

Mike Wiegele Helicopter Skiing

Ski Tips & Techniques

OCTOBER 2010 - KEEP THE KNEE INJURY-FREE

This month I thought I'd offer some advice and exercise ideas aimed at injury prevention - specifically associated with the knee.

We all worked hard to provide great guiding and find the best snow to help prevent injuries. However, even in great powder, injuries happen. Often, these injuries affect the knee.

The knee is somewhat of a weak link in the three joints used in skiing. Our ankles are protected by ski boots. Our hips, although susceptible, are afforded significant protection by the massive and powerful muscles that incorporate the hip girdle and the upper leg. However, our knees are completely unprotected.

So what can be done to help our knee joint and prevent injury? There are a few different facets that will help in this regard. Let's consider flexibility, strength, pre-skiing warm up and good ski technique.

By increasing strength in the muscles around the knee we decrease force on the ligaments in the knee, increase associated muscular endurance, and provide improved joint stability. Quadriceps and hamstrings get a lot of focus, but keep in mind that our stability muscles in the abductors and adductors (muscles of the inner thigh and outer thigh) are also very important.

For strengthening, stretching may actually be the best thing we can do. A good stretching regime will substantially improve the work capabilities of the muscle.

For all of you that have skied with us in Blue River, you have all heard Mike Wiegele talk about the importance of pre skiing warm-ups and post skiing cool-downs. Getting on the bike, with no resistance and spinning helps to wake up the muscles. As Mike says "it lets your muscles know that you mean business and it's time to go to work".

But don't forget your post skiing cool-down. I'm not talking about your après trip to the Silver Buckle lounge. Again getting on the bike for 30 minutes of low resistance spinning helps eliminate lactic acid, decreasing muscle soreness and stiffness.

Finally, knee injuries happen as a result of a skier's hips getting below the angle of the knee. The main culprit is a slow twisting fall that doesn't put enough force on your

bindings to get them to release but does take the ACL and MCL past their useable range. There are several ways to decrease your chances of this type of injury.

For starters, don't set your bindings past their recommend din setting. They are supposed to release in particular circumstances. Next, learn to fall. Everyone crashes from time to time but it is often fighting the fall that leads to knee injuries. Finally, slow down in tricky snow. There are conditions where our knees are particularly susceptible. When your guide says slow down, it is for this reason.

Unfortunately, knee injuries will still happen but we should still try to reduce the chance. Try some of these ideas and your knees will love you for it.

Tim McLean - Senior Lead Guide
CSIA Level 3, CSGA Level 3