

Cranial Nerve blocks including Greater Occipital Nerve (GON) blocks

Information for patients



A cranial nerve block is a therapeutic injection for headache or facial pain. These blocks have been shown to be beneficial in patients with migraine, cluster headache, occipital neuralgia and other head pains.

The most commonly performed block is called a Greater Occipital Nerve Block (GON block). Occasionally additional blocks to other nerves can be performed.

The left and right greater occipital nerves are present just under the skin at the back of head and are most commonly treated.

Each of these nerves helps us feel sensation over the back of the head and they are connected to the nerves that are involved in migraine and cluster headache pain.

A 'block,' is an injection of a local anaesthetic and sometimes steroid just under the skin near a nerve to temporarily reduce sensation the nerve feels. A single block can last for a varying length of time in each individual treated.

Please tell us if you have ever had a reaction to local anaesthetics or steroids which are often combined in a single injection.

Why has a cranial nerve block been recommended for me?

Your headache doctor has diagnosed a type of headache or facial pain which has been shown to benefit patients who have similar head pains to yours in the past for the same or similar conditions.

Studies have shown that these procedures benefit patients. However, most studies were performed in small numbers of patients therefore the evidence for treating everyone is limited.

Nerve blocks are routinely offered to patients in many headache centres in the UK and abroad. Clinical experience tells us they do help some patients.

How does a nerve block work?

A nerve block contains local anaesthetic and steroid. When injected around the nerve it anaesthetises the region of skin supplied by the nerve.

Both the anaesthetic and steroid components have been reported to provide a period of relief from headache and facial pain for some patients that outlasts the duration of the local anaesthetic itself and may continue for weeks or even months.

Does everyone improve after a cranial nerve block?

No, unfortunately not, as with any medical treatment not all patients notice the same benefits and we are unable to reliably predict who will respond. However, as the potential side-effects are reported to be temporary and mild in the vast majority of patients, and the possible benefits for many patients outweigh the risks we try this form of treatment in most patients who we believe may benefit.

You will need to sign a consent form in order to give the doctor permission to go ahead with the cranial nerve block the first time you have one.

What are the side-effects of a cranial nerve block?

- The most common side-effect is a temporary sensation at the injection site or mild localised pain. Other short term effects, usually with the first 48 hours, can include in occasional cases worsening pain, flushing or sensation of heat, bleeding, dizziness, fainting, neck pain, unsteadiness.
- A temporary slow pulse has been seen in one patient in the literature.
- One important potential side-effect that has been reported and is estimated to affect less than 1% (1 in 100) is an area of hair loss or thinning of the skin tissue of about 2cm in diameter, the size of a 10 pence piece, at the site of injection. This can leave a palpable dimple.
- In rare cases allergic reactions may occur and infection at the injection site is a rare possibility.
- Nerve blocks will not usually be offered to patients who have had intracranial surgery in the region of the injection site without careful planning and consideration of risk. As a centre we have developed experience doing these blocks if required.
- Patients taking blood thinning medications such as warfarin, aspirin, clopidogrel may notice more bleeding from the site of the injection.

How will it be given?

Cranial blocks are given by injection just under the skin at the site of the nerve we are blocking. It is not injected inside your skull or brain.

How long will it take?

The treatment will take about 10 minutes and you will need to wait around after the block for about 10 minutes so that we can monitor you for any side-effects. In total, you will need to be in the department for about half an hour.

How will I feel immediately after the treatment?

Everyone is different, but most people feel well and have less severe headache, apart from mild pain or swelling around the injection site. We ask you stay for about 10 minutes after the block to check for bleeding, dizziness or unsteadiness.

Will I need any help travelling home from hospital or time off work?

Not usually, but you should not drive the same day as some patients feel a bit dizzy afterwards. You should only drive the next day if you are feeling well. Most people only need half a day off work for this procedure and the recovery from the injection.

How long will it take to work?

Cranial nerve blocks usually start working straight away but some patients find the effects may take 2-3 days before they notice a beneficial effect.

Do I need to stop my other medications ?

In most cases you should continue all your other medications. However, medications that thin the blood such as warfarin or the Direct-Acting Oral Anticoagulant(DOAC's) apixaban, dabigatran, rivaroxaban, and edoxiban, aspirin, and clopidogrel may need to be stopped or reduced temporarily. You should tell the doctor doing the procedure beforehand that you are taking these medications.

Will I need to have another cranial nerve block?

If you find it useful for your headache then another one may be given at a later date. If steroids are used this cannot be more often than every four months. However, sometimes blocks without steroids can be used in between.

Are there any other options?

It is likely that before a cranial nerve block being considered other treatment options will already have been tried and failed to control your symptoms. This is why it is being recommended by your consultant. Your consent is required beforehand. Risks, benefits and alternatives to this treatment, where relevant will be discussed before asking for your consent. If you are unsure about any aspect of the procedure or treatment proposed or any other options please do not hesitate to ask for more information.

What would I bring during the procedure?

If you have long hair, we recommend to bring something to tie your hair such as hair bobble/scrunchie.

Who will perform my procedure?

It will be performed by a doctor or health care professional with experience and training in the procedure and its risks. This may not be the same person who suggested and consented you for the procedure.

What do I do if I feel unwell afterwards?

During working hours (Monday to Friday from 8:00am to 4:00pm) you can contact **The Neurology Day Care Unit**.
Telephone No. **0113 392 5227**

Headache Clinical Nurse Specialist

Monday to Friday, 8:00am to 4:00pm

Telephone No. **0113 392 6437**, messages can be left on a secure voicemail and will be picked up as soon as possible due to clinical commitments.

E-mail: leedsth-tr.headache.nurse@nhs.net

For anything you consider an emergency please contact your GP or the Emergency Services or NHS direct 111.

Further information

For further information please ask you headache doctor or neurologist.



What did you think of your care?
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