Patient information leaflet

All about your anaesthetic

6 Anaesthesia for shoulder, arm and hand surgery

For patients having a surgical procedure at a Care UK independent diagnostic and treatment centre

This is the sixth in a series of patient information leaflets which will provide you with information about the different types of anaesthesia and what to expect during your admission to a treatment centre for your operation. Surgery on the shoulder, arm or hand can be conducted under a **general anaesthetic** (when you are asleep) or in many cases under a **local anaesthetic block** (when your arm is numb).

Under the local anaesthetic block, it may be possible for you to remain awake. **Sedation**, where you are lightly asleep or sleepy, or a general anaesthetic can also be given together with the local anaesthetic.

Local anaesthesia for the arm is provided by means of a **brachial plexus block**.

Brachial plexus and brachial plexus blocks

The brachial plexus is a group of nerves that run from your spinal cord to your hand and arm, including the shoulder.

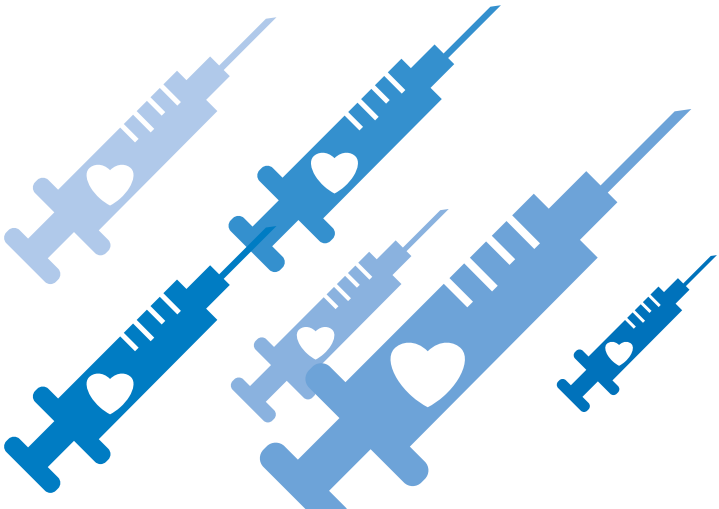
Injecting local anaesthetic around these nerves (a brachial plexus block or a 'block') can temporarily make your shoulder and/or arm numb and immobile. This can be done with or without a general anaesthetic:

- When used with a general anaesthetic, the injection is intended to help with pain relief following the operation.
- When used without a general anaesthetic, the intention is to make your arm numb enough to allow you to have the operation without feeling any pain. Sedation medicines can be used to keep you calm and relaxed if you wish.
- The local anaesthetic injection usually gives you pain relief for 8-12 hours, though the effects can last for up to 24 hours in some individuals.

Why have a brachial plexus block?

The advantages of having a brachial plexus block are:

- Very good pain relief immediately after surgery
- Less or no need for general anaesthesia or strong pain killers
- Less effects on the heart and lungs
- Less nausea and sickness
- Earlier return to eating and drinking
- Without a general anaesthetic, you will usually be quicker to leave the hospital



Performing the block

The block is performed in the operating theatre suite, usually in a room next to the actual operating theatre. On your arrival, you will be asked to lie on a trolley and then be attached to our routine monitors; this will monitor your heart, blood pressure and the oxygen levels in your blood.

The anaesthetist inserts a small cannula or 'drip', in the arm opposite to the side of your operation. Even if you are having a general anaesthetic, they may wish to perform the block whilst you are still awake. Most people find that the block is no more painful than having the cannula put in: speak with your anaesthetist if you wish to be unconscious first.

The skin around the injection site is then cleaned and numbed. Depending on your operation, the block may be performed in the side of the neck, around the collar bone or in the armpit. Your anaesthetist will discuss this with you.

To perform the block quicker and make it more reliable, your anaesthetist may use an ultrasound machine to identify the nerves and ensure that the local anaesthetic is injected near enough to be effective. They may also use a small machine that will make your arm twitch when the needle is close to the correct nerve.

