

## ENDOSCOPIC CARPAL TUNNEL RELEASE (ECTR)

Carpal tunnel syndrome is due to compression of the median nerve within a tunnel comprising a "U" shaped collection of bones with a tight ligament at the top. The nerve can gradually wither if the condition is not treated. This causes permanent loss of sensation and wasting of thumb muscles, which cannot be completely relieved by surgery.

There are a number of ways of treating the condition including activity modification, splinting, anti-inflammatory drugs, steroid injections and surgery. Surgery is recommended if you have had the problem for a long time, your symptoms are severe, non-surgical treatments have failed or if the doctor detects wasting of muscles or loss of sensation in the hand. Surgery involves cutting the ligament over the tunnel to relieve the pressure on the nerve. This can be achieved in two ways:

**Open technique** A cut is made in the palm and the carpal ligament is reached by cutting through the underlying tissues and muscle. The ligament then is cut under direct vision.

**Endoscopic technique** The carpal ligament to be reached from a small cut at the wrist. The ligament is seen using a small telescope, which provides a magnified image on a television screen that the surgeon watches whilst performing the surgery. Technical difficulties can occur necessitating conversion to the open technique (6%).



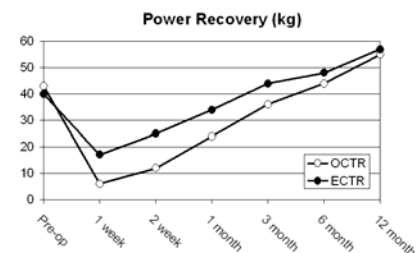
**Choice** ECTR causes a smaller scar in a less sensitive area and it allows the surgeon to be more selective as to which tissues are cut. It therefore shortens the time taken for patients to get back to normal activities. This advantage is most evident in patients who undergo release of both sides together. However, nerve damage is slightly more common with ECTR particularly in patients with small wrists in whom access can be difficult. I therefore generally only recommend ECTR in patients with medium to large build who are undergoing bilateral release and who use their hands heavily for work or sport.

The operation can be performed under either local or general anaesthetic but is easier under general. The hand will be dressed with a supportive dressing that permits finger movement and light hand use. You will be discharged with specific instructions ("Hand Surgery") relating to hand exercises and wound care.

Your stitches will be dissolving by about two weeks after your operation. Your pain at night should settle immediately but tingling in the fingers may take some weeks to disappear.

You can drive a car after two weeks as long as you are comfortable and have regained full finger movements. You will find that your grip is weaker than previously and slightly uncomfortable ("pillar pain"). This can be frustrating but you should be back to full power by about twelve weeks. Exercises, such as squeezing balls, will not speed the process and if overdone can delay recovery. The timing of your return to work varies according to your occupation but as general guidance: -

- **Supervisory, managerial:** 1 to 2 weeks
- **Light manual:** 2 to 4 weeks (clerical, secretarial)
- **Medium manual:** 4 to 6 weeks (cleaner, nurse, check-out operative)
- **Heavy manual:** 6 to 10 weeks (e.g. ground-worker, HGV driver)
- **Custodial or rescue services:** 6 to 10 weeks (e.g. prison officer)



**Wound** Possible problems include swelling, bruising, bleeding, blood collection under the wound (haematoma), infection and splitting of the wound (dehiscence).

**Scar** You will have a small scar at the wrist crease, which will be firm to touch and tender for some months. This can be helped by firm massage with the moisturizing cream.

**Nerve damage** Nerves running in the region can be bruised or damaged during the surgery and form a painful spot in the scar (neuroma) or numbness. The most commonly involved areas are the heel of the hand or the space between the middle and ring fingers. This complication is rare (2%) but may require a further operation to correct.

**Recurrence** If you continue to have attacks of tingling and numbness, it might mean that not all the ligament has been cut. This is rare (2%) but the operation would need to be repeated to correct this.

**Regional pain syndrome** About 5% (1 in 20) of people are sensitive to hand surgery and their hand may become swollen, painful and stiff after the operation. This problem cannot be predicted, is variable in severity and is principally treated with physiotherapy.

**Recovery** Patients who had very numb fingers or wasting of the thumb muscles before surgery will probably never regain full nerve function. Recovery can be very slow (6-12 months). As the nerves grow back, the fingers can actually feel tingly or even unpleasant.