



Symptoms of common eye diseases

IMC
GRUPO MIRANZA

Instituto de
microcirugía
ocular



On the occasion of Sant Jordi's Day, which is celebrated in Catalunya on the 23rd of April and it coincides with the World Book Day, we want to give to our patients this little guide, about prevention and detection of some of the most common eye diseases.

For us here in Barcelona, it is a very special day as it is very representative of the local culture and it has its own symbols which are the book and the rose. Additionally, Sant Jordi's Day transforms the streets of all Catalan cities, in improvised points of sale for books and roses. It is definitely a day we experience with a lot of emotion.

In **IMO Grupo Miranza**, we are experts in eye health and we would like to remind you of the importance of having good eyesight in order to be able to enjoy good quality of life and such pleasures as the one of reading.

We hope that this little book will help you to get to know some of the most common eye diseases and disorders, as well as their main symptoms and warning signs.

Feliç Diada de Sant Jordi!

Happy World Book day!

Barcelona, the 23rd of April 2021



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VISION WITH
SEVERE
AMD



**Central vision loss,
deformed images**

**Age-related macular
degeneration
(AMD)**

What is AMD?

AMD, or Age-related Macular Degeneration, is a degenerative and chronic disease of the macula, the central area of the retina, which causes progressive deterioration of the photoreceptors and the cells of the retinal pigment epithelium. It causes a loss of central vision and it usually appears as of the age of 50-60 years.

Symptoms

Vision with AMD, generally, is associated with the loss of central vision, just as you can see in the image on the left. However, this symptom appears in very advanced stages of the disease. In this respect, depending on the type of AMD and its progress, some of the most common symptoms experienced by patients are:

- Loss of vision.
- Perceiving lines as not being straight or being deformed.
- Decreased contrast sensitivity.
- Difficulty adapting to changes in light, for example, when one moves from outdoor to indoor spaces.

How to act?

The majority of AMD cases are progressive and the damage to the eye is irreversible. Early diagnosis is important in wet forms of AMD or neovascular, since the prognosis depends on the speed with which the treatment is performed. For this reason, the following aspects are crucial:

1. Regular ophthalmological checks as of the age of 50 years old, especially if you have family that has had AMD.
2. Healthy lifestyle habits: do not smoke, follow a balanced diet rich in antioxidants and keep your blood pressure under control.
3. Patients over the age of 50 can also self-diagnose with the Amsler grid, a simple test to detect the early signs of AMD.



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GLAUCOMA



**Reduced field of vision
or loss of peripheral
vision**

Glaucoma

What is glaucoma?

Glaucoma encompasses a group of ocular diseases that cause progressive damage to the optic nerve. This disease can be caused by multiple factors, the main one being ocular hypertension. Some groups of people have more risk of suffering from glaucoma, for example people over the age of 60 years old.

Symptoms

Glaucoma, if not treated on time, can cause an irreversible loss of eye sight. Generally speaking, vision with glaucoma, is associated with tunnel vision. However, the majority of patients also experience other symptoms, such as blurry or foggy vision and halos around bright lights.

How to act?

1. It is recommended to have regular eye check-ups over the age of 40. It is estimated that half of all glaucoma sufferers do not know they have the disease, as it shows no clear symptoms in early stages. Loss of peripheral vision due to glaucoma is irreversible. That is why it is important to diagnose glaucoma on time, in order to slow down its progress.
2. The main risk factor of this disease is ocular hypertension. If eye pressure can be reduced in the early stages of glaucoma, the progress of the disease can be slowed down.



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Loss of vision and/ or black curtain that “falls” across a part of the field of vision.

Retinal detachment

What is it?

Retinal detachment is an eye disease caused by the spontaneous detachment of the neurosensory retina (inner layer of the retina) from the pigment epithelium (outer layer). When detachment occurs, fluid accumulates in the space left between the layers, and the detached retina cannot function or nourish itself properly.

If left untreated, the retinal detachment can eventually lead to a complete loss of the functioning of the eye (blindness).

Symptoms

Flashes could be symptoms of a retinal detachment. They usually appear from the side with the eyes open or closed. They last tenths of a second, they are very fast, but they appear continuously.

Another symptom can be the sudden appearance of ‘flies’ or black spots commonly called ‘eye floaters’ (myodesopsias)

How to act?

1. Most cases of retinal detachment are produced spontaneously, without any other associated factor. More rarely, they can be caused by an accident, a tumor or vascular diseases. The disease is more common amongst people with high myopia. It is important that the risk population undergoes periodic eye check-ups, at least once a year.
2. The appearance of flashes, a black curtain or any other of the described symptoms, is reason for an **emergency** visit to the ophthalmologist.