Your anaesthetist may also wish to block nerves in the upper arm or forearm with more injections. This is usually done in order to give longer lasting pain relief. If this is the case they will discuss this with you.

Injecting the local anaesthetic can give a full or tight feeling where the block is being performed, but it should not be painful. If you feel pain, please tell your anaesthetist straight away.

After the local anaesthetic has been injected the arm will gradually become heavy, warm and numb over around 20 minutes. Your anaesthetist may test the block by using a cold spray or asking you to move your arm.

After the block, you will then be given a general anaesthetic, some sedation or taken directly into the operating theatre for your operation. The operation will not begin until we are sure that your arm is appropriately anaesthetised.

The operation

A screen will be put up to keep the operation site clean. This means you cannot see the operation being performed. Nevertheless, a member of staff will be with you throughout the operation.

If you are not having a general anaesthetic, but you do not wish to be fully awake, most people can be given sedatives to make them more relaxed or drowsy through the operation. This may mean that you are sleepy for a while after the operation.

If you are awake, you may feel sensations of touch or pressure during the operation. You should not feel any pain at any point. If you do, please tell your anaesthetist so that they can arrange another form of pain relief. This may include a general anaesthetic.

After the operation

You will leave the operating theatre and be taken either to the recovery area or straight back to the ward. Your arm will usually be put into a sling to protect and support it whilst it is still numb.

As long as you are feeling well, you can eat and drink when you are back on the ward.

Your block will usually last several hours after the operation; this may mean that your arm will still be numb when you go to bed. However, the block may wear off before the morning so take some painkillers, e.g. at least paracetamol, before going to bed. You will usually be given a supply of painkillers to take before you leave the treatment centre and your anaesthetist can advise you about this.

What are the risks?

All things that we do involve risks and brachial plexus blocks are no different:

Very common or common risks (that is, more often than one in every 100 blocks):

Your arm will be weak and numb for several hours after the operation. This is because the local anaesthetic medicines are still working. Not feeling pain means that you could hurt your arm without being aware of it. You must protect your arm:

- Use your sling,
- Avoid scalding or burning your arm (be careful with hot water bottles and radiators),
- Do not sleep on your arm,
- Support your arm on a pillow when possible,
- Change the position of your arm often to avoid too much pressure in one place.

Other nerves may be affected by the local anaesthetic medicine. Which nerves are affected is dependent on where the local anaesthetic is injected and will usually improve as the local anaesthetic wears off. The effects can include drooping of the

eyelid or a stuffy nostril on the same side as the injection or a feeling of difficulty in taking a deep breath. Your anaesthetist can give you more information.

Your block may not relieve all the pain. This can be due to the local anaesthetic not reaching all the nerves or the operation being more extensive than planned. Tell the anaesthetist if you feel pain. There are several options, which include:

- Asking the surgeon to inject more local anaesthetic to catch the missed nerves
- The anaesthetist may give you a general anaesthetic

Bruising or even a small collection of blood (haematoma) may occur around the injection site. These will usually resolve in a few days.

Rarely the numbness lasts more than 48 hours. If your arm has not returned to normal within 2 days, please contact the hospital for advice. In the vast majority of cases, these will improve in less than six weeks, but we need to know what is happening.

Rare (fewer than 1 in every 1000 blocks)

- Infection around the site of the injection may occur, but is rare.
- Lung damage or air around the lung (pneumothorax) can occur with injections around the collar bone.
- Numbness or weakness lasting more than a year or being permanent is very rare and exact numbers are not available. It is thought to happen between 1 in every 2000 and 5000 blocks. More details are available on **http://www.rcoa.ac.uk/system/files/PI-Risk12_1.pdf**
- High levels of local anaesthetic in the blood may occur if the needle is placed into a blood vessel. This is very rare, but is potentially very serious as it can affect the heart and/or cause unconsciousness.

Notes