

Therapist guide to making an outer plaster cast for a custom leather splint.

Step 1: Gathering your equipment

- Bucket of water lined with a plastic bag
- Gloves
- Plastic apron
- Table covering/versa towel
- Liquid soap
- Pair of scissors
- Pen or pencil
- One roll of 15cm plaster gauze
- One roll of 8cm plaster gauze

Preparing the plaster

For the 15cm plaster

- Cut 6 lengths measuring from the PIP joints to approximately 5cm distal to the elbow
- Gather 3 lengths together for the dorsal slab and 3 lengths for the volar slab
- With the volar slab, cut a notch to accommodate the thenar eminence

For the 8cm plaster

- Cut 6 lengths measuring approximately 15cm in length
- Gather 3 lengths together for the dorsal slab and 3 lengths for the volar slab

Step 2: Preparing the client

- Lay a sheet of versa table over the table.
- Provide a plastic apron to the client to protect clothing from plaster.
- Position the client in a seated position with their elbow on the table and forearm in a neutral position.
- Take note of any bony prominences, you can either pad now or mark on the dried cast for the later stages of fabrication.
- Soap the clients forearm and hand lightly with liquid soap.
OR
- If your client has a particularly hairy hand and forearm you may prefer to use a well fitting rubber glove and a layer of tubular-band. However, please make sure they are well fitting and contour around the wrist without any creases.

Step 3: Applying the plaster cast

- Wet the dorsal piece of plaster and apply to the dorsum of the hand from the PIP joints down the forearm towards the elbow.
- Smooth the surface around the ulnar border, and then along the radial border, fold the edges back approximately 1cm.

- Wet the volar piece and apply to the volar aspect of the hand from the PIP joints extending down the forearm towards the elbow.
- Smooth the surface well, particularly into the palmar arches.
- Wrap and overlap on the ulnar side.
- Along the radial border, fold back approximately 1cm of the edge where it meets the dorsal piece.
- Wet one of the thumb pieces and add to the dorsal slab again folding back along the radial border.
- Wet and add the last thumb piece to the volar slab again folding back along the radial border where it meets the dorsal thumb piece.
- With all the pieces in place, position the hand as you would want it positioned in the splint. Moving the thumb into opposition, the wrist into slight extension, and the forearm in neutral. Also make sure the MCP joints are in slight flexion to maintain the palmar arches.
- Smooth and mould well in the web space and through the palmar arches.
- Allow the cast to dry for 20-30minutes.

Step 4: Removal for the plaster cast

- Mark serral lines across the radial seam with a pencil. This ensures the cast can be rejoined accurately after removal.
- Once the plaster is dry, have the client wiggle thumb and fingers until the plaster lifts off of their skin.
- Carefully open the plaster along the radial border and gently remove the hand.
- Approximate the radial seam using the pencil lines as your guide and join it with a double layer of the 8cm plaster.
- Cover over the finger and thumb holes with a double layer of the 8cm plaster.
- Let the cast dry for at least 24hours, and arrange transportation to our Mill Park Clinic.

Clean up advice

Leave the bucket of water to stand for a few hours or overnight so the plaster settles to the bottom. Once settled you'll be able to pour the top water into the sink, and then throw out the plastic bag with the majority of the plaster remnants. This will prevent clogging the drains with plaster when you tip out the water.

For more information

For more information, call us directly on **03 9458 5166** or visit our website at www.melbournehand.com.au/health-professionals/leather-splint-orders/

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