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Blurred or distorted near vision

Presbyopia or “old eyes”

What is it?

Presbyopia, also known as “old eyes”, is the diminished ability of the eye to focus, causing a loss of sharpness in near vision. It usually occurs from the age of 40-45 onwards.

It is mainly caused by the loss of elasticity in the crystalline lens, which is the eye's natural lens located between the cornea and the retina. The main cause is the aging of the crystalline lens, which with the passing of time, loses its elasticity and transparency: it becomes opaque.

Symptoms

The crystalline lens has the ability to focus on objects at varying distances. It is similar to the zoom of a camera. With age, the crystalline lens loses its elasticity and ability to focus, resulting in presbyopia. People with presbyopia have difficulty focusing on close-up images, which causes the sensation that letters are dancing about or blurred when reading.

How to act?

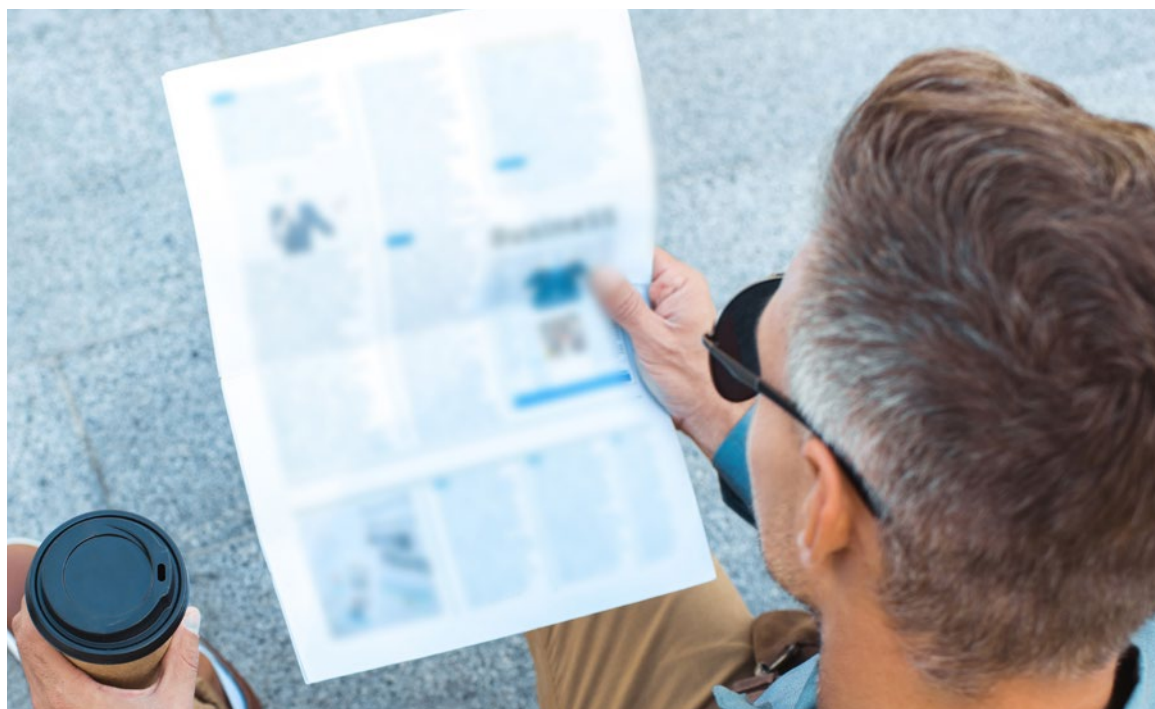
1. A full ophthalmic check-up is recommended every one or two years after the age of 40.
2. Presbyopia can be corrected with glasses. Refractive surgery is possible if the patient wishes to reduce the dependency on glasses or if presbyopia is associated to other refractive problems like cataracts.



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**Blurred vision,
usually close up**

Hyperopia

What is it?

Hyperopia is a refractive defect or error in focusing. Images are focused behind the retina so vision becomes blurred, especially close up.

Most of babies are born with hyperopia (natural hyperopia). This defect corrects itself as the eye develops and usually disappears completely during the teenage years. In case that it does not disappear past this age, it is possible then that it might remain for life, however without developing further.

Symptoms

The main symptom is blurry vision, mostly close up. If the patient tries to force the close up vision, he/ she might notice:

- Eye fatigue.
- Headache or eye pain.

