

Buddy strapping

Indications: phalanx fractures, finger/toe joint injuries

- The injured digit should be strapped to the longest adjacent digit
- Pre-cut small rectangle of gauze to fit between digits
- Apply two pieces of 1cm wide zinc oxide tape to hold the digits together (one around the proximal phalanges and one around the middle phalanges – leave the DIP and PIP joints free)
- Teach the patient how to do it so they can replace if needed

Mallet finger splint

Indications: extensor tendon injuries, extensor tendon avulsion fractures of base of distal phalynx

- Decide on splint size
- Hyper-extend DIP joint and apply 1cm wide zinc oxide tape in figure of 8 around DIP joint
- Apply mallet splint
- Tape splint in place distally with 2cm wide Elastoplast tape
- Tell the patient they should clean the splint daily – but when they remove it the DIP joint extension must be strictly maintained



Knee splint

Indications: sprains, ligamentous injuries, patella fractures

- Decide on the correct size for the patient
- Apply with patients leg horizontal
- Firmly tighten Velcro with patella sitting in hole
- Give crutches and encourage partial weight bearing
- Give quadriceps exercises

Futuro splint ± thumb extension

Indications: suspected scaphoid fracture (with thumb extension), soft tissue wrist injuries, tenosynovitis, sprains

- Decide on splint size and right/left
- Place the side with the metal bar in over volar wrist and ensure thumb is in the groove (or in the 'thumb extension')
- Strap down firmly starting proximally
- Mould into position of function (wrist 30-50° extension)

High arm sling

Indications: to elevate hand/wrist/finger injuries

- Ask patient to stand
- Place affected arm in desired position (affected hand touching opposite shoulder)
- Sling is in the shape of a right angled triangle – place one acute angled corner over the shoulder that their affected hand is placed on, ensuring that the right angle corner falls by their affected limb's elbow
- Bring the lower corner of the sling around their affected elbow (the lower part of the sling should be rolled under their arm), around their back and tie behind their neck to the corner placed over their shoulder at the beginning
- Pin the excess sling at their elbow

Broad arm sling

Indications: forearm fractures, cast support, clavicle fractures, AC ligament tears, elbow injuries

- Ask patient to stand
- Place affected arm in desired position (elbow in 90° flexion)
- Sling is in the shape of a right angled triangle – place it under their affected arm (i.e. between their arm and their body) so that the right angle corner is by their affected elbow and the long edge is parallel with the opposite side of their body

- Fold the lower point of the triangular sling up in front of their affected arm, bring it around the neck (affected limb side) and then tie it to the upper point of the triangular sling (which should be brought around the opposite side of the neck)
- Pin the excess sling at the elbow

Polysling

Indications: same as broad arm sling (forearm fractures, cast support, clavicle fractures, AC ligament tears, elbow injuries)

- Support
 - Place forearm in forearm support
 - Secure it using the two support straps – the support strap with two rings on should be placed near the wrist (one ring should be positioned superiorly, the other posteriorly)
- Shoulder strap
 - Pass shoulder strap (starts at elbow of the forearm support) around the patient's back, then over the opposite shoulder and back down their front
 - Pass the shoulder strap through the superior ring and double it back onto itself (securing with Velcro)
- Body belt
 - Attach one Velcro end to the anterior elbow part of the forearm support and bring it posteriorly around the patients waist
 - Bring all the way around and pass the strap through the posterior ring and double it back onto itself (securing with Velcro)

Collar and cuff sling

Indications: humerus fracture, hanging casts

- Assistant to hold arm in desired position (elbow in 90° flexion)
- Place the foam material around their neck (with the ends dangling in front of them) – the end nearest their affected arm's elbow should go under their affected arm's wrist and should end ~30cm below; the other end should end near their affected arm's thumb
- Bring the lower end up over their affected arm's wrist and pin it to its upper part and the other end of the foam that was near their thumb

Compression bandaging

Indications: to reduce soft tissue swelling in soft tissue injuries

- Cut tubigrip to desired length $\times 2$ (plus 2-3cm for overlap)
- Apply tubigrip over part of affected limb by pulling on like a stocking
- Double tubigrip back over itself to make a second layer (top layer 2-3cm above the first)
- Positioning:
 - Hand/forearm (~6.75cm width tubigrip): cut thumb hole and leave MCP joints free to move (by folding over tubigrip)
 - Ankle (~7.5cm width tubigrip): leave MTP joints and toes free
 - Knee (~8.75cm width tubigrip): extend 2 hand breaths above and below
- Check circulation is adequate

Crutches education

- Preparation: adjust height (handle at level of wrist when arm is straight down by patient's side), tighten nuts
- Non-weight bearing (injured foot kept off the ground): crutches should be placed about a foot ahead, then the patient should begin their step as if they were going to use the injured foot but instead shift their weight onto the crutches. They should then bring their body forward between the crutches and finish the step on their good leg the other side of the crutches.
- Partial-weight bearing (some weight passed through injured leg): place crutches and injured leg forward together, placing injured foot on the floor in between the crutches (i.e. crutches are taking some of the weight). Then step forward onto uninjured leg (unsupported). Then repeat.
- Advice: wear good supportive shoes, avoid wet surfaces and rugs