



Dorsal Root Ganglion Block/Transforaminal Epidural/ Nerve Root Block For The Treatment Of Pain

What is a dorsal root ganglion block?

A dorsal root ganglion block is an injection around the dorsal root ganglion. The ganglion looks like a small swelling on the nerve that joins the spinal cord. This ganglion contains nerves that carry sensation. The sensory nerves enter through a hole referred to as the intervertebral foramen. The procedure is therefore, sometimes referred to as a transforaminal epidural because the injection may spread to the epidural space. It may also be called nerve root injection.

Dorsal Root Ganglion blocks are used mainly for localised radicular pain (sciatic leg or arm pain) pain where simpler measures have not helped. They are most commonly used in the lumbar region. It may help your pain by reducing some of the pain signals. Pain relief can be short-lived although some people can get significant and lasting pain relief from these injections, it may not be a cure.

The injection contains local anaesthetic often with a small amount of steroid. The injection is usually undertaken alongside other treatments such as physiotherapy.

Is this the right treatment for me?

Other treatment options will be discussed with you before deciding to go ahead with the injection(s) and your consent is needed. The decision on whether or not to go ahead with the injection(s) is a shared decision between you and your doctor. Your doctor will be able to provide you with up-to-date information about the likelihood of this being a successful treatment for you and how this treatment fits into the best pathway of care. If you are undecided about whether or not to have injection(s) then further advice and information to make this informed decision can be provided. Please speak to your doctor for more information. If your health has changed, it is important to let your doctor know;

- If you have an infection in your body or on the skin of your back, your doctor will postpone the treatment until the infection is cleared
- If you have been started on anticoagulant or antiplatelet medicines that “thin the blood” such as warfarin, heparin or clopidogrel, this may require extra preparation
- If you suffer from diabetes, the use of steroids during injections may cause your blood sugar to change requiring monitoring and adjustment of your diabetic medication
- If you have any allergies

You must also inform the doctor if there is any chance that you could be pregnant. Finally, if you are planning to fly or travel abroad within two weeks after the injections, please let your doctor know as it may be best to change the date of the injections.

I have heard that steroids are being used unlicensed/off-label, what does this 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-label 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.

What will happen to me during the treatment?

Before the injection, your doctor will discuss the procedure with you. Your doctor will either obtain your consent before the injection or confirm this consent if it was previously given. The treatment will take place in a dedicated area with trained personnel. An X-ray machine (or other forms of image guidance) will be used to enable accurate injection. Not all doctors undertake these injections in exactly the same way but the following usually happens;

- You will be prepared for the procedure as per local protocol
- Observations such as blood pressure and pulse rate may be made

- A small needle (cannula) will usually be placed in the back of your hand.
- You will be carefully positioned and the skin around the injection site(s) will be cleaned with an antiseptic solution or spray; this can feel very cold
- X-ray (or an alternative way of guiding the needles) will be used
- You will feel a stinging sensation as local anaesthetic is injected to numb the skin and surrounding tissues. Your doctor will warn you of this first
- The doctor will direct the injection to the dorsal root ganglion suspected to be a source of pain and usually inject contrast (a solution that is visible under XRay) to ensure the needle is correctly positioned. When the injections are made, you may feel pressure, tightness or a pushing sensation in your back or leg. If there is any discomfort, do let the doctor know

What will happen to me after the injections?

After the injections you will be taken to a recovery or ward area where nursing staff will observe you. Sometimes you will be asked to lay flat for about 30 minutes or longer. You may be assisted to sit up and your blood pressure and pulse may be checked. You will be advised when to get dressed and be given assistance to help to ensure that you can stand safely after the procedure.

When will I be able to go home from hospital after my injections?

You will usually be able to return home within a few hours after the injection and in some cases much sooner, depending on how long your doctor or nurse want you to stay for recovery. Please ensure that you have made arrangements for someone to collect you after the procedure. Failure to do so will likely result in your procedure being cancelled. It is unsafe for you to drive home immediately after the procedure. If you do so your motor insurance will be invalid.

What can I do after my procedure?

Ideally, you should arrange for someone to stay with you for 24 hours but, failing that, you should at least have access to a telephone. You should not drive, operate machinery, sign legal documents, provide childcare unsupervised or drink alcohol until fit to do so. If in doubt, please discuss these issues with your doctor for further advice.

When can I return to work after the procedure?

This will vary between individuals and may depend on the nature of your work. It is difficult to give general advice and so you should discuss this with your doctor.

Will I experience any side-effects?

As with any procedure, side-effects may occur. These are usually minor but there are risks with this procedure. Side-effects may include;

- Mild local tenderness and/or bruising at the site of the injection. This usually settles over the first few days
- The local anaesthetic may rarely spread causing some numbness and/or weakness in your legs (lumbar injections) or arm (cervical injections). Should this occur, the effect is temporary and will rapidly resolve over minutes or rarely hours
- Infection. This is rare. You should seek medical help if there is local warmth or redness over the site of injection with tenderness and/or you feel hot and unwell. This may require antibiotic treatment
- There are important nerves in the spine, but serious nerve injury is extremely rare (less than 1 in 10,000 cases) and occurs when there is serious bleeding or abscess near the spinal cord. Persistent weakness of the legs and/or incontinence require further urgent investigation. Very rarely cervical injections have caused severe harm or even death. These complications are so rare it is difficult to say how often they occur with certainty. Please speak to your doctor to discuss this issue fully.
- Blood pressure may temporarily fall and rarely, people may occasionally feel faint
- Headache. On rare occasions the needle may be placed too far and spinal fluid (CSF) encountered. This is called a dural puncture and may lead to headache that requires further treatment. If a severe headache does develop following your injection, take some Paracetamol, drink plenty of water and lie flat. If the headache continues for more than twenty-four hours please contact your GP or Pain Clinic
- Injection treatments are not always effective and may not help your pain
- (Injections in thoracic area only) Injury or collapse of the lung (pneumothorax). This is very rare. If you get chest pain or breathlessness, you should seek immediate medical help

- In rare circumstances, steroid use can damage your eyesight. You should report any new visual disturbance (such as blurred or distorted vision) to your doctor

What can I expect in the days afterwards?

You may experience some soreness or aching at the injection site. Please keep the area of the injection dry for 24 hours following the procedure. Do not worry if your pain feels worse for a few days as this sometimes happens. Take your regular pain killers and medications as normal and this should settle down. Try to keep on the move about the house whilst avoiding anything too strenuous.

What should I do in the weeks after the injections?

As your pain decreases, you should try to gently increase your exercise. Simple activities like a daily walk, using an exercise bike or swimming on your back will help to improve your muscle tone and strengthen your muscles. It is best to increase your activities slowly. Try not to overdo things on a good day so that you end up paying for it with more pain the following day. Your doctor will be able to give you more specific advice.

What follow-up will be arranged?

Though practice may vary, a letter will usually be sent to your GP and your doctor will advise on what to do after the procedure. You may be asked to make a call to the pain department, be given a form to fill in, or given a telephone review or other appointment.

Is there anything else I need to consider before the procedure?

- Please bring your glasses if you need them for reading
- Always bring a list of all current medication
- Continue to take your medication as usual on the treatment day

