



Information Guide

Ophtalmology

Macular hole

Definition

It consists in a hole that appears on the macula (the zone of the retina corresponding to the center of the visual field, responsible for central, high acuity vision like reading and precision vision).

It can cause a **significant decrease in vision**, a **black spot in the center of your field of vision**, and sometimes even a sensation of **distorted images**. The macular hole is typically related to the natural aging of the eye and **does not cause total vision loss**. The only treatment option is surgery, specifically a **vitrectomy**.



Vitrectomy and membrane debridement

A vitrectomy involves removing the vitreous gel from the eye and replacing it with a gas. During the surgery, the membrane on the surface of the retina is also peeled off using micro-instruments.

The gas is used to apply pressure on the macular hole, helping it close.

Retina: The retina is the light-sensitive part of the eye that allows us to see. The nerve tissue that makes up the retina converts the light it detects into electrical signals, which are then sent to the brain via the optic nerve. The retina is responsible for vision.



Preparation for surgery

Organize your return home now

Make sure to have a family member or friend with you on the day of surgery, the first evening, and the following morning for your first follow-up appointment after surgery.

You must inform the preoperative clinic (validation office) in the following cases:

- A new diagnosis of diabetes
- Known diabetes, but with a change in medication
- Start of anticoagulation medication (blood thinner) and/or any change in your current medication or dosing of anticoagulants medication
- Recent hospitalization.

To reach validation office: 418 682-7511 poste 84705. Explain the reason for your call.

To fax documents to the validation office: 418 682-7937

The morning of the surgery:

- No jewelry, piercings, or watch
- No perfume
- No nail polish or artificial nails
- **ABSOLUTELY NO false eyelashes**
- No makeup (mascara, lipstick, etc.)
- Follow the nurse's instructions for taking your medications
- You must be accompanied. Your companion must stay at the clinic during your surgery to avoid delays when it's time to leave.

Postoperative Follow-Up Appointments:

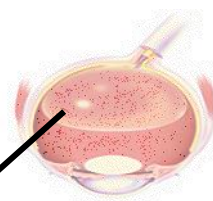
Follow-up appointments are necessary after your surgery. The first visit will be the day after your surgery, and a second visit will be 1 to 2 weeks later. Subsequent appointments will be scheduled based on your condition. Make sure someone comes with you, because you won't be allowed to drive to these appointments.

Eye Drops

- You will be prescribed eye drops to promote healing.
- Begin using the drops after your first medical visit the day after surgery.
- Always bring your eye drops with you to your ophthalmologist appointments.
- If you have any questions about your drops, please contact your pharmacist.

Gas injection

Gas has been injected into your eye during the surgery in order to apply pressure to the retina and promote healing.



Gas bubble creating a pressure over the closed macular hole.

IMPORTANT NOTICE

For the next 5-7 days, it is **very important to respect the positioning** prescription ordered by your doctor; it will allow the gas injected to cause maximal pressure on the healing retina.

You will not be able to see from the operate eye for the first few days after the surgery due to the presence of the gas in the eye.

As the gas will be absorbed, you will notice a bubble edge in your vision, similar to the bubble in a carpenter's level. Do not worry, it's normal.

The bubble might split in many smaller bubbles before disappearing completely.

If you have gas in your eye, avoid air travel and being in places of high elevation of more than 2000 feet or 610 meters (ex.: Parc des Laurentides, Parc des Grands Jardins).

At high altitude, the gas will expand and cause an increase in eye pressure and subsequently pain.

You must wait to have your doctor's authorisation before flying or travelling through these 2 parks (Parc des Laurentides, Parc des Grands Jardins)

How Long Does the Gas or Air Stay in the Eye?

Air	4-5 days
SF6	10-14 days
C3F8	8-12 weeks

Positioning for macular hole

When standing:

Keep your head tilted forward, looking down towards the ground.



When sitting:

Keep the head tilted forward, your face looking down towards the ground.



When lying down:

Sleep on your stomach.



Other alternative:

For ventral positioning



- You must follow this positioning without interruptions during 5-7 days.
- You may position your head straight for a maximum of 10 minutes every hour.
- During that period, avoid sudden movements.
- To facilitate positioning, there is on the market a facial support that is available for you to rent.
- The nurse will give a pamphlet with information concerning how to rent this equipment

Example of positioning equipment

Renting a massage table is also another alternative.

