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Footmaxx™ in Sports News

Ilio Tibial Band Syndrome

The ilio tibial band runs from the hip to the lateral side of the proximal end of the tibia. Its function is to resist internal rotation of the tibia as well as to maintain the lateral integrity of the leg. Ilio tibial band “friction syndrome” is a condition wherein the ilio tibial band is stretched and torqued and the distal end rubs across the lateral condyle of the femur. Patients most commonly complain of pain on the lateral side of the knee often extending up the lateral side of the thigh as high as the hip.

Ilio Tibial Band Syndrome is especially common among athletes. It is caused by overstress of the ilio tibial band. During a normal gait cycle, the femur and the tibia rotate in unison; however, when a person overpronates, the tibia is locked into the talus by the saddle joint and therefore continues to rotate internally past the end of the contact phase while the femur begins to externally rotate with the pelvis during the midstance phase. The resulting counter rotation of the femur and the tibia causes a shearing force to occur and the ilio tibial band is torqued and stretched. The result is that the distal end of the band rubs across and is irritated by the lateral condyle of the femur.

Treatment options vary according to symptoms. Massage and stretching of surrounding muscles to help ease the tightness and ice to reduce inflammation. Since the problem is the abnormal pronation, the patient should be fitted with functional orthotics to correct the prolonged pronation thereby reducing the counter rotation between the femur and the tibia, alleviating stress off of the ilio tibial band.



How Footmaxx Can Help!

Arch Fill:

Provides a solid, rigid or semi-rigid arch support to the entire orthotic. A firm arch fill is recommended for overweight patients or patients demonstrating severe over-pronation, with severely flexible pronated feet or with posterior tibial tendonitis. A soft arch fill is recommended for patients with significant over-pronation or for stabilizing the orthotic during activities such as running.

Arch Strip:

Provides a semi-rigid or semi-flexible arch support to either the medial or lateral side of the orthotic. The arch strip provides support with less bulk than the arch fill. A firm arch strip is recommended for overweight patients or patients with severe over-pronation or flexible pronated feet, while the soft arch strip is recommended for patients with moderate over-pronation.

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Featured Products: Premium Ski/Skate Orthotic by Footmaxx™

Brushed synthetic suede top to add grip while decreasing friction.



Premium Ski/Skate

Design and Features

Designed to provide enough biomechanical control so that an athlete can skate or ski with their feet in the subtalar neutral position. A proper edging technique is possible due to the "blade flat on the ground" starting position.

Important Biomechanics

The Premium Ski/Skate orthotic comes with a semi-flexible Duramaxx™ module for ultimate biomechanical control. The synthetic brushed suede top cover provides shock absorption while reducing friction, and allows moisture to pass through. The soft arch fill or strip increases rigidity and shock absorption while extending the life of the orthotic.

This orthotic provides enough biomechanical control so that an athlete can skate or ski with his/her feet in the subtalar neutral position. A proper edging technique is possible due to the "blade flat on the ground" starting position. The Premium Ski/Skate orthotic is ideal for athletes who want to glide while feeling nothing but comfort.

Posture and biomechanics of a player have a huge effect on the body. Leg length discrepancy can affect gait and possibly cause injury to the knee, even on the ice. The Metascan™ system is a readily available tool to assess posture and biomechanics. You can assess walking mechanics with a gait and pressure analysis. Check out leg length discrepancy with a static scan. Evaluate whole-body mechanics by performing a postural analysis to determine weight transfers, pressure distributions and postural abnormalities.

Once the assessment is complete, a therapeutic regime is put into place. An essential part of that regime is often orthotic therapy. For someone who skates orthotic therapy is essential in the movement components of the game. Our Premium Ski/Skate orthotic is designed specifically for those who ski or skate with a narrow cut to fit skis and skates. This style of custom-made orthotic provides support, control and shock absorption.

Possible Injuries

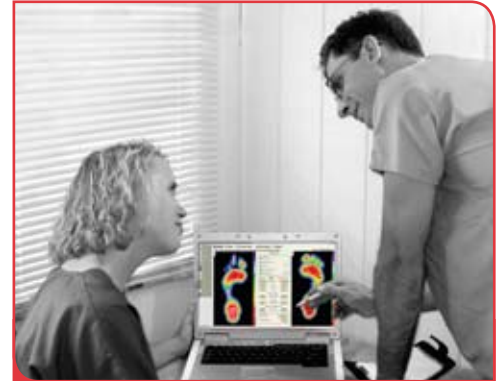
Plantar fasciitis, Achilles tendonitis and ligament tears in the knees can all occur from the intense activity associated with skating. It is important to remember that Duramaxx orthotics are specially made to take these possible biomechanics into account.

