

A CT guided cervical nerve block (Root block)

Radiology Department



Patient information leaflet

The leaflet tells you about having a computerised tomography (CT) guided cervical nerve block. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the consultant who has referred you for the test or the Radiologist who is going to perform it.

Who does what?

Radiologists are specialist doctors trained to interpret x-rays and carry out more complex examinations.

They are supported by **specialist radiographers**, who are highly trained to carry out x-rays and other imaging procedures.

Radiology Nurses are specialist nurses who will assist the Radiologist and care for you throughout the procedure until you are handed back to the ward nurses, who will collect you from CT.

Prior to this procedure being performed, the Radiologist will explain fully what will happen and allow you to ask any questions.

A written consent will be required. (You should have sufficient explanation before you sign the consent form).

This confirms that you understand the risks, benefits and possible alternatives to the procedure and have given your permission for it to go ahead.

What is a CT guided cervical root block injection?

A nerve block is an anaesthetic or anti-inflammatory injection targeted toward a certain nerve or group of nerves to treat pain. The purpose of the injection is to “turn off” a pain signal coming from a specific location in the neck or to decrease inflammation in that area.

The CT scanner is used to assist the radiologist in placing the needle in exactly the right location, so that you can receive maximum benefit from the injection.

How long does the procedure take?

It takes up to 1 hour.

Why do I need a CT guided root block injection?

People who suffer from either acute or chronic pain might have a nerve block injection to achieve temporary pain relief. Often, such pain originates from the cervical spine, but other areas commonly affected include the neck and arms. Delivering a nerve block injection allows a damaged nerve time to heal itself from a state of constant irritation. Additionally, nerve blocks can provide diagnostic information to the doctor. By performing a nerve block and then monitoring how the patient responds to the injection, the doctor can often use this information to help determine the cause or source of the pain.

Who has made the decision?

The consultant in charge of your case, and the Radiologist performing the cervical nerve root injection will have discussed the situation, and feel that it is the best thing to do. However, you will have the opportunity for your opinion to be considered, and if, after discussion with your doctors, you do not wish the procedure to be carried out, you can decide against it.

Before your appointment

You may be asked to stop taking certain medicines before your nerve root injection. You may also be asked not to take any pain relief medicines for at least four hours prior to the procedure.

Please contact the CT department if you are diabetic, taking any blood thinning drugs, have renal impairment or if you know that you are allergic to x-ray dye(iodine). If you are asthmatic, please bring your inhaler or asthmatic medication with you to your appointment.

How should I prepare?

You will have been allocated a day bed on either the medical day unit (MDU), day surgery unit (DSU) or the surgical short stay unit (SSSU). The location will be written on the appointment letter accompanying this patient information leaflet.

You will be asked to **attend the ward three hours** prior to your appointment to allow bloods to be taken and the results available prior to the procedure.

You will be routinely screened for MRSA (Methicillin-resistance Staphylococcus Aureus) prior to the planned procedure.

You will be asked not to eat for four hours but can drink water up to one hour prior to the procedure, unless otherwise advised.

You will be asked to put on a hospital gown and a cannula will be placed in a vein usually on the back of the hand.

If you have any allergies, you must let the staff looking after you know. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and CT scans) then you must tell the radiographers.

Can I bring a relative or friend?

Yes, but for reasons of safety, they may not be able to accompany you into the examination room, except in very special circumstances.

You must have someone to collect you and drive you home after your four hours bed rest.

What actually happens during a root block injection?

Sedation **may** be given prior to the procedure.

You will be asked to lie flat on your back to have your cervical root block injection. Your head will be tilted away from the side that the root block is going to be performed and a marker will be placed along your neck.

Your skin will be cleaned at the site of the injection with a sterile antiseptic wipe.

A needle can then be introduced at the appropriate level for the appropriate nerve root. The local anaesthetic may sting and the introduction of the longer needle itself may feel sharp.

The radiologist will use the CT images to decide on the most suitable point for inserting the needle.

The Radiographers will accurately mark this point with an indelible pen using the centring lights on the scanner to guide them.

Your consultant may inject a special dye (contrast medium) to check the position first. This will show on the CT scan whether or not the needle is in the correct place.

The steroid and local anaesthetic mixture is then injected into the nerve root. You may be asked during the procedure whether you feel any altered sensation.

You must keep as still as possible during this stage, if it becomes too uncomfortable please let us know.

