



Information brochure nerve block for operations of the lower limb (hip, leg, knee and foot)

73.038E

Jan Yperman Ziekenhuis • Briekestraat 12 • 8900 Ieper
www.yperman.net • 057 35 35 35
info@yperman.net •     



This brochure provides more information on regional anaesthetics (nerve block) during hip, leg, knee or foot surgery.

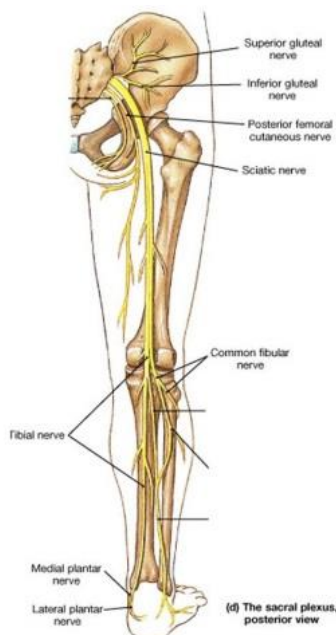
A regional anaesthetic means that part of the body - for example a knee or foot - is temporarily made insensitive to pain and numb, and/or made immobile by injecting anaesthetic medication close to a nerve or group of nerves.

A regional anaesthetic ensures that you will not feel pain in a particular region, and can be applied as the only form of anaesthetic during the operation or, together with a full or partial anaesthetic (epidural), as pain prevention, after the operation.

The purpose of this nerve block is to reduce the need for other anaesthetics, or to dispense with general anaesthesia completely. This technique also aims to provide better pain control after the procedure, with fewer pain-killers. Therefore you will suffer less from the side-effects of these (powerful) pain-killers: you will be less nauseous and dizzy. This also means you will need to stay in bed for less time, that you will be able to get up and eat and drink sooner, and that your hospital stay will be shortened.

In practice

This regional anaesthetic or nerve block provides excellent pain relief for 3 to 24 hours, depending on the type of local anaesthetic used. (If longer-lasting pain relief is required, the effect can be prolonged by repeating the injection at a later time, or by sliding a catheter (fine plastic tube) next to the nerve and connecting it to a pain pump).



It rarely affects the rest of the body, therefore it has many advantages for patients at increased risk under a general anaesthetic, and is extremely useful for many patients as an anti-pain treatment after the operation. (Note: a regional anaesthetic is not possible or useful for all types of procedure).

The nerve block injection can, depending on the operation, take place in different parts of the lower limb.

For hip operations, the injection is often given into the groin or flank. For operations of the knee at the front of the thigh, also for operations of the foot and toes on the rear or side of the knee, or at the ankle.

A local anaesthetic is injected close to a nerve or a group of nerves, and ensures that all information passing through that nerve is blocked. This is not just about pain, but also about muscle movement, temperature and posture.

If a nerve block is the only anaesthetic applied, not all sensation will be lost. In some cases you will still feel as if you are being touched.

The pain nerves often coincide with the nerves that make the muscles work. Those muscle nerves are also deactivated with the anaesthetic and the muscles they control will temporarily not work, and will seem to be paralysed.

You will also often lose any sense of where your limb is located. Patients may wonder for example if it is their leg being lifted up and disinfected.

After the injection, your leg will start to tingle, feel warm, and it will gradually be sedated and temporarily 'paralysed'.

Your anaesthetist can explain which anaesthetic is most suitable for you.

The injection

You should not eat or drink before surgery. Clear instructions can be found in the anaesthetic information leaflet.

Before the nerve block, you will be taken to a room near the operating room, in which all monitoring is first switched on: blood pressure, oxygen saturation and heart activity.

Sometimes a mild sedative (minor anaesthetic) will be given in advance: your anaesthetist will give you medication to help you relax.

When a nerve block is combined with total or partial anaesthetic (spinal anaesthetic by an epidural), this anaesthetic will often be started after the injection for the nerve block.

The skin around the injection site is always disinfected, after which the injection site is anaesthetised locally with a minor prick.

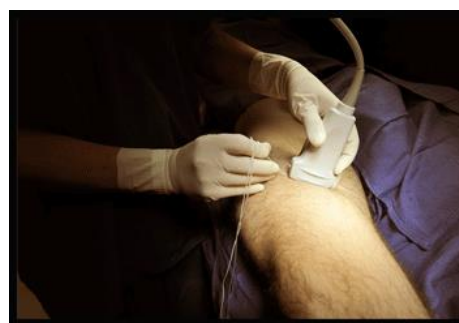
The nerves are located by means of an ultrasound and/or nerve stimulator.

