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CHAPTER

16

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THE EYES

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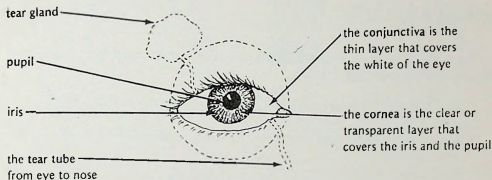
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## HOW TO TAKE GOOD CARE OF THE EYES

The eyes are delicate and need good care. Infections of the eye spread very easily, if proper care is not taken.

1. Keep eyes clean by washing them with clean water. Washing eyes at bedtime is very good as it removes the dirt and dust collected throughout the day.
2. Always use a clean cloth to wipe eyes. Do not use saris, dhotis, or sleeves of clothes to wipe eyes. These may cause serious infection in the eyes. Trachoma (p.264) and conjunctivitis (p.263) spread this way.
3. Each person should use a separate cloth, towel or handkerchief for wiping eyes. If one eye is already infected, use a separate clean cloth for each eye.



4. When applying "kajal" or "surma", use a separate finger or applicator for each person. Keep the tin closed after use, so that dust does not collect on it.



5. Show any eye infection to a health worker. Do not use medicines given by roadside medicine sellers. These may not help and may even cause blindness.

6. Eat dark green leafy vegetables like amaranth, agathi, spinach, drumstick leaves and fruits like papaya and mangoes. These contain vitamin A which is very good for eyes. They prevent night blindness (p. 271)



## DANGER SIGNS

The eyes are delicate and need good care. Get medical help fast when any of the following danger signs occurs:

1. Any wound that cuts or ruptures (goes through) the eyeball.
2. A painful, grayish spot on the cornea, with redness around the cornea (corneal ulcer).
3. Great pain inside the eye (possibly iritis or glaucoma).
4. Difference in the size of the pupils when there is pain in the eye or the head.



A difference in the size of the pupils may come from brain damage, stroke, injury to the eye, glaucoma, or iritis. (Some difference is normal in a few people.)

5. If vision begins to fail in one or both eyes.
6. Any eye infection or inflammation that does not get better after 5 or 6 days of treatment with an antibiotic eye ointment.

## INJURIES TO THE EYE

All injuries to the eyeball must be considered dangerous, for they may cause blindness.

Even small cuts on the **cornea** (the transparent layer covering the pupil and iris) may get infected and harm the vision if not cared for correctly.

If a wound to the eyeball is so deep that it reaches the black layer beneath the outer white layer, this is especially dangerous.

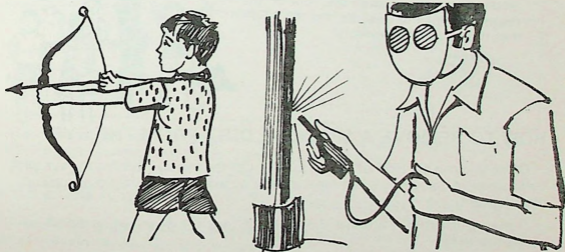
If a blunt injury (as with a fist) causes the eyeball to fill with blood, the eye is in danger (see p.270). Danger is especially great if pain suddenly gets much worse after a few days, for this is probably acute glaucoma (p.267).

**Injuries may be caused by:**

- fireworks used carelessly can injure the eye and cause permanent damage



- "gulli danda" which is a very popular game, can be dangerous; the "gulli" with its two sharp ends might damage the eye
- bows and arrows can cause permanent damage if handled carelessly.



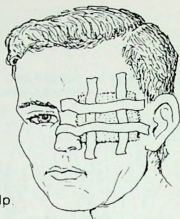
- sparks during welding can damage the eyes if the eyes are not protected with special dark glasses.
- careless handling of chemicals can also damage the eyes.
- blunt injuries as with a fist

**Treatment:**

- If the person still sees well with the injured eye, put an antibiotic eye ointment (p.413)

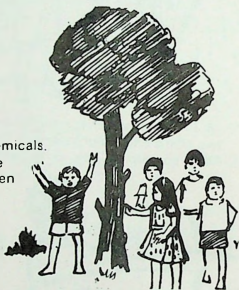
in the eye and cover it with a soft, thick bandage. If the eye is not better in a day or two, get medical help.