The treatment usually only takes a few minutes and more than one nerve root can be injected during the same session.

The medication delivered by the injection will be placed as close to the nerve causing the pain as possible. It will then "shut down" the pain receptors within the nerve(s) causing the problem. Imaging can help the radiologist place the needle in exactly the right spot. The imaging itself is painless.

The effects of the injection are usually immediate. It only takes a short time for the medication to achieve pain relief. However, nerve blocks are only a temporary fix – they typically last for up to one or two weeks and then wear off as they are absorbed by your body. Some patients undergo several rounds of nerve blocks before they feel a more permanent sense of relief. Others may not receive any permanent pain relief from this type of injection and may require different treatment methods to manage the pain or inflammation.

When finished, you will be allowed to rest for 15 to 30 minutes to let the medication take effect. The nurse will also make sure you don't have any unexpected side effects before you leave the department.

Will it hurt?

You will probably feel a “pinch” when the needle is inserted. As soon as the medication is delivered, though, you should feel less discomfort. Sometimes the needle has to be inserted fairly deep to reach the nerve causing your problem. This can be temporarily uncomfortable, but it is important to hold still so that the needle is inserted correctly.

After the injection, you will probably experience a sensation of pain relief in the area injected. This will typically last up to one or two weeks, or even permanently in some cases.

What happens afterwards?

After the procedure you will be kept for up to 3 hours on the ward for observations. You will be given a ‘symptom’ questionnaire to be returned after two weeks. The follow-up form is completed to record whether your usual symptoms are still present or not.

What are the benefits vs the risks?

Root block injections are commonly performed and generally safe. However, in order to make an informed decision and give your consent, you need to be aware of the possible side-effects and the risk of complications of this procedure. You will be exposed to some X-ray radiation during nerve block injections. The amount of radiation you will be exposed to will depend on the number of X-rays you need to have done and how many root blocks need injecting.

Any adverse reaction to this injection is rare. There is a small possibility of an allergic reaction to the drugs used. If this occurs, it is immediate, but is very rare. Every precaution is taken to avoid infection.

Benefits

- Temporary pain relief
- Temporary reduction of inflammation in the region of the spine causing pain
- May help the doctor identify a more specific cause of pain
- Better ability to function in daily life without the restrictions previously caused by pain

Risks

- Infection at the injection site
- Bleeding
- Accidental delivery of medication into the blood stream
- Unexpected spread of medication to other nerves
- Hitting the “wrong” nerve in an attempt to block the targeted nerve, if the nerves are close together
- Feeling faint

Complications of this procedure

A CT scanner is used for this procedure to avoid structures such as the vertebral arteries supplying the brain and also to avoid the spinal cord, which runs centrally in the neck, but there are **very rare cases in the literature and anecdotally where patients have suffered strokes and spinal cord damage from this procedure**. Most of these cases have probably used X-ray guided rather than CT guided techniques, which are safer.

What are the limitations?

Typically, the effects of a nerve block injection are temporary and offer little to no long-term relief. Each individual is different; however, nerve block injections are often delivered in a series and then discontinued, depending on the results they achieve. A patient may feel benefits after a round of injections, or none at all. Delivery of the medication to the correct spot can fail, thereby making the injection ineffective. If the nerve blocks don't help alleviate your pain, your doctor will most likely recommend a different treatment approach.

Who interprets the results and how do I get them?

When we receive the completed follow-up form back from you the Neuro radiologist will write a report and send it to your consultant.

Any imaging that is performed during the procedure itself will conclude with the procedure, and no follow-up image interpretation is necessary.

In conclusion

Some of your questions should have been answered by this leaflet, but this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.

Privacy and dignity

Sometimes tests, although necessary, can be embarrassing or undignified for patients but we promise to do everything we can to make you as comfortable as possible during your visit to the department.

Patient surveys

We value your opinion on our service and in order to deliver, maintain and improve this service we ask you to complete a short patient questionnaire survey found with your appointment letter.

Completion of these surveys is entirely voluntary.

Questions and contacts

Following the examination, if you experience any problems please contact the CT department between 08:30 and 17:00. Outside these times please contact your GP.

If you have any questions or would like to know more about this procedure, please telephone the CT department on:

01483 464151 (Direct line)

01483 571122 Extension **4151 / 4414**

If you are unable to keep your appointment notify the CT scanner clerical staff as soon as possible.

