

Vitreomacular traction (VMT) syndrome

Information and advice for patients

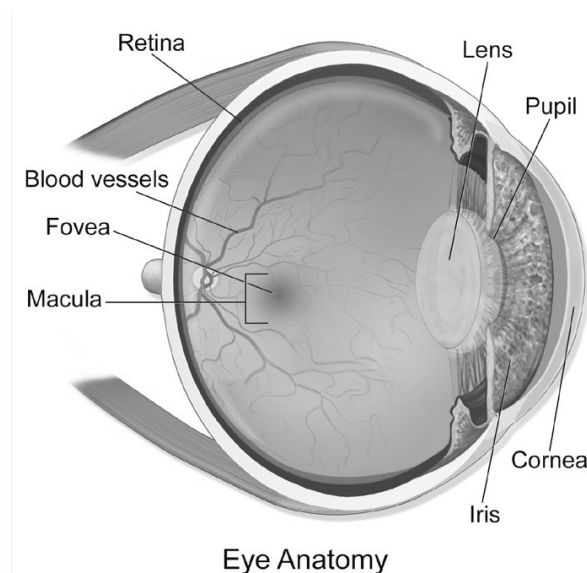
Ophthalmology

What is vitreomacular traction syndrome?

The macula refers to the central part of the retina which is responsible for our best vision and is usually lying flat against the back of the eye. The retina acts like the film in a camera by turning light entering your eye into a picture for your brain.

The vitreous humour is a transparent, jelly-like substance that fills the space between the lens and retina of the eye.

As the eye gets older or in certain pathologic eye conditions, the vitreous can pull away from the retina. Sometimes this detachment is not complete, and part of the vitreous stays stuck to the macula pulling on it and causing anatomic disruption which results in what is termed as Vitreomacular traction (VMT).



Pic 1: Diagram of the normal eye showing the macula, vitreous jelly, retina

Blausen.com staff (2014). "Medical gallery of Blausen Medical 2014".

What are the risk factors of VMT?

Certain factors increase the chance of getting VMT:

- Increasing age: As we age, the vitreous in our eyes breaks down and this forms pockets of fluid within the vitreous (syneresis). This can cause the vitreous to pull away and shrink.
- Being near-sighted (having high myopia) puts you at risk of early vitreous syneresis.
- Having certain eye conditions like wet age-related macular degeneration, diabetic macular oedema, retinal vein occlusion or diabetic retinopathy can also put you at risk of VMT.

What symptoms will someone with VMT show?

In many cases, the condition is mild, develops slowly and doesn't cause symptoms. But sometimes, you might have:

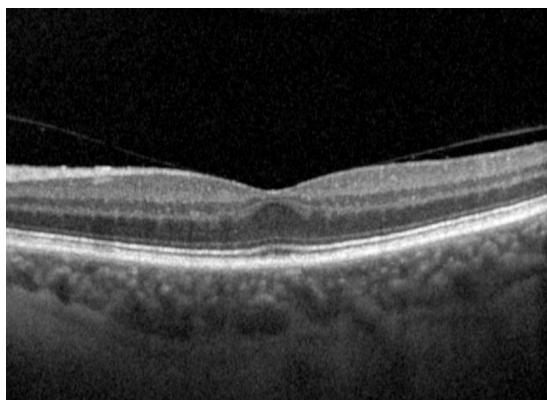
- Blurry vision (because the macula helps with sharp vision)
- Seeing flashes of light in your eye (photopsia)
- Objects looking smaller than they really are (micropsia)
- Distorted vision, where straight lines look wavy or blank (metamorphopsia).

The pulling (tractional effects) on the eye if not treated over time, can progress and can cause more central vision loss. In some situations, things may appear distorted even if your vision is not blurry. Usually, your peripheral vision is maintained.

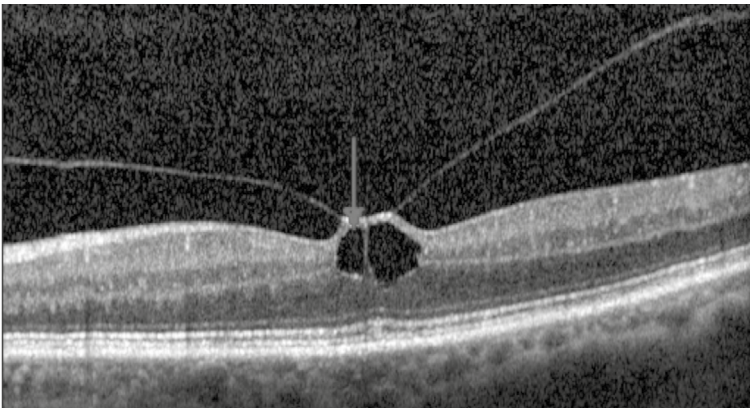
How is VMT diagnosed?

Your eye doctor can often detect vitreomacular traction syndrome by looking at your retina with a special lens during a dilated eye exam.

