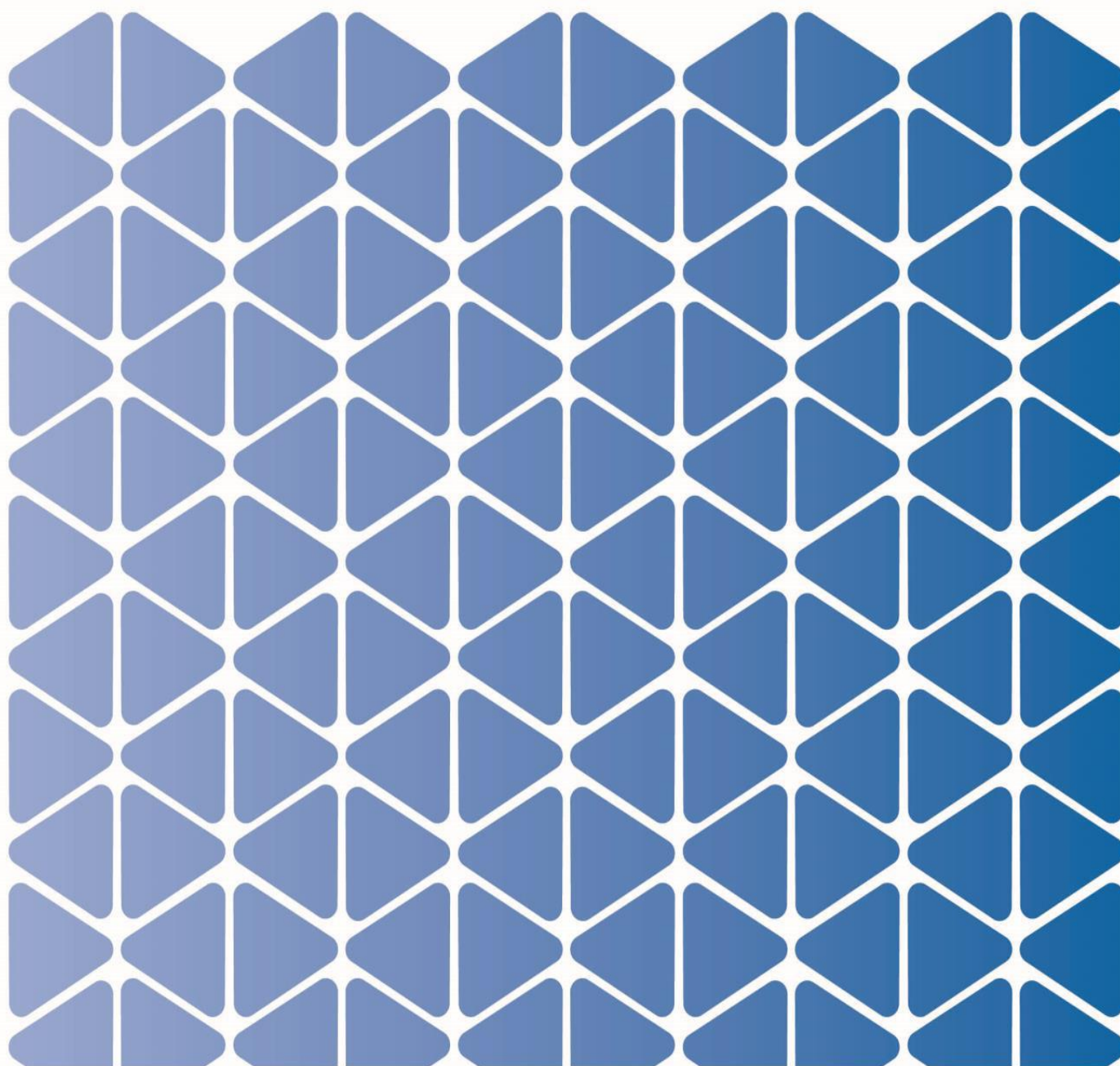
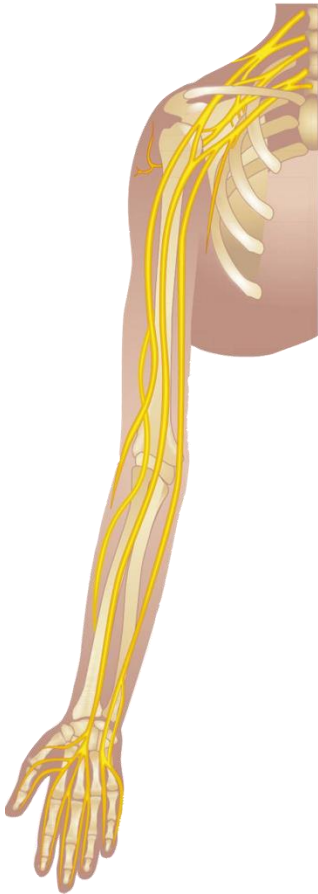


