Eye surgery

**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).

Symptoms are a decrease in vision sometimes significant, the impression of seeing a dark spot in the middle of the vision field and sometimes an impression of difformed images.

**Vitrectomy and membrane debridement:**
Surgery consisting in aspirating the vitrous and replacing it with a gas. The membrane debridement is done using micro instruments in order to remove the layer responsible for the macular hole, layer situated at the surface of the retina.

A gas is used to apply pressure at the level of the macular hole allowing it to close (like a dressing to close the hole).

After the surgery, you will have to respect a positioning schedule for a period of 2 weeks in order to maximise the effects of the gas bubble.
How to prepare for the surgery:

Plan your discharge and your return home

- Have a family member or a friend to stay with you for the day of the surgery until the morning after the surgery, to help you and take you to your first post-op appointment with the doctor.
- Plan your meals ahead. We suggested you prepare ahead your meals for the next 2 weeks.
- Make sure you have everything you will need for 2 weeks from the grocery store and the pharmacy. Make sure you have acetaminophen (Tylenol) available if needed for pain control.
- Clean the house so you don’t have to worry about it when you come back home.
- Check with your local CLSC to learn what services they offer that might help you.
- Check with your doctor and nurse if you will need to rent special equipment, like pillows or other positioning devices.

What you need to do before your surgery

- Ask your pharmacist for an updated list of all your medication and bring it with you the day of the surgery.

You need to notify validation in case of:

- A new diagnosis of diabetes;
- Change in medication and start of Insulin to treat known diabetes;
- Start of anticoagulation medication (blood thinner) and/or any change in your current medication or dosing of anticoagulants medication;
- Any recent hospitalization.

To reach validation office: 418 682-7511 poste 4705. Explain the reason for your call.
To fax documents to the validation office: 418 682-7937

REMINDER

Discontinue your anticoagulant medication (name) _______________________________ on ________________________________.

Surgery date: ________________________________

Notes:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Guidelines for diet:
- The day before the surgery, eat normally.
- As of midnight, do not eat any solid food, milk, cereal, or any other food. You can drink water only, as much as you want, up to 3 hours before the surgery.

The morning of the surgery:
- Do not wear any piercing or jewellery (ring, earrings, necklace, etc.).
- Do not wear perfume.
- Remove nail polish.
- Do not wear make-up (foundation, mascara, etc.) because it increases risk of infection.
- Do not take your diabetes medication (oral hypoglycemiant, Insulin).
- Take your other medication with a little bit of water (hypertension and heart medication).
- BRING ALL OF YOUR MEDICATION WITH YOU, INCLUDING your Insulin and your inhalers.
- You must come to the hospital accompanied by somebody; that person must remain on site in order to not delay your discharge.

Post-operative guidelines:
- Start the drops after the first doctor visit, the next morning after the surgery.
- You next doctor appointment will be the next morning after the surgery.
- Always bring your drops with you to your appointment with the ophthalmologist.
- Drops will be prescribed to you to promote healing post surgery.

ATTENTION
If you have to apply more than 1 drop in your eye, always wait 5 minutes in between each drop application.

As per your prescription:

Apply first:
Atropine OR Homatropine OR Cyclogyl: Drop that dilates the pupil. Used to rest the eye.

Apply second:
Vigamox OR Ocuflax: An antibiotic used for the healing of the eye surface.

Apply third:
Nevanac OR Ketorolac: An anti-inflammatory that will be used for 3-4 weeks, with a weaning schedule of doses

OR

Maxidex OR Prednisolone: An anti-inflammatory that will be used for 3-4 weeks.

If an ointment is prescribed, always apply last
Erythromycine ointment: An antibiotic that will be used for the healing of the eye surface. The doctor will give you a prescription for your treatment.

Anticoagulant medication must be taken on:
GAS OR AIR INJECTION

You had gas or air injection during the surgery: Why?

To apply pressure to the retina to promote healing.

**IMPORTANT NOTICE**
For the next 4-14 days, it is very important to respect the positioning prescription ordered by your doctor; it will allow the gas or the air 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).

**WHY?**
- 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).

**Duration of the gas or air in the eye**

<table>
<thead>
<tr>
<th>Gas</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>4-5 days</td>
</tr>
<tr>
<td>SF6</td>
<td>10-14 days</td>
</tr>
<tr>
<td>C3F8</td>
<td>5-7 weeks</td>
</tr>
</tbody>
</table>

**Positioning for macular hole**
Gas has been injected into your eye during the surgery in order to promote healing of the macular hole.

