

Information for Patients having: Computerised Tomography (CT) Guided Nerve Root Injection

Important Information

What is a nerve root injection?

A nerve root injection is an injection of local anaesthetic and steroid under CT guidance into the area where a nerve leaves the spine. A nerve root injection is not a cure for the cause of your pain but it is used to help reduce the level of your pain. A nerve root injection is usually requested by your doctor for pain in the arm or leg that follows the path of a single nerve. It may be diagnostic (a test to determine the source of your pain) and/or therapeutic (to relieve your pain). If you get a period of sustained pain relief from the injection it can be repeated. Sometimes the injection is done to decide whether or not surgery might be helpful and at what level it should be performed.

Each patient referred for an image-guided steroid injection should be reviewed on a case-by-case basis in order to determine if the treatment is still suitable for current symptoms. All reasonable non-injection pain management measures should have been explored.

Is there any preparation?

Please sign at the bottom of this information sheet to confirm you have read the information and consent to proceed.

Note: The procedure cannot be performed if you are on blood thinning drugs (anticoagulants).

If you are taking any blood thinners (anticoagulants) such as Warfarin, clopidogrel, dabigatran, apixaban, rivaroxaban) or any others, these medications must be discontinued well before the procedure. Please make your **referring** doctor aware that you are taking a blood thinner so they can give you specific instructions about when to stop and restart the medication. These drugs are commonly prescribed to prevent stroke or heart attack so it is very important that you do not stop taking them without being instructed to do so by your doctor.

Steroid injections should not be performed within 2 weeks before or after a vaccine (including COVID); please telephone or email us (details above) so we can rearrange your appointment.

Special considerations during the SARS-CoV2 (COVID-19) pandemic:

There is a small risk that steroid injections can temporarily reduce the ability of the immune system to fight infection. This effect can last from seven to forty days and as a result there may be an increased risk of contracting COVID-19 infection. This is not guaranteed to happen, but the risk cannot be eliminated. In severe cases of COVID, this may result in hospitalisation, intensive care support, and potentially (although rare) death.

Steroid medication is known to have a suppressive effect on the immune system that could lead to an increased risk of a worse outcome if patients become ill with an infection. Unfortunately these effects are poorly understood for coronavirus but we do know that coronavirus can result in becoming seriously unwell if contracted.

The overall effects of steroid injections and therefore the associated risks are small compared to oral or intravenous steroid preparations. However, we believe that it is better to avoid these risks where an injection can be safely delayed.

Steroid injection should only be considered by if your pain is severe and/or debilitating and all other appropriate treatments and/or pain therapies have been tried.

You should discuss carefully with your referring clinician the benefits versus risks of attending hospital (increased exposure risk), as well as temporary immunosuppression, especially if you are a vulnerable patient in the high risk group.

You should not attend for injection if you have symptoms of COVID-19, recently tested positive for COVID-19 or have had recent contact with a person with symptoms; please telephone us on 01603 288469 so we can reschedule your appointment.

What are the risks of the procedure?

As with most procedures there is a small risk of bleeding, infection, nerve injury, or allergic reaction to the medications used. A very common side effect of nerve root injections is worsening of symptoms (about 1 in 3 patients). This is temporary and may last for 48 hours after the injection.

You may feel some numbness or altered sensation that follows the path of the nerve that was injected. On rare occasions there can be some temporary weakness caused by the local anaesthetic (between 1 in 10 and 1 in 100 patients). Significant bleeding after the injection is an uncommon side effect (less than 1 in 100 cases).

There is a small but unavoidable risk (about 1 case in every 3,500) of very serious complications associated with cervical nerve root injections including permanent paralysis.

There are very few reports in the literature of permanent leg weakness and bladder function problems (paraplegia) after this procedure for injections in the middle (thoracic) and lower back (lumbar). It is possible though extremely rare for the nerve root or lower part of the spinal cord to be injured permanently. Permanent damage means that you could have permanent weakness, pain and numbness in the area we are trying to treat.

The risks are very small but we have to mention them so that you have all the information to decide if this is the treatment that you want.

The doctor will assess you before you leave the department to ensure there are no concerns. If this weakness interferes with your ability to walk, you may have to remain in the radiology department until it resolves - usually several hours. You may have increased pain for a few days after the injection, including localized pain at the injection site. Diabetics can have short-term elevation of blood sugars because of the steroid medication.

What does off licence use or off label use of steroid mean?

Steroids (corticosteroids) are commonly used in managing chronic pain but are licensed for specific routes of administration only. Some routes of administration to treat pain are not on license. This is referred to as off-licence use. The manufacturer of the medicine may not have applied for a specific licence to extend its usage. Many medicines used in pain medicine are used off-label. Your doctor will be able to discuss this with you further. The hospital given approval that this medication can be used in this way.

Will the injection be painful?

Most people say the stinging/burning of the local anaesthetic at the start of the injection is the most uncomfortable part of the procedure however, each person's response to any procedure will differ. It is possible to get a temporary "electric-shock" sensation during the procedure, since the injection is close to a nerve.

What happens at the time of the injection?

The doctor performing the injection will answer any specific questions you still have after reading the information leaflet that will have been sent to you with your appointment letter. After signing a consent form the injection will be done in the CT (computed tomography) room with you lying on the CT table (on your stomach for a lower back injection). Your back/neck will be cleaned thoroughly with an antiseptic and sterile drapes are placed around the area. The skin is anesthetised (numbed) with a local anaesthetic, which may produce a brief stinging or burning sensation that goes away usually in 10 seconds. The needle is advanced to the proper location under CT guidance. A dye may be injected at this point - please let the doctor know if you have any allergies to X-ray injections. A mixture of local anaesthetic (numbing medicine) and steroid is then injected through the needle around the nerve. Patients are then monitored in the recovery area for a time (usually 30- 40 minutes). The doctor will then come to assess you before you leave.

How will I feel after the injection?

Your pain may (but not always) be improved immediately after the injection from the local anaesthetic. The steroid usually takes two or three days to work but sometimes longer and may take 10 – 14 days. You may experience some local tenderness for a couple of days after the injection. You may take your usual pain medication after the procedure. It will be helpful for your doctor if you keep track of the amount of pain relief you received as well as the duration of pain relief.

Will I have any restrictions on the day of the procedure?

It is important that you have a responsible adult to escort you home. You must not drive or use public transport for the journey home. It is recommended that you rest for the remainder of the day. If the nerve root injection helps to reduce the level of your pain, please remember you will still have a problem with your back/neck. Do not rush back to doing strenuous activities, but build up your activity levels slowly.

How do I get the results?

The Radiologist will study your CT scan and report the findings to your consultant. Your consultant will then contact you or arrange a clinic appointment where you will get the results of the scan.

Any Questions?

If you have any further questions or would like to know more about this procedure, please telephone the CT department or appointments office between 9am and 4.30pm, Monday to Friday.

Finally

Some of your questions should have been answered by this letter, but remember that this is only a starting point for discussion about your treatment with the Doctors looking after you.

Patient:

I have read the information above.

Signed:..... Print Name:..... Date:.....

Access to Radiology

How to find us:	East Outpatients entrance and follow the signs to Level 2 Radiology. You can find more information at: www.nnuh.nhs.uk
Hospital transport:	To enquire about hospital transport telephone 0333 240 4100
Contact details:	Telephone: 01603 286081 Email: radiology@nnuh.nhs.uk Website: www.nnuh.nhs.uk

