

# **Carpal Tunnel Syndrome**

## Carpal tunnel release/decompression

### **Things you want to know about:**

Carpal tunnel syndrome is where the nerve to the thumb and index/middle fingers becomes squashed as it passes under a tight ligament into the hand. This can be caused by repetitive activity with the hand, or anything that causes swelling within the carpal tunnel, such as inflammation of the finger tendons, arthritis of the surrounding joints, or pregnancy. It is more common in older patients.

### **Symptoms**

The thumb, index and middle fingers tingle and may go numb. This is particularly common at night and can often be relieved by shaking the hand. If the nerve compression is severe there may be permanent numbness of the fingers, and/or weakness of the thumb. The little finger should not be affected by carpal tunnel syndrome – if it is, further investigations may be needed.

### **Investigations**

If the clinical findings are consistent with carpal tunnel syndrome further investigation is usually not required. If there is any doubt, nerve conduction studies may be requested (this involves tiny electrical currents being passed along the nerves – it is mildly uncomfortable only). Occasionally Xrays, and ultrasound or MRI may be required.

### **Treatment**

Initially avoiding the activity that caused the symptoms may solve the problem. Wearing a wrist splint at night may also help. In some cases a steroid injection into the carpal tunnel will settle the symptoms for a while – this can also be used to show that the diagnosis is correct

### **Surgery**

The operation involves releasing the tight ligament over the nerve through an incision at the base of the palm.

The operation can be done under local or general anaesthetic as a day case. Bandages are left on for about 5 days; a waterproof dressing is wrapped in the bandage and can be used to cover the wound for 3-4 days after that, when the wound can get wet. Dissolving stitches are used; if they are still present at 2 weeks they can be gently scratched to remove them.

### **Recovery**

After the operation, it is very important that you elevate the hand for 2 days to minimise the swelling and pain. You can move the fingers and the thumb as much as the bandages allow right from the start.

The scar is often tender for a couple of months, with localised swelling. It should be massaged with E45 cream or similar

### **Return to Activities and Work**

People undertaking light work and office-based duties should be able to return at 1- 2 weeks following the surgery, particularly if it is the non-dominant hand that has undergone the operation.

People who undertake heavier work should be able to return to work between 4 and 8 weeks after surgery.

Sporting activities (e.g. golf, badminton) can be resumed between 3 and 6 weeks after the operation, as pain allows.

The time back to driving is variable, partly depending which hand is operated on. Most people find that they are able to return to driving after about 2 weeks, and will be able to decide themselves when they are safe to do so.

## **Things you possibly do not want to know about carpal tunnel release, but have to be informed about:**

### **Specific risks of the operation**

When operating around a nerve there is always the risk of damaging it – this happens in 1% of cases, and may be temporary or permanent

About 10% of patients will have an aching sensation in the wrist and difficulty with heavy activities such as hammering. This 'Pillar Pain' usually settles after a few months

If the nerve has been squashed for a long time it may not be able to recover fully. The tingling is almost always improved, but numbness and weakness may not be, and very occasionally the nerve recovery is more painful than the original compression.

### **General Risks of all operations**

With planned operations complications are unusual, overall probably about 5% of patients have a post-operative problem, of which the vast majority are temporary and do not affect the final result.

**Infection** – the signs may develop after a few days, with *increasing pain, swelling and redness*. *Treatment with antibiotics is usually sufficient. Very occasionally, an infection can be severe and cause major problems.*

**Wound healing problems** – *for instance excessive bleeding, causing a painful swollen wound (haematoma) or delayed healing may slow down the recovery. A few people react to the dissolving suture material and this can lead to localized areas of tenderness and swelling that persist for a couple of months.*

**Swelling and stiffness** – these always occur to a certain extent, and it is very important to elevate and exercise the hand after an operation or injury. Occasionally the swelling is severe, prolonged and associated with pain, due to the development of the poorly understood condition of reflex sympathetic dystrophy (algodystrophy, CRPS type 1). This occurs unpredictably, and is treated by physiotherapy and pain tablets. Very rarely, it leads to long-term stiffness and disability, compromising the function of the hand permanently.

**Scar tenderness** – all scars are tender for at least two months, and often longer. In about 10% of people the scar, after healing well initially, thickens and becomes itchy, red, and more painful after the first month. If this happens, the full process of maturation of the scar (settling down to normal, thin, mobile skin) can take more than a year. Occasionally nerves running in or just under the skin at the site of an incision are damaged, resulting in persistent tenderness of the scar.

### **Conclusion**

**Carpal tunnel syndrome is a common problem, and in cases which don't settle with simple treatment surgery is highly effective**