PATIENT INFORMATION

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INTRODUCTION

Attached is patient information on common disorders seen in an optometric office. When used with pictures or diagrams in the office, this information will help answer patient questions. The purpose of making this information available is to give the patient a permanent source of reference.

This information was compiled with the intention of being copied and distributed to the patients of Ferris State College of Optometry.

Cataracts

Inside the eye, behind the pupil (which is the black "hole" in the middle of the colored part of your eye) is a lens. In the normal eye, this lens is crystal clear and aids in focusing light on the retina, which is the nervous tissue which lines the inner wall of the eye.

A cataract by definition, is a clouding in this normally transparent lens. When the lens becomes cloudy, the light can no longer easily pass through and the image formed becomes dull and indistinct. A cataract is not a film or layer on the outer layer of the eye.

There are different types of cataracts. In most cases cataracts are a natural part of the aging process of the eye. However, cataracts can sometimes occur in younger people, even infants at birth, as a result of injury, heritary, exposure to radiation, infection, certain medications, inflammation within the eye, or from diseases such as diabetes. The most common etiology of cataracts is simply aging.

Cataract formation is not associated with "signals" such as pain, redness or tearing. The symptoms of a cataract all revolve around interference with vision: blurred vision, double vision, spots, ghost images, the impression of a haze over the eye and problems with light, such as finding lights not bright enough for near work or reading. The need for frequent changes of eyeglass prescriptions-which may seem to help for a short duration or a sudden improvement in vision at near distances without glasses (second sight) may also indicate a cataract.

There is usually no medical treatment for a cataract. Drops, diet, vitamins, pills, and injections have not been proven to prevent clouding of the lens or cause it to disappear. The only successful treatment to date for a cataract is surgery. Although it is a

delicate operation, it is one of the safest operations performed today. Cataract surgery has been perfected to the point where successful recovery of vision is attained in more than 95 out of 100 cases.

During cataract surgery the clouded lens is removed and should only be considered when the cataract begins to interfere visually with one's normal activities. The time of progression of a cataract varies from person to person. A cataract may develop rapidly over a period of a few months or it may progress very slowly over a period of years. A cataract left undetected and untreated can lead to blindness.

There are varying techniques for the surgical procedure itself; and the ophthalmologist will select the method best suited to his patient, considering such factors as the degree of "ripeness" of the cataract, the age of the patient, the patient's general health and any other important influences. After cataract surgery, a replacement is needed to provide the eye with a focusing lens to take the place of the removed lens. The "replacement" lens may be special cataract eyeglasses, contact lenses or lenses placed inside the eye at the time of surgery (intraocular implant). Because of the optical and cosmetic advantages of intraocular lenses, this is now the most recommended treatment. Approximately eight weeks after cataract surgery, a permanent prescription for eyeglasses can be made by your eye care specialist.

Chalazion

Along the margin of the eyelids are the openings of some very small glands. Each gland manufactures droplets of oil which pass out of the gland to the edge of the eyelid. This oil coats the lid margin and the lashes just enough to aid the tears in protecting and lubricating the eyes.

Sometimes the duct of one oil gland and becomes plugged. The gland keeps on manufacturing the oil and now has no outlet, so it forms a cyst which is called a chalazion.

Chalazions usually do not hurt, so many people leave them alone. They can be removed with a minor surgical operation if they are cosmetically unacceptable or if they keep reoccuring. Recurrent chalazions may indicate a more severe problem and are usually removed for a biopsy.

Hordeolum (Stye)

Along the margin of the eyelids near the base of the eyelashes are rows of glands. These glands normally secrete substances that aid the tears in protecting and lubricating the eyes. If these glands become infected, a stye may form.

Symptoms of a stye may include a localized red, swollen or painful area along the eyelid margin. The pain usually is worse before the stye comes to a head.

When you first notice the formation of a stye by the symptoms and/or appearance, you should see your eye care specialist. Warm compresses and a topical antibiotic will probably be prescribed. You should never squeeze the stye and avoid touching it to reduce the risk of contamination.

Glaucoma

The inside of the eye is filled with fluid that helps keep the eye round. This aqueous fluid is continually being produced and absorbed by the eye. The resultant fluid in the eye is under a constant pressure. If this intraocular pressure becomes too high, loss of sight can result.

