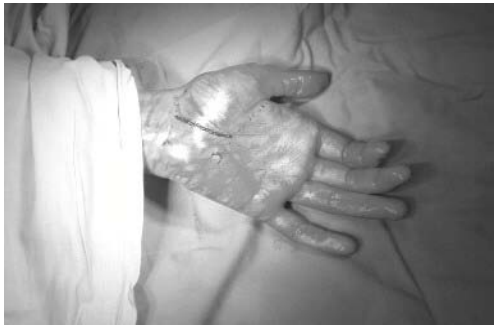

Figure 1. The carpal Tunnel marked out ready for surgery.

WHAT ARE THE BENEFITS & RISKS?

The benefit is to halt the progress of nerve injury in your hand and prevent pins and needles, permanent numbness or weakness. Pre-existing symptoms of permanent numbness and weakness, which is a sign of death of the nerve cells, may not be relieved even over time.

There may be bleeding. This often settles with elevation.

Infection occurs in an average of 6% of patients because we all have bacteria on our skin and if these bacteria get into the cut they can multiply to produce infection. Infection can be surmised if you develop more severe pain after the first 24 hours. In these circumstances please contact your GP or surgeon immediately.

Nerve damage should never occur. Rarely, the condition can recur over years if the retinaculum heals. The effects of peripheral neuropathy for example from diabetes cannot be treated by carpal tunnel decompression.

Immediately after surgery your hand will be bandaged and will be kept elevated to keep the swelling down. You should maintain the elevation after you are taken home.

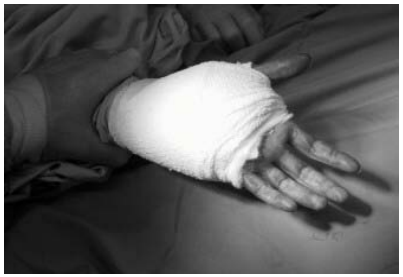

Figure 2. The bandaged hand with the wrist back

You may be given pain relief medications. It is important to keep the dressing dry so cover it with a plastic bag or "Limbo" when bathing or showering. Dark blue or brown discoloration of the hand and wrist after surgery is normal and due to bruising. You will be told about exercising your hand by opening and closing your fingers and squeezing exercises.

You will probably be able to start light activities in one to two days. Avoid bending your wrist far forward or backward, and try not to bump the area around the sutures. We will arrange follow-up appointments so that we can make sure you are healing properly after surgery. If your develop a pale blue or white hand, increasing pain for more than a few hours not relieved by medication, loss of sensation, throbbing, excessive swelling in the hand, or fever over 100 º F please contact your doctor or surgeon.

For further copies of this information leaflet please go to
www.JohnHardy.co.uk
Phone 0044 (0)117 3171793

CARPAL TUNNEL SYNDROME

INTRODUCTION

Carpal tunnel syndrome (CTS) results from the compression of a nerve, the median nerve, within the carpal tunnel in the wrist. The purpose of this leaflet is to explain why it happens, and what can be done to relieve your symptoms.

WHAT IS INVOLVED?

Carpal Tunnel Syndrome is numbness or tingling in your hand, especially in the early hours of the morning. Latterly, as the nerve damage progresses, you may also experience permanent numbness, clumsiness, weakness in handling objects, and sometimes develop pain up the arm to the elbow and rarely as high as the shoulder. Late changes include wasting of the muscles in the hand.

The median nerve travels from the forearm into your hand through a tunnel in your wrist. The tunnel is formed by wrist bones and the top of the tunnel is covered by a strong band of connective tissue called a "retinaculum". This tunnel also contains the tendons that bend your fingers and thumb.

Anything that causes swelling, thickening or irritation of the tissues in the carpal tunnel can result in pressure on the median nerve that stops it working. The condition is more common in people between 30 and 60 years old and is more common in women than in men. Some common causes and associated conditions are:

1. Obesity
2. Excessive growth hormone
3. Broken or dislocated bones in the wrist
4. Arthritis, especially the rheumatoid type
5. Underactive thyroid
6. Diabetes
7. Hormonal changes associated with menopause
8. Pregnancy

Although any of the above may be present, most cases have no known cause. Compression on the nerves in the neck may simulate the condition.

Your doctor may diagnose this condition if you have the symptoms described above. The signs of carpal tunnel syndrome include swelling, weakness of the thumb and loss of sensitivity in the hand.

Figure 3. Weakness lifting the thumb may be a sign of carpal Tunnel Syndrome

X-rays, nerve conduction testing, and muscle testing (electromyogram) help to document the presence and degree of tissue damage and whether complicating factors like fracture and arthritis are also present.

HOW IS IT TREATED?

Mild cases may be treated by non-surgical methods such as weight loss wearing a wrist brace or CTS Wrist Support at night. Medications taken by mouth called non-steroidal anti-inflammatories may also reduce swelling and compression on the nerve. Occasionally your doctor may offer you a cortisone injection at the mouth of the Carpal Tunnel. The effectiveness of non-surgical treatment may be short lived.

Surgical treatment is reserved for those who have severe pain, persistent symptoms after medical treatment, or who are at risk of permanent nerve damage. The aim is to reduce pressure in the carpal tunnel by opening the roof of the tunnel. This is done by dividing the "retinaculum". There are two types of surgical procedure: Open and Endoscopic; both take somewhat less than 30 minutes.

HOW DO I PREPARE FOR SURGERY?

Please make arrangements to be accompanied home by a responsible adult after surgery. Do not eat or drink anything after midnight the night before the procedure unless you are instructed otherwise. Wash your arm the night before surgery and do not apply hand creams. Your operation will take place in the most modern facility by a trained Consultant surgeon who will explain each step of the procedure to you as it takes place. At surgery a local anaesthesia injected into the wrist and hand so you don't feel pain during surgery. Rarely, a general anaesthetic may be given. After skin preparation and draping a tourniquet is inflated around your upper arm to reduce bleeding during the operation.

Figure 4. A tourniquet is used for approximately 11 minutes.

An incision is made down the centre of your palm. The retinaculum is then cut to relieve the pressure on the nerve. The skin is then closed with sutures.