During the first 2 weeks after the surgery, it will be very important to follow and respect the guidelines described below.

**WHY?**
For the gas to create a pressure over the macular hole (like a dressing).
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 the first 2 weeks.
- You may position your head straight for a maximum of 10 minutes every hour.
- After 2 weeks, the gas will still be present but in smaller volume.
- It is possible your doctor asks you to maintain the positioning guidelines for a few more days.
- The gas will take 5-7 weeks to absorb completely.
- 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.
Renting a massage table is also another alternative.

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

**Positioning**

**Vitrectomy with gas bubble for macular hole**

Your positioning schedule is:

<table>
<thead>
<tr>
<th></th>
<th>During the day</th>
<th>During the night</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Lying on your stomach</td>
<td></td>
<td></td>
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<tr>
<td>☐ 5-10 minutes break every hour</td>
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</table>

**General post-operative guidelines:**

- Sleep with the eye patch at night and for naps for 2 weeks, or as per your doctor’s recommendations.
- Avoid rubbing your eyes for the first 2 weeks.
- Do not wear eye make-up for 2 weeks.
- You can read, watch television, and do your usual activities.
- Avoid any trauma to the eye.
- Be careful to not fall.
- You can take a bath or a shower, and wash your hair.
- Avoid spraying water directly in the operated eye.
- Do not wash your hair over the sink with your head bended forward.
- You will be able to wear your glasses. Your ophthalmologist will advise you to when it will be necessary to readjust them.
- You will be comfortable wearing sunglasses, especially in sunlight.
- It’s normal to experience some discomfort and pain inside and around the operated eye after the surgery.
- It’s normal to have headaches.
- **Take the analgesics regularly for the first few days if you have pain.**
## ACTIVITY

<table>
<thead>
<tr>
<th>Activity</th>
<th>VITRECTOMY AND/OR BUCKLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving a motor vehicle</td>
<td>Do not drive a car for the first few weeks; wait until your doctor gives you authorization to drive.</td>
</tr>
<tr>
<td>Resume sedentary occupations</td>
<td>Depending on the healing process: between 2-3 weeks.</td>
</tr>
<tr>
<td>(Example: office work)</td>
<td></td>
</tr>
<tr>
<td>Resume physical work</td>
<td>After 4 weeks</td>
</tr>
<tr>
<td>Lift objects</td>
<td>Maximum of 10 pounds during 4 weeks</td>
</tr>
<tr>
<td>Sport activities</td>
<td>Wait at least 1 month before resuming any sport activity. Get authorization from your doctor prior.</td>
</tr>
</tbody>
</table>

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

### The following symptoms are NORMAL. They will gradually disappear with time.

<table>
<thead>
<tr>
<th>Effects of the drops</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>- The pupil of the eye will be dilated from the mydriatic drops (Cyclogyl, Atropine, Homatropine).</td>
<td></td>
</tr>
<tr>
<td>- The effect can last a few days after the end of the treatment.</td>
<td></td>
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<tr>
<td>- You may feel a burning sensation, a bad taste in the mouth or a runny nose with the application of the drops.</td>
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<table>
<thead>
<tr>
<th>Effects of the surgery</th>
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<tr>
<td>- The conjunctiva and the eyelid will be red and inflamed (eyelid swollen, pink eye).</td>
<td></td>
</tr>
<tr>
<td>- 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.</td>
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<tr>
<td>- You might have the feeling of having sand in your eye: that is because of the stitches that will take 7-10 days to dissolve.</td>
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<tr>
<td>- The stitches will dissolve and disappear by themselves</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Effects of positioning</th>
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<tbody>
<tr>
<td>- Both your eyelids and face can become swollen, especially if your positioning is on your stomach and face down.</td>
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<tr>
<td>- This should go away within a few days after the end of the required positioning.</td>
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</tbody>
</table>

<table>
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<th>Effects of gas</th>
<th></th>
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<tbody>
<tr>
<td>- Vision will be blurry for a few weeks, and the improvement in vision will be gradual.</td>
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</table>
Be vigilant:
If you experience a significant decrease in eyesight, or excessive pain or redness to the operated eye, blindspots, 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.

Follow-up:
Your next appointment will be in _____ days.

Nursing and medical follow-up:
As per your physician's orders.

Personal notes:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

To contact us:
During the day, Monday to Friday:
  • At the ophthalmology clinic: 418 682-7511 poste 4739

Evening, nights and weekends:
  - Info-Santé : 811

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

This guide makes recommendations in accordance with the scientific information available at the time of its publication, i.e. May 21th 2013. 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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