

# Peripheral Nerve Block



Quality & Safety Advisory Committee

College of Anaesthesiologists of Ireland

## Patient Information Leaflet

This leaflet is for patients who are having, or may be offered, a **peripheral nerve block** as part of their care in an Irish hospital. It explains what a nerve block is, why it may be used, what to expect, and the possible risks and benefits. Please read it carefully and discuss any questions with your anaesthesiologist.

## What is a peripheral nerve block?

A peripheral nerve block is an injection of **local anaesthetic** given near a nerve or group of nerves. These nerves supply feeling and movement to a specific part of the body, such as an arm or a leg. A similar technique is used by dentists when numbing your mouth for dental work.

The local anaesthetic temporarily stops pain signals from travelling from that area to your brain. As a result, the area becomes **numb** and may also feel **heavy or weak** until the block wears off.

A peripheral nerve block is **not the same as a spinal or epidural**.

Your anaesthesiologist will explain the procedure, discuss the **benefits, risks and alternatives**, and answer your questions before asking for your consent.

## Why is a nerve block used?

A nerve block may be used for:

**Anaesthesia** — to make the area numb enough for surgery, sometimes allowing the operation to be done without a general anaesthetic. Sedation may also be used if necessary and appropriate, to help you feel relaxed during the procedure.

**Analgesia (pain relief)** — to reduce pain during and after surgery, usually alongside a general anaesthetic.

Whether a nerve block is used for anaesthesia, pain relief, or both depends on the type of surgery, your medical history, and what matters most to you.

Your **anaesthesiologist will discuss this with you on the day**, including any reasonable alternatives, and help you decide what is most appropriate for you.

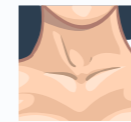
## Types of nerve blocks

There are many different nerve blocks. The type offered will depend on what part of your body the surgery is being performed. Your anaesthesiologist will explain which block is planned for you and why.

### Upper limb (arm) nerve blocks



These are commonly used for surgery on the **shoulder, arm, elbow, forearm, wrist or hand**.



The injection may be given in the **neck, above or below the collarbone, the armpit, or further down the arm**.

Your arm will feel numb and heavy, and you may not be able to move it normally until the block wears off.

