



Nerve block anaesthesia for the upper limb A patient's guide

Surgery on the Upper Limb (Shoulder, Elbow, Arm, Hand)

Information

This leaflet explains nerve block anaesthesia for upper limb surgery (shoulder, elbow, arm, hand) at The Whittington Hospital.

The information provided is useful for people who prefer not to have a general anaesthetic or have been advised not to have a general anaesthetic due to underlying health conditions. If you have high levels of anxiety, a movement disorder or your surgery is expected to be prolonged, a nerve block only anaesthesia may not be suitable for you.

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What type of nerve block is it?

The nerve block anaesthesia performed is called a Brachial Plexus block.

What is the Brachial Plexus?

The brachial plexus is the group of nerves that lies between your neck and your armpit. It contains all the nerves that supply movement and feeling to your arm – from your shoulder to your fingertips.

How is a Brachial Plexus block performed?

The skin around the injection site will be cleaned.

A small injection of local anaesthetic will first be used to numb your skin.

It will sting a little before it numbs your skin.

The main injection of local anaesthetic is then placed into the side of the neck, near the collarbone or armpit.

An ultrasound machine and/or a small machine that makes your arm twitch to locate the nerves are used for safety and guidance during the procedure.

The local anaesthetic temporarily numbs the group of nerves (brachial plexus) that supply movement and feeling to your shoulder, elbow, arm and hand.

What happens during and immediately after the injection?

During the procedure, you might experience some stinging, pressure or an electrical sensation in your arm or hand. Most people find the injection no more painful than having a blood test.

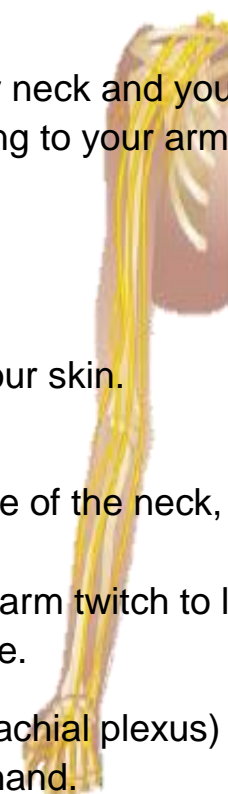
The injection takes 20-40 minutes to work. Your arm will start to feel warm, tingly before becoming numb, immobile and heavy (like lead). The quality of your block will be tested before the operation.

What happens if the block does not work fully?

Occasionally failure of block to give complete anaesthesia means more local anaesthesia injections (near the elbow, forearm, wrist or hand) needs to be given to ensure complete numbness. This is called a “Top Up”.

In addition, you might also be offered additional pain relief through your cannula.

On rare occasions if a ‘top up’ and additional pain relief is inadequate, a general anaesthetic can be offered. If this happens, you might be rescheduled for surgery under general anaesthesia on another day.



What are the benefits of having a brachial plexus block?

- Better pain relief during and after surgery. Pain relief can be provided for up to 24 hours after surgery and allows you to have physiotherapy which can help your recovery.
- Avoid risks and side effects of general anaesthesia (e.g. sickness, sore throat, drowsiness). This is advantageous for patients who have medical conditions which would put them at a higher risk. The risks of a general anaesthesia can be further discussed with an anaesthetist if you are unsure about having a brachial plexus block.
- Quicker return to normal self (e.g. Get up and move around, eat and drink and leave hospital sooner).
- Less need for strong painkillers which can cause sickness, drowsiness and constipation.
- Brachial plexus block can be combined with other types of anaesthesia (e.g. Sedation or General anaesthesia) and many of the benefits above still remain.
- There is currently a shorter waiting time for patients undergoing hand surgery under brachial plexus block.

What are the possible side effects, complications and risks of having a brachial plexus block?

Every medical intervention carries a risk of complications. The risks for brachial plexus blocks are very small and uncommon.

We take great care (with modern drugs, equipment and training) to avoid and reduce these risks but we cannot remove them completely.

This is a risk scale for comparison



The possible side effects, complications and risks are:

- Infection
- Bruising and bleeding – this is **common** and usually stops with pressure over the area
- Eyelid, vision, voice problems and some shortness of breath- this is **common** and goes away as the block wears off.
- Lung damage – this is **uncommon**. It is called a pneumothorax. The chance of this happening is reduced by using the ultrasound for guidance.
- Fits, seizures and anaphylaxis – these are extremely rare (1 in 100,000). Your anaesthetist will manage this if it occurs.
- Nerve damage* – this can be temporary or permanent.
 - Temporary: Common. About 1 in 10 patients have a prolonged numbness or tingling in their arm. 95% of patients recover within 6 weeks and 99% in a year.
 - Permanent: Studies have shown this happens between 1 in 700 to 1 in 5000 nerve blocks (uncommon or rare)

*(*Note: Regardless of the type of anaesthetic procedure used, there is always a risk of nerve damage after any operation. This can be due to the operation, the position you lie in or the use of a tourniquet (a tight band on the upper arm, which prevents bleeding during the operation). Swelling around the operation site or a pre-existing medical condition, such as diabetes, may also contribute to nerve damage)*

Further information

-Royal College of Anaesthetists Patient Information Leaflet on Nerve Damage:
<https://rcoa.ac.uk/sites/default/files/documents/2020-05/13-NerveDamagePeripheralNB2019web.pdf>

-RA-UK, the specialist society for regional anaesthesia: Patient Information Video on Nerve Block: <https://www.ra-uk.org/index.php/patient-info-video>



Patient advice and liaison service (PALS)

if you have a compliment, complaint or concern please contact our PALS team on 020 7288 5551 or whh-tr.whitthealthPALS@nhs.net

If you need a large print, audio or translated copy of this leaflet please contact us on 020 7288 3182. We will try our best to meet your needs.

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Whittington Health NHS Trust
Magdala Avenue
London
N19 5NF
Phone: 020 7272 3070
www.whittington.nhs.uk

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