

## MOVING towards better health. By Karen Decker

### Hitting the slopes.

One great way to remain active during winter months is to downhill ski - either within Nova Scotia or trips away. Skiing can improve strength as well as challenge our anaerobic training. There are a number of steps that both the experienced and beginner skier can take to reduce the risk of injury on the slopes.

- Attending ski lessons can greatly reduce the risk of injury.
- Ensure proper equipment is used and maintained. Bindings should be checked and adjusted regularly by trained ski mechanics and boots should be fitted by skiing technicians who can advise on the correct equipment for the individual skier. A skier's individual body alignment such as knee inward or outward bowing, high or low arches, and wide feet, could all influence the choice of ski boot.
- Biomechanical problems of the foot such as excessive arch collapse- or over pronation - can increase injury risk. During skiing, control is maintained by pronating the foot to edge the downhill ski into the slope. A skier with biomechanical abnormality may already have their foot pronated flat in the boot and will therefore internally rotate the lower limb to have the desired effect. This will lead to a valgus knee position resulting in inefficient skiing, fatigue and medial knee pain. Orthotics can be used to correct foot biomechanics in the boot.
- The most common areas injured while skiing include the knee, shoulder and thumb. Injuries range from more minor to severe ligament strains and muscle strains.
- One of the most common injuries is sprain of the knee ligaments. This occurs when there is delay in or failure of the ski binding to release. Get into the habit of checking your binding settings every day by performing the 'self test'. This simple procedure basically involves you trying to release each boot from its binding at both the heel and the toe. If you can't manage this, then your binding is set too tight and should be adjusted.
- To further prevent knee ligament injuries try to avoid getting up while still moving after a fall, leaning back on your skis or attempting to sit down after losing control, attempting to recover from an inevitable fall, and finally landing after a jump off balance to the rear with the legs straight.
- Reduce the risk of head trauma by wearing a quality and well fitted helmet.
- Try and avoid skiing with your hands inside the ski pole straps. This locks your hand to the pole in a fall, the pole then acts as a lever across the thumb increasing the risk of injury.
- Selecting the appropriate difficulty of slope on the mountain is important. A uniform code exists with green being easiest, then blue and black for intermediate to advanced skiers. A double black diamond exists for advanced skiers only.
- Skier fatigue is often a factor and time spent preparing and conditioning the body before starting up for the first time on the slopes or before undertaking a skiing holiday can prove worth while. Some gyms and leisure clubs may run specific classes to prepare for skiing holidays.

- The most important areas to focus on with a preventative strengthening program include the leg, core, and shoulder muscles. Some general exercises that can be completed at home include partial squats, lunges, and step-ups or stair climbing. Shoulder exercises include push-up – at a wall, table or the usual version completed from the floor depending on level of beginner strength. Start with 2 sets of 10 repetitions for the less than active person working up to 3 sets of 20 reps for each exercise. Preventative strengthening is best started 4-6 weeks prior to hitting the slopes.
- Warming up before skiing is also important. A typical warm up may consist of a short jog or flat slope ski skating to raise heart rate, followed by dynamic stretches for the hamstrings, iliotibial band, quadriceps and calf muscles.
- Stay hydrated and pay attention to fatigue. That ‘one last run’ at the end of the day while low on fluids and energy resources often leads to falls, poor judgement and thus injury.
- Wear adequate clothing, preferably in layers. Don’t forget good quality sunglasses, goggles and sunscreen.
- If participating in a multi-day ski adventure, remember to complete cool-downs each day after runs (static stretching) and utilize a cold tub for a short period to potentially reduce muscle soreness.

| Finally, remember to ski in control and to respect others on the slope. Happy [skiing](#).

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