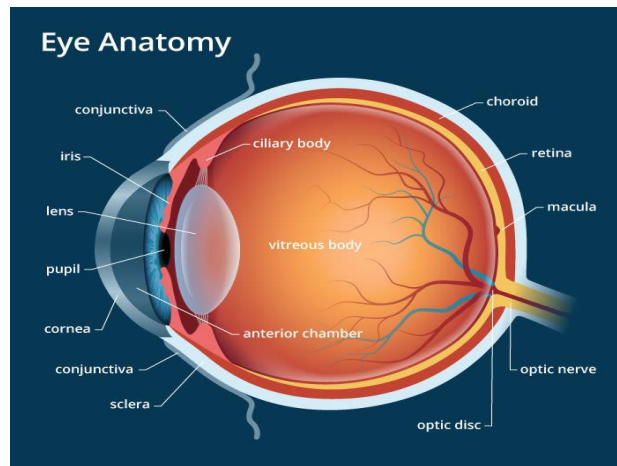


# Eye Disorders



The most common visual problem is refractive error.

**Myopia (nearsightedness)** is an inability to accommodate for objects at a distance. It causes light rays to be focused **in front of the retina**. **C/M:**

Dizziness, headache, clumsiness and eye rubbing. Squinting to read word far away, holding books close to the face to read, sitting too close to the TV.

## Hesi question

**Difficulty reading the board at school and complains of frequent headaches?.....**

**Hyperopia (farsightedness)** is an inability to accommodate for near objects. It causes the light rays to **focus behind the retina**. It is caused by refractive error where images focus in the back of the retina making close images blurry.

**Signs and symptoms:** Near objects: blurry, burning eyes with eye aches too. Treatment: Contacts or glasses.

**Astigmatism** is caused by an irregular corneal curvature. This irregularity causes the incoming **light rays to be bent unequally**. Person has trouble driving at night.

**Strabismus**: this is a disorder where the eyes appear crossed and don't look in the same direction at the same time. one eye may deviate in (esotropia), out (exotropia) or down (hypotropia).

In which eye patch should be put on.....?

**Total blindness** (no light perception and no usable vision), **legal blindness** (central visual acuity of 20/200 or less in the better eye with correction), **functional blindness** (has some light perception but no usable vision).

### **Eye infections**

**Hordeolum (commonly called a stye) : Staphylococcus aureus**

A red, swollen and tender area develops rapidly. Appropriate antibiotic ointments or drops may be indicated.

**Conjunctivitis** is an infection or inflammation of the conjunctiva. These infections may be caused by bacteria and viruses. Conjunctival inflammation may result from exposure to allergens or chemical irritants.

Acute bacterial conjunctivitis (pinkeye) is a common infection- complains of discomfort, pruritus, redness and a mucopurulent drainage.

If viral infection: complain of tearing, foreign body sensation, redness and mild photophobia. Topical corticosteroid can provide temporary

relief but have no effect on the final outcome. **Antiviral drops are ineffective and therefore not indicated.**

**Keratoconjunctivitis sicca (dry eyes)** is a common complaint particularly of older adults and individuals with certain systemic diseases such as scleroderma and systemic lupus erythematosus.

Example: eye lubricants: Systane, Cyclosporine ophthalmic.

## **Cataract**

Cataract is an opacity within the lens. The patient may have a cataract in one or both eyes.

Although most cataracts are age related (senile cataracts), blunt or penetrating trauma, congenital factors such as maternal rubella, radiation or ultraviolet light exposure, systemic corticosteroids, ocular inflammation and diabetes mellitus can also contribute.

Clinical manifestations: decrease in vision, abnormal color perception and glare and glare (worse at night).

**Ophthalmoscope or slit lamp microscopic examination** is used to assess the opacity of lens. Best treatment is surgery (Phacoemulsification). In the preoperative phase, dilating drops (Anticholinergic medications such as: atropine, homatropine) and NSAIDs eye drop to reduce inflammation.

Another type of drug is **cycloplegic** (produce papillary dilation).

## **Preventions**

Patient's eye may be covered with patch or protective shield, which is usually worn overnight and removed during the first postoperative visit.

The patient is usually ready to go home as soon as the effects of sedative agents have worn off.

Regardless of the type of IOL used, patient may still need glasses to achieve their best visual acuity.

Photophobia is common when administering pupil dilation medications. Therefore decreasing the room lighting is helpful.

Special considerations to avoid falls or other injuries. Patient may require 1-2 weeks for the visual acuity in the operated eye to reach an adequate. Patient usually experiences little or no pain but may have some scratchiness in the operative eye.

If the pain is intense, the patient should notify the surgeon because this may indicate hemorrhage, infection or increased IOP. Client stays in hospital for few hours.

Example: Anticholinergic drugs eg: Benztropine, Atropine.

## **Retinal detachment**

Retinal detachment is a serious eye condition. The retina, the layer of tissue in the back of the eye, pulls away from tissues supporting it. Sudden changes, including eye floaters and flashes and darkening side vision, are signs this may be happening. A detached retina needs treatment as soon as possible. Cobweb"

Once the retina has detached, the patient describes a painless loss of peripheral or central vision, **like a curtain** coming across the field of vision.

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

Is the most common cause of irreversible central vision loss in people over age 60.

Risk factors: long term exposure to UV light, hyperopia, cigarette smoking and light colored eyes are risk factors.

Dietary supplement of vitamin C,E, beta carotene and zinc decreases the progression of advanced AMD.

Patient may complain of blurred and darkened vision, scotomas (blind spot in the visual field) and metamorphopsia (distortion of vision).

### **Amsler grid test**

**It can be activated by exposure to sunlight or other high intensity light such as halogen, avoid light stay indoor.**

## **Glaucoma**

Is a group of disorders characterized by increased IOP and the consequences of elevated pressure, optic nerve atrophy and peripheral visual field loss. Glaucoma is the second leading cause of permanent blindness in the United states.

### **Tunnel vision develops**

**Acute angle closure glaucoma, IOP may be over 50mmHg. Acute angle closure glaucoma is a medical emergency that require immediate**

**intervention. Miotics and oral or IV hyperosmotic agents including glycerine liquid, isosorbide solution and mannitol solution.**

Optic disc cupping may be one of the first signs of chronic open angle glaucoma. The optic disc becomes wider, deeper and paler

**Argon laser trabeculoplasty (ALT)** is a noninvasive option to lower IOP when medications are not successful.

## **Ear disorder**

### **Otitis media**

Is an infection within the Eustachian tubes, the air filled space behind the ear drum. The infection leads to major inflammation and purulent fluid inside the middle of the ear.

#### **Sign and symptoms**

**High fever, refusing to eat, restless and irritable “crying more”, not sleeping, ear pain.**

**Complication: sudden relief of pain.**

**Question: which finding indicates a tympanic membrane rupture?**

Sudden relief of pain in a child with otitis media with effusion.

**Question : Infant who has acute otitis media. Which of the following statements should the nurse expect the parents to make? Select all that apply?**

My baby has been pulling of her ears, not drinking in a proper way, poor sleeping at night, very irritable and crying.

**Antibiotics:** Amoxicillin, return to the clinic if s/s do not improve within 48-72 hours. Finish all antibiotics, do not stop halfway through.

Education: smoking cessation by caretakers. Earplugs before going swimming. Do not immerse child's head in water.

Surgery: tympanostomy tubes. Myringotomy.

Routine vaccinations (influenza and pneumonia).

Stop pacifier use after 6 months old.

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