

Iselin Disease

Description

- Iselin disease is painful inflammatory condition of the apophysis (growth plate) of the 5th metatarsal (foot bone), where one of the leg muscles inserts.
- In a child, the bones grow from areas called growth plates.
- The growth plate is made up of cartilage, which is softer and more vulnerable to injury than mature bone. This growth plate also serves as an attachment site for the peroneus brevis muscle and the plantar fascia
- Iselin disease is most often seen in physically active boys and girls between the ages of 8 and 13 years of age.
- This condition is most common in those that participate in soccer, basketball gymnastics and dance.

Causes

- Iselin disease is an overuse injury caused by repetitive pressure and/or tension on the growth center at the base of the fifth metatarsal.
- Running and jumping generate a large amount of pressure on the forefoot.
- Tight calf muscles are a risk factor for Iselin disease because they increase the tension on the growth center.

Signs and Symptoms

- Pain is most commonly found along the outer edge of the foot and is worsened with activity and improved with rest
- A limp on the affected side may be present
- The child may walk on the inside of the affected foot
- The skin overlying the growth center may be swollen, red, and/or painful to touch

Diagnosis

- The diagnosis of Iselin Disease is made primarily by clinical presentation and physical exam
- Radiographs are usually not needed to diagnose the disease, but they may prove useful in assessing for displacement of the growth center and excluding other causes of foot pain

Treatment

- A short period of rest from aggravating activities to reduce inflammation and allow release of pressure on the growth center is recommended



Radiograph of a 10 year old boy with Iselin disease and a displaced apophyseal fragment

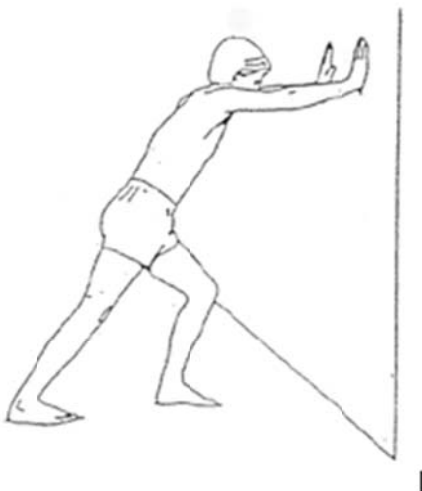
- Applying ice for 10 to 15 minutes every 2 to 3 hours is helpful to reduce pain and swelling. Non-steroidal anti-inflammatory medications such as ibuprofen or naproxen may also be beneficial in relieving inflammation and pain
- Tension on the growth plate can be relieved by gentle stretching the calf muscles
- Proper fitting athletic shoes and/or arch support inserts are very helpful in decreasing pain
- If the individual fails a trial of stretching, rest, ice, and pain medications, the affected limb may be immobilized with a walking cast or boot

Returning to Activity and Sports

- Despite having a goal to return the patient to his or her sporting activities as quickly as possible, playing with pain will not only inhibit healing of the affected growth plate but may further injure the affected foot.
- The longer the individual has been plagued by the injury, the more time is required for symptoms to resolve
- Healing typically takes anywhere between 4-12 weeks and is typically nearing completion when the patient can meet the following:
 - Completing full range of motion without ankle pain
 - Absence of pain at rest
 - Ability to walk, jog, and sprint without pain
 - Ability to jump and hop on the affected side without pain
- If pain recurs upon returning to sporting activities, the individual should rest, ice, and stretch until the pain has resolved before trying to return to play again

Prevention

- Perform a proper warm-up before starting any activity. Ten minutes of light jogging, cycling, or calisthenics before practice will increase circulation to cold muscles, making them more pliable so that they put less stress and tension on their attachment sites.
- Wear shoes that fit well and are appropriate for the activity. Replace worn-out shoes promptly.
- Stretch tight muscle groups. The ideal time to stretch is before exercise. Hold each stretch for 30 seconds. Don't bounce.
- Do not play through pain. Pain is a sign of injury, stress, or overuse. Rest is required to allow time for the injured area to heal. If pain does not resolve after a couple days of rest, consult your physician. The sooner an injury is identified, the sooner proper treatment can begin. The result is shorter healing time and faster return to sport.



Heel Cord Stretch – keep the back of the leg straight with the heel on the floor and turned slightly outward. Lean into the wall until a stretch is felt in the calf
Hold for 20-30 seconds, repeat 2-3 times, and perform 2-3 sessions per day