How to act?

Hyperopia can easily be corrected by wearing glasses with converging lenses or contact lenses.

If the patient wishes to reduce his/ her dependency on glasses, then refractive surgery can be an option.



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**Blurred or distorted
vision at all distances**

Astigmatism

What is it?

Astigmatism is a refractive defect that causes images to focus on the retina in a distorted way, affecting the nearsightedness and farsightedness.

Astigmatism can appear alone or can be associated with myopia or hyperopia, and it is usually stable throughout life.

Symptoms

- Perceiving images as distorted (most common symptom).
- Problems changing points of view, from far to near or viceversa.
- Difficulty seeing subtle details, either up close or from a distance.
- Headaches, eye pain, or dizziness, as a result of the muscular effort exerted by the eye when trying to compensate for the defect by adjusting the crystalline lens (natural lens of the eye whose elasticity allows you to focus). This occurs especially in cases of astigmatism or it is associated with hyperopia.
- Frequent graduation changes.

How to act?

Astigmatism can be corrected by wearing glasses or contact lenses.

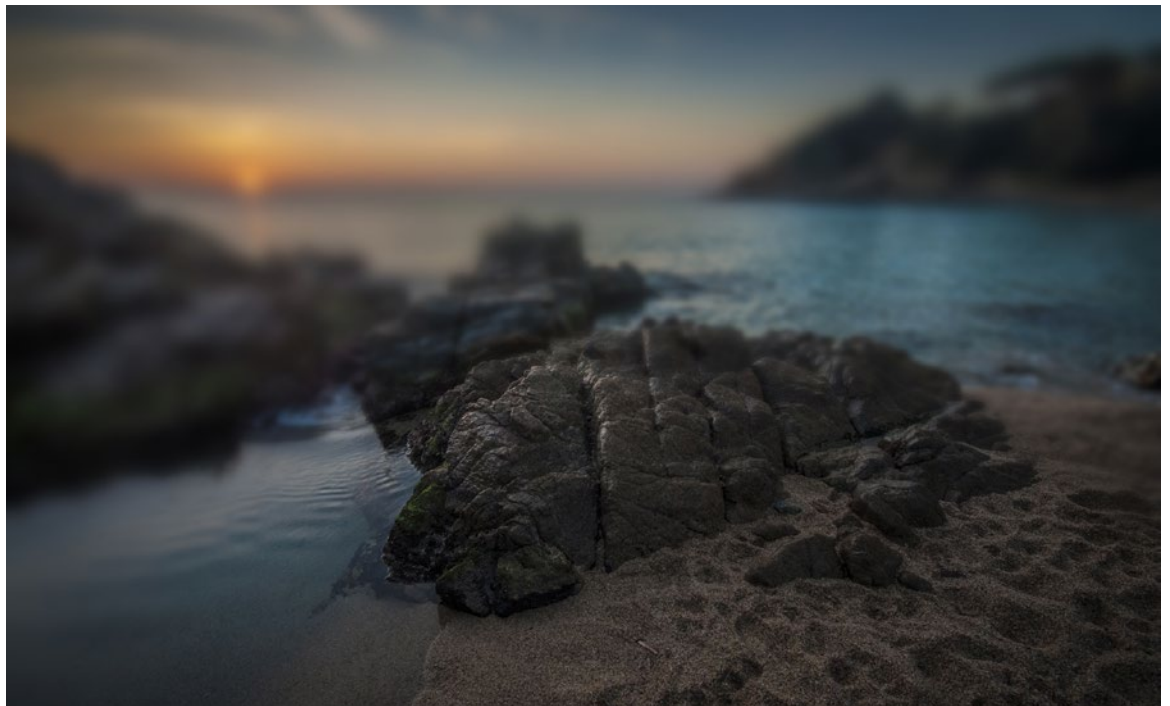
If you want to reduce the dependency on glasses or contact lenses, there are also surgical solutions.



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**Blurred or distorted
vision, mostly far**

Myopia

What is it?

Myopia is a refractive defect or error in visual focusing. Images are focused in front of the retina and not on it, making long distance vision difficult.

Symptoms

A myopic person usually sees objects clearly if they are close up, but blurred if they are at a distance.

If the refractive defect is greater than eight diopters, then the condition is referred to as high myopia, which can involve certain type of risks and complications.

How to act?

1. Full ophthalmic check-up and eyesight test every year (high myopia).
2. Myopia cannot be cured, but can be corrected by wearing glasses or contact lenses. People who prefer not to wear glasses or contact lenses can opt for refractive surgery.