# **Brachial plexus block**

## **Regional Anaesthesia for Shoulder, Hand and Forearm surgery**





## What is a brachial plexus block?

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.

A brachial plexus block is an injection of local anaesthetic around the brachial plexus. It 'blocks' information travelling along these nerves. It is a type of nerve block. Your arm becomes numb and immobile allowing surgery to proceed without the need to go to sleep for the operation.

A brachial plexus block rarely affects the rest of the body so it is particularly advantageous for patients who have medical conditions which put them at a higher risk for a general anaesthetic.

A brachial plexus block may be combined with a general anaesthetic or with sedation if appropriate. Your anaesthetist will meet with you beforehand to discuss your anaesthetic including the risks, benefits, your preferences and if a brachial plexus block is suitable for you.

## What are the benefits of having a nerve block?

- It can provide excellent pain relief for up to 24 hours after surgery, although some areas may feel numb for up to 48 hours.
- Less need for pain killers containing opioids in the period immediately after the surgery. These can make you feel sick and may cause constipation.
- Avoiding a general anaesthetic, including its risks and side effects. The common side effects of a general anaesthetic include sickness, sore throat and drowsiness. This can be particularly useful for patients who have medical conditions which put them at a higher risk from a general anaesthetic.
- Being able to get up and move around earlier and leaving hospital sooner.
- In certain situations, a nerve block can also be combined with a general anaesthetic to help manage pain after surgery.

## What are the risks of having a nerve block?

- Brachial plexus blocks are not always completely effective, sometimes the local anaesthetic does not spread to all the nerves. The operation you are having and your general body shape also affect the success rate. Your anaesthetist will be able to tell you how likely the block is to work fully. If the block does not work sufficiently for your operation, your anaesthetist will use another form of anaesthetic and / or pain relief.

## ***Risk due to local anaesthetic drugs***

- Allergy to local anaesthetics can happen. It is very rare (less likely than allergic reactions caused by general anaesthetics)
- An overdose of the local anaesthetic should not happen because your weight is taken into account when choosing how much local anaesthetic you need.
- Serious problems including fits, heart or breathing problems can happen but they are very rare. Your anaesthetist is trained to deal with these emergencies.

## ***Risk to nearby structures***

- For any operation on your forearm, wrist or hand, an injection under your armpit is generally the common choice for a nerve block.
- If the injection is placed in the side of your neck (nerve block performed mainly for surgery on your shoulder), side effects include a hoarse voice, a droopy upper eyelid and feeling faint, especially on sitting up. Rarely, you may find breathing a bit more of an effort than normal. All these effects are temporary and should get better when the block wears off.
- If the injection is placed around the collarbone (nerve block performed mainly for surgery on your upper arm and elbow), there is a small risk of damage to the lung (1 in 1000 patients). This can usually be managed to keep you safe and serious permanent harm is very rare. Your anaesthetist can tell you more if this injection is performed for your block.
- For all injection sites, there is a small risk of bleeding due to damage to a blood vessel. This can be treated by direct compression and / or extra fluids given into a vein.

## ***Nerve damage***

- Nerve damage can occur because of direct injection into the nerve or because of bleeding or infection. The risk of permanent nerve damage is rare. An exact measure of the risk is not available, but the best studies we have suggest that it happens between 1 in 15,000 and 1 in 30,000 patients having a brachial plexus block. All human activities carry an element of risk. For example, 1 in 15,000 of us will die on the UK roads every year.
- Patients commonly notice areas of tingling and/or numbness in the arm, shoulder or hand. This occurs in around 1 in 20 patients and usually resolves itself within three weeks, or occasionally up to three months.
- There is a risk of nerve damage after any operation regardless of the type of anaesthetic technique used. 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.
- If you have any questions please ask your anaesthetist, your surgeon or your nurses on the ward.

