criteria for each program based on ability of potential graduates to ski independently.
8. Program Coordinator recommends potential graduates for his/her program to the Board of Directors.
9. Board of Directors considers recommendation from each Program Coordinator and makes the final determination.
10. Approved graduates are awarded graduation award or certificate at end of season ceremony.

LONDON TRACK 3 SKI SCHOOL
SKIER PROGRESS REPORT

SKIER: _____ **PROGRAM:** _____
YEAR: 2008

<u>WK</u>	INSTRUCTOR	STAGE UP/DOWN	LESSON	COMMENTS
1				
2				
3				
4				
5				
6				
7				

LONDON TRACK 3
STUDENT REPORT CODE

UPHILL STAGE

- 1 Taken up - pushed etc.
- 2 Assisted to climb
- 3 Climb Unassisted
- 4 Supported on handle tow
- 5 Assisted on handle tow
- 6 Unassisted on handle tow
- 7 Assisted on T bar
- 8 Assisted on chairlift
- 9 Unassisted on chairlift
- 10 Unassisted all lifts

DOWNHILL STAGES

- 1 Moving on flat ground supported
- 2 Moving on flat assisted
- 3 Moving on flat unassisted
- 4 Straight run slight grade - supported
- 5 Straight run slight grade - assisted
- 6 Turning slight grade - supported
- 7 Turning full beginner hill - supported
- 8 Turning intermediate hill - supported
- 9 Straight run slight grade unassisted
- 10 Turn into hill slight grade unassisted
- 11 Turn into fall line slight grade unassisted
- 12 Turn both directions slight grade unassisted
- 13 Link turns on beginner hill unassisted and under control
- 14 Slow skiing, turning, side slipping, stopping on intermediate hill unassisted and under control
- 15 Controlled faster skiing - intermediate hill
- 16 Controlled faster skiing - advanced hill

London Track 3 Ski School
Sit Ski Student Progress Report

Skier: _____ Seat Location: _____ Year: _____
 Sit Ski Unit: _____ Pressure: Normal _____ Cold _____ Handle Bar: Y _____ N _____ Pontoons: Y _____ N _____

Week	Instructors	Skills Development	Comments	Pontoons		
				Up/Dn	# of Holes	F/R
1						
2						
3						
4						
5						
6						
7						

SKI STAR PROGRAM

The Ski Star Program is used to indicate and recognize a student's level of skiing ability. The different levels of progress are identified by coloured star pins that are awarded to the students at the end of each season. The pin to be awarded is determined by the instructor in consultation with the coordinator, two weeks before the end of the season and the pin is presented at the final class of the season. There is also a 'participation award' for students who may not have yet developed sufficiently to receive a star pin. Discuss the program with your coordinator and set goals to ensure the student's development.

The Ski Star Program is as follows:

White Star

This is the first step in our progression. It is relatively easy and should provide encouragement to continue but should not be given automatically. The skier may or may not ride lifts. As with all of the Ski Stars, students must pass the basic maneuver and at least 4 exercises and skills.

Basic Maneuver: Single snow plow turns to the left and the right on gentle terrain.

Exercises and Skills:

1. Carry equipment; put on/take off equipment; remove snow from boots
2. Climb side step; start on a slope
3. Straight run and snow plow stop
4. Star turn; step turn while skiing
5. Slalom pole duck under (pole held at ½ skier's height)
6. Know trail sign colours

Yellow Star

The Yellow Star means a skier can ski a gentle slope under control without stopping. The skier is able to ride lifts with assistance. Skiers must pass basic maneuver and 4 of 5 exercises and skills

Basic Maneuver: Linked snow plow turns on gentle to moderate terrain (at least 4 turns)

Exercises and Skills:

1. Snowplow exercise, open into snowplow at least three times keeping body in the fall line
2. Herringbone climb
3. One type of kick turn
4. Push with ski poles and slide
5. Athletic stance while standing still

Green Star

The Green Star indicates the skier can do basic christie turns; i.e. skis must be parallel for part of the turn. The skier can come down most intermediate runs and use lifts with minimal assistance.

Basic Maneuver: Basic Christie turns, at least 4 of them, with or without pole plant.

Exercises and Skills:

1. Skating on flat terrain with or without ski poles.
2. Side slipping vertically or diagonally for at least two meters.
3. Christie uphill with or without a pole plant on both sides.
4. Straight running on one ski at least 5 meters ((other ski off the snow)
5. Introduction to use of ski poles: correct use of inside pole in at least three consecutive turns of any type.
6. Hockey stop to either side.

Blue Star

The Blue Star means that the skier can do basic parallel turns consistently on a moderate slope, show speed control and the use of the ski poles. The skier can come down all but the most difficult runs and ride any lift without assistance.

Basic Maneuver: At least 4 basic parallel turns with pole plant on moderate terrain; while the turns need not be linked there should be some speed control.

Exercises and Skills:

1. Skate without poles in a figure 8 on flat terrain
2. Diagonal side-slip, both sides at least 5 meters without stopping
3. Traverse a moderate slope on edge showing good positioning, traverse same slope on the downhill ski with the uphill ski raised off the snow.
4. Introduction to bumpy terrain; at least 4 turns on the top of bumps without falling (turns need not be linked)

Red Star

The Red Star indicates that the skier has fairly well developed edging skills, the ability to control speed on steeper slopes, a high degree of ski performance and the ability to link turns smoothly. The skier can safely get down any hill and stay in control.

Basic Maneuver: At least three linked parallel turns on moderate terrain; turns should be quite round.

Exercises and Skills:

1. Power plow showing good bending of outside ski.
2. Step turns showing a good edge platform before the step.
3. Hop Christies.
4. Downhill stop.
5. At least 4 single ski turns, keeping the inside ski lifted.

SIT SKI STAR PROGRAM

Due to the specialized nature of the equipment, a Ski Star program has been developed that is unique to sit ski students. The same award process as applies to the regular Ski Star program is to be followed for sit ski students.

White Star

The White Star skier will be able to participate by understanding instructions, left and right and showing the ability to turn the ski aided by the instructor. This skier would use pontoons and possibly a handle bar. The sit ski is tethered. All participants in their first year would receive this level.

Yellow Star

Skier can complete at least 3 linked turns by shifting their weight under the direction of the instructor. The sit ski would be tethered but would not use a handle bar unless necessary for their disability.

