

## Patient Information

### Carpal Tunnel Release

#### What is Carpal Tunnel Syndrome?

The carpal tunnel is a passageway supported by ligaments and bones where the median nerve which controls sensation and movement in the thumb and first three fingers, along with tendons, run through to the fingers and thumb. Carpal tunnel syndrome occurs when this nerve is pinched or compressed causing numbness, tingling, weakness or pain in the hand or hands.

#### Who gets Carpal Tunnel Syndrome?

- People in their late 50s—affecting particularly women.
- People in their late 70s—affecting women and men equally.

It is often more common in people who are overweight, it often runs in families and it is also common in women who are pregnant.

#### What symptoms does it cause?

The symptoms of carpal tunnel syndrome do not come all at once. They start mildly and often come and go. As the condition worsens so do the symptoms.

The symptoms are often worse at night but when the condition is severe the symptoms are present all the time. Typically the first symptom to develop is pins and needles (tingling and burning) in the thumb, index and middle fingers.

Pain will then develop in the same fingers and as the condition worsens may travel up the forearm and even to the shoulder.

Dry skin in the same fingers may also develop.

The symptoms that will develop if the condition worsens or in severe cases are:

- numbness in the same fingers that experience the pins and needles or in part of the palm
- weakening of the muscles in the fingers and or thumb. This can cause poor grip and eventually lead to muscle wasting at the base of the thumb.

## Why have I got Carpal Tunnel Syndrome?

In most cases it is not clear why carpal tunnel syndrome occurs however it may be:

- that it runs in your family or is something that you have inherited
- the arthritis in your wrist has led to the syndrome
- you have a medical condition which is associated with carpal tunnel syndrome
- a rare factor such as cysts or growths on the tendons or blood vessels passing through the passageway.

## What are the treatment options?

While the following points are not a treatment they seem to give temporary relief to the symptoms:

- hanging the arm down or raising the arm up
- flicking the wrist.

There are several different treatments (listed below) for carpal tunnel syndrome. These treatments are dependent on the severity of the syndrome and knowing what has or has not previously worked. There are both non-surgical and a surgical option. Non-surgical treatment may be advised to try first. Surgical treatment has the best chance of long-term cure and it is done if symptoms continue despite other treatments or if symptoms are severe and the nerve is in danger of permanent damage.

- Simple measures such as not over-using your wrist with excessive squeezing, gripping or wringing action and taking pain medication may help if the condition is part of a medical condition.
- Not treating is an option where symptoms are mild and are likely to disappear:

— in up to 1 in 4 cases the symptoms disappear without treatment within a year or so

— in about 2 – 3 cases that develop during pregnancy the symptoms go after the baby is born.

- The first active treatment is a removable wrist splint. You will see an occupational hand therapist who will assess and provide advice about activity modification. This is applied at night and is aimed at keeping the wrist at a comfortable angle to reduce pressure on the nerve.
- A steroid injection into the inflamed area is another option.
- A small operation will be performed which will ease the pressure in the carpal tunnel. This then gives the nerves more space.

## What happens before I come into hospital?

This information will help you prepare for admission to hospital. Treatment is always planned on an individual basis so your experience may differ slightly from the information given.

Dr Ratahi operates at both Kensington Hospital and Northland Orthopaedic Centre. If you do not go home on the day of your surgery, it will be done at Kensington Hospital.

All our staff are friendly and available to help answer any questions that you may have at any stage of your treatment.

## **Pre-assessment**

If there are concerns around your fitness for an anaesthetic you may be asked to attend a pre-assessment. This is a medical examination made by the anaesthetist who works with Dr Ratahi to make sure you are well enough for surgery.

## **Transport**

Patients are responsible for their own transport to and from the hospital. You will be informed of your admission and discharge date in advance so that you can arrange for a relative, friend or taxi to transport you.

## **What happens on the day of surgery?**

On the morning of your surgery you will be greeted by the staff at the hospital reception on your arrival. Before being taken to the theatre suite you will be greeted by the nursing staff who will be looking after you and ask you to change into a hospital gown to get you prepared for theatre. You will be assessed by Dr Ratahi and the anaesthetist to perform a final check that you are fit for surgery and answer any questions you may have. You will be asked to sign a form giving your consent to the operation. You will then go to theatre, accompanied by a nurse where your personal details and the operation will be confirmed before you are given your anaesthetic.

## **What does the surgery involve?**

The surgeon releases the band of tissue called the transverse carpal ligament (see below). The procedure will take approximately 10 – 15 minutes. If you have symptoms in both hands you can have surgery in both hands, however, it is recommended to only have surgery on one hand at a time due to the challenges that will come with not being able to use two hands if they were operated on at the same time.

## **What can I expect after my operation?**

**Wound** - Your incision will be closed with 4 – 6 stitches and will be dressed with a large bulky dressing which you will need to keep dry. The stitches are removed at two weeks after surgery. You can remove the bulky dressing five days after your surgery. You must leave the small waterproof dressing undisturbed until you see your surgeon at two weeks post op.

**Going home** - As this procedure is usually done using a local anaesthetic, it is anticipated you will be discharged from hospital shortly after you return back to the ward. Make sure you have someone to pick you up from hospital. Your doctor will advise you if you will need to take pain relief at home.

**Activity** - You are not to lift anything with your operated hand for two weeks (not even an empty kettle). This allows wound healing to take place.

Your activity can increase after you have seen your GP to have the stitches removed (see follow-up plan), however, you are still to do NO heavy lifting for another four weeks. (Yes you can pick up a kettle now—but nothing heavier).

**Working** - If you have work that does not include heavy lifting and is in a clean environment, you can return back to work after you have visited your GP at two weeks after surgery.

If you have manual work that includes heavy lifting you cannot return to work for at least six weeks. A medical certificate will be provided for you.

**Follow-up plan** – You will leave hospital with a follow-up appointment to see your surgeon two weeks after your operation.

At six weeks after your surgery you will have an appointment to see your surgeon. Your surgeon will check the wound, movement of your fingers and thumb and the sensation in your hand. The surgeon may refer you to an occupational hand therapist if you require further treatments.

### **How will surgery change the symptoms?**

The tingling and pain should stop soon after surgery; however, if you experienced numbness this symptom will take longer to resolve. Reduced grip and strength symptoms may not improve, or they could take up to a year to return—particularly in older patients. If there has been any muscle wasting on the thumb base this may be permanent and surgery is unlikely to improve this symptom.

### **What complications could occur?**

As with other operations, carpal tunnel surgery involves a small risk of infection and blood vessel and nerve injury. Other common complications include:

- pillar pain—where either side of the wound is extremely painful and difficult to treat
- complex regional pain syndrome—where your nerves tell you that you have pain in your hand
- tendon complications causing restriction of movement in the fingers
- scarring complications where the scar is raised and visible
- five per cent unsuccessful surgery rate where carpal tunnel syndrome can return following surgery
- numbness in the palm of your hand.

Please note: If you are a smoker or have diabetes these two medical conditions increase the risk for infection and wound complications. It is recommended that you cease smoking prior to and after surgery.