By means of the ultrasound we can see the nerves, the needle and the injected product. The nerve stimulator is a device that stimulates the nerve in question with a low electrical current through the tip of the needle. This helps us to make sure that we are close enough but not too close to the nerve. You will see that the arm or leg may make minor involuntary movements (twitches) as a result. However, this does not hurt. In this way, we ensure the best chance of a successful block and reduce the risk of complications.

Most people experience the injection as being no more painful than inserting an infusion.

The sedated region will often feel warm, heavy and numb as a result of the regional anaesthetic. This sensation will set in after about 15 to 30 minutes.

The anaesthetic may sometimes not have sufficient effect. This can have various causes. In that case, the anaesthetist may administer some additional anaesthetic or switch to a different type of anaesthetic, such as a general anaesthetic, to ensure that you are comfortable at all times.



N = nerve

During the operation

In cases where no general anaesthetic is used, you will still NOT see the procedure, as surgical drapes are used for the purposes of sterility.

You are welcome to bring your smartphone or headphones. Some patients find music very pleasant and comforting during a surgical procedure.

If a tourniquet is used, you may sometimes feel this if it is placed outside the sedated region.

An operating theatre is a busy place. On average 5 to 8 people will be walking around the room, each with their own role in your care.

An anaesthesia nurse will be with you throughout the procedure. Your anaesthetist will also be nearby.

If you have been sedated, you will feel relaxed and sometimes a little sleepy. You may be given some extra oxygen through a plastic mask or nasal cannula. You will probably not clearly remember everything that happened in the operating room.

If you were under a general anaesthetic, you will of course not remember anything that happened during the operation.

Advantages of a local anaesthetic / nerve block

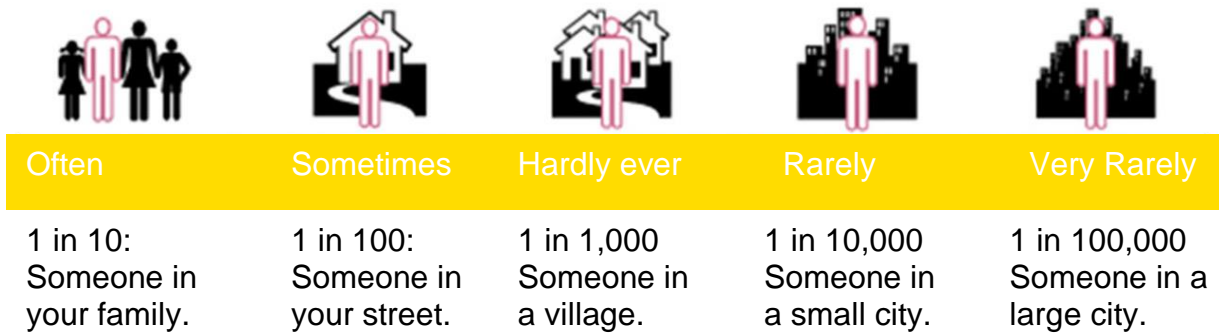
- A general anaesthetic, with its typical risks and complications, can sometimes be dispensed with. Its effects may include:
 - o Nausea
 - o Sore throat or injury to the tongue or lips
 - o Dizziness, headache, shivering, blurred vision
 - o Breathing may be laboured at first
 - o Difficulty urinating (a temporary urinary catheter may be required) or, on the other hand, bed-wetting.
 - o Confusion and impaired memory frequently occurs in elderly persons, but this is usually of short duration.
- Better pain relief afterwards. It generally reduces the need for strong pain-killers (morphinates) which have their own side effects (nausea, itching, upset stomach, constipation, etc.).
- Often you will need to remain at the recovery room for only a short period.
- There is less risk of nausea, therefore you will be able to eat and drink sooner.
- You also tend to be able to get up and leave the hospital sooner.

Side-effects and complications of a regional anaesthetic

Serious problems are rare in modern anaesthesia. Although risks cannot be completely excluded, modern medicines, equipment and training have made anaesthesia a much safer procedure for you in recent years.