Green Star

The skier is able to do controlled turns without direction from the instructor but is still tethered. Skiing is done in a safe and controlled manner. Pontoons will be all the way in.

Blue Star

The skier skis the unit with the pontoons and handle bar removed, and controls turns with the use of outriggers. The student is skiing without direction from the instructor and the tethers are loose. The skier is skiing in a safe and controlled manner.

Red Star

The skier is skiing un-tethered in either the Bi-ski or Mono-ski. Their skiing is controlled and confident and demonstrates safe use of the equipment while skiing. If the equipment allows for self loading the skier should be able to perform this activity unassisted.

JACKET POLICY

Qualified instructors are eligible to purchase instructor jackets, with the Track 3 logo, from the club for the prevailing price, subject to availability. Upon leaving the program the jacket may be donated to Track 3 or retained for personal use. For those not wishing to purchase a jacket, a limited number of loaner jackets are available at the Ski School for instructor use on all program nights.

1. Jackets are to be worn by qualified Track 3 instructors only.
2. All Instructors/Assistants are to adhere to the alpine responsibility code while wearing a Track 3 Jacket.
3. Instructors/Assistants may wear their jacket while snowboarding, only if fully competent in that activity.
4. When wearing your Track 3 jacket in off hill situations, you are a representative of the London Track 3 Ski School and every effort should be made to conduct yourself in a manner that will ensure the best representation and public image for Track 3.
5. Name tags will be provided for all qualified Instructors and Assistants, which will identify their level of qualification. (Green – Level 1, Blue – Level 2, Black – Level 3)

ALPINE RESPONSIBILITY CODE

There are elements of risk that common sense and personal awareness can help reduce. Regardless of how you decide to use the slopes, always show courtesy to others. Please adhere to the code listed below and share with others the responsibility for a safe outdoor experience.

1. Always stay in control. You must be able to stop or avoid other people or objects.
2. People ahead of you have the right-of-way. It is your responsibility to avoid them.
3. Do not stop where you obstruct a trail or are not visible from above.
4. Before starting downhill or merging onto a trail, look uphill and yield to others.
5. If you are involved in or witness a collision or accident, you must remain at the scene and identify yourself to the Ski Patrol.
6. Always use proper devices to help prevent runaway equipment.
7. Observe and obey all posted signs and warnings.
8. Keep off closed trails and closed areas.
9. You must not use lifts or terrain if your ability is impaired through use of alcohol or drugs.
10. You must have sufficient physical dexterity, ability and knowledge to safely load, ride and unload lifts. If in doubt, ask the lift attendant

Know the Code – Be Safety Conscious – It is Your Responsibility

INSTRUCTOR DEVELOPMENT

Track 3 encourages instructors to develop their skills to the extent that they wish to. There are 4 levels plus the Examiner level that instructors could work through.

INSTRUCTOR TRAINING LEVELS

LEVEL	FUNCTION	REQUIREMENT
ASSISTANT		
Those who have not fully qualified in all the required Track 3 Training courses	Help an instructor on the hill but not have the sole responsibility for a student.	Sufficient skiing ability to be able to carry out assigned tasks safely. Receive necessary group or individual instruction to carry out assigned tasks safely.
LEVEL 1 INSTRUCTOR		
Beginning level for a Track 3 instructor	Can teach 2 and 4 track skiing to students in the program May assist a specialist instructor (level 2 and up) after additional necessary training.	Complete training steps 1 to 5 (see Instructor Training Steps). To assist in a specialized discipline must have also completed step 6 training. Skiing ability must be at CSIA step 5
LEVEL 2 INSTRUCTOR		
Advanced level of instructor or	Teach advanced level of 2 and 4 track skiing	Qualify at level 2 progression course as well as 2 and 4 track course. Serve one year (25 hours) teaching at Level 1 Skiing ability must be at CSIA step 6
LEVEL 2 (Special)		
Instructor for a specialty (see Instructor Training Categories)	Teach 2 and 4 track plus a specialty	Qualify at Level 2 Progression as well as a Level 2 specialty course. Serve 1 year (25 hours) teaching at Level 1
LEVEL 3 INSTRUCTOR		
Supervisor and Instructor training level(Examiner)	Teach or supervise in Track 3 programs. Qualified to be an Examiner for Level 1 and 2 candidates	Qualify at Level 3 course in progression and 2 and 4 track skiing. Serve 1 year (25 hours) teaching at Level 2.
Level 3 (Special) in Examiner Specialty	Qualified to teach and examine a Level 2 specialty	Same as Level 3 above plus additional qualifying in a specialty

INSTRUCTOR TRAINING STEPS

LEVEL 1

Step 1 Recruitment Information Session

This is an information session to describe the program, structure, location and organization of Track 3. It will allow the candidates to discover which part of the program and which role is most suited to them and allow the organizers to learn about the candidates. An application form will be completed to give a profile of the candidate and an idea of the time commitment they can make to training and the program.

Step 2 Off Hill training session in Disabilities, Special Equipment and Training Methods.

This will provide a basic knowledge of the types of disabilities the instructor may encounter, a description of how to manage the student as well as methods and special equipment used to deliver the program.

Step 3 The instructor candidates should attend the indoor student evaluation/equipment fitting session. At these sessions the candidate can meet the students to obtain a greater understanding of their disabilities and how to deal with the student and their equipment needs.

Step 4 On-Hill Training – Ski Progression (Basic)

A Course Examiner will present an introduction to ski instruction technique as taught by the Canadian Ski Instructors Alliance. The course will deal with the technique used to develop a first time skier from beginner to an intermediate level skier.

Step 5 On-Hill Training – Track 2/4

Course examiners will describe and demonstrate to their classes the various methods of teaching, assisting and skiing for 2 and 4 track skiers. They will have the candidates perform these methods through practice and role playing.

2-Track will be with 2 skis and without poles

4-Track will be with two skis and outriggers.

Step 6 On-Hill Training-Sit Down Skiing – Basic Course

Course Examiners will describe and demonstrate the equipment and methods used for sit down skiing and the candidates will have the opportunity to experience the equipment and methods.

