

Patient Information

Ophthalmology

Having a MINIject® implant to treat glaucoma

This booklet aims to give you information about your glaucoma surgery (MINIject® implant)

What is Glaucoma?

Glaucoma is a condition of the eye where increased pressure within the eye causes damage to the nerve that allows you to see (optic nerve). This can then lead to gradual loss of vision.

Unfortunately, drops or glaucoma surgery cannot restore vision that has already been lost. The aim of treatment is to reduce the pressure in the eye to prevent or slow down further damage to the optic nerve and so protect your vision from getting worse.

What is a MINIject® implant?

The MINIject® implant is a tiny strip of silicone that is implanted into the corner of the eye through a 2mm incision. Microscopic holes in the implant allow excess fluid to drain from eye, reducing pressure in the eye and so preventing further sight loss. The MINIject® causes minimal tissue reaction, reducing the risk of scarring. The MINIject® reduces eye pressure more than traditional glaucoma surgery and the effect lasts for longer.

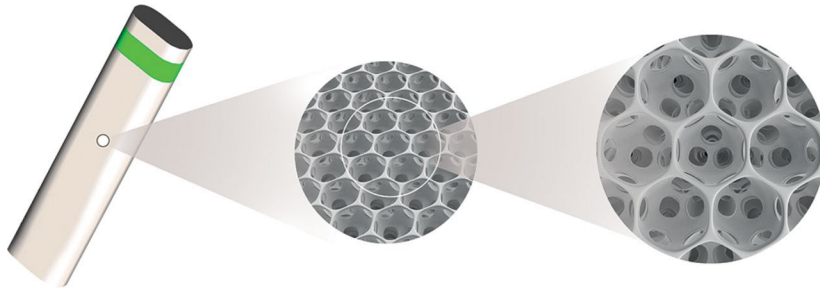


Fig. MINIject® implant and its porous internal structure.

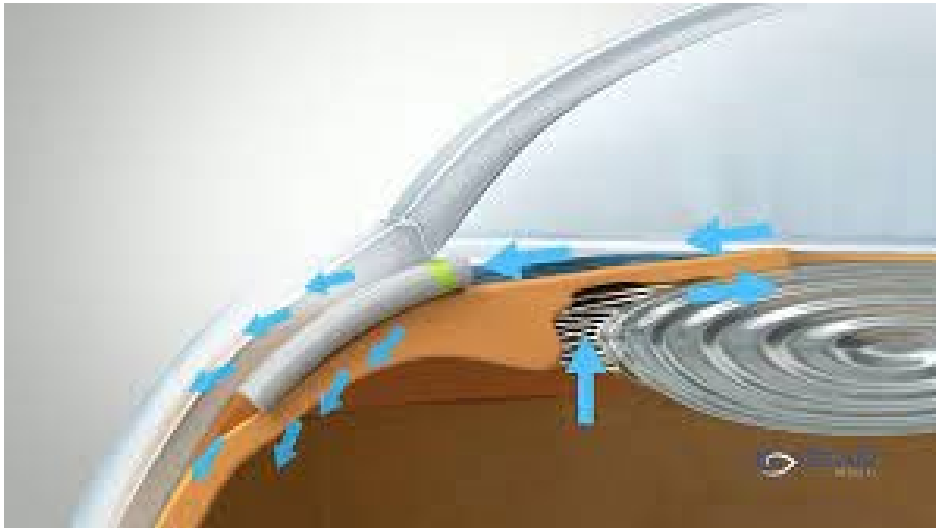


Fig: The MINIject® implant in the drainage angle soaking away the excess fluid causing pressure.

The MINIject® won't be rejected by the body and will not disappear or disintegrate with time. As it is not metallic, it will not set off airport scanners and is safe if you need to have an MRI or CT scan.

MINIject® is recommended for:

- adult patients with primary open angle glaucoma
- Mild-to-moderate glaucoma
- Adults who's eye pressure cannot be controlled by eye drops or laser procedure

Surgery can be combined with cataract surgery or performed as stand-alone.

The MINIject® cannot be used for people with:

- Angle closure glaucoma
- Traumatic, malignant, uveitic or neovascular glaucoma or discernible congenital anomalies of the anterior chamber angle
- Known intolerance or hypersensitivity to silicone

Why do I need it?

The MINIject® is aiming to reduce the pressure inside the eye and therefore prevent or slow down further damage to the optic nerve. It will not cure your glaucoma, reverse any damage already caused by glaucoma or bring back any lost vision.

What my surgery involves?

This standard procedure involves implanting the MINIject® device through a small incision in the clear part of the surface of the eye (cornea).

MINIject® does not need simultaneous cataract surgery, but your surgeon may combine the insertion with a cataract operation, if this is needed.

- The procedure does not change the appearance of the eye and the implant is not visible from outside the eye
- The implant is not felt
- The procedure takes between 5-10 minutes.

Is the surgery guaranteed to work?

MINIject® is proven to be safe and effective, with results sustained into the longer-term. Clinical results show average eye pressure is still reduced by 40% two years after implantation in 85% of people.

