

# SEAPORT ORTHOPAEDIC ASSOCIATES

## ...BECAUSE YOU HAVE A CHOICE

### Common Ski and Snowboarding Injuries\*

Skiing and snowboarding are safe and popular sports, but on any given day, 3-4 out of 1,000 skiers will sustain an injury requiring medical attention. Deaths related to these sports are rare, but well publicized. Each year in the United States, ten times more people drown in their bathtubs than die skiing. Preparation along with some common sense will prevent many injuries. We will discuss some ways to avoid injury and then review some common injuries and their treatment.

Despite the best preparation and caution, injuries will occur. The knee is the most commonly injured body part and the most commonly injured structures within the knee include the medial collateral ligament (MCL), anterior cruciate ligament (ACL), and meniscus. The top of the tibia, or the tibial plateau, is the most common knee fracture.

The medial collateral ligament is a tight band of tissue on the inner side of the knee. It helps prevent abnormal bending. When stressed or twisted, the ligament is sprained. A sprain is a tear in the ligament and can be partial or complete. MCL injuries account for 20-25% of all ski injuries and occur in all skill levels. Beginning skiers 'snowplowing' sustain MCL injuries when they fall, usually after their stance suddenly widens or their skis cross. Experienced skiers tear their MCL by 'catching an edge' causing the knee to suddenly twist. When examined, the knee is swollen and painful. Swelling inside the joint suggests a more severe, or complete tear, and may also involve an ACL or meniscal tear. Initial treatment of all knee injuries is rest, ice, compression and elevation. Minor sprains do not require any further treatment, but significant sprains should be braced until healed. Severe sprains often require physical therapy to regain strength and full range of motion.

The anterior cruciate ligament accounts for 10-15% of ski injuries. We will discuss three common mechanisms of ACL injury. 'Phantom foot' occurs when the skier is off balance and falling backward with their weight on the inside edge of the downhill ski and their uphill ski is in the air. This twists and bends the knee, forcing the tibia forward on the femur and rupturing the ACL. Situations placing the skier in this position include attempting to recover when off-balance or during a fall and attempting to sit down while out of control. A direct hit to the lower leg from behind, often from an out of control skier, can result in an ACL injury. Injury can also occur when landing from a jump off balance with the knee extended. The tail of the ski hits the ground first, forcing the back of the boot against the calf, pushing the tibia forward, and tearing the ACL.

An ACL tear can be partial or complete. Both can cause pain and immediate swelling within the joint. A 'pop' may be felt or heard as the knee gives out. Diagnosis is made by clinical examination and may be confirmed with MRI. The MCL and lateral meniscus are commonly injured along with the ACL. At this point, evaluation by an orthopedic surgeon to discuss treatment options is helpful. Initial treatment and rehabilitation is directed at reducing swelling, regaining strength and full range of motion and preventing deconditioning. As rehab progresses, sporting activities are gradually resumed. If the knee continues to 'buckle' or 'give out', long-term bracing may be necessary. If this is an unacceptable option, surgical reconstruction is possible.

Five to ten percent of ski injuries involve the meniscus. The meniscus is made of cartilage and sits between the femur and tibia. A sudden severe twist can tear the meniscus, usually occurring when the knee is bent with the full body weight on it. There is immediate pain when standing or walking, but maximum swelling may take a day or two to appear. A large tear may get stuck between the bones preventing straightening of the knee. This is known as a 'locked knee'. The meniscus has poor blood supply, so most tears do not heal. Arthroscopic surgery can provide relief if pain persists.

Arm injuries also occur, 'Skier's thumb' being the most common. This is a ligament injury at the base of the thumb occurring during a fall on an outstretched hand while still holding the pole. A complete tear requires several weeks of casting or bracing and may even need surgery. If not properly treated, thumb grasp and strength is permanently decreased. This injury can be prevented by not wrapping the pole straps around your thumb.

Prevention is the best treatment, but injuries will still occur. Ski injuries can be permanently disabling if not appropriately treated, and early medical evaluation will direct a rehabilitation program to speed recovery. I wish everyone a healthy and happy ski and snowboard season.



### You have a choice to

- **Have the best medical care possible**
- **See the correct specialist**
- **Be an educated patient**
- **Receive the best treatment available**

**Ski and snowboard season is here, and you have the choice to avoid injury. Whatever you do...**

**DON'T PANIC!**



SEAPORT  
ORTHOPAEDIC  
ASSOCIATES

19 Beekman Street  
New York, NY 10038  
(212) 513-7711

for more information, visit [www.seaportortho.com](http://www.seaportortho.com)

\*[www.ski-injury.com](http://www.ski-injury.com)