



Minimally Invasive Glaucoma Surgery (MIGS) using the iStent

Why is MIGS required?

In a healthy eye there is a fluid called aqueous humour. This is constantly produced and then drained to maintain eye pressure. This fluid is unrelated to tears - it is produced behind the iris.

The aqueous humour moves through the pupil and across the front of the iris to the angle of the anterior chamber (which is where the iris and cornea meet). It then moves through the angle to the outside of the eye through a tissue called the trabecular meshwork (which provides some resistance) before finally being absorbed by surrounding blood vessels.

This constant process sustains normal eye pressure. However when there is an imbalance in this drainage network eye pressure is increased and glaucoma.

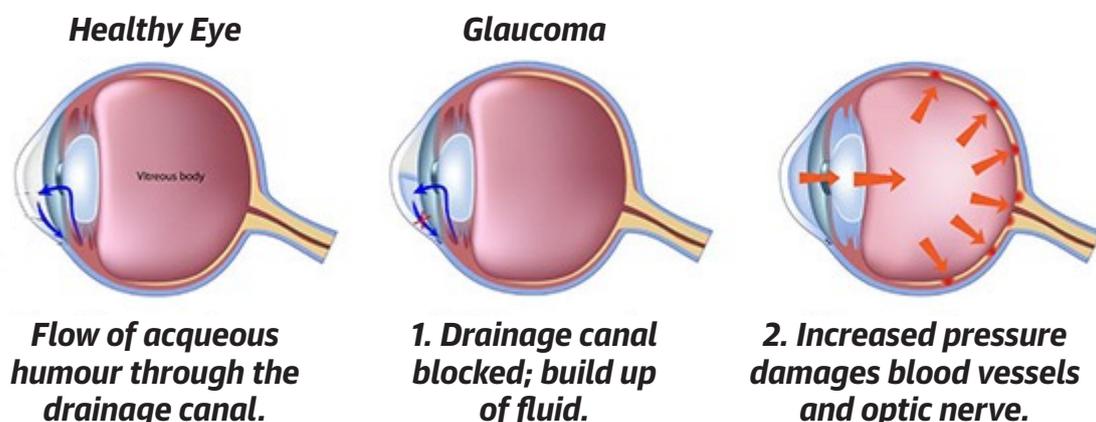
What exactly is Minimally Invasive Glaucoma Surgery (MIGS)?

A MIGS procedure is aimed at either improving existing glaucoma control or as a way to reduce the need for ongoing eye drop treatment.

MIGS is a relatively new type of procedure that uses tiny incisions and microscopic equipment. Traditional operations, while effective at lowering eye pressure, have a long list of potential complications. MIGS procedures have been designed to provide a greater degree of safety.

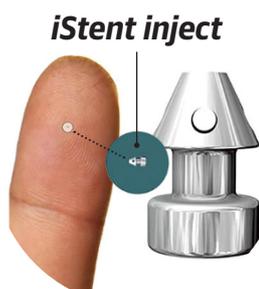
There are several different ways a MIGS procedure can be performed. One of these is using an iStent, which works by increasing the natural drainage system in the eye.

It is not possible for MIGS to cure your glaucoma. Nor will it reverse any damage already caused, or bring back any lost vision. However it may prevent your glaucoma from getting worse and causing further damage.



The iStent

- The iStent is a tiny one-millimetre long tube used to create a permanent opening in the eye's natural drainage channel to help drain fluid and reduce eye pressure.
- It usually takes two iStents inserted in each eye to achieve the desired effect.
- The iStent is so small you will not see or feel it after the procedure.
- It is made from surgical-grade titanium (so your body will not reject it).
- It's safe to have an MRI scan with an iStent and it will not set off airport scanners



Suitability for iStent surgery

Surgery with the iStent may be suitable for patients who:

- Have mild-to-moderate, open-angle glaucoma
- Have intraocular pressures that are either uncontrolled or borderline controlled by current glaucoma medications
- Want to reduce their eye drop medication usage
- Have a cataract operation scheduled and meet the criteria above

