

ULNAR NERVE ENTRAPMENT AT THE ELBOW/WRIST

WHAT IS ULNAR NERVE ENTRAPMENT?

The ulnar nerve runs from the armpit down to the hand and is responsible for sensation and movement in the hand, forearm, and upper arm. It can get trapped at several levels, sometimes referred to as a 'pinched nerve'. The commonest site is at the inner aspect of the elbow, but occasionally at the wrist. Sometimes pressure at the origin of the nerve at the neck can also occur. At the level of the elbow there are three possibilities:

- a) There is constant pressure while the nerve sits in its groove due to thickened surrounding structures
- b) The nerve is too tight and is stretched when the elbow is bent, as if being stretched around a corner
- c) The nerve is being pulled out of its natural groove and becomes a little more inflamed every time this happens

WHAT SYMPTOMS COULD I EXPECT?

Patients usually describe tingling or numbness in part of the hand, usually the little and ring finger, and sometimes this extends into the forearm along the inner aspect. It can be accompanied by a feeling of weakness or clumsiness in that hand and also wasting away of muscles in the hand. Symptoms may be worse in a bent elbow position. Occasionally a clicking is felt at the inner aspect of the elbow as the nerve snaps over a bony prominence, and it may also be tender and thickened in this region.

It is usually a clinical diagnosis, but further information may be needed from X-rays, Ultrasound or MRI scans, and also nerve conduction studies (usually called EMG tests) which measure how well the nerve is conducting electrical signals.

TREATMENT OPTIONS

Most patients report improvement of symptoms by avoiding leaning on the elbow, keeping it straight rather than bent (a splint can be made to help with this) and occasionally steroid injections, although this is not normally recommended. If entrapment is at the wrist, use of a wrist splint is sometimes beneficial.

If muscle wasting is observed it is usually more serious and urgent surgery should be considered to prevent further irreversible muscle loss.

SURGERY

Surgery is usually carried out under general anaesthetic as a day-case procedure so you may return home the same day. A local anaesthetic injection is also usually given to help with pain relief.

If entrapment is at the elbow it is necessary to ascertain which of the three previously mentioned underlying causes it could be, so that it can be addressed correctly. A curved incision about 4cm long is made on the inner aspect of the elbow. Usually it is sufficient to divide the structures that are compressing the nerve, and there is no long term consequence to releasing these structures. Sometimes it is necessary to shave off a small area of bone and move the nerve to an area a few centimetres further forward to its current position so that it is not under too much tension. This means a partial detachment of some tendons which are then repaired back at the end.

If entrapment is at the wrist, it is a matter of releasing the nerve from the overlying compressing structures. No bony work is needed.

WHAT TO EXPECT AFTER SURGERY

You will go home in a sling to be worn for a few days until you are comfortable to start using the arm. You will be given strong painkillers to take home, please take them regularly for at least a few days. You will have been given a local anaesthetic injection at the time of surgery and your elbow may become more painful after it wears off so taking painkillers is very

important. Sometimes the injection results in temporary numbness or weakness, this is nothing to worry about and will usually wear off by the next day.

You will have a bulky bandage that you can remove yourself 48 hours after surgery; the surgical incision will be covered by a small dressing, and these do not need to be disturbed. They are designed to be waterproof but avoid getting it wet for the first 7 days. If the dressing does get wet in the shower, clean it with water and apply a fresh dressing. Be sure to make an appointment with your GP nurse or the ward to have the wound checked at 10-14 days following surgery.

You must try to use your arm for light duties as soon as pain allows. This prevents stiffness and allows the muscles to regain strength early. Most people find driving comfortable after 3 to 4 weeks, although you must feel comfortably in control of the car and be able to make emergency manoeuvres before you can safely drive.

Most people return to office/light duties around 3 weeks after surgery but heavy manual work may take 6 weeks or more. Physiotherapists will help you with specific exercises but you must exercise several times daily at home/work.

Surgery for this condition is very safe, but there are rare risks that you should be aware of. These include infection, stiffness, injuries to nerves resulting in poor hand function and numbness, sensitivity and numbness around the incision. There may be ongoing/recurrent symptoms, and occasionally further surgery is needed. However, these risks are all very small and surgery is usually very successful.

It will take several weeks for the elbow and hand to settle down after surgery, and most of the recovery will take up to 3 months, along with intensive post-op physiotherapy, to achieve. The hand and elbow will continue to improve for a year, and some people report continued improvement for up to 2 years following surgery.