

MASS Casting Technique

Reliable, Repeatable & Referenced to the Floor



Proper leg and foot alignment is checked prior to thrusting foot into the foam in a defined sequence.



The foot is manually supinated while pressing the heel through the foam.

After defining *what* position of the foot should be casted, a reliable method of *how* to cast is necessary. The professional standard of casting currently is plaster slipper casting in an off-weightbearing position, usually with the patient prone. There are a number of problems, though, with this approach (in addition to the problems with Neutral STJ Position theory). The first is that the foot functions on the ground, so why would we want to capture it in mid-air? There is no frame of reference for the practitioner with the foot dangling in space. The foot is flexible and can be put in any number of positions in mid-air -way too much guesswork.

Secondly, because there is so much potential variation with slipper casting, it is difficult to create the same cast in the future. Finally, the typical lab that accepts slipper casts knows that, because of the problems mentioned above, they cannot trust the cast "as is". So they add arch fill to insure a low, more generic-shaped orthotic that won't risk a product return (but then won't do much for the foot, either). Many labs have gone to prefabricated shapes that most closely resemble the size of the foot in the cast, taking arch fill to its logical conclusion.

We these shortcomings in mind, and the goal of capturing a functionally corrected posture of the foot, MASS position casting was invented. We start with a box of foam. Why foam?

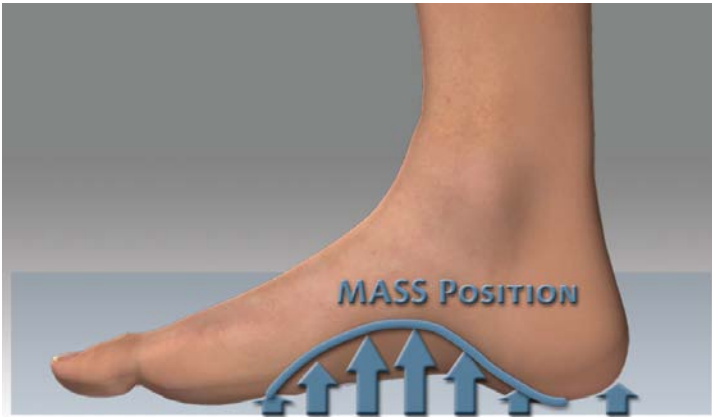
- 1) Because it lies square to the floor -our frame of reference
- 2) The foot can be introduced into it in sequence, as in gait, to help define the plantar vault
- 3) The foam puts a consistent upward pressure against the plantar soft tissues, helping to define the underlying bone structure to be influenced by the orthotic

Next, the patient is seated so the foot will be only semi-weightbearing as it is pressed into the foam. Full weightbearing would flatten the 3D plantar vault we need to capture.

The leg must be kept perpendicular to the foam to avoid distortions in varus, valgus, dorsiflexion and

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With the semi-weightbearing MASS casting technique, each individual foot yields an individual plantar shape in Maximum Arch Supination Stabilization position.

plantarflexion. The foot is held in supination as the heel is pushed all the way through the foam and straight down. Then the lateral forefoot is impressed, followed by the toes and metatarsal heads from lateral to medial. Care is taken to bring the heel, fifth and first met heads down the full available depth of the foam so they reside on the same plane parallel to the floor.

The foot is removed to inspect the cast to insure a good impression has been obtained. Then the entire procedure is repeated for the other foot. Now we have both feet captured in MASS position.

At our lab all casts must pass an initial QC inspection since we make the orthotic exactly as captured in the foam.