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2ND MTP JOINT INSTABILITY

You have been diagnosed with 2nd MTP joint synovitis and instability. This is a condition that affects the second toe and causes pain in the ball of the foot.

The foot is under constant demand in our busy lives. The average person makes 2,000 steps a day. These include walking barefoot, in dress shoes, running shoes, or even high heels. The complex design of the foot allows for an even absorption of impact to avoid undue stress. Studies have shown that in the forefoot, 50% of weight is borne by the great toe, and the rest by the lesser toes.

The second toe lies in the centre of the foot, and certain unique conditions may allow this toe to bear more weight than it should. For example, if the second toe is unusually long it can bear more weight, causing a callus to develop under the toe. Another common cause of added stress to the 2nd toe is when one has a bunion deformity of the great toe. Over time the ligaments that keep the toe stable and straight may wear from the increased load. The increased pressure also can irritate the joint, leading to inflammation known as SYNOVITIS.

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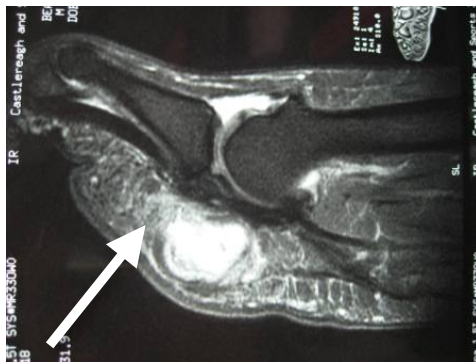


Figure 1 White arrow points to ruptured plantar plate, joint is inflamed



Figure 2 Crossover hammer toe due to instability

When the ligaments around the second toe thin out, the toe becomes unstable. Subtle increased movement in the joint will lead to inflammation and synovitis. When the ligament completely ruptures, the toe then becomes unstable. (Figure 1) Without the anchoring effect of the ligaments, the forces from the muscles cause the toe to drift and lose its normal alignment, causing a deformity. A common name for the deformity is a hammer toe, and when severe, the toe may cross over the great toe. (Figure 2)

In the early stages of 2nd MTP joint instability the condition can be completely reversible. Initial treatment involves splinting and pads to rest the toe. Stabilising the toe with tape or a toe straightener brace will help to rest the ligaments. A soft pad under the foot that offloads the 2nd toe joint is also helpful. The location of this pad is important, as poor placement may actually cause a worsening of pain. A podiatrist can often be helpful in assisting with these non-operative treatments. Anti-inflammatory medications may help with reducing pain and inflammation.

If the pain is severe then immediate relief can be obtained from a cortisone injection. A small dose is injected into the joint to alleviate the pain and inflammation. Cortisone injections are only used once and cautiously, as the cortisone can cause weakening of the already damaged ligaments.

Once a hammer toe or cross-over toe develops, the deformity is permanent. Interestingly, pain sometimes goes away in these late stages as the inflammation in the joint subsides. The deformed toe, however, can cause other problems, such as calluses and sores. Podiatric care with pads and braces, orthotics and shoes with a high toe box may help to alleviate symptoms related to these deformities.

SURGERY is considered when these non-operative treatments fail to alleviate symptoms. The goal of surgery is to alleviate symptoms and to correct the deformity. In an early stage 2nd MTP instability without a deformity, I prefer to perform a 2,3 Weil osteotomy. The 2nd and 3rd metatarsal bones are shortened to reduce the pressure on these toes and alter the weight distribution with walking. The bones are cut and screws are left in the bone. The foot is protected in a special wooden shoe for six weeks to allow for the bones to heal.

If a hammer toe or crossover toe is present, a hammer toe correction is added to the shortening osteotomies to straighten the 2nd toe. The PIP joint is fused or stiffened and tendons are released to take away the deforming forces. A pin is placed in the toe which will be removed in the office 6 weeks later. If a bunion is present with 2nd MTP joint instability, the bunion MUST be corrected in order to make room for the 2nd toe.

In Summary:

- 2nd MTP joint Instability results from added pressure to the second toe due to a long toe or bunion deformity.
- Non-operative treatment can usually help in the early stages to reduce the pressure and inflammation
- Surgery is considered when non-operative treatment fails to alleviate symptoms. A bunion must be corrected at the same time to make room for the 2nd toe.

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