

Patient information factsheet

Doppler-guided greater occipital nerve (GON) block

We have given you this factsheet because your doctor has requested that you have a procedure called doppler-guided greater occipital nerve (GON) block.

This factsheet explains what a doppler-guided GON block is, what the procedure involves and what the possible risks are. We hope it helps to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

What is a doppler-guided GON block?

A doppler-guided GON block is a medical procedure used to manage certain types of headaches and neck pain.

The procedure involves injecting a mixture of medications (a local anaesthetic and a steroid) around the greater occipital nerve (a nerve located at the base of the skull) to provide pain relief and reduce inflammation (swelling).

A doppler ultrasound (a procedure that uses sound waves to visualise the greater occipital nerve and surrounding structures) is used to guide the placement of the needle, ensuring it is placed accurately.

Why am I having a GON block?

There are a number of reasons why a GON block may be needed.

A GON block can be used to treat:

- occipital neuralgia (a condition in which the greater occipital nerve is injured or inflamed causing chronic pain)
- migraines (particularly those that involve the occipital area)
- cluster headaches (intense headaches that can happen multiple times a day and continue for weeks or months, often causing severe pain around the eye)

The doctor who requested you have this procedure will have explained to you why a GON block is needed in your case.

What are the benefits?

There are a number of benefits to having a GON block, including:

- relieving pain in the area around the occipital nerve (this usually lasts between a few weeks and three months)
- reducing inflammation around the occipital nerve
- reducing other symptoms such as neck stiffness and blurred vision
- helping the inflamed nerve recover and heal

Are there any risks or complications?

A doppler-guided GON block is generally a safe procedure, but as with any medical procedure there are possible risks.

Infection

As with having any type of injection, there is a small risk of infection around the injection site.

Hair loss

Less than 1 in 100 people have experienced a small area of hair loss (usually no bigger than a 2 pence coin) immediately at the site of injection. This is a risk when steroid is in the injection as it can permanently affect the fat cells which are vital to support the hair follicle.

Are there any alternatives?

There may be alternative treatment options available if a GON block is not suitable for you or you do not wish to have the procedure. Your doctor will discuss your options with you in more detail.

How do I prepare for the procedure?

No special preparation is needed for this procedure. Continue to take your normal medications as prescribed.

Bringing someone with you

You will need to arrange for a responsible adult to accompany you to your appointment. This is because you will **not** be able to drive or travel home on your own after the procedure.

What happens during the procedure?

Before your procedure, we will perform a full assessment to make sure that a GON block is the correct treatment option for you. During this assessment, we will:

- review your medical history
- perform any necessary scans
- perform neurological tests

We will explain the procedure to you, including the benefits and potential risks. This is a good opportunity for you to ask any questions you may have. We will then ask you if you are happy to go ahead with the procedure.

The procedure will be performed in an outpatient clinic by a neurosurgery consultant (a doctor who specialises in treating conditions affecting the nervous system), a registrar (a doctor training to be a specialist) or a specialist nurse.

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We will ask you to sit on a couch and tilt your head forwards so that it is resting on the back of the couch. We will clean the skin over the area around your greater occipital nerve. We will then use a doppler ultrasound to get clear images of the greater occipital nerve and the surrounding structures near the base of your skull. Using the doppler ultrasound for guidance, we will place a thin needle into the target area. Once the needle is in the correct position, we will inject a mixture of local anaesthetic and steroid into the target area. Lastly, we will remove the needle.

How long will it take?

This procedure takes approximately 30 minutes. However, you should expect to be in the hospital for up to 1 hour to allow time for you to recover after the procedure.

Will it hurt?

As with any type of injection, you may briefly feel some pain or a stinging sensation, but this will pass quickly because of the local anaesthetic.

What happens after the procedure?

After having the procedure, you will need to wait for 15 to 30 minutes in the outpatient area to ensure you feel well before going home.

Before you leave the hospital, we will advise you on how to recover safely at home. Please see the 'Recovering at home' section as a reminder.

Are there any side effects?

You may experience some temporary side effects after the procedure (typically lasting for a few hours to a few days), including:

- mild discomfort or a sensation of pressure during the injection
- numbness or weakness in the back of the head
- dizziness
- a small, bruised feeling or bump around the injection site
- a worsening of your headache (this is rare)

If your headache gets worse, you can take paracetamol to help ease the pain (make sure to read the instructions included in the box). Alternatively, you can try a cool compress or refrigerated wheat sack to help with the pain.

If you are concerned about your symptoms, please contact us for advice using the details at the end of this factsheet.

Recovering at home

Eating and drinking

You can eat and drink as normal after the procedure.

Driving

You will **not** be able to drive for 12 hours after the procedure.

Returning to work and daily activities

You will usually be able to return to your normal daily activities straight after the procedure. However, we recommend that you rest at home for 12 hours after the procedure.

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Wound care

Keep the area around the injection site clean and dry for 24 hours. Check the area around the injection site daily for signs of infection, such as redness and/or heat. If you are concerned at all, contact your general practitioner (GP) for advice.

Will I need follow-up care?

We will arrange a follow-up appointment for you three to four months after your procedure.

We recommend keeping a headache diary to record your symptom progress after having the GON block. If you notice your pain has improved, this suggests that the GON block has been effective and you will need to have further GON blocks to provide long-term pain relief. Most people usually have between three and six GON block sessions.

If your symptoms keep coming back, we may need to look at different treatment options for you. If this is the case, we will discuss this with you.

Contact us

If you have any further questions or concerns, please contact us.

Functional neurosurgery team

Telephone: **023 8120 6057** (Monday to Friday, 8am to 4pm)

Useful links

www.migrainetrust.org/live-with-migraine/healthcare/treatments/greater-occipital-nerve-gon-block-injections

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