Performance

This orthotic is ideal in skis and skates with the narrow cut to ensure proper fitting. The more a person plays, the more susceptible the body is to overuse injuries, sprains and strains. For serious players, consider offering an "assessment/treatment package" that includes dynamic, static and postural assessment with a treatment strategy that involves custom orthotics (if warranted) along with your usual treatment regime.

Tips for Ordering

All Duramaxx orthotics are designed to accommodate for the stresses placed on the lower extremities during sports.



Ask A Doctor

Q: What is the best way to treat plantar fasciitis?

A: The plantar fascia is repeatedly over-torqued because the calcaneus in the hindfoot is stable while the forefoot is over-pronating. This shearing force causes the plantar fascia to become inflamed, so treatment options vary according to symptoms.

If the pain is caused by over-pronation and continuous torquing of the fascia, an aggressive more rigid orthotic is needed to arrest the torquing and stabilize the forefoot. If the pain is found in the middle area of the plantar fascia, aggressive rearfoot control is needed and can be found with orthotics.



Patient Corner



Case Study

Patient:

45-year-old female

Complaints:

Tenderness on the plantar surface of the foot in the metatarsal area

History:

Moderate activity level

Clinical observations:

Any activity will aggravate the area

Diagnosis:

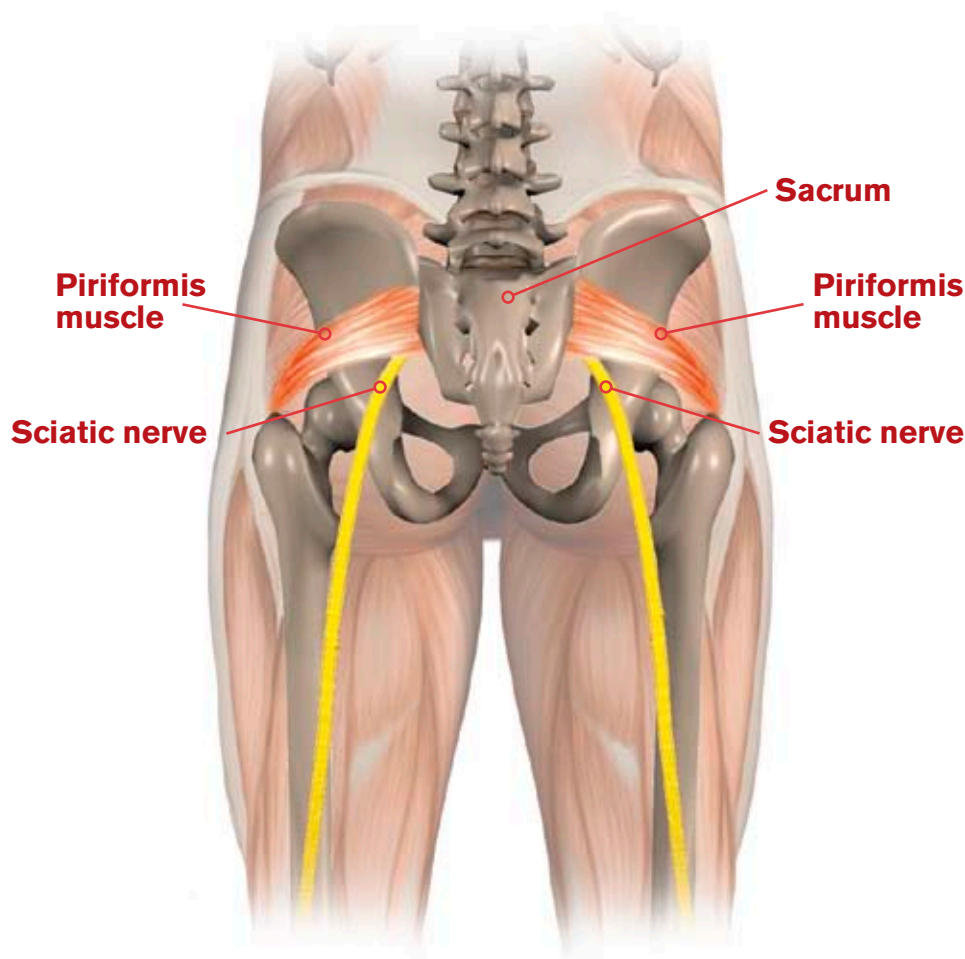
Metatarsalgia

Comments:

None.

