PATIENT INFORMATION SERIES

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SIMPLY speaking

VITREOUS DEGENERATION & HEMORRHAGE

The Vitreous Body

The eye is a hollow globe. The cavity in the central portion of the eye, behind the lens, is occupied by a fibrous transparent gel called the vitreous body. The consistency of the vitreous gel is similar to uncooked egg white. This gel supports the retina and is in fact adherent to it especially to the retina behind the lens.

Changes due to Age

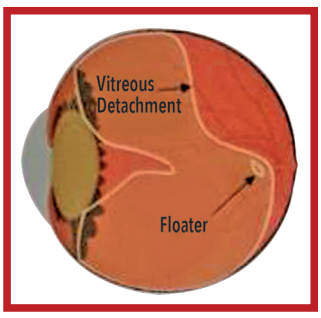
The vitreous gel liquefies with age. Liquefaction may start at the age of 40 years, or even younger, especially in myopic individuals and those who experienced trauma to the eye, including intraocular surgery.

Vitreous Floaters

Some portions of the vitreous may lose their transparency when adjacent areas liquefy. These condensed particles might project shadows on the retina causing the patient to see floating particles appearing like bubbles, hair strands, mosquitoes, or shadows in the field of vision. The floaters are more noticeable when viewing a white sheet of paper, a white wall or a bright sky, and, when in a brightly room.

The portion that is still fibrous may collapse and condense reducing the transparency of the remaining gel so that the patient may intermittently see a cloud or film passing across or obstructing vision in the affected eye.

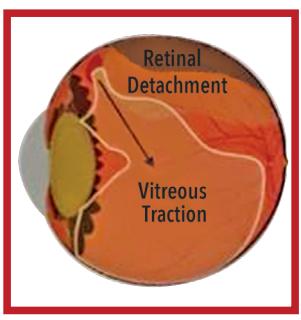
There is no treatment for floaters. They are a nuisance but eventually the brain learns to ignore them. As the vitreous becomes more liquefied, gravity will pull the floaters down and away from the central field of vision.



Vitreous Detachment and Traction

As the vitreous liquefies and condenses, its attachment to the retina will give way especially at the backmost portion.The medical term for it is **posterior vitreous detachment**. This can be seen by the ophthalmologist through dilated pupils but patients do not usually notice it. At times, the vitreous detachment shows a ring of condensed vitreous material where it was attached to the optic nerve which can be seen as an oval, an inverted question mark, or a C- shaped floater.

The front portion of the vitreous retains its attachment to the peripheral retina in most cases. Mobility of the condensed vitreous gel floating in the rest of the already liquefied vitreous produces a pulling force, or traction, on the peripheral retina where it is still attached. The patient may report sudden showers or arcs of light in the peripheral vision when coughing, carrying heavy objects or sudden head motion, especially in the dark. In patients with peripheral retinal degeneration, as seen commonly in myopic individuals, the traction may be enough to cause a tear in the retina, predisposing the eye to retinal detachment, a more serious, blinding condition *(see Retinal Detachment flyer)*.



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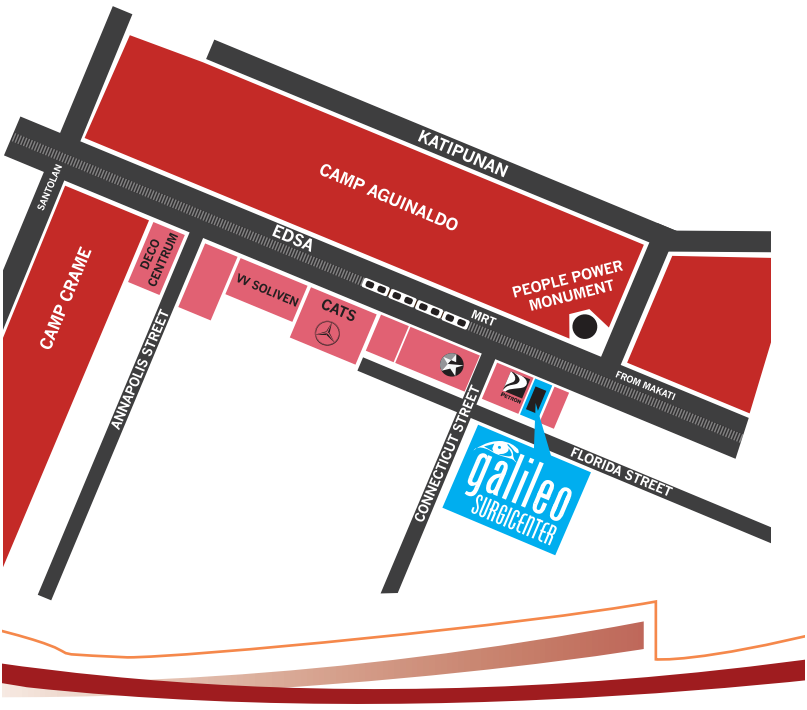
Vitreous Hemorrhage

The blood vessels in the retina may rupture and bleed into the vitreous. Abnormal blood vessels found in diabetic retinopathy, in retinal vessel occlusive diseases and in macular degeneration are prone to bleeding. Hypertensive patients especially those on blood-thinners like aspirin may also bleed. Bleeding into the vitreous can cause patients to see dark or reddish droplets or dots raining down their field of vision. If more severe, there may be streaks of reddish shadows. Persistent bleeding will fill the vitreous cavity with blood obstructing vision completely. Vision may be limited to just shadows or light perception.

Management of vitreous hemorrhage will depend on the causative factor. The ophthalmologist may not be able to see the retina if the bleeding is extensive. In such cases, ocular ultrasound can help determine the extent of the hemorrhage and exclude the possibility of an underlying detachment of the retina. Surgical evacuation *(see Pars Plana Vitrectomy flyer)* of the hemorrhage is necessary in many cases especially if there is no improvement or when a retinal detachment is detected. During surgery or right after, laser treatment may be applied to the bleeding portion of the retina to prevent recurrence.

Rarely, glaucoma can occur in patients with vitreous hemorrhage. The blood cells may clog the angle of the eye where aqueous fluid drains or the underlying retinal disease may induce the growth of abnormal blood vessels in the angle making eye pressure rise. Management of the glaucoma may include evacuation of the vitreous hemorrhage, intravitreal injections, and laser treatment. Traumatic injury to the globe may also cause or aggravate vitreous floaters, detachment and hemorrhage.



Consultation Hours: 6:00am - 4:00pm, Monday - Saturday

G/F Belson House, 271 EDSA (near Connecticut St.,), Mandaluyong City
Call for an appointment: Tel: 7217135 / 7216412
SMS/Viber: (917) 884-7466 / (916) 670-5176
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