

newsletter



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Hours of operation  
Monday-Friday: 8:00 am - 5:00 pm  
We will be closed Thanksgiving Day,  
Christmas Day and New Years Day

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# HEALTH TIPS

## PRE-SEASON SKI INJURIES

For those of us who love snow sports, one of the worst things is being unable to ski or board as a result of an injury. The only thing more terrible than injuring yourself on the mountain is getting hurt while training in the pre-season. Pre-season training injuries can occur when aggressive plyometric activities are introduced to an exercise regimen too quickly. Plyometric exercises are specialized, high intensity, training techniques, for example jumping off a box and onto a higher box with a weighted vest. These exercises, some argue, build speed and strength and therefore build power. On the other hand, the high forces involved in plyometric training can be destructive and cause injury.

Most of us enjoy cycling, hiking, and running during the summertime months. Our bodies adapt to these aerobic/endurance activities in specific ways that allow us to sustain moderate exercise intensities for longer durations. When it's time to switch gears to skiing, our muscles, bones, and tendons are not prepared. Skiing requires speed, power, and agility over short periods of time. This principle should be replicated in pre-season training and if you have ever attended a ski conditioning class, you are well aware of this concept. However, just like anything else, a "ramping up" period is required to allow the body to safely adapt, especially if you choose to participate in plyometric drills. Start very slowly and build gradually. Begin with only 50 jumping contacts and build by 10 each session. Allow plenty of rest between plyometric sessions and listen to your body. Pay attention when an exercise causes you pain.



### TIPS

### HERE ARE SOME TIP-OFFS TO RECOGNIZE IF AN INJURY IS SERIOUS AND NEEDS MEDICAL ATTENTION.

1. You have joint pain that lasts longer than 48 hours
2. You experience tenderness at a specific point that is not reproduced at the same spot on the other side of the body
3. You have swelling
4. You have reduced range of motion comparatively on one side of the body
5. You have weakness comparatively on one side of the body
6. You have numbness and tingling

If you recognize any of these symptoms the goal is to prevent any further damage. Don't let the problem get worse. Stop all activity and seek medical attention.





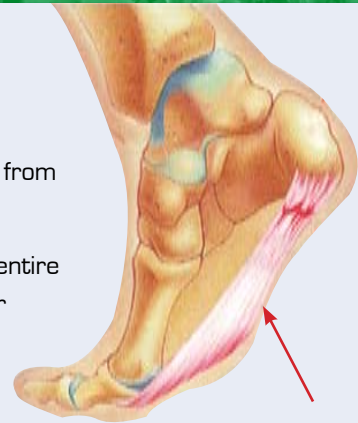
# plantar fasciitis

Plantar fasciitis is an injury of the main ligament in the arch of your foot. The plantar fascia runs from heel to toe across the bottom of your foot and acts as the main soft tissue support of your arch.

The main symptom of plantar fasciitis is heel pain. Some people will feel pain throughout the entire arch of the foot. Frequently symptoms are worse first thing in the morning or the first steps after sitting for a prolonged time. As symptoms increase any walking or weight bearing activity can become painful and debilitating.

Plantar fasciitis is usually caused by repetitive stress on the arch because of abnormal foot mechanics. With over pronation the foot widens and elongates excessively pulling on the plantar fascia. With a high arch or supinated foot the plantar fascia becomes shortened and tight and is susceptible to abnormal force. In both cases extra tension on the fascia can cause abnormal force where it attaches to the heel bone causing tissue damage and inflammation.

Treatment consists of two stages. The first stage is decreasing any acute inflammation. The second stage is changing the mechanics of the foot to decrease stresses on the fascia and prevent re-injury. To decrease initial pain anti-inflammatory treatments are indicated, including oral anti-inflammatories, ice, taping, soft tissue mobilization, and physical therapy modalities such as low level laser. To improve mechanics of the foot, stretching of the fascia and calf muscles are very important to reduce stress. Custom foot orthotics are also important in long term management of plantar fasciitis. Properly supporting the arch will reduce stress on the fascia, allowing it to heal, preventing future injury.



