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Physician Publication

Common Injuries from Winter Recreation

By Gregg S. Berkowitz, MD, FAAOS

With winter upon us, many people participate in activities such as snow skiing, snowboarding, and ice skating. The very conditions that make these activities possible and enjoyable, reduced friction, also make falls and injuries very common. Winter sports injuries get a lot of attention at hospital emergency rooms and doctor's offices, and include sprains, strains, dislocations and fractures (broken bones). In 2004, the U.S. Consumer Product Safety Commission reported 49,600 injuries from ice skating, 143,990 injuries from snowboarding and 144,379 injuries from snow skiing.

While participation in each of these winter sports can result in the injury types listed above, there are injuries particular to the different winter sports pursuits.

Skiing injuries, because of the independent movement of each leg, often involve the knee. Ligament injuries can range from mild stretching, or sprains, to complete tears where the ligament is no longer functional. The milder injuries are usually treated conservatively with rest, bracing, and anti-inflammatory medications. Complete tears of one of the main stabilizers of the knee, the anterior cruciate ligament, can require surgical reconstruction using arthroscopic minimally invasive techniques. Cartilage, the rubbery cushioning structures between the bones, can be injured, with treatment ranging from conservative to arthroscopic surgery. Finally, there is a characteristic skiing injury of the thumb, called, appropriately enough "skier's thumb", and is a ligament injury of the thumb caused by a fall on the outstretched hand and thumb, with the ski pole held between the thumb and other digits. Depending on how severe the ligament injury is, treatment can be conservative, with casting or bracing, or require surgical repair. Other upper extremity injuries, such as dislocated shoulders and elbows, where the bones of the involved joint are completely out of place, can result from falls on an outstretched arm.

Snowboarding injuries differ from skiing injuries because of the fixed position of both feet on the snowboard. This makes knee and lower extremity injuries less likely however because of the leg and ankle motion needed to snowboard, and with the softer boots, there is a characteristic break of one of the bones in the ankle. This fracture can require non-surgical treatment with casting, or surgical repair if the broken bone is shifted out of place. Upper extremity injuries are more common, with the wrists often fractured due to falls on the outstretched hands. Other upper extremity injuries include clavicle (collar bone) fractures, and shoulder or elbow dislocations.

Ice skating shares some of the injury types with both skiing and snowboarding. Falls onto outstretched upper extremities can result in wrist fractures, or shoulder or elbow dislocations. The fractures may need casting or surgical treatment, depending on severity, and the dislocations require reduction, manipulating the dislocated joint back into place. Usually this must be done in the emergency room. Lower extremity injuries can involve the knee, as is noted above for skiers, with trauma from a twisting force, or ankle injuries. Ankle sprains which are ligament injuries of the ankle, can occur and are usually treated conservatively without surgery and allowed to heal. Fractures of the ankle can be treated with casts, walking boots, or in more severe cases, surgery.

There are ways to prevent some of the injuries mentioned. Many winter sports injuries happen at the end of the day, while pushing to do that one last run, when muscles are tired. Pay attention to your level of fatigue and quit when you get tired. Check your equipment, making sure boots or skates fit properly and bindings are adjusted correctly for your weight and skill level. There is evidence that wrist guards for snowboarders can reduce the chance of fracture in a fall, and their use is recommended. There are snowboarding gloves available with the wrist guards built in. Helmets have been found to reduce the severity of head injuries in crashes and their use is recommended as well. It does appear that as helmet use increases, the stigma previously associated with helmet wear is disappearing- a good thing! Finally, there are some general tips for preventing injury; stay in shape, condition muscles before participating, warm up before starting the activity, take lessons from qualified instructors and wear layers of light, water- and wind-resistant clothing. Also drink plenty of water-dehydration is a risk due to the low humidity, particularly at high altitude. Normal signs that you may need to drink, such as sweating, may not be present.

Should you be unfortunate enough to sustain an injury participating in winter sports activities, despite following the tips above, contact the Orthopedic Surgeons at Advanced Orthopedics and Sports Medicine Institute in Freehold, New Jersey.
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The seven practicing physicians at AOSMI have a combined 100 years of experience providing exceptional orthopedic care to the New Jersey community, with specialists for all your orthopedic needs.

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