OS05 Carpal Tunnel Release (under Local Anaesthetic)

What is carpal tunnel syndrome?
Carpal tunnel syndrome is a condition where there is increased pressure on the nerve that crosses the front of your wrist (the median nerve). Your surgeon has recommended an operation called a carpal tunnel release. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you make an informed decision. If you have any questions that this document does not answer, you should ask your surgeon or any member of the healthcare team.

How does carpal tunnel syndrome happen?
The median nerve runs across the front of your wrist through a tight tunnel, together with the tendons that bend your fingers. If the tunnel becomes too tight, this can compress (squash) the nerve, usually causing pain or numbness in the thumb, index and middle fingers. The symptoms are often worse at night. If your symptoms are less obvious, your surgeon may recommend further tests to confirm the diagnosis. Carpal tunnel syndrome is more common in women than men and is sometimes associated with arthritis, pregnancy, wrist fractures, diabetes or thyroid problems. However, for most sufferers there is no particular cause.

What are the benefits of surgery?
The main benefit of surgery is to relieve pain and numbness in the hand.

Are there any alternatives to surgery?
If your symptoms are mild, a wrist support worn at night often helps. A steroid injection near the carpal tunnel can reduce the numbness or pain in most people, but the symptoms usually come back after several weeks or months. If the symptoms are severe, or these simple treatments have failed, surgery is usually recommended.

What will happen if I decide not to have the operation?
Symptoms may improve if there is an underlying cause that is treated. In those sufferers with no underlying cause, symptoms usually continue but can get better or worse for no known reason. If the compression of the nerve is severe and you do not have any treatment for a long time, the nerve may become permanently damaged. This makes some of the muscles at the base of your thumb waste away and you may get permanent numbness in your hand. A carpal tunnel release operation at this stage will not be able to put right the damage already done.
What does the operation involve?
You should remove any rings from your hand before you come into hospital. A carpal tunnel release can usually be performed under local anaesthetic and usually takes about a quarter of an hour. Your surgeon will make a small cut in the palm of your hand. They will then cut the tight ligament (called the flexor retinaculum) that forms the roof of the carpal tunnel (see figure 1). This stops the nerve being compressed.

What can I do to help make the operation a success?

• Lifestyle changes
If you smoke, try to stop smoking now. Stopping smoking several weeks or more before an operation may reduce your chances of getting complications and will improve your long-term health. For help and advice on stopping smoking, go to www.gosmokefree.co.uk. You have a higher chance of developing complications if you are overweight. For advice on maintaining a healthy weight, go to www.eatwell.gov.uk.

• Exercise
Regular exercise can reduce the risk of heart disease and other medical conditions, improve how your lungs work, boost your immune system, help you to control your weight and improve your mood. Exercise should help to prepare you for the operation, help with your recovery and improve your long-term health. For information on how exercise can help you, go to www.eidoactive.co.uk. Before you start exercising, you should ask a member of the healthcare team or your GP for advice.

What complications can happen?
The healthcare team will try to make your operation as safe as possible. However, complications can happen. Some of these can be serious. You should ask your doctor if there is anything you do not understand. Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. The complications fall into three categories.
1 Complications of anaesthesia
2 General complications of any operation
3 Specific complications of this operation

1 Complications of anaesthesia
Please read the information about local anaesthetic at the end of this document.
2 General complications of any operation

• Pain, which happens with every operation. The healthcare team will give you painkillers to control the pain. The cut is normally small and not too painful.
• Bleeding during or after surgery. This is not usually serious but can occasionally cause a painful swelling (haematoma) that takes a week or two to settle.
• Infection in the surgical wound (risk: 1 in 20). This usually settles with antibiotics but may occasionally need another operation.
• Scarring of the skin. However, as the cut lies in one of the skin creases, the scar usually becomes almost invisible over time.

3 Specific complications of this operation

• Continued numbness in your thumb, index and middle fingers, caused by damage to the median nerve or one of its branches before or during the operation. This can be temporary (risk: 1 in 100) or permanent (risk: 1 in 600).
• Tenderness of the scar. This is common for the first six weeks after surgery. It usually gets better with time, but can be a permanent problem (risk: 1 in 5).
• Aching in the wrist when using your hand (risk: 1 in 25).
• Return of numbness and pain, which is caused by scar tissue that forms after the operation (risk: 1 in 17). If this happens, you may need another operation to release the nerve again.
• Severe pain, stiffness and loss of use of the hand (Complex Regional Pain Syndrome). This is rare and the cause is not known. If this happens, you may need further treatment including painkillers and physiotherapy. The hand can take months or years to get better.

How soon will I recover?

• In hospital
After the operation you will be transferred to the recovery area and then to the ward. You will have a bandage on your hand and may have to wear a sling. You should be able to go home the same day. However, your doctor may recommend that you stay a little longer.
If you are worried about anything, in hospital or at home, ask a member of the healthcare team. They should be able to reassure you or identify and treat any complications.