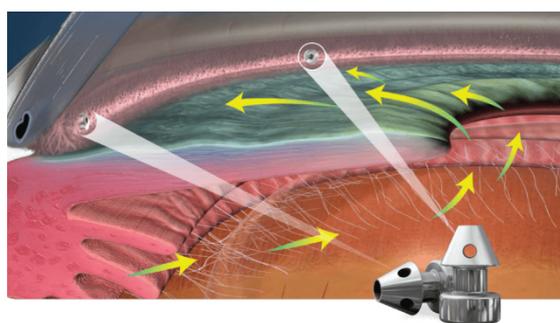
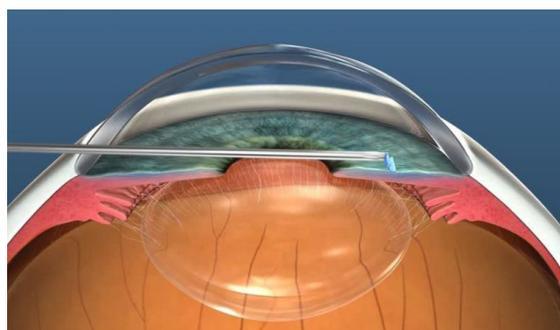
There are some circumstances when surgery is not suitable however, including when a patient has:

- Narrow-angle glaucoma
- Secondary glaucoma associated with other eye conditions
- Damage to the natural drainage system
- Patients with tumours of the optic nerve
- Chronic inflammatory diseases
- Thyroid eye disease
- Sturge-Weber syndrome

What happens during surgery?

The iStent MIGS operation is performed as a day procedure. Here's what you can expect:

- Before surgery your eye specialist will talk with you if you are taking blood-thinners. Medication such as Warfarin or Aspirin may increase the risk of bleeding during the operation. You may be advised to stop taking the medication a week before surgery (if it will not affect your general health).
- To begin the operation numbing drops are put into your eye. When your eye is numb, local anaesthetic is injected into the tissue around your eye. You may feel pressure when this is happening, but it is not usually painful.
- Then a very small cut is made in the cornea. The angle where the cornea meets the iris is opened using a jelly-like substance called viscoelastic. This is injected into the fluid-filled space inside the eye between the iris and the cornea's inner surface.
- The eye specialist will then use a special applicator to slide the metal iStent into the spongy tissue where the fluid flows through.



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- The position of the iStent is checked, the viscoelastic is removed, and the applicator is taken out.
 - More than one iStent can be inserted during the same procedure.
 - The procedure takes about 30 minutes. When combined with cataract surgery it will usually take approximately 50 to 60 minutes.

What to expect after surgery

- Immediately after your eye will be covered by a pad or protective plastic shield.
- You will be unable to drive yourself home following surgery. Please arrange for somebody to provide suitable transport and post-surgery support if necessary.
- The day after surgery you will come back to the clinic to meet with your eye specialist for an eye examination.
- You will be given an eye drop to use. This is usually administered four times a day for four weeks.
- The iStent should start working immediately after surgery, or at least within the first few weeks. By this time, if your eye pressure is stable, your eye specialist will assess the reduction of eye drop medication.
- You should be able to return to work and your normal routine one to two weeks after surgery. Feel free to discuss this with your eye specialist.

What are the risks?

While it is normal for there to be a small amount of bleeding inside the eye during the operation this should stop within a few days. More uncommon risks include:

- Inflammation
- Infection
- Tissue trauma
- Pain
- Vision changes
- Swelling of the cornea
- Increased intraocular pressure or progression of your Glaucoma.

There is a small risk the surgery may not lower eye pressure, or its effect may wear off over time. If the iStent fails, becomes blocked or moves out of position, your eye will not be harmed. However further surgery may be required should this occur.

While the risk of this happening is minimal it's you have all the information you need to decide on the operation. If you have any concerns your SES eye specialist is always prepared to discuss these further.

When to contact us post-surgery:

If you have any of the following issues after surgery, contact the clinic immediately:

- Reduced vision or loss of vision
- Severe pain that does not go away
- Any abnormal discharge from your eye (especially if it is increasing)

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