



# Greater Occipital Nerve block, pulsed radiofrequency and cryotherapy

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## What is Greater Occipital Nerve (GON) block?

Greater occipital nerve (GON) block is a simple, low risk injection to the back of the scalp to help with neck pain and headaches.

## How is it done?

This block is usually done awake with the patient sitting. Local anaesthetic, often with some anti-inflammatory steroid (cortisone) is injected on one or both sides of the scalp. The procedure usually takes less than 5 minutes. It will result in the scalp being numb for up to 12 hours after.

## What are the benefits?

This block can be very successful in helping with any chronic headaches – for example migraines, whiplash headaches and headaches coming from the neck (cervicogenic headaches).

The block can reduce pain for weeks to months. It can then be repeated.

## What are the risks?

In general this is a very safe procedure.

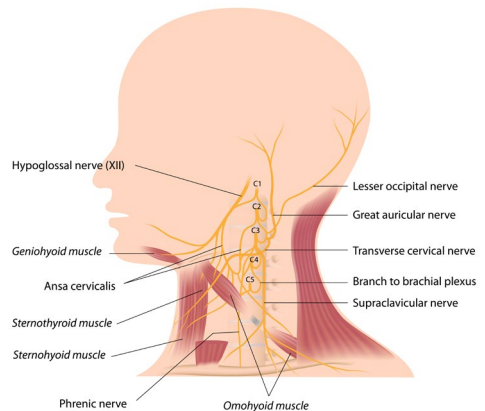
The most common risk is that it may not work, or only work for a few days.

Occasionally people can have a temporary reaction to the cortisone for a few days (feeling moody or high, trouble sleeping, dizziness).

There is a small risk of minor bleeding and very rarely infection.

There is a very small risk of damage to the nerve from the needle.

With repeated injections side effects from cortisone can develop so blocks are normally only done very 2-3 months.





## What is pulsed radiofrequency treatment?

This is a procedure which is sometimes added to the GON block in order to get a longer duration of benefit. It is usually done in the operating theatre with some sedation to make the patient sleepy.

It involves producing a strong magnetic current in the tip of the needle, next to the nerve, which may reduce pain for months after. In order to find the nerve there may be some electrical current from the needle which will produce a tingling sensation when the needle approaches the nerve.

Sometimes an ultrasound machine is used to direct the injection.

This is also a very low risk procedure, with risks similar to the above block. This procedure cannot be done on patients with implanted pacemakers or defibrillators due to the magnetic current involved interfering with these.

## What is Cryotherapy?

Cryotherapy involves freezing the nerve with a larger needle which forms an "ice ball" on the nerve. This also aims to produce a much longer lasting benefit than the single injection (6 months to a year). It is also done in the operating theatre with some sedation.

Cryotherapy uses a larger needle than the other procedures so there is more likelihood of producing a large bruise on the back of the head from bleeding.

Cryotherapy often results in a numb area on the back of the head for weeks after the procedure.



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