- Note:
- 1) Level 1 training completion of all five steps plus Step 6 to work as sit down ski Assistant
 - 2) The steps can be spread over more than one season
 - 3) All instructors will serve a minimum of one year in each level before upgrading to a more advanced level.
 - 4) All instructors are required to re-train or upgrade with steps 2, 3, 4 and 5 every three years. Instructors are encouraged to attend a training course every year.

LEVEL 2

After serving a season as Level 1, an instructor may wish further training to qualify for Level 2 by successfully completing the following:

All Level 2	Advanced ski Progression	The candidate must satisfactorily complete a progression course on the Canadian ski technique which reinforces the course given at Level 1.
	Track 2-4	2 and 4 Track Skiing – The candidate must satisfactorily complete a course in 2 and 4-Track skiing which reinforces the courses given at Level 1. The candidate will be given more opportunity to demonstrate and teach.
Plus one of...	Sit down skiing	A Course Examiner (Level 3 Specialist) will teach candidates advanced technique and theory with special adaptive equipment such as <i>Bi-Ski</i> and <i>Mono-Ski</i>
	Visually impaired	A Course Examiner (Level 3 Specialist) will teach techniques used for instructing and guiding students who are visually impaired.
	Hearing impaired	A Course Examiner (Level 3 Specialist) will teach techniques used for instructing students who are hearing impaired.
	Three Tracking	3-Track Skiing – A Course Examiner (Level 3 Specialist) will instruct candidates to ski on one ski using outriggers. The candidates will learn about dealing with leg amputees and teaching them to ski.

Training Requirements

Assistant

- Should be 14 years of age by the start of the Track 3 season in January
- Skiing ability must be at CSIA step 4 as determined by a CSIA instructor. If the candidate is a CSIA instructor this requirement is waived.
- Must attend and satisfactorily complete both the off-hill and on-hill Track 3 training.
- Must re-certify annually at both on-hill and off-hill

Level 1 Instructor

- May be the entry level position bypassing the Assistant designation
- Must be 16 years of age by the start of the Track 3 season in January
- Skiing ability must be at CSIA step 5 as determined by a CSIA instructor. If the candidate is a CSIA instructor this requirement is waived.
- Must attend and satisfactorily complete both the off-hill and on-hill Track 3 training.
- Re-certification is required every three years for both on-hill and off-hill

Level 2 Instructor

- Must spend at least one year (25 hours) teaching as a Level 1 instructor
- Skiing ability must be at CSIA step 6 as determined by a CSIA instructor. If the candidate is a CSIA instructor this requirement is waived.
- Must attend and satisfactorily complete both the off-hill and on-hill Track 3 training.
- Re-certification is required every three years for both on-hill and off-hill

Level 2 (Special)

- Must spend at least one year (25 hours) teaching as a Level 1 instructor
- Skiing ability must be at CSIA step 6 as determined by a CSIA instructor. If the candidate is a CSIA instructor this requirement is waived.
- Must attend and satisfactorily complete both the off-hill and on-hill Track 3 training as well as training associated with the desired specialty
- Re-certification is required every three years for both on-hill and off-hill

Level 3 Instructor

- Must have achieved the Track 3 Level 2 designation and taught for at least one year (25 hours) in any discipline at Level 2.
- Skiing ability must be at CSIA step 6 as determined by a CSIA instructor. If the candidate is a CSIA instructor this requirement is waived.
- Must have attended the Fall pre-season training planning session
- Has participated in a combined six hours of on-hill/off-hill training of new instructors with

the 2 Track/4 Track Lesson Plan

- Re-certification is required every three years for both on-hill and off-hill

Level 3 Instructor(Examiner)

- Must have achieved the Track 3 Level 3 designation and actively participated in both the Level 3 training plus an additional year of teaching in the Track 3 program
- Must have attended the Fall pre-season training planning session
- Will function as a lead instructor providing training to new Level 3 instructors
- Annual re-certification is required at the six hour on-hill/off-hill training in order to retain the Examiner designation

Canadian Ski Patrol

Effective rescue services require a clear, concise and rapid transmission of information. In order to ensure the safety of our students and instructors we rely on the local members of the Canadian Ski Patrol System (CSPS). In the event an accident occurs that results in injury to either a student or an instructor it is important to be aware of the appropriate method of obtaining help from the Ski Patrol.

After securing the area and marking the site such as with crossed skis or poles uphill from the injured skier, you should let the Ski Patrol know that you need help. Any of the following methods may be used.

1. Send another nearby skier to get the Ski Patrol and stay with the injured skier.
2. If a patroller is in sight you can signal to them by facing the patroller being signaled and raising one arm upright.
3. If you have a whistle you should blow three blasts to summon help from the patrollers. Any patroller hearing this will respond with either one blast signifying that they understand your call for help, or two blasts requesting that you repeat your three blast request.
4. Send another skier to the Track 3 building to inform the coordinator
5. Remain with the skier throughout until such time as the skier has recovered on the hill or the patroller has handed off the injured skier to their parents or EMS workers.

If there's an accident...

1. Secure the site so other skiers don't run into you (cross your skis or poles by sticking them into the snow uphill from you)
2. Send someone to get the Ski Patrol. (see above for hand and whistle signals)
3. Send someone to inform the program coordinator
4. Remain with your student to reassure them until such time as they have either been handed off to their parents or to the paramedics and transported from the hill if required.
5. If there's an injury to your student ensure that their equipment is returned to the equipment room, isolated to prevent further use and red tagged without making any changes or adjustments to it. This may be needed for further investigation of the accident
6. **Do not comment on any aspect of the accident to anyone but your coordinator!**
7. Your coordinator will obtain the number of any Ski Patrol Accident Report for our files
8. Make personal notes about the incident and leave them with your coordinator who will make additional notes in order to inform the Board of Directors.

9. Your notes should include

- a. Who was injured?
- b. What is the nature of the injury?
- c. Where did the accident occur?
- d. What time did it occur?
- e. How did the accident happen?
- f. What were the weather, snow and lighting conditions at the time of the accident?
- g. These notes should not contain any narrative as to fault or responsibility... just the specifics noted above

DEVELOPMENTALLY HANICAPPED – TEACHING TECHNIQUES

It is important to call your skiers' "skiers" or "athletes" or some other name YOU wouldn't mind being called. Being patient is likely the most important factor for successful instruction. Constant encouragement and praise is the next most important factor allowing you to build confidence.

