

The Expanded Key Steps to Our Casting Technique *(these are directions for casting the right foot)*

1. **With the Hip, Knee and Ankle at 90 degrees**, center the casting box under the foot. It is essential that you place the box in line with their natural angle and base of gait. In other words, do not attempt to correct their angle and base of gait when casting.
 - a. Note: Before I even begin the casting procedure, I hat the patient thoroughly on one thing: “You Can Not Help Me Push Your Foot Down Into The Foam!” I make a very big deal of this because if they push down, they will automatically pronate their foot and subsequently give you a pronated cast. That is one that has a lower arch, tilted out heel etc...
 - b. Note: Upon the initial positioning of the leg and foot, I usually say something like “let you thigh float” or “let your thigh go where it wants to go” or something to that effect. Many people will attempt to straighten themselves upon examination. You do not want this to happen. You want them to be in their relaxed and “normal” alignment for the purposes of casting.
 - c. Note: If you attempt to correct the foot by positioning it straight or “rectus”, you will place a torque at the patient’s knee. This is not the position that we want to capture in the cast so ensure that their natural “angle and base of gait” is the position that you place the foot onto the foam
2. **Once you are centered and aligned, THEN** have the patient assist you by abducting the knee and thigh about FIVE inches. While they are doing that, invert their entire foot until their ankle reduces. (in other words, place the ankle so that there is no valgus or varus; in essence so that it is “neutral or straight”)
 - a. Note: Smaller people and children do not need to assist you. Generally speaking when you abduct the thigh the foot will automatically invert. However, bigger people, (be it obese or just plain large bodies) are not so easy to just push this way and that. So I usually allow them to help me abduct their thigh, and once you have the foot supinated (inverted), you maintain that attitude of supination AND THEN you say “Ok, now completely relax” or something to that affect. Once you have control of the foot you have won the battle and it is all down hill from here.
3. **While Maintaining the Foot In the relatively Supinated Position**, with your LEFT thumb placed under the Navicular so as to control the arch of the foot, gently rock the knee back to a point DIRECTLY over the ankle while maintaining the supinated attitude of the foot. **This is done without letting the arch fall or having the foot pronate!**
 - a. Note: You simply CAN NOT let the foot go or loose control of the foot during the casting process. If you get lax here, you will end up with a pronated cast for sure.

4. Now, **place your right hand on the patient's right knee** and push directly down on the knee. Seat the heel into the foam about ONE INCH. **Do NOT fully bottom out the heel at this time! If you do you will excessively dorsiflex the entire foot and subsequently pronate the rearfoot!**
 - a. Note: This is not only one of the very unique facets of my casting technique but it can be a little more technically difficult to do as well. Usually with foam casting techniques (in general), you fully bottom out the heel at this point. But as you know if you try to maintain a somewhat rectus or inverted attitude of the calcaneus when trying to “correctly” get a patient’s ankle to 90 degrees, you will not be able to do so on a vast majority of the population WITHOUT having the calcaneus EVERT. Eversion is a pronation component which will unlock and begin to pronate the entire foot to some degree. Again, this is the opposite of what we want to achieve.
 - b. Note: A final note on this is an average foot with the heel bottomed into a two inch block of foam with the forefoot on top of the foam distally being suspended “up in the air” passively (as it has not been bottomed out yet”, would have to have about 30 degrees of available ankle dorsiflexion. I would challenge you to find a patient where you could hold the rearfoot in neutral and dorsiflex the ankle thirty degrees. The point is that my technique addresses this issue because the ankle is never significantly dorsiflexed during the casting process.
5. **Next, push the five toes and met heads down into the foam until they are bottomed out.**
 - a. Note: I do this all at once, keeping the toes themselves from dorsiflexing or in essence, keeping them straight. I do this by using one hand to push down the toes and the other to push down directly over the met heads AT THE SAME TIME. If you push the met heads down by themselves, you will dorsiflex the toes (as they will be held up passively by the foam) and you will “strap” or cause tension on the plantar fascia. This can lower or distort the foam in the arch are which otherwise would have not been affected.
6. **Now, Once again place your thumb under the Navicular and maintain the position of relative foot supination** while you again place your right hand on top of the right knee and continue to press the heel **COMPLETELY DOWN TO THE FLOOR. It is essential that you make sure to completely bottom out the heel so that we get Soft Tissue Splay around the calcaneus.**
 - a. Note: If I feel that the arch (or more specifically the Navicular which is directly beneath my thumb), is dropping then **I IMMEDIATELY STOP!** I will let go of the foot completely and reassess the forefoot to make sure that it has been properly bottomed out. Then I reposition my hands and get a good firm grip on the foot and the recommence pressing down the heel.
7. Now move to the **MIDDLE OF THE FIFTH MET SHAFT** and push down the foot laterally with your finger tips from the middle of the fifth met shaft to the end of the fifth toe. **Do NOT** press proximal to the middle of the fifth met shaft as this will collapse the patient’s lateral arch if they possess one.

- a. Note: It should be of interesting note that the lateral arch (IF PRESENT) is a very vital component when attempting to control the foot as it is ONE HALF of the mid tarsal joint. This fact seems to escape most people. If the lateral arch is there when you push down on the middle of the fifth met shaft then you will see it. If they do not have one, no matter where you press laterally you will not see one. In either event, I make a big deal about this because if the patient has a lateral arch and it gets obliterated because you pressed down over the styloid – cuboid area of the foot, potential problems will most likely arise as we completely support the other half of the mid tarsal joint, otherwise known as the Medial Arch. The point is that supporting the medial arch and not supporting the lateral can cause a focus of torque and potential shifting (usually abduction) at that lateral arch junction. Dorsal “joint pain” laterally or Cuboid Peroneal Syndrome type of deal will suddenly appear where there was no pain there before. I support both the medial and lateral arches of the foot which is how one restores normal foot function.
8. At this point you need to ensure that you have correctly and fully bottomed out the heel, the lateral foot and the met heads. To quickly check that this is in fact the case, quickly repress the lateral foot and over each individual met head. This is a very important step!
 - a. Note: You will hear a faint “CRUNCH” of the foam if any part of the cast was in fact not bottomed. If you press and don’t hear a crunch noise then you are good to go.
 9. Lastly, **while FIRMLY holding the first met head down with your LEFT hand, quickly thrust the ankle from Dorsal Medial to Plantar Lateral with your Right hand.** This thrust which takes literally one second, simply reseats the heel and helps to further define the proximal medial arch.
 10. **Do the pen test;** Place the tip of your pen in the center of the first & fifth met heads and the center of the heel, ensuring that they are very close to the same thickness of foam (**should be about 1/8th to 3/16th inch wide circles**). If the foam at these points is any thicker than 3/16th of an inch and you get a larger “circle” than you should, gently place the foot back into the foam and press down over the insufficiently bottomed areas. Now you would **redo the pen test as necessary after re-bottoming the foot.**
 11. **Correctly pack the cast with THREE paper towel wads before shipping!!!!**
 - a. As I will be picking up and delivering all of your casts, this will mostly not apply to your clinic but if you do mail me a cast, crumple up THREE paper towels (unless you have a child’s sized cast in which case you would use two) and place one in the rearfoot area, one in the mid foot area and one in the forefoot area. Place the order form inside the box and place the box into a mailing sleeve. Do NOT mail the box without a mailing sleeve as it will almost certainly be destroyed in transit.