

HEEL PAIN IN YOUNG SOCCER PLAYERS

Even though soccer is a safe and healthy form of exercise and competition for young athletes, hard playing surfaces, improper foot wear and demanding practice and playing schedules can lead to common overuse injuries associated with the game. Heel and foot pain is a common symptom reported by soccer players, particularly boys between the ages 9-12.

The heel is particularly susceptible to all the running, repetitive jumping and landing demands of sports like soccer. A brief review of anatomy shows that the heel is made up of the calcaneus (heel bone), the attachment of the achilles tendon (heel cord) to the back of the heel, the bones of the foot and the plantar fascia which makes up the arch of the foot. There are several reasons for heel pain including plantar fasciitis, commonly known as a heel spur, achilles tendinitis, bursitis and fat pad syndrome. A growth related illness affecting the achilles insertion at the trochanter plate, and commonly present in the young players is called Sever's disease. Many children playing soccer year-round, often three or more times a week. Over time, the frequency of play could put a young soccer player at risk for calcaneal apophysitis (Sever's Disease), the most common cause of heel pain in children between the ages of eight and 16. Sever's Disease results from stress placed on the growth plate of the heel bone. Excessive amounts of running or jumping causes inflammation to the growth plate of the heel bone, which causes pain and limits a young soccer player's ability.

The plantar fascia, on the bottom of the foot, is a long piece of connective tissue connecting the heel of the foot to the forefoot. This structure is affected by the shape, position and shock-absorbing properties of the foot and assists the foot in the push-off power we need when we run and jump. The plantar fascia can become inflamed from overuse hence the term "plantar fasciitis." Pain may also be linked to a foot that is too flat (excessive foot pronation) or a high arch foot (excessive foot supination). Plantar fasciitis usually affects one side only and will often give you pain with the first few steps getting out of bed in the morning. In severe cases, athletes may walk on the outside border of their foot or limp during or after activity.

Achilles tendonitis is a common overuse injury in soccer players. It may begin with a feeling of stiffness over the achilles tendon especially after activity. This soon gives way to tendon swelling and pain. The most common site of achilles tendonitis is 2 – 6 cm. above its attachment to the back of the heel. With repeated episodes of achilles pain, the tendon can become thickened in its appearance and may even form a nodule or lump in the body of the tendon. Close to the attachment of the achilles tendon at the back of the heel is a small bursa or fluid sac. This area is susceptible to trauma, i.e., being stepped on or kicked, or friction from the heel cup of the soccer shoe. This area can become inflamed and painful and over time can form a larger bump often referred to as a "pump bump." At the bottom of the heel direct trauma or contusion can occur with repetitive jumping and landing on harder surfaces such as a soccer field, especially in the spring when the fields can be dry and hard. The heel and the underlying fat pad becomes bruised and inflamed causing pain over the bottom more than the sides of the heel.

When it comes to effectively treating any soccer player with heel or foot pain, it is important to remember the basic principle of rest or activity modification, frequent application of ice packs, and proper analysis of the soccer player's foot wear. One simple consideration is to get rid of poorly cushioned, worn out soccer shoes. There is often significant wear or even a hole in the heel cup of the shoe. Soccer players like to "feel the ball" and will often prefer to wear tight shoes. Always make sure that the tips of the toes are not tight against the shoe. There should be a small amount of room, like the width of your thumb, from the tip of the big toe to the leather end of the soccer shoe.

One final thought is playing the game with minor aches or pain; this is okay as long as they

don't last or worsen over time. If heel or foot pain persists, consult your physician or physical therapist. Treatment may include the use of electrotherapy equipment, massage, Kinesiotaping and other proper taping techniques, replacing the inlay of the soccer shoe with heel cups or orthotics, use of protective pads, advice regarding proper warm-ups, stretching and strengthening exercises.

Footwear

It's important for athletes of all ages to pay careful attention when selecting any type of athletic shoe including soccer cleats. If heel pain or any other type of foot pain is experienced, consulting a podiatrist or a Physical Therapist is recommended. Not only can the podiatrist or a therapist help you select the proper shoes, but they could treat any foot problems that may occur.

Cleats should be light and flexible. Uppers should be supple and at least a finger's width should separate the tip of the big toe and the end of the shoe. Laces should be tight.

When shopping for cleats, wear the same style of socks you intend to wear in competition. Shop in the afternoon, when the feet are naturally slightly swollen. Investing in proper footwear for a young athlete is much less expensive than medical treatment later.

For children, the design of soccer cleats can contribute to injury in young athletes, according to a study published in the journal "The Foot," the official publication of the Journal of the American College of Foot and Ankle Orthopedics and Medicine. I personally suggest that the shoes have a heel motion control and for girls I prefer rounded cleats over the square ones as they do not get stuck on the ground (which could also cause knee injuries)

The study found that a soccer shoe doesn't have the same shock absorbency quality as a running shoe. A cleated shoe places the foot in a position where the heel is lower than the toes (it's similar to walking uphill). This causes pressure to be focused on the heel, causing stress that can result in inflammation and pain. wearing a simple heel pad or an insert may help this problem.

For questions regarding heel or foot pain do not hesitate contacting me at coachprato@comcast.net

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