Refractive surgery, an alternative to wearing glasses or contact lenses

There are multiple refractive surgery techniques that allow correcting myopia, astigmatism, hyperopia and presbyopia. The choice of technique depends on the type of refractive defect and the number of diopters, as well as other aspects such as age, lifestyle of the patient, stability of the condition or the thickness of the cornea.

Generally, there are two main types of surgery techniques:

- Laser.
- Intraocular lens implants.

A previous ophthalmological study is essential in order to choose the appropriate technique, personalize the treatment and achieve maximum eyesight satisfaction for the patient.



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**Blurred or distorted
vision at all distances**

Cataracts

What is it?

A cataract is the loss of transparency of the crystalline lens, the eye's natural lens located behind the pupil. Rays of light pass through this lens to reach the retina, where images are formed. If the lens loses its transparency and obstructs the passage of light to the retina, the patient suffers from a progressive loss of vision.

Symptoms

- Loss of vision.
- Discomfort in light (photophobia).
- Blurred or double vision.
- Loss of sensitivity to colors.
- Frequent graduation changes.

How to act?

Cataracts cannot be prevented, but they can be detected by eye check-ups. It is advisable to see an ophthalmologist regularly, especially after the age of 45, to detect the possible existence of a cataract, its type, size and location, and to determine whether surgery is required and when it should be carried out.



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Floaters or small spots that impair vision

What are they?

Floaters, also called *muscae volitantes* (from the Latin, meaning 'flying flies'), are small deposits that many people see moving in their visual field, especially when looking at a plain background, such as a wall or the sky.

They are small particles of gelatinous material that form in the vitreous humour, the clear liquid that fills the inside of the eye.

Symptoms

Although they appear to be in front of the eye, they actually float in the vitreous humour, and what can be seen are the shadows of the floaters projected onto the retina. They are generally of minor importance and are associated with the ageing process.

How to act?

Floaters are not preventable. What is possible, however, is early detection of related complications. It is advisable to consult an ophthalmologist if:

1. New floaters appear suddenly.
2. You see light flashes.
3. You experience sudden loss of peripheral vision.
4. If vision loss occurs after an eye operation, the patient should be treated as soon as possible.



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Red eye

Red eye might be a symptom of different processes:

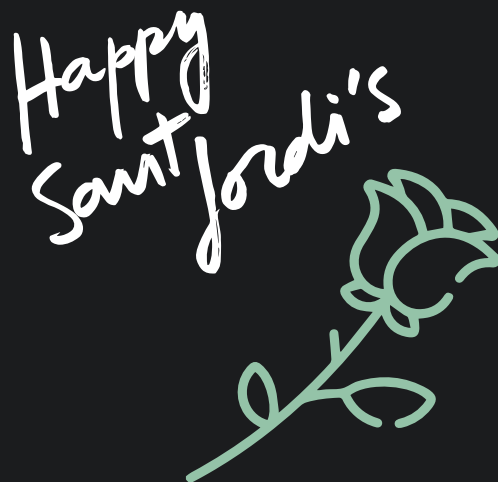
- **Conjunctivitis:** infectious (virus or bacteria), allergic (pollen, especially in spring, or caused by other allergens such as dust mites) or irritants (cosmetics, chlorine from swimming pools etc.).
- Other inflammatory processes are **keratitis** (inflammation of the cornea) or **uveitis** (inflammation of the uvea, the membrane that surrounds the inside of the eye and which is the tissue with most blood vessels in the body).
- **Eye dryness:** dry eye causes the ocular surface to be less lubricated and therefore can cause it to become inflamed, irritated and red.
- **Misuse of contact lenses.**
- **Corneal ulcers:** small injuries that threaten vision if not treated properly
- **Acute glaucoma attack:** one of the signs that often accompanies an attack in patients with angle closure is the red eye.
- **Endophthalmitis:** infection of the entire eyeball is one of the causes of severe redness and it puts at risk the integrity of the eye as well as the vision.
- Other possible causes of red eye are **different types of trauma**, as well as the **rejection of a corneal transplant**.

How to act?

Since there is a wide variety of disorders and problems that could lead to red eye, it is important to evaluate other accompanying symptoms that might be present.

Vision damage and pain are the main warning signs that should lead to an emergency visit to the ophthalmologist, as should occasional redness –which should normally be relieved by eye drops– but does not disappear after 24 hours.

An ophthalmic examination is essential in determining the cause of red eye and in starting the required treatment, therefore avoiding possible complications.



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