

Snowboarding: *Growth in Popularity & Injuries*

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Marko Grilc of Slovenia competes during the Snowboard Slopestyle event at the 2010 Winter X Games in Tignes, France. (Photo courtesy of Julian Finney)

The unfortunate death of freestyle legend Marco Grilc while exploring the terrain of an Austrian ski resort was an important reminder about the growing popularity of snowboarding and a rise in snowboarding-related injuries. Grilc reportedly was not wearing a helmet at the time of his accident and died of fatal head injuries.

Falls are the leading cause of injury in snowboarding. Beginners are more likely to get injured because they have not mastered the ability to maintain a stable stance on the snowboard and fall more frequently than advanced snowboarders who typically perform more aggressive and dangerous maneuvers. In fact, nearly 25 percent of snowboarding injuries occur during the first time on a snowboard and almost 50 percent happen in the first season of snowboarding.

Snowboarding injuries typically involve the upper extremity, knee, ankle, or head. The most commonly treated injury in the emergency room is a wrist fracture. This occurs when snowboarders lose their balance, fall and instinctively react by reaching out with their hands to break the fall. The fracture results from the excessive amount of force absorbed by the wrists at the time of impact.

Ankle sprains are the second most common injury seen in snowboarders. They most often occur when a snowboarder loses control of a landing following a jump. A combination of a compressive loading and ankle inversion (rolling in) results in tearing of the ligaments of the ankle, called a sprain. "Snowboarder's ankle," which is a fracture of the lateral process of the talus (a bone of the foot near the ankle joint) may also result from a similar mechanism.

A small percentage of snowboarding injuries (four to eight percent) occur while entering or exiting a ski lift line. Snowboarders release the rear foot in order to propel themselves forward, leaving the lead leg attached to the board at awkward 45-90 degree angle. Falling with your foot secured to the board in this position can result in a large rotational (twisting) force and injury to

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Snowboarding

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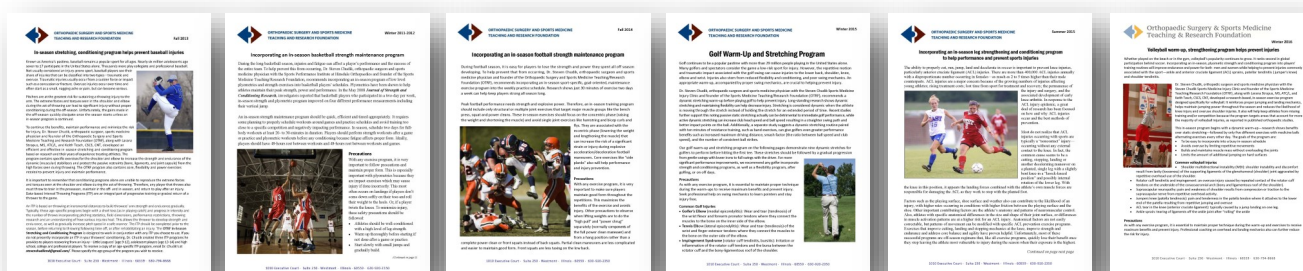
the anterior cruciate ligament (ACL) and the medial collateral ligament (MCL) of the knee.

Serious head injuries are seen in association with falls or collisions with obstacles. Snowboarders often and unexpectedly can “catch an edge” resulting in either a forward or backward fall. These types of falls are associated with significant amounts of momentum that slam the head against the ground in a whip-like manner resulting potentially serious head injuries including concussion and intra-cranial bleeding (cerebral contusion, intracerebral hemorrhage, epidural hematoma, subdural hematoma). Early symptoms include headache, nausea, confusion, amnesia (memory loss) or loss of consciousness. Anyone experiencing any of these symptoms following a head injury should seek immediate medical attention.

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Snowboarding not your sport? Through the Orthopaedic Surgery & Sports Medicine Teaching & Research Foundation (OTRF), Dr. Steven Chudik and his Health Performance Team provide reliable and proven training information to help athletes of all ages and abilities compete and perform at their best—no matter if it is a state athletic championship or a weekly golf outing with friends. One of the most popular resources is OTRF’s sports performance programs. Research-based, these programs incorporate appropriate exercises, weights and stretching into weekly training schedules to maintain strength and help minimize injuries.

The health performance programs are electronically distributed with the OTRF *Active Bones* E-newsletter. To automatically receive new programs, email OTRF and request to be added to the *Active Bones* mailing list. Sports performance programs previously developed by OTRF are available as PDF downloads. Visit the OTRF website, otrfund.org and click on the sports performance tab.



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