Important methods:

1. MODELLING of the task – show your student the skill you are going to teach them.
2. REPETITION – practice it with your student repeatedly.
3. PHYSICALLY ASSISTING the skier – help them to properly position their skis etc.
4. Teach ONE-STEP at a time making the task as simple as possible
5. REINFORCEMENT of doing a good job or trying hard with verbal praise (see 91 Ways to say “Very Good” on Page 22), hot chocolate rewards...

Some skiers will have difficulty hearing you in a noisy background. Make sure you have their attention before you start talking to them and speak clearly and loudly enough to be heard. Have them repeat important instructions to ensure they understood what you said. Speak directly by saying, "Do this..." rather than "Would you like to do....". Let your skier know that you are introducing a new skill and that you feel they are ready to learn it.

At the end of each lesson, talk with your skier to find out what they liked/disliked. Go over their improvement and point out one or two areas to think about working on for the next lesson. Record your progress, difficulties and new techniques that "clicked". Refer to these notes before you head back out to the hill the next time.

There are 8 considerations in making skiing an enjoyable experience for your students:

1. **Motor Function** - It is surprising what children can do!!! Particularly children with disabilities. Motor function is dependent upon flexibility, muscle strength, endurance, efficiency of movement and balance. This is especially important for children with disabilities, as they tend to have fewer opportunities to participate in sport.
2. **Sensory Capabilities** - The ability to know where your hand or foot is at any given time is a necessary ingredient in muscle action of that area. Decreased tactile sensation whether due to pain or pressure must be carefully monitored. If sensation is decreased, the skier may not know when problems are beginning to develop.
3. **Capacity To Organize Perceptions** - The skier's ability to learn may require adjustments in your teaching methods. If the skier's learning style is auditory, verbal instructions may be sufficient. Most children learn by demonstration and hands on assistance. Learning may require many repetitions and returning to basic steps.
4. **Past Learning** - It is helpful to talk to the parents about previous successes your student has had. This may give you insights into how best to make skiing a success.
5. **Maturation** - For most students the social aspect of skiing should be emphasized. Introducing your skier to others and playing up the party atmosphere is generally the right approach.

6. **General Level of Adjustment** - Praise! Praise! Praise of every slight improvement.
7. **Anxiety** - Developing a good rapport with your skier should help to alleviate anxiety. If your student becomes anxious attempt to find out what provoked the anxiety in order to reduce it.
8. **Frustration** - All sports have a degree of frustration. Allowing your skier to understand this will go a long way to help alleviate any frustration your skier may be experiencing.

PEOPLE GENERALLY REMEMBER:

20% of what they HEAR

50% of what they SEE

90% OF WHAT THEY DO

91 Ways to say “Very Good”

Clever
Congratulations!
Couldn't have done it better
Excellent!
Fantastic!
Fine!
Good for you
Good going
Good job (name)
Good remembering
Good work
Great!
I knew you could do it
I think you've got it now
I'm happy to see you working so hard
I'm proud of the way you worked today
I'm very proud of you
I've never seen anyone do it better
Keep it up!
Keep on trying
Keep up the good work
Keep working on it
Look at you go!
Marvelous!
Much better
Nice going
Not bad
Nothing can stop you now!
Now that's what I call a fine job
Now you have it
Now you've figured it out
Now you've got the hang of it
One more time and you'll have it
Outstanding!
Perfect!
Right on!
Sensational!
Super!
Superb!
Terrific!
That makes me feel good
That's the way to do it
That's a great job

That's better than ever
That's coming along nicely
That's first class work
That's good!
That's great!
That's it!
That's much better
That's quite an improvement
That's really nice
That's right!
That's the best ever
That's the best you've ever done
That's the right way
That's the way
Tremendous!
Very good!
Way to go!
Wonderful!
WOW!
You are learning fast
You are really learning a lot
You are very good at that
You did a lot of work today
You did it that time
You did very well
You figured that out fast
You haven't missed a thing
You make it look easy
You must have been practicing
You out did yourself
You really make my job fun
You remembered
You're doing a good job
You're doing beautifully
You're doing fine
You're getting better
You're getting better every day
You're on the right track
You're really going to town
You're really improving
You're right
You've got it made
You've just about got it

The Art of Teaching

Things to Remember

- Remember the Submarine Sandwich.....Only take small bites to enjoy it...
- Know your students and their capabilities, don't try to accomplish too much at once
- Analyze the skill, reduce it to its basic components and teach each part in its turn
- Learning is fun...game situations and your enthusiasm will ensure your lessons are enjoyable for both you and your student.

Guidelines for Success

ALWAYS:

- Check clothing and equipment
- Do warm up exercises
- Select terrain that is appropriate for your student and the skill to be taught
- Talk as little as possible (learn by doing)
- Demonstrate often (exaggerate as needed)
- Provide positive feedback ... "look at that turn, you are way ahead of me"
- Adjust the pace to the student's skill development
- Be aware of psychological factors such as fear
- Practice and repetition
- End with encouragement and a feeling of fulfillment

Basic Steps:

- At what level is my student?
- Set a goal to achieve during that particular lesson. i.e. straight running
- Basic skills or tasks – balance, body position, stance
- Terrain – slight downgrade ending with a short upgrade or slight downgrade ending with a short upgrade or long out run
- Teaching Progression:
 - Easy terrain – slow speed
 - Increase speed by using steeper terrain
 - Introduce the next step at easier terrain

- Remember that the slower you go at first the faster you can progress later.....don't be in a hurry to get there.....remember the sub sandwich.
- Practice – use games – airplanes, canoeing, tall/small, etc to re-enforce what the student has learned.
- Always end on a positive note, tell the student what they did well and tell them what you will work on next. The next lesson begins with a review (usually in a game context).

Skiing should be fun...enjoy the time with your student ...ask how their week went? How do they feel? What do they like or do outside of skiing? Use this knowledge to keep them interested and talking to you. That way you can watch for the lesson ending signs....FATIGUE, BOREDOM AND FEAR.

Safety:

- Always stop before the student is tired.
- Always position yourself between the student and potential danger
- Use the lesson to make the student aware of the **ALPINE RESPONSIBILITY CODE (page 14)**
- Know your student's capabilities and limitations
- Begin each session with an equipment check and warm up exercises (make sure the student sees this or is aware that it has been done....we are teaching lifetime skills as well)

INFORMATION ON DISABILITIES

CEREBRAL PALSY

Cerebral Palsy is a disorder of movement and posture appearing in the early years of life. "Cerebral" refers to the brain and "palsy" to the lack of muscle control.

