

## NON-DIABETIC VITREOUS HAEMORRHAGE

### What is the vitreous?

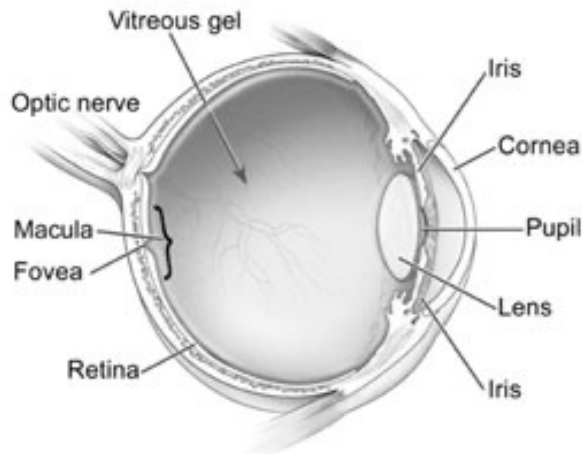


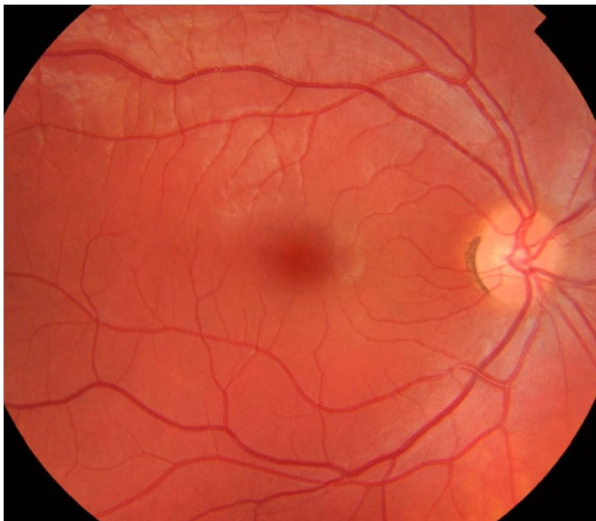
Image Source: National Eye Institute

The vitreous is the transparent gel-like substance in the back of the eye. It is attached to the retina, the part of the eye that detects light.

Before birth, the vitreous acts as a scaffold for the developing eye structures. In adults the vitreous becomes more liquid.

### What is a vitreous haemorrhage?

A bleed into the vitreous gel is called a vitreous haemorrhage. Blood in the vitreous causes reduced vision and new floaters.



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Image source: Mikael Häggström

**Photograph of a normal retina**

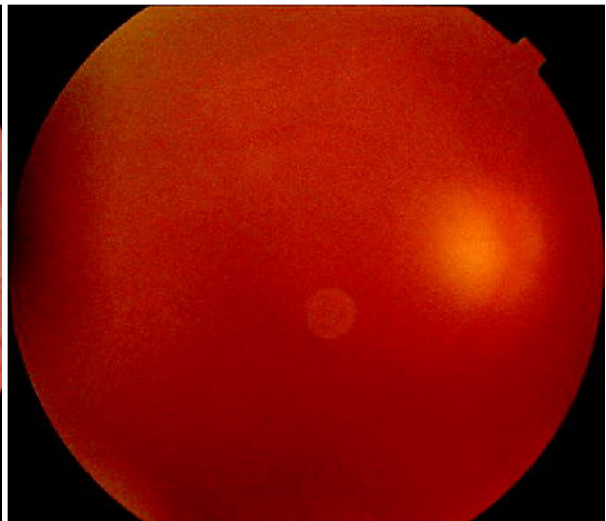


Image source:

**Retina obscured by vitreous haemorrhage**

## **NON-DIABETIC VITREOUS HAEMORRHAGE**

### **Why do I have a vitreous haemorrhage?**

There are several causes of vitreous haemorrhage. Details of the most common causes are given in this leaflet.

#### **1. Posterior vitreous detachment**

In adults, the vitreous peels away from the retina in a process called a Posterior Vitreous Detachment (PVD). A PVD is a normal change in the eye associated with age. However, in some people, the vitreous tears a small blood vessel on the retina as it peels away. This causes a vitreous haemorrhage.

#### **2. Retinal tear or detachment**

A vitreous haemorrhage may occur if there is an injury to the retina. For example, a tear in the retina or a retinal detachment can be associated with a tear in a retinal blood vessel.

#### **3. Retinal vein occlusion**

A blocked retinal blood vessel is termed a Retinal Vein Occlusion (RVO). After RVO, the eye may respond by growing new vessels to restore blood supply. The new vessels are fragile and tend to bleed into the vitreous.

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### **4. Neovascular age-related macular degeneration**

Neovascular age-related macular degeneration (nAMD) is an eye condition in which new blood vessels grow in the retina. The new vessels are fragile and tend to bleed into the retina; they may also bleed into the vitreous.

### **5. Sickle cell retinopathy**

Sickle cell disorder (SCD) is a disorder of haemoglobin, the oxygen carrying substance in blood cells. People affected by SCD can develop blocked blood vessels in the retina. The eye may respond by growing new, fragile vessels which tend to bleed into the vitreous.

### **6. Trauma**

Head injury or direct trauma to the eye may also cause a vitreous haemorrhage.

## **How will my vitreous haemorrhage be treated?**

### **Observation**

If you have a PVD, your eye will be examined to ensure that your PVD is not associated with a retinal tear or detachment.

If you have a mild vitreous haemorrhage, you will be monitored in the outpatient clinic to ensure that your vitreous haemorrhage clears by itself within the coming weeks.

## **NON-DIABETIC VITREOUS HAEMORRHAGE**

### **Laser treatment**

A retinal tear is treated with laser surgery, to stabilise the retina and prevent progression of the tear.

New vessels are also treated with laser surgery. The laser aims shrink the new vessels and halt growth of more new vessels.

You may have to wait until the vitreous haemorrhage clears itself before laser treatment is possible.

### **Anti-vascular endothelial growth factor treatment**

New vessels may be treated with anti-Vascular Endothelial Growth Factor (anti-VEGF). This is an injectable treatment which aims to shrink new vessels and halt growth of more new vessels.

### **Surgery**

A retinal detachment is treated with surgery to reposition the detached area. During surgery, your vitreous haemorrhage will be cleared.

If you have a severe vitreous haemorrhage, you may be recommended to have surgical removal of the haemorrhage.

Laser treatment and/or anti-VEGF treatment may also be offered to you depending on your condition, to improve the outcome of surgery.

## **NON-DIABETIC VITREOUS HAEMORRHAGE**

### **Will I develop vitreous haemorrhage in my other eye?**

Depending on the cause of the vitreous haemorrhage it is possible that your other eye could be affected. It is therefore very important to monitor for any changes in vision of the fellow eye, and report these to your eye specialist or optician urgently.

### **When will I need to be seen again after the treatment?**

Follow-up will depend on the extent of the vitreous haemorrhage and any treatment performed. You will be reviewed regularly to monitor for any improvement or progression. Your eyes will be monitored to identify any increase in pressure, which can develop following vitreous haemorrhage.

### **What will happen next?**

We must seek your consent for any procedure or treatment beforehand. Staff will explain the risks, benefits, and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

## **Scientific Evidence**

## **NON-DIABETIC VITREOUS HAEMORRHAGE**

The advice in this booklet is based on a variety of sources, including latest research published in peer-reviewed scientific journals. It has also been scrutinised by a panel of experts from the Britain & Eire Association of Vitreoretinal Surgeons (“BEAVRS”). If you require further information about this, please ask your surgeon.

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