A retinal scan called the ocular coherence tomography (OCT) is commonly used to capture the cross-sectional images of the retinal layers and show the severity of the VMT.



Pic 2 showing a segment of Normal OCT



Pic 3 showing a VMT on OCT (red arrow)

How is VMT treated?

There are four (4) main ways to treat Vitreomacular traction:

1. **Watchful waiting:** Your doctor will keep an eye on your condition with regular check-ups and scans if you've got symptoms that do not warrant active intervention. About 10% of cases may get better on their own over a few months, but most cases stay the same or get worse.

If it gets worse, you might need:

2. **Vitrectomy surgery:** This is for patients with serious vision problems or central blindness.
3. **Pneumatic release:** Another treatment option.

What is Vitrectomy surgery?

This operation involves manually releasing the vitreous attachment and relieving the pulling on the retina. It can be done with either local anaesthesia (you're awake but your eye is numbed) or general anaesthesia (you're asleep). Three tiny cuts are made around the eye, through which the vitreous is removed from the eye and replaced with clear fluid. This stops the gel from pulling on the retina. The surgery usually takes less than an hour. But this is invasive and can be inconvenient for most patients.

There is 20% chance it will be necessary to leave a bubble of special gas inside your eye to help flatten the retina. In which case, we will ask you to carry out posturing, whereby you would be required to keep your head in a particular position for most of the time for up to 2 weeks following surgery.

Is surgery beneficial?

Your vision usually gets worse for a week or two after the surgery and starts to improve thereafter. It can take many weeks or even months to see the full benefits of surgery. Most patients notice less distortion and blurriness after the surgery, but vision is rarely perfect, and some minor symptoms may remain.

What are the risks of VMT Surgery?

The surgery can speed up the development of cataracts (clouding of the lens). Often an early cataract is removed at the same time as the VMT surgery to avoid needing cataract surgery in the future. This combined procedure is called phacovitrectomy. If you have already had cataract surgery, then VMT surgery will not cause another cataract to recur.

- There is a 9% risk of vision worsening in the operated eye.
- There is a 1 in 1,000 chance of losing vision from a severe eye infection.
- There is a 1 in 1,000 chance of losing vision from severe eye bleeding.
- There is a 1 in 100 chance of developing a retinal detachment after the surgery.

What happens after my surgery?

It is normal to have bruising after surgery. Your eye may also feel tender and gritty and you can take paracetamol for the pain. You will most likely be discharged the same day and have a follow up the next day or two, then at 1 week, 1 month, and 3 months after surgery.

Remove the eye pad and shield the next morning but use the shield at night for a week to protect your eye. You will be given drops to help your eye recover and to prevent infection, usually starting the morning after the surgery.

Can I resume normal activities after my VMT Surgery?

- Avoid swimming for a month after surgery.
- You can shower and bath as usual but be careful to avoid getting water into the eye.
- Avoid vigorous exercise and intense straining for 2 weeks.

Posturing

The hardest part of the recovery is maintaining the right posture after the surgery. We usually ask you to keep a posture which requires you to lie or sit with your face down to help the bubble float to flatten the retina.

When to seek advice after my surgery?

- If you notice any of these signs before your follow-up appointment, please contact us or go to the eye casualty.
- Severe pain in the operated eye
- Vision getting worse or loss of vision

- Increased redness in the eye
- Any discharge coming from the eye

How much vision can I expect after treatment?

For patients with vitreomacular traction syndrome, after 6 months, there is a 25% chance of improving by at least 10 letters on an eye chart, and a 7% chance of losing at least 10 letters.

What is Pneumatic release?

This is a procedure where a small gas bubble is injected into the eye. It is a quick and simple injection of special gas bubble into the eyeball usually under local anaesthesia and it is conducted as a day-case or outpatient procedure.

Injecting gas into eyes has been done for many years for other eye problems. We expect the success rate to be about 80%.

What can I expect after the gas injection?

We will prescribe antibiotic drops to use in your eye for about a week. Your eye might feel a bit red, sore and gritty for a few days.

After the injection, you'll see dark bubbles in your vision, which will get bigger and then join together over three days. After that, the bubble will gradually get smaller and disappear over about six weeks.

Other possible side effects include floaters in your vision, blurred vision, increased eye pressure, and retinal tears or detachment. Very rarely, there might be a loss of vision after the injection.

What happens if the gas injection does not work?

You will have the option to have vitrectomy surgery or another gas injection to relieve the vitreomacular traction.

Contact Details

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Sources used for the information in this leaflet

Images sourced and used, with permission from The Heidelberg Eye Explorer.

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Further Information

The Foundation American Society of Retina Specialists (2024) Retina Health Fact Sheet. Available at: <https://www.asrs.org/patients/retinal-diseases> [Accessed 22 July 2024].

Moorfields Eye Hospital NHS Foundation Trust (2024) Patient information leaflet library. Available at: <https://www.moorfields.nhs.uk/for-health-professionals/leaflet-library> [Accessed 22 July 2024].

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