For further information about Diagnostic Imaging Services at Royal Surrey County Hospital NHS Foundation Trust, please contact:

Royal Surrey County Hospital NHS Foundation Trust

Egerton Road

Park Barn

Guildford

Surrey

GU2 7XX

www.royalsurrey.nhs.uk

Key reference sources and other sources of information

Radiation Dose

- www.gov.uk/government/publications/ionising-radiation-dose-comparisons/ionising-radiation-dose-comparisons

NHS choices – CT Scans

- www.nhs.uk/Conditions/ct-scan/Pages/Introduction.aspx

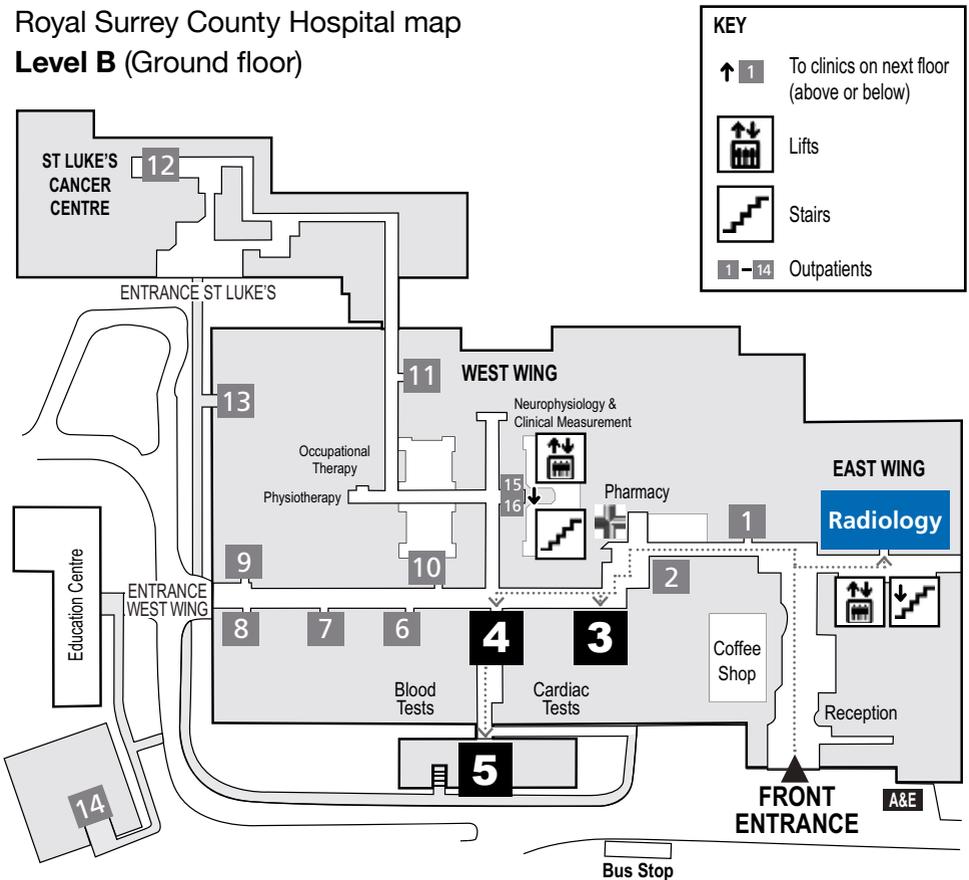
Nerve Block – Information for patients

- www.radiologyinfo.org/en/info.cfm?pg=nerveblock#how-its-performed

How to find the Radiology Department

Royal Surrey County Hospital map

Level B (Ground floor)



Data sharing reference information is available on Royal Surrey County Hospital patient information leaflet entitled:

Your Healthcare records – your information, PIN120703–562

Royal Surrey County Hospital NHS Foundation Trust

Egerton Road

Guildford

Surrey

GU2 7XX

www.royalsurrey.nhs.uk

Radiology Department contact details

If you have any questions or would like to know more about this procedure, please telephone the CT Department on:

Telephone: 01483 464151 (Direct line)

Telephone: 01483 571122 **ext** 4151 / 4414

If you are unable to keep your appointment, please contact us as soon as possible.

PALS and Advocacy contact details

Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located on the right hand side as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

Telephone: 01483 402757

Email: rsc-tr.pals@nhs.net

Opening hours: 9.00am–3.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact PALS.

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