Treatment:

Orthotics should be worn to correct abnormal pronation and redistribute the weight more evenly along the plantar surface. If shoe fit allows, a metatarsal bar will assist by off-loading the metatarsal heads, alleviating pain localized under the metatarsal heads.



Piriformis Syndrome

What is it?

The piriformis muscle originates on the sacrum and crosses over at a slightly downward angle to the outside of the hip, attaching to the lateral side of the femur. Its function is to laterally rotate and extend the hip joint. Piriformis syndrome is a condition in which the piriformis muscle irritates the sciatic nerve, causing pain in the buttocks and referred pain down the leg along the path of the sciatic nerve.

What are the common symptoms/complaints?

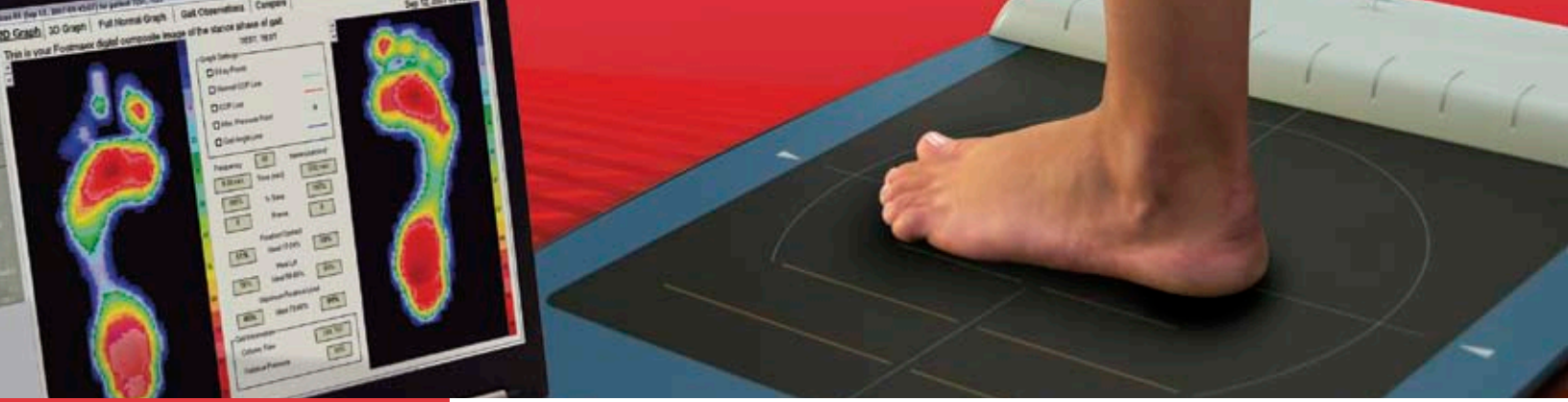
An irritating pain in the buttocks and referring pain down the leg along the path of the sciatic nerve. Pain is aggravated by sitting, squatting or walking. When relaxed, the affected leg is often externally rotated.

How is it caused?

If the leg has been externally rotated for an extended period of time (driving long distances) the piriformis muscle can shorten. Continual internal rotation of the femur can cause the piriformis muscle to overwork and therefore increase in size. In both instances, when the leg tries to straighten out the involved muscle compresses the sciatic nerve.

How is it treated?

Stretching of the piriformis muscle is necessary. Massage is helpful in relieving tightness. Faulty pelvic and foot mechanics need to be addressed. If internal rotation of the femur and prolonged pronation is evident, an orthotic device should be prescribed to arrest over-pronation and control the leg from internally rotating too much and too long.



Metascan™ Tip

To see how running affects a patient's gait, use the comparison feature on our Metascan V5 software and show your patients the added stress that running puts on the body. Also, this can assist you in identifying problem areas that can lead to injury.

The Metascan V-5 software is a multi-dimensional tool, and can be used to take a dynamic scan during walking or running. The software can then compare walking and running scan data of the same patient. Metascan diagnostics will analyze information from the digital pressure mat and compile patient data, translating it into a prescription for orthotics.

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