The brain starts to develop half way through pregnancy and continues to develop until about the end of the third year of life. Damage to the brain such as, lack of oxygen, infection, bleeding or chemical imbalance during this time may result in cerebral palsy. Cerebral palsy usually results in poor motor control of the muscles of the limbs and trunk. The brain damage interferes with the messages from the brain to the body and will also interfere with messages sent from the body to the brain. The muscles of the eyes and mouth may be involved, affecting sight and speech. This brain damage may affect a child's learning ability and may cause problems with behaviour.

The degree of involvement will depend on the extent and location of the damage. This can vary from mild speech impairment with no obvious signs to a severe lack of muscle co-ordination. It is important to realize that damage is a one-time event and does not continue. Damaged brain cells cannot be repaired but undamaged brain cells will continue to develop and mature. Cerebral Palsy is a permanent disability but with help a child may learn to compensate for their disability.

TYPES OF CEREBRAL PALSY:

SPASTIC CEREBRAL PALSY:

Approximately 75% of all children have the spastic form to cerebral palsy; some have spasticity combined with another type of cerebral palsy. The motor control area of the brain is affected with spastic cerebral palsy. The muscles contract tightly all the time and limbs feel stiff. Instead of having normal tone, spastic muscles have an increased tone.

When part of a limb is moved, muscles on one side of the limb should contract and opposing muscles on the other side should relax. If both sides are contracting as in spastic cerebral palsy there is a muscular tug-of-war and the intended movement does not occur. Tight muscles are kept supple by exercises. When muscles become too tight to stretch they may need to be lengthened by surgery.

ATHETOID CEREBRAL PALSY:

The control centers (Basal Ganglia) between the brain and the spinal cords are affected with athetoid cerebral palsy. Because of this damage, messages will not long be properly coordinated. When one movement of the body is attempted, it may result in many unwanted or unnecessary movements of other parts of the body. These movements may occur all the time when the child is awake or only when a particular movement is attempted.

ATAXIC CEREBRAL PALSY:

This is the least common type of cerebral palsy. A person with ataxic cerebral palsy has unsteadiness of fine movements of the hands together with an awkward and unsteady walk which, in adults, is frequently mistaken for drunkenness. This is due to damage or slow development of the brain's balance mechanism in the cerebellum, the lower part of the brain.

CLASSIFICATION:

Cerebral Palsy, particularly Spastic cerebral palsy, is also classified according to the number of limbs involved. One side of the brain controls the opposite side of the body so that when one side of the brain is affected, the other side of the body is weak.

The term "PLEGIA" is commonly used in describing the limbs involved. The following list describes the terms:

MONOPLÉGIA	One limb is involved, an arm or leg.
DIPLEGIA	Both legs are affected. The arms are usually affected but not as much as the legs.
TRIPLEGIA	Three limbs are involved.
TOTAL INVOLVEMENT	All four limbs are affected, the arms being involved as much or more than the legs.
HEMIPLEGIA	Only the limbs on one side of the body are affected.

SOME EFFECTS OF CEREBRAL PALSY:

INVOLUNTARY REFLEXES: Everyone has certain reflexes that serve to protect us from harm and assist in everyday activities. For example breathing and blinking are involuntary movements. Young children have some involuntary reflexes that disappear as higher levels of physical control are established. Involuntary reflexes may persist in a child with cerebral palsy. These reflexes may interfere with intentional voluntary movements.

CO-ORDINATION AND BALANCE: Many people with cerebral palsy experience impaired co-ordination and balance due to the brain damage and poor motor control.

MOBILITY AND FUNCTION: person with poor co-ordination and balance may experience difficulty in body movements.

SPEECH AND HEARING: Damage may affect those areas of the brain concerned with speech, language and hearing. The uncoordinated muscle movement may result in difficulty in speaking, feeding and swallowing.

EYES AND VISION: It is quite common for people with cerebral palsy to have "lazy" or crossed eyes. Other people may have brain damage to the area of the brain involved with vision so that sight may be damaged.

PERCEPTION: Although some people have no basic impairment in the sensory organs (eyes, ears...) they do have difficulty organizing the information received through the senses and

interpreting this information. Social perception may also be affected, if the person misinterprets what people say or facial expressions.

COMMUNICATION: The more extensive the brain damage, the greater the likelihood of communication problems. Delay in language development may be the result of a hearing impairment or poor control over the muscles of the mouth.

THINKING OR COGNITIVE SKILLS: Many people with cerebral palsy have normal learning skills. Others, however, have uneven general intellectual functioning, resulting in specific learning disabilities; these may include a short attention span, difficulty with language comprehension and delayed pre-reading skills.

SEIZURES: An abnormal focus of activity in the brain, often the result of scarred brain tissue, will result in seizures. They may be mild, such as staring spells, or they may be severe with jerking of different parts of the body and a loss of consciousness.

SEE "HOW TO RECOGNIZE AN EPILEPTIC SEIZURE" Page 28.

THE AUDITORIALLY IMPAIRED

The skiers with auditory impairments may use a variety of ways to compensate for their hearing loss. Some of the skiers, may have hearing aids or cochlear implants to help improve their ability to hear. The degree and type of hearing loss will affect the speech and language characteristics. The speech and language abilities can range from non-speaking to very intelligible speech. Most of the skiers who participated last year did not use sign language but relied on verbal communication, context, facial expression and lip reading.

HOW TO FACILITATE COMMUNICATION:

1. Gain the skiers attention - touching is better than yelling.
2. Establish and maintain eye contact while talking.
3. Speak slowly and clearly using visual prompts, demonstration, or singing when possible.
4. If the skier is not following your direction, periodically ask them to restate what it is you want then to do. For example "O.K., what are we going to do this time?" This will allow you to know whether they understand what you are saying or are having difficulty with the task.
5. Ask you skier and/or parent what is the best way to communicate with them. Often the other hearing impaired skiers can serve as interpreters for you.
6. Remember that talking may be easier for your skier in quieter places with less yelling in the background. You might want to talk about a few things in the Track 3 building where it might be quieter.
7. Good lighting will help your skier to see your lip, facial expressions and body language, which will help communication.

