

Hand Therapy Pearls and Splinting

- Muenster Splint:
 - Indications: ECU– tendonitis, subsheath rupture, post-operative sub-sheath repair, ECU snapping/instability (acute), ulnar head resection.
 - Positioning: Allows full elbow flexion/extension but limits forearm rotation- although not entirely. This splint is positioned most likely with wrist in 20-30 degrees of extension which is standard for a forearm based wrist splint.
 - Considerations: I would use a thicker material- 1/8” thick material for a patient who is more likely to fight the splint or is stronger and a 1/16” thick material for a less strong person or for someone who is going to be removing the splint more frequently for exercise as it will be easier to don/doff with material that is slightly more pliable.
- Hand Based Thumb Spica/Short Opponens Splint
 - Indications: Thumb UCL Injury (Skier’s Thumb), Thumb Proximal Phalanx Fracture, CMC Arthritis, MCP joint sprain.
 - Positioning: Functional, 3-point pinch creating thumb abduction with the wrist free. IP free with enough space under crease for full motion.
 - Considerations: I use 1/8” material for people who do heavy activities or who need extra protection with activities. I most frequently use 1/16” material.
- DIP Extension Orthosis/QuickCast
 - Indications: Mallet fingers, DIP pinning, tuft fracture, stable distal middle phalanx fractures.
 - Positioning: DIP joint in extension or very slight hyperextension.
 - Considerations: Do not over hyperextend DIP joint as it can decrease the blood flow to the tendon for healing. I will do volar based or clam shell for these depending on the patient’s risk for re-injury/compliance.
- Forearm Based Thumb Spica
 - Indications: Scaphoid fracture, Wrist and Thumb Arthritis, Radial Styloid Tenosynovitis, EPL Rupture.

- Positioning: Wrist in 20-30 degrees of extension, $\frac{3}{4}$ of the way down the forearm, thumb in palmar/radial abduction or in a functional pinch position depending on injury.
- Considerations: Thicker material for patients who are stronger/may fight splint, conservative management. Thinner material for post-surgical patients. Bubble material away from scaphoid.
- Thumb IP Extension Orthosis:
 - Indications: Thumb Tuft Fractures, Trigger Thumbs
 - Positioning: IP in extension, MCP joint free, quick cast or Orficast (demonstrated) works great.
 - Considerations: This splint needs to be sturdy enough to protect the injury, but it is sleek enough to fit under a glove for a lacrosse or hockey player. May tape the splint on if there is concern it will fall off during activity.

Splinting Tips

- Focus on positioning: Keep IPs straight during intrinsic plus positioning splints and adjust if you can't get it perfect during the first visit.
- Create a space differential for the ulnar and radial styloid and base of the CMC joint.
- Smooth edges or pad edges for comfort.
- Flare bottom of forearm based splints to keep forearm tissue from getting pinched.
- If the splint doesn't fit quite right or seem quite right, then take your time and remold it.

If you have questions or comments please contact me:

Cortney L Prchal MA OTR/L CHT
2805 Campus Drive, Suite 465
Plymouth MN 55441
952-946-9777
Cortney.Prchal@allina.com