



## Aqueous Shunt Implantation Questions you may have

This brochure is intended for patients receiving an aqueous shunt such as the PRESERFLO™ MicroShunt implant and for their families

The PRESERFLO™ MicroShunt Glaucoma Drainage System is intended for the reduction of intraocular pressure (IOP) in eyes of patients with primary open-angle glaucoma where IOP remains uncontrollable while on maximum tolerated medical therapy and/or where glaucoma progression warrants surgery.

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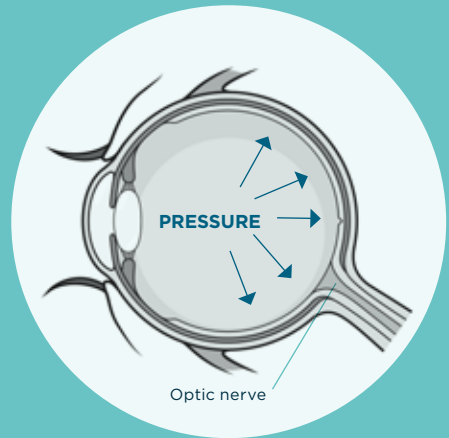


## What is glaucoma?

Glaucoma is the term given to a group of eye conditions characterized by damage to the optic nerve (responsible for sending visual messages to the brain).<sup>1</sup>

Primary open-angle glaucoma is the most common form of glaucoma and it often occurs when fluid from the eye cannot drain properly, leading to an increase in pressure that damages the optic nerve.<sup>2</sup>

As damage to the optic nerve can affect vision, the amount of fluid in the eye needs to be kept under control.<sup>3</sup>



## What is the treatment for glaucoma?

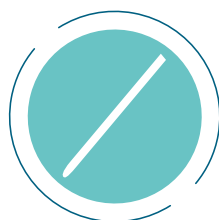


Treatment for glaucoma includes medication in the form of eye drops, as well as laser and surgical intervention.<sup>2,3</sup>

Your doctor has decided that you could benefit from an aqueous shunt (see below), such as the PRESERFLO™ MicroShunt, implanted via a small surgical procedure called filtering surgery.

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## What is an aqueous shunt?



An aqueous shunt is a small, tube-like drainage device, used to control IOP.<sup>1</sup>

It creates an escape tunnel for any excess fluid from inside the eye to safely drain into a small blister, or filtering bleb, behind the eyelid. From there, the fluid is slowly absorbed into the bloodstream.<sup>1</sup>

Aqueous shunts are designed to stay in your eye permanently, to help keep control of the fluid level.<sup>1,4</sup>

## Will an aqueous shunt implantation improve my existing vision problems?



Unfortunately, any damage to the optic nerve caused by glaucoma is likely to be permanent so the aqueous shunt will not help with any existing vision problems.

But by decreasing IOP, it can help to prevent further vision loss.<sup>4</sup>

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## What are the benefits of an aqueous shunt device?



By draining away excess fluid from inside the eye, an aqueous shunt will help to relieve pressure and prevent any further damage to the optic nerve.<sup>4</sup>

Compared to more traditional filtering surgeries, implantation of an aqueous shunt may result in fewer postoperative complications that require extra intervention.<sup>5</sup>

## How is an aqueous shunt implanted?



Aqueous shunt implantation can be performed under local or general anesthetic; your doctor will discuss which is the right option for you.<sup>6</sup>

The aqueous shunt will usually be implanted behind the upper eyelid.<sup>1,5</sup>

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## How should I prepare for the surgery?

Your doctor will advise you on what to do in the time before and on the day of your surgery, including instructions on taking your current glaucoma medication.



You may also be advised to arrange for someone to accompany you home after surgery.

## How long will it take me to recover after having an aqueous shunt implanted?



The surgery is not lengthy<sup>5,7</sup> and you can expect to be discharged the same day or after a few days if required.

Although it can take 2–3 months for your eye to feel completely ‘normal’ again, it won’t take long to get back to your daily routine. You will be prescribed eye drops after the surgery to help the recovery process.

It is important to avoid rubbing your eye and any strenuous activity during the early post-operative period, including sports.<sup>8</sup>

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## Will I still need to use my glaucoma medicines after surgery?