### Lower limb (leg) nerve blocks

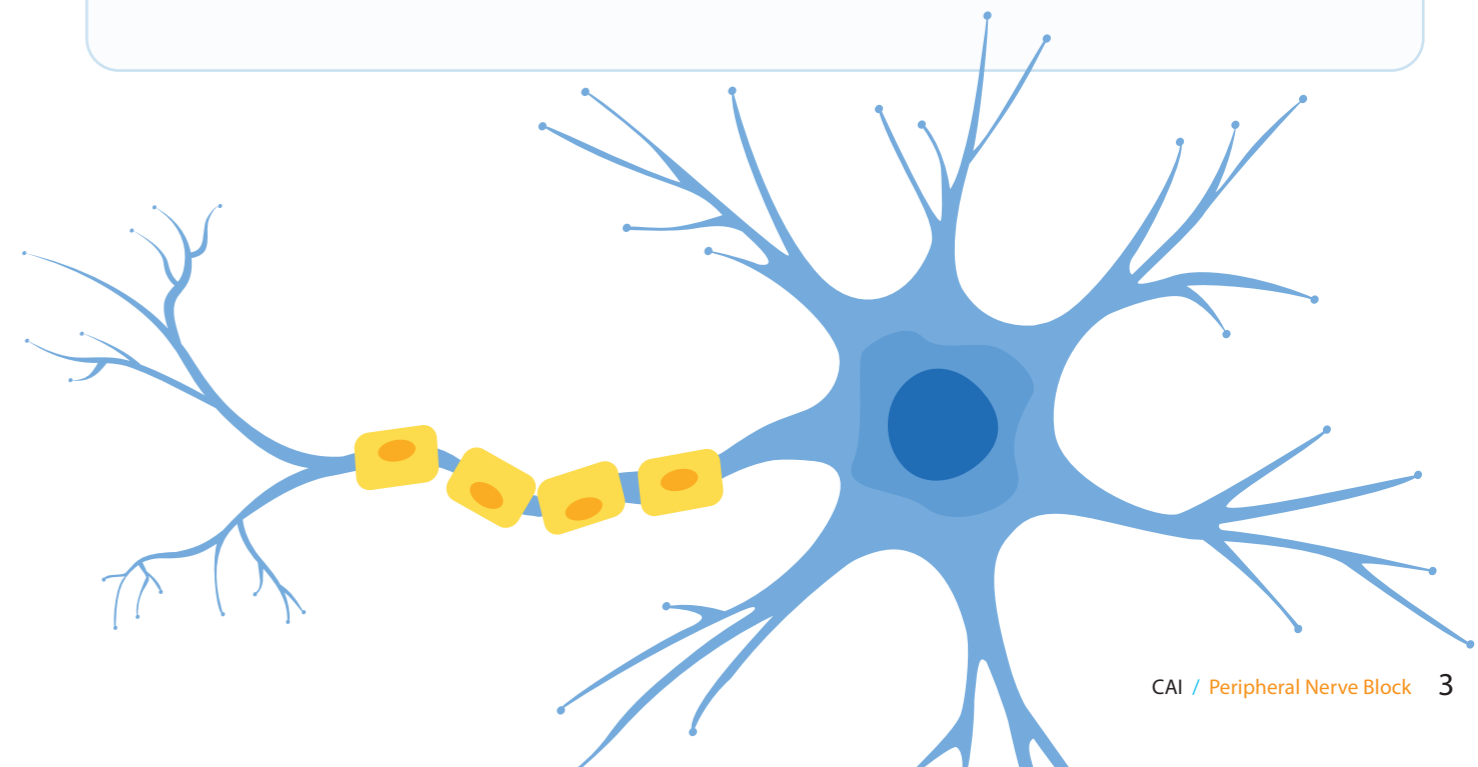


These are commonly used for surgery on the **hip, thigh, knee, lower leg, ankle or foot**.



The injection may be given in the **groin, buttock, thigh, behind the knee, or around the ankle**.

Your leg or foot may feel numb, heavy and weak for several hours.



## What happens on the day?

### Before the block

- You will meet your anaesthesiologist, who will explain the procedure and answer your questions.
- You will have an intravenous line (plastic tubing into vein) placed.
- You may be offered **sedation** to help you relax. This can make you feel drowsy, but you are usually still able to respond.
- Monitoring (blood pressure, heart rate and oxygen levels) will be attached.

### Having the block

- You will usually need to be awake for this.
- The skin is cleaned with antiseptic.
- A small injection may be used to numb the skin (this may sting briefly).
- The anaesthesiologist usually uses **ultrasound** (and sometimes a nerve stimulator) to guide the needle safely.
- You may feel pressure or a pushing sensation. Tell your anaesthesiologist if you feel sharp pain or tingling like an electric shock.
- The block usually takes **10–30 minutes** to work fully

### During the operation

- If the block is your main anaesthetic, you may remain awake or lightly sedated. The operation will not start until the anaesthesiologist is happy the block is working properly.
- The block will stop you having sharp pain sensations but you may still feel tugging and pulling
- If you also have a general anaesthetic, you will be asleep for the operation.
- A member of the anaesthesiology team will be with you throughout.

### After the operation

- The numb area may last from **2 to 24 hours**, sometimes longer depending on the block and medicines used.
- As the block wears off, you may notice **pins and needles**, tingling, or aching. This is normal.
- Start taking your prescribed pain relief **before the block fully wears off.**

### Protecting the numb limb

While the block is working:

- Protect the arm or leg from injury.
- Avoid heat sources (fires, radiators, hot water) as you may not feel burns.
- Use a sling or support if advised.
- Do not walk on a numb leg unless advised by staff.
- **Do not drive** until the block has completely worn off and you have full control.

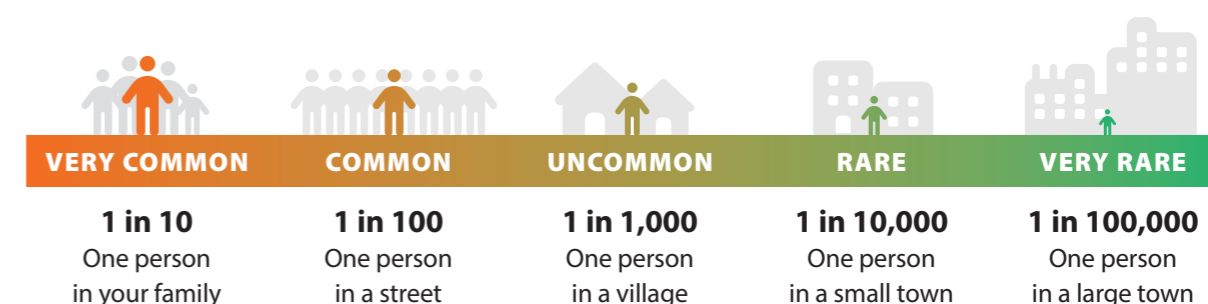
## Benefits of a nerve block

Benefits may include:

