Pre-dislocation syndrome, capsulitis, and metatarsalgia are all similar problems usually at the ball of the foot near the second and third MPJ.

Subjective symptoms reported by those afflicted with this syndrome would be described as a “marble” swelling under the affected toe joint and a feeling as if there were a stone bruise on the ball of the foot. It is also more difficult to walk barefoot on hard surfaces. Swellings can sometimes occur.

Clinical findings with **pre-dislocation** syndrome include pain at the bottom of the second toe at its attachment with the ball of the foot, and subtle subluxation of the toe (exacerbated with loading of the foot). The range of motion of the metatarsophalangeal joint is painful with end-range motion of the toe. A hammertoe formation may be present or the up word and medial deviation of the toe may only be starting to form. A callus beneath the second metatarsal head is common.

Essentially, **pre-dislocation** syndrome describes the evolution of a hammertoe deformity if it is left untreated as this problem is usually progressive. Inflammation of the plantar structures of the metatarsophalangeal joint can eventually lead to attenuation/ thinning or tearing or rupture of the stabilizing ligament structures (plantar plate), which leads to ensuing deformity of the toe. With continued damage to the plantar plate ligament, the toe is free to move upward and ultimately “cross over” the first toe. This is commonly seen with bunion deformities.

This problem generally occurs with the second MPJ but can also move to the third as well.
An accurate diagnosis is essential because the symptoms of capsulitis can be similar to those of a condition called Morton's neuroma, which is treated completely differently from pre-dislocation syndrome/metatarsalgia/capsulitis. In An accurate diagnosis is essential because the symptoms of capsulitis can be similar to those of a arriving at a diagnosis, your podiatrist will examine the foot, palpate, and maneuver it to reproduce the symptoms. The foot and ankle surgeon will also look for potential causes and test the stability of the joint. X-rays are usually ordered, and other imaging studies such as MRI may sometimes be needed. An ultrasound is generally used in the office which clearly visualize this the condition of the plantar plate.

**Causes**

It is generally believed that pre-dislocation syndrome of the second toe is a result of abnormal foot mechanics, where the ball of the foot beneath the toe joint takes an excessive amount of weight-bearing pressure. Normally there is even distribution of weight across each metatarsal head, (the ball of the foot) and in some circumstances the second metatarsal is overloaded causing damage to the bone and surrounding soft tissue structures including the plantar plate. The most common predisposing factors include a severe bunion deformity, a second toe longer than the big toe, an arch that is structurally unstable or flattens, and a tight calf muscle. Additionally weakness of the small intrinsic muscles of the foot contribute to this problem.

**Non-surgical Treatment**

The best time to treat capsulitis of the second toe is during the early stages, before the toe starts to drift toward the great toe. At that time, non-surgical approaches can be used to stabilize the joint, reduce the symptoms of inflammation, and address the underlying cause of the condition.

**Rest and ice.** Staying off the foot and applying ice packs help reduce the swelling and pain. Apply an ice pack, placing a thin towel between the ice and the skin. Use ice for 20 minutes and then wait at least 40 minutes before icing again.

**Oral medications.** Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, may help relieve the pain and inflammation.

**Splinting and padding.** It may be necessary to tape the toe so that it will stay in the correct position. This helps relieve the pain and prevent further drifting of the toe.

**Stretching.** Stretching exercises may be prescribed for patients who have tight calf muscles.
Shoe modifications. Supportive shoes with stiff soles are recommended because they control the motion and lessen the amount of pressure on the ball of the foot. Depending on the amount of swelling a CAM boot may be used.

Orthotic devices. Custom shoe inserts are often very beneficial. These include arch supports or a metatarsal pad that distributes the weight away from the joint.

Injections of cortisone

immobilization. It is crucial to stay off the injured foot, since walking can cause further damage. Non-weightbearing with crutches or a walker is ideal. For immobilization, a CAM walker is often recommended.

Home physical therapy: includes the below

**Strengthening Exercises for the Foot**

**Static toe flexion**

- With the feet flat on the floor, press the toes downwards into the floor.
- Do not allow them to curl, or the ankle to move whilst performing the exercise.
- Hold for the count of 3, repeat 10 times.
- Perform this exercise 3 times a day if possible.
- Progress the exercise by holding the contracture for longer

**Spreading the toes**

- Place feet flat on the floor.
- Spread the toes as far as they will go and then return them together.
- Repeat this 10 times, rest and then perform a further 2 sets of 10 repetitions.
- Aim to repeat this exercise 3 times a day, as below.
Forefoot press

- Place the back half of a foot on a suitable book, and the forefoot on a set of weighing scales, ensuring the foot is horizontal as far as possible.
- Press down with the forefoot onto the scales to see who much force you generate.
- Repeat 10 times for each foot.
- Perform this exercise daily. It is an excellent way of seeing exactly how the strength of the foot is improving.

Toe lifting

- Place feet flat on the floor and try to lift each toe up in turn.
- Aim to keep the others flat on the floor - not easy, is it?
- Perform three sets of each toe.
- Try to perform this exercise twice a day - at least once

Toe Raise, toe point, toe curl exercise:
Hold each position for 5 seconds and repeat 10 times. We recommend these for people with hammer toes or toe cramp

Toe Squeeze exercise:
Place small corks between your toes and squeeze for 5 seconds. Repeat 10 times. This is a good exercise if you have hammer toes or toe cramps.

Big toe pulls exercise:
Place a thick rubber band around both big toes and pull them away from each other, toward the smaller toes. Hold for 5 seconds, repeat 10 times.
The golf ball roll exercise:
Roll a golf ball under the ball of your foot for 2 minutes. This is a great massage for the bottom of the foot and good for people with plantar fasciitis (heel pain syndrome), cramps or arch strain.

Toe Pulls exercise:
Put a thick rubber band around all of your toes and spread them. Hold 5 seconds and repeat 10 times.

Towel curls exercise:
Place a small towel on the floor and curl it toward you, using only your toes. You can increase the resistance by putting a weight on the end of the towel. Relax, then repeat this exercise 5 times. Try this if you have hammer toes, toe cramps, pain in the ball of your foot, or for overall strengthening.

Marble pickup exercise:
Place 20 marbles on the floor. Pick up one at a time with your toes and put each marble in a bowl. This is recommended for people who have pain in the ball of the foot, hammer toes, or toe cramps.

Sand walking exercise:
Any chance you get, take off your shoes and walk in the sand at the beach. This not only massages your feet, but strengthens your toes for general foot conditioning.

When is Surgery Needed?
Surgery is indicated for progressive and disabling pain associated with pre-dislocation syndrome. Many patients can have a toe that is crossing over the first toe without pain but please note that when this occurs it never returned back to its original position.

Surgical Options:
Generally a Weil osteotomy will be performed with tendon and capsule lengthening and sometimes a direct plantar plate repair can be performed in the most severe cases. Additionally a hammertoe repair may be needed if this problem is also present. A bunion reduction can be performed if it is contributing to the original issue. This is an outpatient based surgery done under local and sedation and postoperatively a cast boot is used between 4 and 6 weeks allowing the patient to walk low level during the initial recovery phase.