For many patients, undergoing implantation surgery means that they will no longer need to take glaucoma medicines; however, this is not the case for everyone.<sup>8</sup>

After the surgery, your doctor will advise on whether you need to continue taking any glaucoma medication. The drug and the dosage may be different after your surgery.<sup>8</sup>

Is it possible for the aqueous shunt to be rejected or cause an allergic/adverse reaction\*?



You may temporarily experience blurred vision in the first week after surgery but this should resolve.<sup>8</sup>

Redness and swelling of the eye are to be expected in the days after surgery. If increasing redness<sup>8</sup> and/or pain persists, it is recommended to contact your ophthalmologist.



While it is very unlikely that you will experience a more serious side effect, such as an allergic reaction or rejection of the device, it is possible, and you should inform your doctor immediately if you have blurry vision, headaches or discomfort.<sup>5,8</sup>

\*The complications during and after surgery may include: glaucoma progression not controlled, difficulty in inserting the PFMS, extended surgical procedure, tube migration out of anterior chamber, flat anterior chamber, excessive bleeding in anterior chamber or eye, PFMS touches cornea or iris, intraocular pressure too high or low, viscoelastic used in anterior chamber, choroidal effusion or hemorrhage, retinal detachment, proliferative retinopathy, hyphema, hypotony or hypotony maculopathy, phthisis bulbi, endophthalmitis, tube erosion through conjunctiva, tube block by iris or vitreous or fibrin, uveitis, diplopia, aqueous misdirection, corneal complications (abrasion, edema, ulceration, infection, decompensation, bullous keratopathy, endothelial cell loss, Descemet striae), partial or complete vision loss, globe perforation, bleb leak, blebitis, cystic bleb, bleb failure, pupillary block, ptosis, macular edema, prolonged inflammation, use of glaucoma medications, pain, conjunctival complications (dehiscence, dissection, hemorrhage, hyperemia, scar, ulcer), iris adhesions/synechiae, cataract development or progression, explantation of the PFMS, encapsulation reaction, fibrin in anterior chamber, visual field damage, globe perforation, headache, vitreous hemorrhage, and suture related complications<sup>6</sup>

# What is the PRESERFLO™ MicroShunt?



Actual size

**The PRESERFLO™ MicroShunt is an aqueous shunt that is less than 1mm thick and with a winged design.<sup>4,7</sup>**

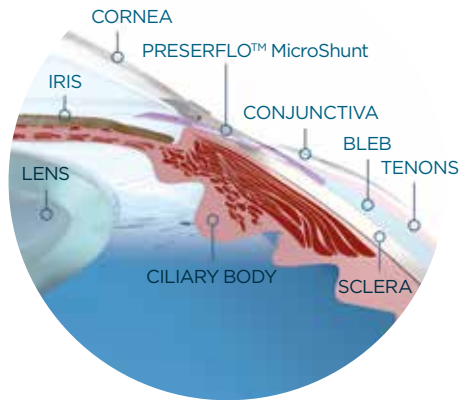
The tube is designed to ensure the correct amount of fluid flows out of the eye, and the wings help to prevent leakage and make sure the device stays in the correct place.<sup>7</sup>

The PRESERFLO™ MicroShunt is made of a soft, flexible biomaterial that conforms to the curve of your eye.<sup>8</sup> First approved in 2002, for use in cataract surgery, the biomaterial does not cause a negative immune response within the eye.<sup>9-11</sup>



# How is the PRESERFLO™ MicroShunt implanted?

After anesthesia has been given, one end of the PRESERFLO™ MicroShunt tube is inserted into the eye space in front of the iris, called the anterior chamber. The rest of the tube is tucked away under the protective membrane that surrounds the eye.<sup>9</sup>



This creates a small escape tunnel allowing the fluid to drain away into the space under the protective membrane, to form a filtering bleb.<sup>9</sup> The protective membrane is then securely closed with small sutures.<sup>9</sup>



**The procedure itself is less invasive than traditional glaucoma surgeries and can have a shorter implantation time in comparison.<sup>5,9</sup>**

# Further support



If, after reading this brochure, you still have questions on the PRESERFLO™ MicroShunt, please write them down here. That way, you will remember to ask them when you next visit your doctor.

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You can also find more general information about glaucoma via the following websites:

[www.glaucomasociety.org](http://www.glaucomasociety.org)

[www.worldglaucoma.org](http://www.worldglaucoma.org)

[www.isgs.info](http://www.isgs.info)

[Local country to insert additional relevant information sources]

#### References:

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