Your anaesthetist will take all possible precautions to prevent the risks listed below. He/she can give you more information about each of these risks, and the precautions taken.

Potential risks are shown in this figure:



Note

- Leaning on or attempting to walk using the lower limb with a temporary loss of strength or sensation may result in falls.

Bleeding by puncturing a blood vessel

- In some cases a blood vessel may be punctured. This is usually remedied by applying pressure to stop the bleeding.

Infection (inflammation)

- To prevent this, several sterility measures are used.

Injections in the flank

- Piercing abdominal organs

Rare to very rare: Nerve injury

- There is a certain degree of risk of nerve injury after any operation, irrespective whether you have received a nerve block. This risk is difficult to measure exactly, but studies show that it occurs in 9 patients for each 10,000 operations 6 months after surgery.
- It can occur as a result of the procedure, your posture during the operation, direct nerve trauma caused by the needle, or by excessive pressure around/in the nerve when injecting the medication. Swelling around the operation site, or a pre-existing condition such as diabetes, smoking or high blood pressure, can also contribute to nerve injury after surgery.
- A nerve block should not hurt more than the injection itself. If you suddenly experience a sharp pain, it is essential to tell your anaesthetist immediately.
- What will you notice in the event of nerve injury? Some people experience a slightly different sensation. For example, an area of numb skin or tingling might be noticed. Some patients describe a changing sensation or even pain in a particular region. In rare cases, muscle weakness in one or more muscles can occur.

Rare to very rare: a seizure or other life-threatening situation

- A seizure (8/100,000 nerve blocks) or other life-threatening situation may occur. Your anaesthetist will treat these immediately. He/she will give you more information about this complication.

Your anaesthetist will obviously make every endeavour to avoid and/or treat these complications.

Alternatives

Various sedation techniques are often available for each operation. As well as a regional nerve block, these can range from a local anaesthetic, a 'half' anaesthetic (epidural) up to a general anaesthetic.



Various techniques are available for pain-killing after an operation.

Every patient will receive a combination of pain-killers through a catheter or in tablets.

In addition, a pain pump can be started up instead of, or together with, a nerve block

There are four types of pain pumps. One technique is to administer pain-killers through an epidural catheter (fine plastic tube between the vertebrae high or low in the back). This provides excellent pain control, which can be maintained by using a pain pump.

Epidural pain-killers of this type always work on both sides (left and right, which is not always necessary), and means that you are 'attached' to your hospital bed both literally (because of the

plastic tubes between your catheter and the pump) and in a practical sense (your leg muscles may be sedated to a greater or lesser extent). Also, the pain pump which administers pain-killers intravenously (through the infusion), or the pain pump which administers a pain-killer through a catheter placed next to the nerve, makes you physically attached to the serum stand/bed.

A last type of pain pump works by administering a pain-killing tablet under the tongue (Zalviso).

After the operation

Providing the nerve block works, you will not (or not fully) be able to move your entire leg, or your knee or ankle. As indicated above, you are not allowed to lean on a lower limb that is still under anaesthetic.

You should take a pain-killer before the block wears off completely, making sure it can start working before pain actually occurs.

After the block has worn off, you may feel tingling in your leg. This is normal.

Aftercare

Be careful around heat sources, because you will not feel the heat while the block works. You may suffer burns without feeling anything.

Special situations

You need to seek specific medical help if you experience serious pain that does not go away with medication.

Also, you should contact the anaesthetist if the block does not wear off after 48-72 hours.

You can reach the anaesthetist through the reception of Jan Yperman Hospital at 057 35 35 35.

Further information

Anaesthetists are doctors who specialise in sedation and pain-control, who:

- Will explain to you which type or types of anaesthetic are suitable for your surgery. If there are several options, he or she will help you make the right choice.
- Will discuss the risk of sedation with you.
- Will discuss a pain-control plan with you after the operation.
- They are responsible for the administration of medication in case of anaesthesia.
- They are responsible for your comfort and safety during and after the operation.
- Take care of a blood transfusion if necessary.
- Arrange for admission to intensive care if necessary.
- Make sure that your experience before, during and after your surgery is as peaceful and pain-free as possible.

Information video on regional anaesthetics

Would you like more information about anaesthesia? Watch the video on our YouTube channel *vzw Jan Yperman Ziekenhuis* or scan the QR code below with your smartphone.



