

Midfoot Impingement Syndrome And Degenerative Joint Disease (DJD) of the Midfoot



Pain at the top of the midfoot area is a somewhat common problem. The pain can involve the entire width of the top of the midfoot, or just the outer side or inner side of the top of the midfoot. Usually, these pains are caused by joint impingement. Sometimes, the impingement problem can lead to degenerative arthritis in the joints of the midfoot. Therefore, in more advanced cases, the pain can be associated with degenerative joint disease of the midfoot.

Multiple small joints exist in the midfoot area. Because the midfoot is the high-point of the arch, the joints in this area are subject to problems if the arch sags, flattens, collapses. When the arch sags, the small joints of the midfoot impinge at the top of the arch/midfoot. When this happens over and over with weight-bearing activities, the top portion of those joints can become painful, and sometimes even a bit swollen. Over a period of years, the wear and tear on the joints can cause the cartilage in these joints to degenerate – degenerative joint disease (also called DJD or osteoarthritis).

There are number of factors that could cause or allow the arch to sag and lead to midfoot impingement syndrome or DJD of the midfoot. These factors include:

- Overweight
- Tight calf muscle
- Overuse
- Poor footwear / inadequate arch support
- Age

Patients with **midfoot impingement syndrome** will often complain of pain with walking, running, or other weight-bearing activities that is felt on either, the outer side or inner side of the top of the midfoot. The pain can be sharp and stabbing at times, but is often achy. The pain generally grows worse throughout the day, as weight-bearing activities are performed. Occasionally, the site of the pain can be somewhat swollen. Xrays are not usually helpful in confirming this diagnosis.

Patients with **DJD of the midfoot** will often complain of pain with walking, running, or other weight-bearing activities that is felt over the entire width of the top of the midfoot. The pain can be sharp and stabbing at times, but is often achy. The pain generally grows worse throughout the day, as weight-bearing activities are performed. Usually there is some swelling across the entire top of the midfoot. Additionally, bony ridging/lipping can be felt across the midfoot – these are joint osteophytes. Xrays usually are helpful in confirming this diagnosis.

Midfoot impingement syndrome usually resolves with non-surgical treatment and rarely requires surgical treatment. The goal of treatment of DJD of the midfoot, in contrast, is to lessen or control the pain with non-surgical treatment. In some cases of DJD of the midfoot, surgery can resolve the pain. However, the surgery is quite involved, as you can read on the next page.

What can I do for myself?

You should use as many of these treatments as possible concurrently:

- q Wear supportive shoes. Sometimes clogs can be helpful as well.
- q Add a good arch support or orthotic in your shoe. (We recommend Superfeet orthotics – they can be purchased at the The Depot Store next to the Department of Foot and Ankle Surgery.)
- q Avoid standing or walking barefoot or in unsupportive footwear like slippers or sandals. (Instead, you should be in supportive shoes with Superfeet orthotics as much as possible every day.)
- q Perform calf stretching exercises for 30-60 seconds on each leg at least two times per day. (Stand an arm's length away from the wall, facing the wall. Lean into the wall, stepping forward with one leg, leaving the other leg planted back. The leg remaining back is the one being stretched. The leg being stretched should have the knee straight (locked) and the toes pointed straight at the wall. Stretch forward until tightness is felt in the calf. Hold this position without bouncing for a count of 30-60 seconds. Repeat the stretch for the opposite leg.)
- q Lose weight.
- q Modify your activities. (Decrease the time that you stand, walk, or engage in exercise that put a load your feet. Convert impact exercise to non-impact exercise – cycling, swimming, and pool running are acceptable alternatives.)
- q Use ice on the painful area for 15-20 minutes, 2-3 times per day -especially in the evening. (Option A - Fill a styrofoam or paper cup with water and freeze it. Peel back the leading edge of the cup before application. Massage the affected area for 15-20 minutes. Option B – Apply an ice pack for 15-20 minutes. (CAUTION: AVOID USING ICE WITH CIRCULATION OR SENSATION PROBLEMS.)
- q Use an oral anti-inflammatory medication. (We recommend over-the-counter ibuprofen. Take three 200mg tablets, three times per day with food – breakfast, lunch, and dinner. To obtain the proper anti-inflammatory effect, you must maintain this dosing pattern for at least 10 days. Discontinue the medication if any side effects are noted, including, but not limited to: stomach upset, rash, swelling, or change in stool color. **IF YOU TAKE ANY OF THE FOLLOWING MEDICATIONS, DO NOT TAKE IBUPROFEN: COUMADIN, PLAVIX, OR OTHER PRESCRIPTION OR OVER-THE-COUNTER ORAL ANTI-INFLAMMATORY MEDIATIONS. IF YOU HAVE ANY OF THE FOLLOWING HEALTH CONDITIONS, DO NOT TAKE IBUPROFEN: KIDNEY DISEASE OR IMPAIRMENT, STOMACH OR DUODENAL ULCER, DIABETES MELLITUS, BLEEDING DISORDER.**)
- q Use glucosamine sulfate. Typically, 500mg two to three times per day.
- q See your doctor if you have failed to respond to the above regimen after a two month trial.

What can my doctor add?

- q Administer cortisone injections. (Injection of cortisone is a potent way to reduce inflammation and expedite the recovery process. Cortisone does not replace the need for supportive shoes, foot orthoses, calf stretching, and other physical measures. The risks of cortisone injections for midfoot impingement syndrome/DJD are: increased pain for 24-72 hours following the injection (30%), infection (<0.1%), and accelerated arthritis (<1%). Systemic side effects of this type of injection are extremely rare.)
- q Prescribe physical therapy. (Ultrasound and interferential electric current therapy can be useful methods of reducing inflammation.)
- q Refer you for custom-made foot orthotics. (Custom foot orthoses are not a covered benefit of the Kaiser Health Plan. However, custom foot orthoses are available through the Department of Foot and Ankle Surgery on a fee for service basis.)
- q Perform surgery. (Surgery involves fusing the affected joints of the midfoot. The anesthesia is usually general or spinal. A below-knee cast is used for 3 months. The first two months requires absolutely no weight-bearing, while in the 3rd month, weight-bearing is allowed. Recovery takes 4-12 months. The success rate is about 70%. About 20-25% are better, but still have some problems. About 5-10% are no better or worse. Risks include, but are not limited to: delayed or non-healing of the fusion site, infection, nerve injury or entrapment, tendon injury, wound healing or scar problems, prolonged recovery, incomplete relief of pain, no relief of pain, worsened pain, limp, chronic swelling, and transfer of pain, callus, or arthritis to other area of the foot or ankle.)