You will need many pillows and cushions to maximise your comfort.



General Recommendations after surgery:

- Sleep (including naps and nighttime) with the protective shield in place for 10–14 days, or as recommended by your doctor.
- Avoid rubbing your eyes during the first 2 weeks.
- Do not wear makeup around the eyes for 2 weeks.
- You may read, watch TV, and do your usual daily activities.
- Avoid any hit or injury to the eye, and be careful to prevent falls.
- You may take a bath, shower, and wash your hair.
- Avoid getting water directly into the operated eye.
- You can wear your glasses. Your ophthalmologist will let you know when they need to be adjusted (usually 6 weeks after surgery).
- Wear sunglasses if needed for your comfort.

Pain Relief

Take non-narcotic pain medication (such as Tylenol®) regularly during the first few days if you feel pain.

Use narcotic pain medication only if needed, and only as prescribed by your doctor.

If you have questions about pain medication, please contact your pharmacist.

ACTIVITY	VITRECTOMY AND/OR SCLERAL BUCKLE
Driving a motor vehicle	Do not drive a car for the first few weeks (at least 2 weeks); wait until your doctor gives you authorization to drive.
Resume sedentary occupations (exemple : office work)	Depending on the healing process: between 4-6 weeks.
Resume physical work	After 4-6 weeks
Lift objects	Maximum of 10 pounds during 4 weeks
Sport activities	Wait at least 2 months before resuming any sport activity. Get authorization from your doctor prior.

N.B.: The length of recovery will be discussed with your doctor.

Common side effects	
Effects of the drops	<ul style="list-style-type: none"> The pupil of the eye will be dilated from the mydriatic drops (Cyclogyl) The effect can last a few days after the end of the treatment. You may feel a burning sensation, a bad taste in the mouth or a runny nose with the application of the drops.
Effects of the surgery	<ul style="list-style-type: none"> The conjunctiva and the eyelid will be red and inflamed (eyelid swollen, pink eye). You might have a bruise around the eye (black eye). You may feel a burning sensation, a feeling of tightness and pressure in the operated eye. You might have the feeling of having sand in your eye. The stitches, if there has, will dissolve and disappear by themselves.
Effects of positioning	<ul style="list-style-type: none"> Both your eyelids and your face can become swollen, especially if your positioning is on your stomach and face down. This should go away within a few days after the end of the required positioning.
Effects of gas	<ul style="list-style-type: none"> Vision will be blurry for a few weeks, and the improvement in vision will be gradual.

Dry Eye

Retina surgery often increases eye dryness, especially during the first year after the procedure. You will likely need to use artificial tears regularly.

Possible Complications

Cataract development is a known complication of vitrectomy. It may occur a few months to a few years after surgery.

Although very rare, more serious complications can happen. Some of these may require another surgery or can lead to complete vision loss.

- Intraocular infection (endophthalmitis)
- Damage to the lens
- Retinal tear(s)
- Retinal detachment
- Macular edema
- Irritation or inflammation of the surface of the eye
- Drooping of the upper eyelid (also called ptosis)
- Significant increase in eye pressure
- Intraocular bleeding (hemorrhage)

Be vigilant :

If you experience **significant decrease in eyesight, or excessive pain or redness to the operated eye**, blind spots, light flashes in the operated eye (to see some small light is normal) and persisting nausea and vomiting, call us or present to the Emergency Room of the hospital to ensure proper follow-up as soon as possible.

To contact us:

During the day, Monday to Friday

- At the ophthalmology clinic: 418 682-7511 poste 84739

Evening, nights and weekends:

At any time in case of complications, present yourself at the Emergency Room of Saint-Sacrement Hospital.

Personal notes

This guide makes recommendations in accordance with the scientific information available at the time of its publication, i.e. april 2025. However, these recommendations are in no way a substitute for the judgment of a clinician. If you have any questions, we invite you to contact your healthcare professional. If in one way or another you misuse the information contained in this document, the CHU de Québec cannot be held responsible for any damages of any kind in this regard.

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