REMEMBER:

Auditorily impaired people may be embarrassed that they cannot hear and might say that they have heard you when they have not. People with auditory impairments frequently have problems with balance and require extra spotting in many balanced-based activities.

Do not take failure to respond or apparent disinterest as personal affront.

AMPUTATIONS

An amputation may be defined as the removal of a limb or part of a limb. Amputation may be the result of an accident, a lifesaving measure to arrest a disease or congenital deformity.

With a "below knee" amputee, it is essential that they have good knee strength; with an "above knee" good hip strength.

In leg amputations those 3 major changes are:

1. Less body sway in standing.
2. Dependence on vision for balance - no ankle joint.
3. More weight on the non-amputee side.

The leg amputee has the same problem in edging as a person with low back pain.

THE VISUALLY IMPAIRED

INTRODUCTION: REMEMBER YOU ARE YOUR STUDENT'S EYES

INSIDE:

1. Introduce yourself to the student.
2. Walk at the student's pace. Always say their name when directing conversation at them. Say who is speaking until such time as they get to know your voice. Face the individual when speaking to them. Never be afraid to use the words see, saw, look etc. Paint a picture with words. The blind understand through description. Conversation between the Instructor/Guide and skier will enhance the skiing experience; describe the snow condition, description of the trail, etc.
3. Discuss the visual impairment and any other medical problems with the student or parent. Find out if the student is totally or partially blind. Avoid making assumptions about the person. If partial you may be able to demonstrate a maneuver directly in front of them if they can see to some degree.
4. For new skiers, explain the operation of the equipment by having them feel it and then trying on the equipment. Caution the student about the sharp edges of the skis.
5. Explain the key words or commands that you will use, e.g. gentle turn, hard turn, slow or stop. Give only one command at a time making it short and concise. Keep your commands consistent, speak with confidence as the skier can sense hesitation or urgency in the way you say a command.
6. Speak clearly at all times.
7. Don't speak for the skier who is blind when he or she is capable of communication on his or her own behalf.
8. A person who is blind or vision impaired is like anyone else with their own interests, likes and dislikes, personality and skills. Be aware of the things that make us all unique.

9. The relationship between a Guide/Instructor and their student is based on trust. We give our trust to those in whom we have confidence. Keep in mind, trust is fragile thing that can very easily be shaken.

OUTSIDE:

1. Ensure that your student is properly dressed for the weather. Goggles should be worn at all times on the hill for protection from the elements, the sun and other objects.
2. A helmet must be worn at all times on the hill.
3. Explain all the noises to the student that come from the snow guns, snowmobiles, lifts etc. and their location in reference to the fall line.
4. DO NOT leave the student alone at any time on the hill. It is very lonely in a dark strange surrounding.
5. Allow the skier to make choices but the guide must be comfortable with the decision arrived at. When safety is a consideration the guide must finally make the choice appropriate for the occasion.
6. Offer assistance when it is needed but allow the skier who is blind to be as independent as possible while keeping safety in mind. For example, the skier can carry their own equipment unless there is a reason for not doing so.

EPILEPSY

EPILEPSY is a disorder of the nervous system. It may result in recurring attacks called **EPILEPTIC SEIZURES**. In most cases, this condition is controlled by medication

HOW TO RECOGNIZE AN EPILEPTIC SEIZURE

An **EPILEPTIC SEIZURE** may come on **SUDDENLY** and be **BRIEF**.

Any or all of the following signs and symptoms will help you identify an epileptic seizure:

SIGNS

You may observe:

1. Fainting
2. Sudden loss of consciousness
3. Frothing from the mouth
4. Grinding of the teeth
5. Convulsions (uncontrolled muscle spasms)

SYMPTOMS

The casualty may complain:

Sensation that a seizure is about to occur (aura).

ON REGAINING CONSCIOUSNESS THE PERSON WILL BE UNAWARE OF RECENT EVENTS AND BE CONFUSED.

FIRST AID FOR AN EPILEPTIC SEIZURE

When a person is having an epileptic seizure, you should attempt to **PROTECT** him from injury during the period of convulsions.

You should:

1. Clear the area of onlookers to ensure **PRIVACY** for the individual.
2. Clear the area of **HARD** or **SHARP OBJECTS** that could cause injury.
3. Guide but **DO NOT** restrict his movements.
4. Wipe away saliva but **DO NOT** attempt to force the mouth open.

When convulsions have ceased place the student in the **RECOVERY POSITION** (lying on their side) and **MONITOR THEIR BREATHING**. Obtain medical aid, if necessary, or advise the skier and their parents to seek medical advice.

HEMOPHILIA

Hemophilia is an inherited condition in which a specific blood-clotting factor is lacking, thus causing a delay in clotting when bleeding occurs. Hemophilia occurs in approximately one out of every 5,000 male births. It is incurable at present.

The severity of hemophilia varies with individuals.

1. A mild hemophiliac will have dangerous bleeding only when injured or requiring surgery.
2. The severely affected individual experiences bleeding as a result of minor injury or for no apparent reason.

Most problems occur because of bleeding into tissues and joints where it may not be detected before pain and swelling are evident. Although the hemophiliac is born with normal joints, repeated bleeds cause deterioration and early crippling of affected limbs.

Effective treatment is provided through the immediate transfusion of special blood concentrates that replace missing factors. Blood borne viruses have been transmitted through the clotting factors although safety of these concentrates has been steadily improving. Many people with hemophilia have been exposed to hepatitis, which can cause mild chronic infection, or, in some cases, severe liver disease. A high percentage of hemophiliacs have antibodies to HIV (Human Immunodeficiency Virus) which is the virus responsible for AIDS. For those who have not been exposed to HIV, safety measures have minimized the risk of acquiring it from clotting factors.

SPINA BIFIDA

Spina Bifida is a birth defect that leaves a cleft or opening in the spinal column. The backbone does not form around a portion of the spinal cord during fetal development. This leaves the spinal cord uncovered by bone. There may be a thin layer of skin or the spinal cord may be exposed.

There are different types of Spina Bifida including Spina Bifida Cystica, which occurs when there is herniation of spinal fluid (meningocele) or of spinal fluid and spinal cord (myelomeningocele) resulting in damage to nerve. Spina Bifida Occulta is another type, which occurs when there is an opening in the bone with no herniation of spinal cord or fluid.

