



Saint Alphonus Medical Group

COUGHLIN FOOT & ANKLE CLINIC

Plantar Plate Repair Therapy Protocol Michael J. Coughlin, M.D.

Therapy for your plantar plate repair begins shortly after surgery. This therapy can be done by you, or with the assistance of a physical therapist. But we have found that active participation by the patient helps greatly in the recovery from surgery. If this therapy is delayed or not performed adequately, the involved toe can become stiff and painful with walking. The goal of therapy is to maintain your motion in the toe as well as to maintain the strength to push off of the floor as you walk in the weeks following surgery. Walking is a form of therapy and must be done correctly as well.

Performing the exercises, early on, can be uncomfortable—and this is normal. Let pain be your guide as you exercise the forefoot. These exercises will be continued throughout the entire recovery process. You should be performing these stretching exercises several times a day with several repetitions each time. Beginning during the week after surgery, we want you to actively work on toe range of motion. We start out carefully the first three weeks to protect the plantar plate repair.

Walking and Shoes:

Immediately after your surgery, please only apply weight to the **heel and outside** of your foot. Typically you will use a **post-operative shoe** for the first three weeks.





WALKING ON OUTSIDE OF FOOT



WALKING FLAT FOOTED

It is important to avoid pressure on the front of your foot during this initial recovery period.

At **three weeks** following surgery, you can also start applying weight to the front of your foot when you walk, walking “flat-footed”.

At **six weeks after surgery**, you may transition from your hard sole postoperative shoe to a sandal. We suggest wearing a Birkenstock© like sandal with a stiffer sole and straps over the top of the shoe that you can adjust to accommodate the swelling in your foot. In a few more weeks, a shoe with a rounded toe box, like a sneaker, may be used.



EXERCISES

Passive range of motion of the operated toe:

Initially you should begin passive range of motion exercises at your metatarsophalangeal joint (MTP) as pain permits. This is the joint at the base of your toe (not the joints inside the toe). While grasping the forefoot with one of your hands, hold the operative toe between your thumb and index finger and push **downward** toward the floor. (Note: by holding the toe between your fingers, you keep the small toe joints from moving- the goal is only move the MTP joint.) During the first three weeks, only downward passive stretching of the toes is recommended.



Active range of motion of the operated toe:

Now while holding the ankle at 90° (it may help to prop it against the arm of a sofa, or step); push the foot down flexing all five toes at the same time. Hold this for five seconds, and then release slowly. You should perform 10 of these per set and do three sets per session.

We understand that pain will be a limiting factor early on, but getting into a routine will help you build confidence and gain your motion back with time.



PUSHING TOES DOWN OVER ARM OF COUCH and CURLING TOES ACTIVELY

At three weeks following your surgery you should continue the exercises described above, but start working on moving the toes **upward** in a similar fashion. (Both with passive stretching upward, and with active range of motion pulling the toes upwards.) **The reason you will wait three weeks to start these exercises is to protect your plantar plate repair.**



PASSIVE DORSIFLEXION STRETCHING OF THE TOES

Thera-band exercises:

Again, hold the angle at 90°. A Thera-band, or elastic band, is placed around the base of the great toe. Pull the toe upwards with the Thera-band while using your toe muscles to flex down with your big toe. (Although you are exercising the first toe, this exercise helps all the toes to work). Hold the toe down for five seconds, and then release pull up for five seconds. Repeat this 10 times and do this for three sessions. This exercise is also commenced 3 weeks following surgery.



THERA-BAND EXERCISES

Protecting Your Toe:

There are several different options including taping and commercial splints to protect the toe during the first six weeks after surgery. You can tape your downward, remove the tape for your exercise sessions, and then re-tape it. You also can purchase commercially available splints which are easy to apply and remove. A common problem after this surgery is that the toe tends to drift up (“floating toe”) and doesn't touch the ground. Exercising, and taping or splinting the toe when you are not exercising tends to prevent the “floating toe”.

Taping your toe down:

Take a piece of ½” tape, about 8” long (and place another piece of tape in the center backside to cover the central adhesive portion of the tape) (this makes it easier to slide the tape in and tends to prevent blisters); center the long piece of tape over the top of your toe. Bring the two ends down and stick them to the bottom of your foot with the toe slightly plantar-flexed. Make sure that you put enough downward tension on the tape so that your toe bends down toward the floor. You really can't bend it too far, just make sure it is comfortable. Then take a piece of 1” tape and wrap it around your foot, just up from the ball of your foot, in order to keep the tape from loosening or slipping off. You may need to re-tape this during the day if it loosens.



TECHNIQUE OF TOE TAPING

Wear a toe brace:

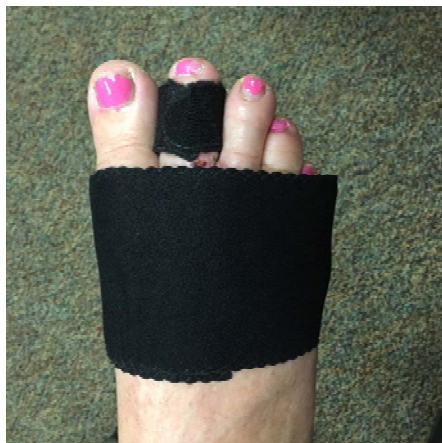
We often use a dynamic toe brace to hold the toe down. You can use one or more toes depending upon how many of the toes have undergone surgery (one, two, or three). Apply the toe brace as demonstrated in the picture. Again, make sure to apply downward tension on the Velcro® straps so that your toe bends down toward the floor. This helps to hold the toes downward. You can release the upper Velcro® straps and stretch your toes up and down to exercise them.

DARCO Bunion Splint:

This splint can be found online on Amazon for about \$13. This splint allows you to pull the operative toe into a desired position once your dressings have been removed. This will make it easier for you to hold the toe in a good position as it heals, yet easily remove it to exercise it. It is typically placed at the time of your first appointment following surgery. It is simple to apply and remove and will facilitate stretching exercises.



DARCO TAS© Toe Alignment Splint



Bio-Skin© Removable Splint