Are there alternatives to surgery?

Generally speaking, there are three ways to lower the pressure inside the eye on a long-term basis: eye drops, lasers and surgery.

You may already be using eye drops, but they did not lower the eye pressure enough, you are getting side-effects or you find it difficult to use

the drops. The surgery is used when eye drops and lasers have not worked or are not suitable.

The traditional surgery is called trabeculectomy. The surgeon creates a small cut through the white of the eye (sclera) to allow the fluid to drain into a blister or 'bleb'. The fluid is then reabsorbed back into your bloodstream.

The MINIject® technique that is being offered to you is a new technique. We are offering it to you because it is less invasive than the traditional trabeculectomy surgery with less recovery time.

What if I don't want surgery?

You may be suitable for a laser procedure or you may need more eye drops. However, this may not control your glaucoma and your vision may continue to get worse.

Preparing for the operation

Please continue to use any eye drops and tablets for your glaucoma as prescribed, unless directed otherwise by your Ophthalmologist.

If you take any blood thinning medication (e.g. Warfarin) or have had bleeding problems in the past please discuss this with your Ophthalmologist before your surgery.

Before your operation you will be asked to attend a pre-operative assessment appointment to check you are fit for the procedure and anaesthetic.

What happens at the time of surgery?

The operation is usually performed under a local anaesthetic, meaning that you are awake but your eye is numb so you will not feel anything. Your eye will be numbed with eye drops and then a small injection will be given around your eye. The injection may cause a pressure sensation and brief discomfort. The local anaesthetic takes several hours to wear off and may affect your vision during this time.

You can ask for a general anaesthetic so that you are fully asleep during the operation. Risks associated with general anaesthetic will be discussed with you.

What happens after the operation?

We will usually see you in the eye clinic one week after your operation and again a month later. We may also need to see you on a frequent basis during the next 3 months after the surgery.

You will need to use two different drops in your operated eye to help it recover from the surgery. These are antibiotic and steroid. You will need to use these for about 1 month after your surgery.

What about my medication?

If you are using drops in the other eye you should continue to do so unless told otherwise.

Please stop your normal glaucoma drops in the operated eye so we can assess the effect of the MINIject®. You may be asked to restart the drops later, depending on the pressure in your eye after the operation.

What are the risks and possible complications of surgery?

Serious complications are uncommon. You could have a small amount of bleeding inside your eye. If this happens, your vision could be blurred for a few weeks.

The effect of the MINIject® may wear off with time. This is most often due to scarring around the implant. We do not have enough data to suggest the likelihood of this with MINIject®.

The following are (rare) glaucoma surgery risks or side effects to discuss with your doctor:

- Vision loss (1:1000)
- Bleeding in the eye (usually self-resolving after few weeks)
- Infection
- Low eye pressure (or hypotony) – usually resolving after couple of weeks. Occasionally requires another surgery.
- Eye pressure too high – this may require another method of treatment.
- Scarring of the implant
- Cataract formation

There is a small risk of infection after MINIject® surgery which in very rare cases may cause blindness. There is also a small risk that the shunt might move from its location and need to be fixed by having another operation.

How should I look after my eye after surgery?

- You must not rub or press on the eye after surgery. To help stop this happening while you are asleep, you should wear the plastic shield at night for the first week after surgery.
- You can read, watch TV & use a computer as normal.
- Do not drive until your surgeon says it is safe to do so.
- Most people need 1-2 weeks off work after surgery.
- Keep the eye dry for 2 weeks - Care needs to be taken when washing the face. This is to reduce the chance of infection.
- Swimming is not allowed until advised at the clinic that the eye is healed.
- It is safe to fly after the surgery, however you will need to be seen couple of times by your surgeon in the month after your surgery. Your surgeon will confirm when it is safe to fly.

Who do I contact if I have questions or concerns?

In an emergency:

Within normal working hours – phone 01423 542217 and ask to speak to the Eye Triage Team.

Outside normal working hours – Go to the main Emergency Department (A&E).

For general queries, please call:
Ophthalmology Secretary on 01423 553375

Technical information

The MINIject® implant is composed of a biocompatible porous silicone STAR material. The unique flexible design conforms to the shape of the eye, and the micropores allow for enhanced aqueous outflow through the device. The STAR material has been

shown to provide minimal tissue reaction, and is designed to reduce scarring and keep eye pressure down over time. Studies have shown that MINIject® implant has proven cornea safety.

The MINIject® is 5 mm in length with an oblong, cross-sectional design measuring 1.1×0.6 mm. It has been developed targeting the suprachoroidal space, enhancing outflow of the aqueous fluid.

This path of outflow offers considerably greater eye pressure reduction sustained up to a follow-up period of 24 months, with similar medication reduction, compared to traditional MIGS (Minimally Invasive Glaucoma Surgery) devices addressing trabecular meshwork outflow.

This higher fluid flow can reduce eye pressure, providing 24-hour control, which is important to keep glaucoma controlled and maintain sight.

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