

Cervical nerve root injections

i Information for patients
Radiology



In hospital and in the community

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What is a cervical nerve root injection?

A cervical nerve root injection is normally undertaken in order to find the cause of pain in the shoulder, arm or hand. It is a test rather than a treatment for your pain. After a small injection to give local anaesthetic, a special dye that is visible on the CT scanner is injected next to the nerve root via a fine needle and this is followed by another injection of local anaesthetic and a steroid.

Why do I need it?

You will probably have been suffering from shoulder or arm pain and this may be due to nerve root compression or irritation. It is not always very easy to tell which nerve root is causing you so much pain. You may have already had an MRI or CT scan, and together with your surgeon's assessment, this has shown that one nerve root in particular is the probable cause for your pain, and this test aims to confirm or exclude this.

Are there any risks?

Of 1036 patients who had this procedure over a 4 year period at a hospital in America, no patients suffered from major complications and between 1 in 20 and 1 in 100 had minor complications depending on the technique used. Major complications have been reported in isolated case reports and these include:

Nerve damage: Rarely the nerves at the site of the injection may be damaged causing weakness, numbness or pain in the arm or hand. Usually this effect will only last for a few hours, and will disappear after the local anaesthetic has worn off. Occasionally the side effect may be prolonged or permanent.

Stroke: The nerve roots in your neck lie very close to the blood vessels that supply the brain and spinal cord. There are case reports of spasm or damage to these vessels during this procedure. This can lead to temporary, and sometimes permanent, loss of sensation or power in part of your body, which may also affect your eyesight (stroke). The complication is infrequent, but is something that you should be aware of before we carry out the injection.

Infection: Sterile technique and equipment are used to reduce the risk of infection, although this complication may still occur despite these precautions.

Allergic reaction: Approximately 1 in 2500 patients will have an allergic type reaction to the dye. Please tell the doctor if you have any allergy to medicines or anything else.

Bleeding: It is quite common (approximately 1 in 20) for there to be a small amount of bruising at the site of injection; occasionally the bleeding may result in a large bruise or haematoma which can be painful, or cause pressure on adjacent structures in the neck.

Radiation: The typical dose of radiation for this procedure is very low. However, this procedure cannot be done without the use of X-rays, as these help the radiologist to safely guide the needle to the correct nerve root.

Having the Procedure

Where is the procedure done and who will do my procedure?

The procedure is done at the Radiology (X-ray) department using a special scanner called a CT (Computerised Tomography) scanner. This allows your Consultant Radiologist, who is a doctor that specialises in X-ray guided procedures, to see exactly where the needle is going.

This test is not carried out on pregnant women

If you suspect or know that you are pregnant please telephone:

- **0114 271 4728**

Women who are still having periods should have the procedure during the 10 days following the start of your menstrual period. (This includes the time that you are menstruating). If your appointment is not within the first 10 days of your menstrual cycle, please telephone the department and we will arrange a suitable date with you.

Should I continue taking my medication?

If you are taking medications then you should still take them, including any pain medication. However, the procedure is not safe for people taking any medications to thin their blood, such as Warfarin or Clopidogrel.

Tell the ward staff if you are allergic to any medications. In addition, you should telephone **0114 271 4728** if you are taking any medication to thin your blood, such as Warfarin or Clopidogrel.

When do I need to come into hospital?

You should come into hospital 2 hours before you come for your nerve root injection. You will receive a letter detailing when and where you need to come to. You should still take your usual medications, including any pain medication. You will need to stay for 3 hours after the nerve root injection to make sure that you are well enough to go home. The procedure takes approximately 40 minutes.

What happens when I arrive in the x-ray department?

When you arrive at the department, one of our nursing staff will collect you and take you into the CT scanner room. The Consultant Radiologist will check all your details and explain the procedure to you. He or she will then ask you to sign a consent form. Once this is done, the nurse will help you to get into the correct position on the CT table and will stay with you throughout the procedure so that he or she can help you and explain things as they happen.

What happens during the procedure?

After injecting local anaesthetic into your skin and muscles the Consultant Radiologist (Dr Highland) will place a fine needle into the space next to the nerve root using a CT scanner to guide him. He will then inject a special dye, known as 'contrast', next to the root and inject a small amount of local anaesthetic and steroid. We will then apply a small dressing or plaster to the wound.

What happens after the procedure?

Once the procedure is finished and we are happy that you are well, we will take you back to the ward. On the ward, the nurses will check your needle wound on your neck and record your blood pressure, pulse and temperature again. If these are normal, you have passed water and you feel fit enough, you will then be allowed to go home.

When you get home, you should rest for about 24 hours but you can start to eat and drink as normal. It is quite common to have some neck pain or discomfort for a few days after the procedure.

Is there anything I should look out for when I go home?

It is extremely rare to have any problems once you have gone home. However, consult your GP or your local Accident and Emergency department and explain that you have had this procedure if you do feel unwell with symptoms such as:

- an increase in neck pain or swelling
- new numbness in your arms or legs
- fever
- feel generally unwell

When and how will I get my results?

After the procedure, your Consultant Radiologist will ask you to fill in a questionnaire so that you can tell him or her whether your arm pain has been made better by the injection or not. Please send this back to the Radiology department in the reply paid envelope provided with the questionnaire.

Once you have returned the questionnaire your Consultant Radiologist will then write a report and send it to your Surgeon within a few days. You should already have an appointment booked with your Surgeon and he/she will discuss your results with you then. If you do not have an appointment to see your Surgeon, his or her secretary will send one out to you.

Where can I find more information about cervical nerve root injections?

More information about radiology is available from the Royal College of Radiologists' website on:

www.rcr.ac.uk/index.asp?PageID=322

Further information on nerve root injections is available at:

www.spineuniverse.com/

www.spine-health.com/Topics/conserv/overview/inj/inj03.html

Alternatively, you can telephone the x-ray department and speak to one of the x-ray nursing staff on:

- **0114 271 4726**



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