



CUSTOM FOOT ORTHOTICS

Guide to Plaster Casting



MATERIALS NEEDED: Tepid water, scissors, gloves, 1 length of plaster of paris impregnated gauze to wrap entire foot (double thickness)

PREPARATION



STEP 1

Position the patient supine with their knee extended and foot and lower extremity aligned with the sagittal plane.

STEP 2

Grasp the lateral forefoot by placing your thumb within the sulcus of the 4th and 5th. Create thumb/index finger salute.

Note: Be careful not to cover the metatarsal heads with your hand.



STEP 3

Palpate the talonavicular joint and locate the subtalar joint (STJ) neutral position.

Suspend the foot, dorsiflex the foot and lock the midtarsal joint.

Check for supinatus, if supinatus is present determine if it is reducible.



CAST APPLICATION



STEP 1

Apply dampened plaster gauze and lay over the leading edge along dorsolateral foot starting at the $\frac{3}{4}$ interspace and wrap posteriorly.

With the back of the hand smooth the plaster under the lateral longitudinal arch and continue around the posterior heel.

STEP 2

Ensure the plaster bandage is wrapped lightly along the medial foot then continue around the toes. Wrapping the plaster too tightly can create casting errors such as false hallux dorsiflexion, and/ or inadequate plaster contact with the foot.



STEP 3

Fold plaster on the superior edge for added stiffness and easy removal.

Re-establish casting position. Position the foot in STJ neutral.

STEP 4

Reduce supinatus, if applicable, by pressing down on the medial cuneiform/1st ray joint.

Hold the patient's foot at chest level for about 6-8 minutes with the elbow elevated.



CAST REMOVAL + EVALUATION



CAST REMOVAL

Allow the plaster to firm up. Loosen the skin around the cast edge to free the foot. Gently remove the cast starting at the heel. Once the heel is removed, invert the foot to free the forefoot. Don't forget to correct the thumb print in the negative cast.

CAST EVALUATION

Inspect the cast for casting errors, evaluate the rearfoot to forefoot relationship and determine whether the cast is consistent with what was observed in examination.



CAST IDENTIFICATION

Write the patient's name on the bottom of the cast. Allow for adequate drying time to ensure cast integrity during shipping.

Note: for larger feet, greater than a men's size 10, you will require additional plaster to ensure cast integrity.