• Returning to normal activities
Your surgeon will tell you when you can return to normal activities. You should keep your hand lifted up and bandaged for the first couple of days. It is important to gently exercise your fingers, elbow and shoulder to prevent stiffness. After the first couple of days the dressing can be reduced but you should keep the wound clean and dry until any stitches are removed.
Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, you should ask a member of the healthcare team or your GP for advice.
Do not drive until you are confident about controlling your vehicle and always check with your doctor and insurance company first.
• The future
In 3 out of 4 people, symptoms of carpal tunnel syndrome improve quickly after the operation. However, recovery can be slower or less complete because of damage caused by pressure on the nerve before the operation.
Your symptoms may continue to improve for up to six months, or even longer if the carpal tunnel syndrome was related to work. If you had wasting of the muscle at the base of the thumb before the operation, this is unlikely to get better. However, the operation should improve the pain and will prevent further damage to the nerve.
The operation is a success in 7 out of 8 people.

Summary
Carpal tunnel syndrome causes numbness in your thumb, index and middle fingers. A carpal tunnel release should improve your symptoms and prevent permanent nerve damage.
Surgery is usually safe and effective. However, complications can happen. You need to know about them to help you make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Local Anaesthetic

What is a local anaesthetic?
A local anaesthetic is a drug that is injected into the tissues to make them numb. Your anaesthetic will be given to you either by your surgeon or by your anaesthetist (doctor trained in anaesthesia).
A local anaesthetic has been recommended for your operation. However, it is your decision to go ahead with a local anaesthetic or not. This document will give you information about the benefits and risks to help you make an informed decision.
If you have any questions that this document does not answer, you should ask your surgeon or anaesthetist, or any member of the healthcare team.

How does a local anaesthetic work?
Local anaesthetics temporarily stop nerves working so that you do not feel pain. The simplest form of local anaesthesia is to inject the drug just around the area where the operation is going to take place. This tends to sting or burn for a few seconds and then the area goes numb. The feeling of pain goes away much sooner than the feeling of touch, so do not be alarmed if you can still feel pressure or movement. It is possible to numb all the nerves to an arm or a leg (called a regional block).
The procedure will not start until you and your surgeon are both satisfied that the area is numb to pain.
Although the starting area is numb, the operation may reach areas that have not been numbed. If this happens, your surgeon will give you some more local anaesthetic until those areas are numb to pain.
Local anaesthetics generally work for a few hours, depending on the type of drug and dose used. After this time the area should go back to normal.

Are there any alternatives to a local anaesthetic?
If you are concerned about being awake during the operation, it may be possible for it to be performed under a general anaesthetic. However, there are complications associated with a general anaesthetic. Other anaesthetic procedures may be possible such as an epidural or regional block, although these also use local anaesthetic drugs. Sometimes it may be possible to use sedation as well as a local anaesthetic.
What complications can happen?
The healthcare team will try to make your anaesthesia as safe as possible. However, complications can happen. Some of these can be serious and can even cause death. The possible complications of a local anaesthetic are listed below. Any numbers which relate to risk are from studies of people who have had a local anaesthetic. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

• **Not enough pain relief**, which is usually corrected by giving more local anaesthetic. Occasionally other forms of drugs or anaesthetic have to be given as well. Let your surgeon know if you are in pain.

• **Allergic reaction** to local anaesthetics. This is unusual. Many people have been told, or think, they are allergic to local anaesthetic given at the dentist. This is rarely the case, but you should let the person giving your local anaesthetic know about any problems you have had in the past.

• **Bleeding**, if the needle used to inject the local anaesthetic strikes a blood vessel. This usually results in a small bruise that will not cause problems.

• **Nerve damage** (risk: 1 in 5,000). Occasionally the local anaesthetic has a longer effect than expected (up to 48 hours) but this usually settles down on its own.

• **Absorption into the bloodstream**, if the local anaesthetic is accidentally injected into the bloodstream or if it is absorbed into the bloodstream more quickly than usual. This is rare but can cause various problems temporarily affecting the heart and brain, which can be serious. The dose of local anaesthetic is always limited to reduce this risk.

You should discuss these possible complications with your surgeon or anaesthetist if there is anything you do not understand.

Summary

A local anaesthetic can be used for most people, giving a safe and effective form of pain relief both during and after your operation. However, complications can happen. You need to know about them to help you make an informed decision about your anaesthetic. Knowing about them will also help to detect and treat any problems early.

Further information

- NHS smoking helpline on 0800 169 0 169 and at www.gosmokefree.co.uk
- www.eatwell.gov.uk – for advice on maintaining a healthy weight
- www.eidoactive.co.uk – for information on how exercise can help you
- www.aboutmyhealth.org - for support and information you can trust
- Association of Anaesthetists of Great Britain and Ireland at www.aagbi.org
- American Academy of Orthopaedic Surgeons at www.aaos.org
- Arthritis Research Campaign on 0870 850 500 and at www.arc.org.uk
- Royal College of Anaesthetists at www.rcoa.ac.uk
- Royal College of Anaesthetists and Association of Anaesthetists of Great Britain and Ireland at www.youranaesthetic.info
- Reflex Sympathetic Dystrophy and Complex Regional Pain Syndrome UK at www.rsd-crps.co.uk
- NHS Direct on 0845 46 47 (0845 606 46 47 - textphone)
- www.eidohealthcare.com

Acknowledgements

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Local information

You can get information locally from the Patient Advice and Liaison Service (PALS) on 02380 798 498 or email PALS@suht.swest.nhs.uk.
You can also contact:

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