Spina Bifida can occur anywhere along the spine. The higher the lesion on the spine, the more involvement there will be. Nerve damage occurs below the lesion and the parts of the body controlled by that portion of the spinal cord are affected with paralysis, decreased sensation, bowel and bladder problems. Surgery is usually done within the first few days of life to secure the spinal cord within the spinal column. The nerve damage remains.

EFFECTS OF SPINA BIFIDA

HYDROCEPHALUS occurs in approximately 80% of children with Spina Bifida. Cerebral spinal fluid is present in spaces of the brain called ventricles, to bathe, surround and protect the brain and spinal cord. In hydrocephalus excess fluid accumulated in the ventricles. This fluid build up can cause pressure on the brain resulting in brain damage. This is treated by placing a tube called a shunt into the ventricle to drain excess fluid from the ventricle into the abdomen or to a chamber of the heart. Occasionally the shunt may need to be revised due to growth and a need for more tube length or because a shunt malfunction or blockage.

IMPORTANT READ YOUR STUDENTS FILE TO FIND OUT IF HE/SHE HAS A SHUNT

TYPE OF SHUNTS

VENTRICULO-ATRIAL



VENTRICULO-PERITONEAL



Signs of a blocked shunt include:

Headache

- Vomiting
- Lethargy
- Swelling along the shunt
- Personality Change
- Decrease sensory or motor function

If your skier's SHUNT is blocked:

- Lie your skier down
- Keep the head elevated
- Place your skier in a quiet room
- Ensure that they are comfortable
- Seek medical attention immediately

Paralysis or decreased movement: occurs below the level of the lesion (Spina Bifida). Impulses (messages) are not transmitted from the brain to the muscles. Movement is limited or weak and the person may require bracing to assist with walking and standing. If more paralysis is present, crutches, walkers or wheelchairs may be required to assist with mobility.

Decreased sensation or insensitive skin: also occurs below the level of the lesion. Impulses from body parts to the brain are comprised. The skin is insensitive to heat, cold, and pain. So there is a risk of skin breakdown or damage caused by pressure, injury, sunburn or constant wetness from urine or perspiration.

Signs of skin problems include:

- redness
- swelling
- fever
- blisters or sores

Damaged skin takes longer to heal and can result in infection or illness.

Special skin considerations include:

Check pressure areas (buttocks, knees, ankles, heels, and toes) for signs of problems periodically

Smooth out wrinkles in clothing

Due to insensitivity and less activity, bones in the lower limbs may be more prone to fractures, when inspecting skin note any swelling redness or heat

Neurogenic Bladder and Bowel

Nerves from the lowest part of the spinal cord control the bladder and bowel. Due to a lack of sensation the student may suffer from stool or urine accidents. Most are on a management program or routine. The program or routine may involve a regular timed toileting schedule, catheterization of the bladder and/or use of diapers or underwear with linens or pads.

Perceptual-Motor Difficulties

The student with Spina Bifida may also present with perceptual-motor difficulties, eye-hand co-ordination, visual and auditory figure ground discrimination and/or form discrimination. Spatial perception, body scheme motor planning and attention control are common problem areas.

Fine Motor Difficulties

People with Spina Bifida may have difficulty performing fine motor activities as well as having reduced sensory input. Hands tend to be short and pudgy contributing to awkwardness in activities such as printing, and dressing.

"Cocktail Party" Syndrome

People with Spina Bifida may demonstrate extensive conversational language but with shallow content. This "chatterbox" personality can be deceiving. Often parents feel their child is functioning at a higher intelligent level because of the hyperverbal nature of their speech.

REMEMBER

Should an accident occur, this needs to be treated in a matter-of-fact way ensuring privacy, safety, good hygiene and independence. The students self-esteem is very important and should be supported as much as possible.

POLIOMYELITIS (POLIO)

Contagious viral disease that attacks the CENTRAL NERVOUS SYSTEM (brain and spinal cord).

The Virus injures or destroys nerve cells that control muscles. Therefore, causing weakness or paralysis.

There have been very few cases of Polio since 1955 when the Salk Vaccine was developed.

Orthopedic devices, far example, braces, supports and special shoes are utilized to assist in normalization of those afflicted. Physio plays a main role in assisting in restoring much of the function.

GUILLAIN - BARRE SYNDROME

The cause is unknown. It starts after an infection (usually flu like symptoms: low-grade fever, muscle aches, nausea, and respiratory congestion). Guillain - Barre Syndrome shows signs of peripheral nerve inflammation starting from the feet traveling up the body. Causing paralysis of all limbs, respiratory centre and face.

It takes 10 days for the nerves to complete nerve breakdown. Up to 49 weeks to have nerves regenerate and a long rehabilitation with extensive physio and occupational therapy.

BRAIN INJURY

Brain Injury, as the name implies, is injury to the brain. You may also hear it referred to as Head injury. Prior to the injury the brain was healthy and functioning normally. Today traumatic brain injury is the most common cause of brain damage (motor vehicle accidents).

Traumatic brain damage ranges from very mild such as a concussion, to severe, with prolonged coma. Memory loss is most characteristic of a brain injury. The event causing the brain injury is never remembered. There is also usually a period of lost memory or "post traumatic amnesia" for sometime after.

The brain regulates many aspects of a person from how we move and speak to our memory, personality and thinking skills. How a person is changed after a brain injury depends entirely on what part of the brain was injured and how badly. We are still learning about how the brain works and what areas are responsible for specific functions.

Brain injuries vary considerably. Two are seldom alike. There are, however, some commonalities.

COMMON PROBLEMS:

STRATEGY:

- | | |
|----------------------------|---|
| 1. Easily distractible: | Work where there are few noises.
Focus the attention on you. |
| 2. Short attention span: | Repeat name, i.e.: John, look up, John,
this way.
Change the activity so they do not get bored. |
| 3. Movement disorders: | There could be decreased power
and control of one side, tremors, and poor balance. |
| 4. Poor short term memory: | Give one or two step instructions, any
more and they will be overloaded.
Write things down if they have to remember
something for next week. |
| 5. Personality changes: | Family and friends will be more aware of
this and can tell you how they approach
idiosyncrasies. |

- | | | |
|----|--------------------------------|---|
| 6. | Seizures: | Usually controlled by meds.
Most significant the first year after injury. |
| 7. | Lower frustration tolerance: | Be aware of this and if skier shows signs of becoming frustrated, take a time out. |
| 8. | Trouble organizing / planning: | Learning things takes longer, needs lots of repetition. |
| 9. | Speech: | May be slurred or whispery or has trouble finding words they want to use.
Usually you quickly become accustomed to their speech. |

After trauma, no further harm is done to the brain. The greatest recovery is seen in the first year following a brain injury. Over time improvement can continue.