Chronic glaucoma is by far the most common kind, accounting for almost 90 percent of all cases. It is a slowly developing condition that can remain unnoticed for years as it gradually robs its victims of their sight. If detected in the early stages, it usually responds well to treatment with eye drops or oral medication, which generally must be continued for life to keep the condition under control. Surgery is sometimes needed to open the passageway for fluid to leave the eye, but this is the exception rather than the rule.

Acute glaucoma is an emergency condition that must be treated immediately to keep sight from being lost. Unlike the chronic form of the disease, acute glaucoma usually causes noticeable symptoms, including pain in the eye, blurred vision, halos or rainbows around lights, and vomiting. It is treated with medication to lower the pressure, followed by surgery to enable the fluid to flow freely from the eye. The surgery generally relieves the problem permanently, but regular eye examinations are an important precaution against further trouble.

These two forms of glaucoma make up the majority of all glaucoma cases. Secondary glaucoma or glaucoma caused by another ocular condition and congenital glaucoma are rare. These two forms of glaucoma require other modes of treatment.

Detection of glaucoma involves three elements. One is the pressure of the intraocular fluid, the second is the measurement of the extent of the peripheral field, and the third is the appearance of the optic nerve inside the eye. Diagnosis of glaucoma can only be made by an eye care specialist.

Although the answer to why some people develop glaucoma and others do not is not fully known, there seems to be a hereditary tendency. If there is glaucoma in your family, you may be watched more closely and annual eye examinations are strongly recommended.

Blepharitis

Blepharitis is an inflammation of the margins of the eyelids usually caused by a bacterial infection. Typical symptoms include redness of the lid margins, morning crusting of the lids, burning and general eye irritation even to the point of foreign body sensation.

Blepharitis can be a chronic condition which may lead to a more serious eye infection if untreated.

An excellent method of self-treatment is to take a small glass of warm water and add 2 to 3 drops of Johnson's Baby Shampoo. Then, with a sterile cotton tipped swab dipped in this solution or with your own clean fingers, gently clean along the margins of the lids with your eyes shut. Repeat this procedure twice a day.

If the blepharitis is more severe an antibiotic ointment may be prescribed to be used to bring the condition under control. Maintenance with occasional baby shampoo lid scrubs is recommended.

Corneal Abrasions

The cornea is the clear front part of the eye that is elevated away from the colored iris and black pupil. The cornea has many transparent nerves covered by a thin sheet of transparent cells. These cells can be destroyed by minor injury exposing the very sensitive nerve endings. When the eyelid then moves across this area the feeling is like something under the eyelid.

When the cornea gets injured or abraided it can be very uncomfortable. Depending on the extent of the injury, the treatment will vary. Sometimes eyedrops to help aid the tears in covering the abraided area are recommended. Also a patch may be placed on the eye firmly to prevent blinking, which in turn will make the eye feel more comfortable. The patch will also protect the eye from any infection to the open wound.

Occasionally abrasions that do not heal completely can reoccur. Because the outer tissue covering the once injured area is thinner it may tear and feel irritated again. This type of recurrent erosion, as it is called, usually happens in the morning because our tear layer is thinner at the time we first awake. Although there is no prevention for these recurrent erosions, artificial tears and lubricating ointment may be used to aid the tear layer.

How to instill eye ointment or drops

The first step to take when you put eye ointment or drops in your own or someone else's eye is to wash your hands thoroughly to prevent any new or further infection.

To put drops in your own eyes:

* Stand in front of the mirror with your head straight.
* Make a pocket by gently pinching the skin under your eye between your thumb and index finger and pulling forward and down very gently.
* Place the drops into the little pocket. Don't worry about getting too many drops in your eye; the excess will roll down your cheek.
* As soon as the drops are in, release your lower lid and, with your eyes slightly shut, look up, down, and sideways.
* Wash your hands.

