

Injection Procedure Info leaflet

Spinal nerve root block (transforaminal injection)

A 'nerve root block' is an injection around a major nerve where it exits the spinal column through an opening called a neuroforamen. The nerve connects to an area of skin and muscle in a limb.

The injection is carried out at Cervical (neck), Lumbar (low back) or Caudal (base of the spine) level.

A nerve root block can be helpful to temporarily ease pain caused by inflammation or narrowing of the spine affecting the targeted nerve(s) or discs. This pain would be felt in a limb (arm or leg, e.g. 'sciatica') or sometimes the buttock region.

Usually, a combination of cortisone ('steroid') and local anaesthetic is injected together. Local anaesthetic mildly numbs and can provide rapid onset relief, lasting for a number of hours only. Cortisone reduces swelling and inflammation and can have a longer effect, often weeks to a few months.

The effect a nerve root block is temporary; there is no long term curative effect. Please be aware that there always is a chance of symptom improvement over time even without this treatment.

Cortisone *off license* use and risks

Please be aware that cortisone for this injection is used outside its product license. It can be injected as either a crystalloid or a clear solution. The crystalloid solution (standard for lower spine injections) seems to have a somewhat longer effect but has a higher (but still small) risk of causing transient or lasting spinal cord or nerve damage. The clear solution tends to have a somewhat shorter effect and a little lower risk.

While it's possible to do a nerve root block without cortisone any relief effect would likely be very brief (hours/days). We will discuss and agree with you what to use when your doctor sees you before the injection.

Pulsed RF lesioning

It is an option (usually during repeat nerve root blocks) to stimulate the injected nerves with electricity of radio frequency. This can make the effect last longer. Your doctor will discuss this option with you if suitable.

If you have Diabetes

Your blood sugar may increase after this procedure. Diabetic control should be at optimum when having a nerve root block, so please ask your GP or Diabetes specialist to review this before having a nerve root block. If you have a very high blood sugar level on the day of the injection (between 15-20mmol/L) it may not be safe to proceed.

You should plan to monitor your blood sugar concentration carefully for the first few days after the injection and should know how to adjust your anti-diabetic medication.

X-rays and Iodine

X-rays as well as an iodine-containing dye are used to guide the injection. Since X-rays can be harmful in higher doses, we try to keep the dose to a minimum. Please tell us if you have a known allergy to iodine or have recently diagnosed over- or under-active thyroid.

For Female patients age 13-55

X rays can harm unborn children during pregnancy; by regulation we are required to exclude pregnancy in all women of child-bearing age and for this reason should use X-rays only within ten days following your monthly bleeding. If you are not within these 10 days you will be asked you to do a pregnancy test on the day the procedure to rule out pregnancy (please be aware that the standard tests have a tiny chance of failing to detect and existing pregnancy)

If you are unsure, or if there is any chance of you being pregnant, you need to contact us well before your admission .

Blood thinning medicines

anticoagulants and anti-platelet drugs

Your blood clotting needs to be near normal to safely have a nerve root block.

If you take medicines that reduce clotting these usually need to be stopped 5-7 days in advance. Please make your doctor aware of this so that you can receive suitable instructions when to stop, and whether to replace with other treatment.

The following medicines usually need to be discontinued 5-7 days before this procedure:

Aspirin (any dose), Clopidogrel (Plavix), Prasugrel, Abciximab (ReoPro), Dipyridamole (Persantin, Asasantin), Eptifibatide (Integriline), Tirofiban (Aggrastat), Ticagrelor, Warfarin, Acenocoumarol (Sinthrome), Phenindione, Dabigatran (Pradaxa), Epixaban (Eliquis), Rivaroxaban (Xarelto)

Risks and complications

The main risks are lack of useful effect (25%) and, rarely, worsening of existing- or onset of new pain for some time (1-5%). These risks are higher if surgery has been done previously at the injection site.

Very rare complications include temporary or permanent nerve damage leading to reduced feeling, weakness and/or paralysis of a limb, incontinence, loss of sexual function, bleeding with spinal cord damage, infections (such as shingles, meningitis or abscess), or need for spine surgery.

The process of having a nerve root block

Lower back nerve root blocks are performed in a prone - and neck nerve root blocks in a supine position. A local anaesthetic injection first numbs your skin at the injection site prior to inserting the block needle. Please try not to move while the doctor performs the injection. During the procedure you may experience an unpleasant, painful or electric-like feeling in a buttock/ leg (lower spine injection) or arm/fingers (neck injection). Please tell the doctor when and where you feel this.

Afterwards, you may be kept in a recovery area for ongoing monitoring and will then spend some time on a trolley before trying to stand up. As your legs (or arms) may be weaker and feel numb it may take some time for you to be able to do so. Sometimes the bladder muscle tightens for some hours so it may be difficult to pass water.

Arrangements you need to make

You must arrange a friend or relative to take you home when you are ready for discharge and you also must have an adult with you at home for the first night after the injection that is able to physically support you. If this can't be arranged you would need to stay in hospital for one night.

Outcomes

Local audit data show that 75% of patients with limb pain gain pain relief from nerve root blocks, with 53% reporting more than 50% relief. While this does not fully resolve all pain related problems and suffering, temporary relief allows a range of other treatments, e.g. Physiotherapy and Rehabilitation, to proceed and can give you hope and respite, increasing the impact and chance of long term benefit for many pain related problems.

If better for a while after a nerve root block you need to think ahead what to change. For most patients it is important to increase or start new exercises in planned way, and reduce or wean off long term pain killers, particular morphine-like drugs.