## CARPAL TUNNEL SYNDROME CAUSES AND TREATMENT

### Carpal Tunnel Syndrome

Carpal Tunnel Syndrome or CTS is an increasingly common problem affecting the wrists and hands. This problem results in 2 million physician visits and 260,000 surgeries per year, affecting women 3 times more often than men. CTS is frequently caused by repetitive activities such as computer and tool work, but can be aggravated by sleep postures and daily household activities. If not properly treated, CTS can lead to nerve damage and permanent disability.

### What are the symptoms of CTS?

CTS results in pain, numbness, and tingling in the hand and fingers, particularly the index and middle fingers. It is caused by decreased space in the carpal tunnel in the wrist, where the median nerve runs into the hand. This decreased space can result from inflammation or scar tissue formation in the tunnel. The nerve then becomes compressed and results in pain and abnormal sensation. Common activities which can aggravate CTS are use of vibrating tools, computer work, bicycling, knitting, and house cleaning. CTS can become severe enough to awaken people from sleep because of poor wrist postures.



### Treatment of CTS

The most severe cases of CTS may require surgical intervention. Prior to surgery, however many options are available. Reducing the stress on the wrist is important. This can be done by maintaining the wrist in neutral posture while using your hands. That is keeping, your hands in line with your forearms and not bent up or down. Splinting can help with this, especially if you are having problems at night. Ergonomic evaluation of a work site can also be beneficial to put your body in the most optimum position. Decreasing repetitive hand movements that are forceful, awkward, or involve grasping and pinching will significantly decrease stresses on the wrist.

### Cold Laser

One of the most fascinating and recent developments in treating CTS is the ML830 laser. In 2002 the FDA approved the ML830 laser for treatment of CTS because of its success in research trials. Cold laser is a non-operative pain free treatment which can be combined with other traditional forms of physical therapy.

## SNOWSHOE INJURIES

Snowshoeing is an excellent way to exercise and enjoy the outdoors at the same time during the winter months. At intense levels, snowshoe training can improve your fitness even more than running. Even snowshoeing slowly, at about 2 miles per hour, caloric expenditure will be about 480 calories per hour. Pick up the pace to 3 miles per hour and you can burn up to 1000 calories in an hour.

In general, snowshoeing is a relatively safe sport with regard to repetitive overuse injuries. It is a low-impact activity so there is much less potential for muscle/tendon damage. Still, there are steps to make snowshoeing even safer. Start your workout with a gentle cardiovascular warm-up and take time to stretch. Focus on the large muscle groups in the legs and hips. Worn out, ill-fitting or deformed snowshoe boots can also be the culprit of various soft tissue and joint injuries. Check the shape and fit of your shoes before the season starts. Beginners should start slow and build up ability, strength, and endurance gradually. Don't go more than an hour for the first few times out snowshoeing.



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# orthotics

Do you have foot, knee, hip, or back pain? If the answer is yes, faulty foot mechanics could be one of the causes. The foot is designed to un-lock or pronate when it hits the ground for shock absorption. In other words, the arch collapses. As we propel ourselves forward, the foot must re-stiffen or supinate. Faulty foot mechanics result when these two phases are out of synch or disproportionate. More than 90% of us over-pronate. That means our arches flatten too much and do not re-stiffen enough for efficient propulsion.



Bunions, plantar fasciitis, corns, and hammertoes are some of the injuries and deformities that can occur with poor foot function. Because the foot transmits forces from the ground to the rest of the body, foot function can affect the entire chain of bones leading to the spine, including the knee, hip and lower back.

Many of these problems can be prevented or corrected with the use of orthotics. An orthotic is a supportive device which is placed inside footwear to change the mechanical function of the foot. Ideally, it should provide full, custom, and corrected arch contact so the foot works in a biomechanically correct way.



The therapists at Ascent Physical Therapy are licensed, trained and certified in the casting and fitting of custom Sole Supports and will be happy to custom fit whatever shoe or boot you desire.