To place ointment in your own eyes:

* Stand in front of a mirror and tip your head forward just a little. Then, when you look into the mirror, you will really be looking up.
* Place your index and middle fingers of one hand on your lower lid and pull down gently.
* Place a very small amount (1-2mm) of ointment just inside the lid.
* Release your lower lid, shut your eyes gently, and look up, down, and sideways with your eyes shut.
* If both eyes are to be treated, wait a few moments for the blurring to subside before you treat the second eye. Wash your hands again before treating the second eye and after you have finished. Keep in mind that this ointment will cause your vision to be blurred and is usually recommended only at bedtime.

Flashes and Floaters

"Floaters" as they are commonly referred to are usually nothing to be concerned about. The inside part of the eye, behind the colored iris, is filled with a gel-like substance. Sometimes cells float around in this gel. When these cells clump together and move around you see them as soot-like spots or as cobwebs. A few floaters are benign but a sudden onset of many floaters may indicate something more serious and require immediate attention.

Like a sudden onset of floaters, flashes of light may indicate a retinal detachment. A detachment of the retina means that the layers of the inner wall of the eye are separating. This could result in permanent impairment of vision. The flashes of light seen are described to appear like lighting bolts off to one side of the vision.

Remember, both a sudden onset of many floaters and flashes of light seen off to one side require immediate attention from an eye care specialist.

Subconjunctival Hemorrhage

Covering the white sclera of the eye is a thin transparent sheet of cells called the conjunctiva. Between these two thin layers lie blood vessels. These blood vessels are very small and are easily broken. If one breaks, the blood inside disperses throughout the space between the sclera and the conjunctiva. This makes the sclera look bloody red. These vessels can be broken by a blow to the head or eye, a hard cough, or even a sneeze. Although the appearance can be frightening, there is no pain associated with these subconjunctival hemorrhages.

There is no treatment for subconjunctival hemorrhages other than patience. It may take up to two weeks for the blood to reabsorb.

Diabetic Retinopathy

Diabetes is a major cause of adult blindness in the United States. About 12% of all blindness is due to diabetes.

The disease process of diabetes weakens blood vessels throughout the body. The blood vessels in the back part of the eye, under the retina, are included. This weakening of the blood vessels can cause them to leak.

The beginning stage called background retinopathy means that only a few blood vessels have started to leak and there is no vision loss. A diabetic may stay at this stage forever or may progress quickly to the more serious stage called proliferative retinopathy where vision can be severely damaged.

In some cases of proliferative diabetic retinopathy, a laser treatment can be used to seal the leaking blood vessels and possibly prevent further visual impairment. Only an eye care specialist can determine these special cases.

Diabetics are also prone to earlier cataract formation and there is a higher incidence of glaucoma among diabetics. Diabetics must also realize that their vision can vary with changes in their blood sugar level.

Although there is no prevention for diabetic retinopathy, blood sugar control and annual eye examinations are recommended.

Macular Degeneration

As the eye looks straight ahead, the macula is the point of the retina upon which the light rays meet as they are focused by the cornea and the lens of the eye. Similar to the film of a camera, the retina receives the images that come through the camera-like lens. If the macula is damaged, the central part of the images are blocked as if a blurred area had been placed in the center of the picture. The images around the blurred area may be clearly visible.

Macular degeneration is the result of damage or breakdown of the macula. The eye still sees objects to the side, since side or peripheral vision is usually not affected. For this reason, macular degeration does not result in total blindness. However, it can make reading or close work impossible without the use of special low vision optical aids.

The symptoms vary among people. Many people do not realize they have macular problems until blurred vision becomes obvious. An eye care specialist can usually detect macular degeneration in the early stages. Some symptoms people may notice are dimness of color vision, straight lines appearing distorted, and the central vision suddenly becoming blurry or dark.

There is no prevention or cure for the common process of macular degeneration. Sometimes laser treatment can be used to retard the progression, but this only applies to special cases. Therefore, early detection by an eye care specialist of these cases and subsequent treatment, if indicated, may prevent additional visual loss.

A person with macular degeneration can sometimes be helped by low vision optical aids. There are special spectacles, hand and stand magnifiers, telescopes, and lamps with brighter illumination that are often beneficial. Large print books and newspapers offer further help. Aids do not restore vision that has been lost but can help in maximizing all remaining vision to assist people in leading a comfortable and relatively normal life.