- Better pain relief during and after surgery
- Reduced need for strong pain medicines (such as morphine)
- Less nausea, drowsiness and constipation
- Faster recovery and earlier mobilisation
- In some cases, avoiding a general anaesthetic

## Risks and side effects

Serious complications are uncommon. To help explain risk, doctors often use terms such as *common*, *uncommon* and *rare*:



### Common (about 1 in 100)

- Bruising or discomfort at the injection site of the block
- Feeling of pressure during injection
- Temporary tingling or 'pins and needles'
- Block not working fully (block failure)

### Uncommon (about 1 in 1,000)

- Prolonged numbness or weakness lasting longer than expected
- Infection at the injection site

### Rare (about 1 in 10,000)

- Permanent nerve damage

### Very rare (about 1 in 100,000)

- Severe allergic reaction to local anaesthetic
- Local anaesthetic toxicity (which can cause seizures or heart problems)

## Nerve damage

- Some people notice temporary changes such as numbness, tingling, weakness or unusual sensations after surgery and a nerve block.
- In most cases these symptoms improve on their own: the great majority of patients recover within a **few weeks**, and almost all recover within a year.
- Long-lasting or permanent nerve problems are **uncommon to rare**, but they can occur.
- Nerve problems are **not always caused by the nerve block itself** and may also be related to the operation, positioning during surgery, swelling, or existing medical conditions.
- Your anaesthesiologist will talk with you about risks that are relevant to you personally, so you can make an informed decision.

### Temporary nerve symptoms

- It is relatively common to have **temporary changes in sensation** after surgery and a nerve block.
- These can include numbness, tingling (“pins and needles”), weakness, or altered sensations such as burning or electric-shock feelings.
- Most temporary nerve symptoms improve within **days to weeks**.
- Studies show that **over 95% of people recover within 4–6 weeks**, and **about 99% have recovered within one year**.

### Permanent nerve damage

- Permanent nerve damage is **very rare**
- When it does occur, it may result in long-term numbness, weakness, pain, or (very rarely) paralysis of the affected area.
- The exact risk varies depending on the type of block, the area of the body, and individual patient factors.

### Why nerve damage can happen

Nerve damage after surgery is **not always caused by the nerve block itself**.

Possible other causes include:

- The surgery (some operations carry an unavoidable risk to nearby nerves)
- Stretching or pressure on nerves due to positioning during surgery
- Use of a tourniquet during limb surgery
- Swelling or bleeding near the nerve after surgery
- Pre-existing medical conditions such as diabetes or vascular disease

Anaesthesiologists are trained to minimise these risks by using careful technique, ultrasound guidance, and appropriate monitoring. However, as with all medical procedures, risk cannot be removed completely.

If you experience nerve symptoms that **persist beyond 48 hours**, or if symptoms worsen rather than improve, you should contact your hospital for advice.

## Follow-up and treatment if nerve symptoms persist

If ongoing nerve symptoms are identified, your anaesthesiologist or surgeon may arrange **follow-up and further assessment**.

This may include referral to a specialist such as a **neurologist or neurophysiologist** (doctors who specialise in nerve conditions). You may be offered tests to assess how the nerve is working, such as nerve conduction studies, or imaging scans.

It is important to remember that **permanent nerve damage after a peripheral nerve block is very rare**, and the vast majority of patients either have no nerve symptoms or make a full recovery.

### When should I seek help?

- After you go home, contact your hospital or GP if you experience:
- Severe or worsening pain not controlled by medication
- Increasing redness, swelling or warmth at the injection site
- Persistent numbness or weakness beyond 48 hours
- New or worsening nerve symptoms

### Disclaimer

We aim to keep the information in this leaflet accurate and up to date, but we cannot guarantee this. This leaflet provides general information for patients in Irish hospitals. It does not replace a discussion with your anaesthesiologist, who will tailor advice to your individual situation.

Please ask your anaesthesiologist or surgeon if you have any questions or concerns.

### Information sources

Risk information and recovery timelines in this leaflet are based on best available evidence and patient information published by the **Royal College of Anaesthetists (RCOA)** and the **European Society of Regional Anaesthesia and Pain Therapy (ESRA)** and informed by existing Irish hospital leaflets to ensure relevance to Irish care pathways.



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