

Carpal Tunnel Syndrome **Wrist Splint Application competency**

Aim

- To understand the anatomy of the wrist and hand
- To understand the pathology of carpal tunnel syndrome
- To understand when and why splinting can be used to improve symptoms of carpal tunnel syndrome
- To know when not to use the splint and when to stop using it
- To understand the correct application of the splint
- To know which patients require further appraisal by the physiotherapist

When and why a splint can be used in the management of carpal tunnel syndrome

Carpal tunnel syndrome is a common condition that results in the compression of the median nerve as it passes through the carpal tunnel. The results of this can be pain and/ or numbness or tingling sensation in the thumb and fingers of the affected hand. The splint can be used to place the carpal tunnel in a more suitable position and also maintain the position of the wrist. This may aid in the reduction of symptoms of pain or altered sensation in the thumb and fingers.

Contraindications of splint application

Consult with senior member of staff if any of the following are noted

- abnormal red areas of skin
- New wounds/ dressings
- A significant amount of bruising or swelling
- The patient reports recent trauma to the wrist/ thumb since last treatment
- Difficulty positioning splint due to position of wrist/ hand or fingers

How to apply a splint

Procedure

1. Confirm which hand or hands splint is to be applied to.
2. Explain when the splint is to be worn and the duration it is to be used for. Explain the number of times it is to be applied per day and basic skin care advice.
3. Explain what you are going to do and check for contraindications.
4. Position of the patient, the splint can be applied in any comfortable positions close to the service users hand and arm.
5. Position of technical instructor or assistant, any comfortable position close to the patient hand and arm.
6. Apply the splint as per photographs and instruction
7. Advise patient to wear splint at night or when symptoms arise throughout day. The splint should not cause significant pain or discomfort
8. Document intervention
9. Feedback to physiotherapist should any problems arise or further clarification required.

Application of splint

Figure 1

Place the hand on top of the splint with the thumb through the thumb space and the fingers between the straps.



Figure 2
Secure the straps around the back of the hand



Figure 3
Check splint is a comfortable fit with no unintended compression at thumb, wrist and fingers

Figure 3a



Figure 3b



Figure 3c



Explain to the patient that the splint should help relieve symptoms; **if numbness or pins and needles are exaggerated then the splint may be too tight and should be removed.**