MUSCULAR DYSTROPHY

Muscular Dystrophy is a progressive, degenerative disease that attacks the muscles. The disease usually affects the center muscles first and weakness occurs progressively. It is found in men more than women. Eventually the condition extends to practically all voluntary muscles of the body.

Generally M.D. begins between the ages of 3-10 with muscle weakness and fat replacing the muscles. Most children with M.D. that will be skiing are in the early stages of this disease.

Some characteristics of M.D.:

- Tendency to TIRE quickly
- Loss of MOTOR CONTROL
- PROGRESSIVE WEAKNESS
- Possible EMOTIONAL PROBLEMS dealing with loss of function and denial
Tendency to become ILL more easily
- FREOUENT FALLING
- "WADDLING GAIT"
- DIFFICULTY CLIMBING STAIRS
- DIFFICULTY GETTING UP from the sitting position

POINTS TO REMEMBER WHILE TEACHING SKIING:

1. To conserve energy, transfer the child to the hill with minimum effort (toboggan or by assisting them).
2. Take frequent breaks as they tend to tire quickly.

3. Lift the skier by holding them tightly around the ribs (or method suggested by skier and/or family). Avoid lifting from under the shoulders due to the loss of muscle mass at the shoulder joint. The skier could easily slip through your arms and their shoulders could dislocate.
4. Assistance may be required to rise from a chair (in the chalet) or off the snow because of muscle and difficulties.
5. Families have individual feelings about how much their children know about this disease and at what time they are ready to know more. Please respect parent's wishes when dealing with the degenerative nature of this disease.
6. Consult your Program Coordinator if you feel the child's muscle weakness has progressed to the stage where they will longer be able to ski.
7. Offer as much assistance as the child needs to get down the hill.

SPINAL CORD INJURY

MAKE-UP OF THE NERVOUS SYSTEM:

The CENTRAL NERVOUS SYSTEM is made up of the BRAIN, SPINAL CORD and SPINAL NERVES.

When uninterrupted, the spinal cord acts like a telephone line, communicating a two-way message between the brain and muscles. The SPINAL NERVES come out of the spinal cord in pair. The upper nerves connect with the upper part of the torso, arms and hands; the lower with the lower part of the torso, pelvis, thighs, calves and feet.

The nerves branch further into peripheral nerves which reach every millimeter of your body.

HOW THE NERVOUS SYSTEM WORKS:

Muscle movement and sensation are present when the electrical pathway is intact from the brain down the spinal cord to the muscles. The spinal cord runs in the centre of and protected by the many bony structures called vertebrae which make up the "back bone"

The CERVICAL region contains the first seven vertebrae and the first eight spinal nerves.

The THORACIC region is composed of the next twelve vertebrae and next twelve spinal nerves.

The LUMBAR region is composed of the next five vertebrae and spinal nerves.

The SACRUM and COCCYX have nine vertebrae fused together into two separate bones and contain six spinal nerves.

If the spinal cord injury is the cervical region the diagnosis is QUADRIPLEGIA or weakness of all four extremities. If the injury is in other regions it is known as PARAPLEGIA or weakness of the two lower extremities.

The functions of the body, which are controlled from above the site of injury, are unimpaired. The function below the site of injury is impaired and the messages can no longer achieve the appropriate responses.

CLASSIFICATIONS OF INJURY:

Complete: total loss of function and sensation below the point of injury. Total loss "PLEGIA".

Incomplete: partial loss of function below the point of injury. Partial loss "PARESES"

LEVEL OF INJURY:

The most common levels of injury are C5-6, T6-7, and T12-L1.

L4-5-S1: Usually ambulatory requiring ankle-foot bracing and forearm crutches or canes. Excellent 4 Trackers.

L2-3: Require knee-ankle-foot bracing. Require rigid boots, knee brace and outriggers. Many people with this level injuries are sit skiers or mono-skiers

T7-12: Trunk balance is compromised, though may walk, more often utilizes a wheelchair for independence. Excellent sit or mono-skier.

T1-6: Upper chest muscles involvement comprises trunk balance requiring safety straps to maintain upright positioning in the sit ski. They also require pick type ski poles.

T1-C4: These people must be tethered and turned. Basically, they go along for a scenic ride.

SPECIAL CONSIDERATIONS:

Thermoregulation:

T8 lesions and above have impaired internal temperature control. This does not present a problem for those skiers dress appropriately. On very cold days, they should be limited to 2-3 hours and checks made of their distal extremities frequently.

Spasticity:

Involuntary movement, are caused by stretch reflex activity in muscles that occur, below the point of injury the healthy portion of the spinal cord below the level of injury responds and can't be controlled by the brain as in the uninjured. To stop the movement simply repositions the leg to reduce the stretch on the affected muscles.

Skin Breakdown:

Sores develop in areas where there is prolonged pressure over bony prominence. We must be very careful to maintain upright positioning in the sit ski there is adequate padding under and between heels, knees and buttocks. Check the straps are straight and not twisted. Be aware that the quadriplegic requires manual weight change about every 30 minutes.

Bladder Function:

There are various control problems. Each individual knows their own routine to empty their bladder. This may be in form of an indwelling catheter. Special care is needed in positioning into the sit or mono ski to ensure the catheter will not be kinked or pulled out. If leaking occurs while skiing, it must be attended to promptly.

Autonomic Dysreflexia:

"EMERGENCY SITUATION" occurring in T6 level and above. It is a rise in the Blood Pressure. Demonstrated by severe sweating, goose bumps, flushed feeling, chilling without fever, severe pounding headache and increased spasticity. It can be caused by any of the previous mentioned problems.

If this happens to your skier:

Obtain medical attention.

Sit the person upright in the sit-ski or mono-ski.

Aid the person in checking if there is a kink in the urinary catheter if ask to.

Decrease the stretch on the muscles.

Get the person down the hill as soon as is safely possible.