## **How is the nerve block done?**

The local anaesthetic injection is performed in the theatre suite where the anaesthetic assistant will ask you further questions and confirm the side of your body and area of your arm that will be operated on. A small plastic tube (cannula) will be inserted into the back of your hand, this is used to give you fluid and medication during the operation. Routine monitoring of heart rate, blood pressure and blood oxygen levels will be started.

The injection for a brachial plexus block can be either in the side of your neck, in your armpit, or close to your collar bone. Other nerves can be blocked near the elbow, or in the forearm, wrist or hand. The skin around the injection site will be cleaned and a small injection of local anaesthetic will be used to numb your skin- it does sting a little as it goes into the tissues. To help locate the nerve, the anaesthetist will use an ultrasound machine and / or a small machine that makes your arm twitch to locate the nerves, this twitching is not painful.

Most people find that the injection is no more painful than having a cannula inserted into a vein. When the needle is inserted, your anaesthetist will ask if you feel any tingling, or “twinges”, or an electric shock sensation. It can take more than one attempt to get the anaesthetic needle in the correct place to ensure that the area is completely numbed.

The anaesthetist will ensure you are comfortable and pain free throughout the procedure.

Your arm will start to feel warm and tingly before finally feeling heavy and numb. The injection typically takes between 20 and 30 minutes to work. The anaesthetist will check the sensations you can feel at different places. You will not be taken to theatre until the anaesthetist is happy that the block is working well.

If the block does not work fully, you will be offered more local anaesthetic, additional pain relief, or a general anaesthetic.

## **During the operation**

A screen will be positioned in such a way that you cannot see the surgery being done. A member of staff will sit with you during the operation. Your anaesthetist remains close by. Please feel free to bring in a personal music player with headphones if you would like to listen to music during the operation.

An operating theatre is a busy place – there will typically be between five and eight people in theatre, each with their own role in helping look after you. A member of your anaesthetic team will be with you throughout the surgery, and sometimes other members of the team may also speak with you and help with your care.

## **After the operation**

Following the operation, you may return from the operating theatre with a sling or temporary splint. This sling or splint is often used to help keep you comfortable after the operation. While you are in the recovery area or ward, the staff will make sure your arm is protected from injury. You can expect to feel tingling as sensation returns but this soon passes. At this point it is important to let staff know if you are feeling any pain. It will take several hours for the feeling to return to your arm. Your anaesthetist may be able to give you an idea of how long it should take. As the block wears off you may begin to feel more discomfort, although by this time a lot of the inflammation and swelling from the surgery should have subsided.

Usually your pain will continue to be well controlled with simple painkillers, although some patients require stronger painkillers. The requirements for these types of painkiller will vary from person to person.

## **Aftercare at home**

Before being discharged you will be given information to help your recovery at home. You should use any supports you are given once back at home. This is because you will not have full sensation in the area of the surgery, and it can be easier to get injured. This numbness may commonly last up to 48 hours.

Take special care around heat sources, such as fires or radiators. You will not feel heat while the body part is numb, and you may burn yourself.

Avoid using any machinery or domestic appliances, such as kettles, irons and cooking equipment.

Start taking your pain relief medicines before the block wears off and as instructed by the hospital. This is important as the effect of the nerve block can stop quite suddenly. Staff will give you more details about what and when to take them after your operation.

You will need to seek help from the emergency medical services if:

- you notice unexplained breathlessness
- you experience severe pain that is not controlled by your tablets

If the nerve block has not fully worn by 48 hours after the operation, you should contact the Anaesthetic Department secretaries at Worcester Royal Hospital via the hospital switchboard who will direct your call appropriately.

**If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.**

### **Patient Experience**

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

### **Feedback**

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

### **Patient Advice and Liaison Service (PALS)**

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

### **How to contact PALS:**

**Telephone Patient Services: 0300 123 1732 or via email at: [wah-tr.PALS@nhs.net](mailto:wah-tr.PALS@nhs.net)**

### **Opening times:**

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.