- If the person cannot see well with the injured eye, if the wound is deep, or if there is blood inside the eye behind the cornea (p 270), cover the eye with a clean bandage and go for medical help at once.
- **Do not** try to remove thorns or splinters that are tightly stuck in the eyeball. Get medical help.



#### **Prevention of injuries:**

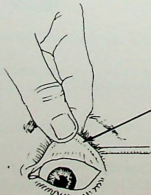
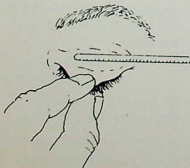
- Sit far from fire when cooking.
- Use special dark glasses while welding.
- Wash hands carefully after handling chemicals.
- In places where children play, cut off the lower-branches of trees so that the children may not injure their eyes.



## HOW TO REMOVE A SPECK OF DIRT FROM THE EYE

Often you can get a bit of dirt or sand out of the eye by flooding the eye with clean water (p. 58) or by using the corner of a clean cloth or the tip of some moist cotton.

If the particle of dirt is under the upper lid, look for it by turning the lid up over a thin stick:





The particle is often found in the small groove near the edge of the lid. Remove it with the corner of a clean cloth.

If you cannot get the particle out easily, use an antibiotic eye ointment, cover the eye with a bandage, and go for medical help.

## RED, PAINFUL EYES—DIFFERENT CAUSES

Many different problems cause red, painful eyes. This chart may help you find the cause:

foreign matter (bit of dirt, etc.) in the eye (p. 262)	usually affects <b>one eye only</b> ; redness and pain variable
burns or harmful liquids (p. 58)	one or both eyes; redness and pain variable
'sore eye' (conjunctivitis, p. 263) hay fever (allergic conjunctivitis, p. 202) trachoma (p. 264) measles (p. 358)	usually <b>both eyes</b> (may start or be worse in one) usually reddest  at outer edge 'burning' pain, usually mild
acute glaucoma (p. 267) iritis (p. 266) scratch or ulcer on the cornea (p. 269)	usually <b>one eye only</b> ; reddest next to the cornea  pain often great

The correct treatment of red, painful eyes often depends on finding out the cause. Be sure to check carefully for signs of each possibility.

## SORE EYES (Conjunctivitis) Sometimes called 'Pink Eyes'

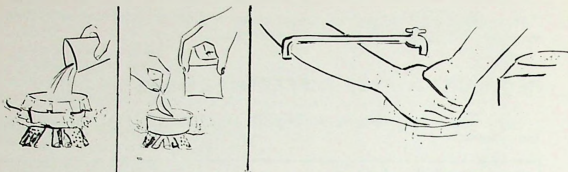
This infection causes redness, pus and mild burning in one or both eyes. The eyes are usually reddest at the outer edge. There is watering of the eyes. The lids often stick together after sleep.

### Treatment:

#### To clean pus from the eyes:

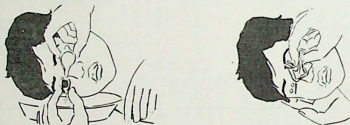
Boil one glass of water with a pinch of salt, and then let it cool. Boil a few pieces of clean cloth in a small cup or 'katori' separately, and let them cool.

Ask the person to lie down with the normal eye near the ground. Wash your hands with soap and water. Take the boiled water in a cup and pour gently into the corner of the normal eye near the nose. Collect the dirty water in a vessel kept below the eye.



Close the eye. Take a piece of boiled cloth and wipe the eye gently with one stroke, starting from near the nose towards the ear. Do not use the same cloth again for the other eye. Throw away the dirty water.

Then turn the head so that the infected eye is near the ground. Open the eyelids wide. If they are stuck together, do not force them open. Wet the eyes with the boiled salt water. The pus will become loose and can easily be removed. Then wash the eye in the same way as the normal eye. Wipe with a separate piece of boiled cloth.



Pull down the lower eyelid and put in 2 to 3 drops of 20% sulfacetamide eye drops. Put the drops inside the lower eyelid like shown in the above illustration. Putting them outside the eye does no good. Put these drops every 10 minutes till the eye becomes normal. Put the drops in the normal eye also once or twice a day.

#### **Prevention:**

Conjunctivitis is easily spread from one person to another if proper care is not taken. To avoid spreading conjunctivitis:

- do not let a child with 'sore eyes' play or sleep with others
- use a separate towel or handkerchief for each person, it is very important that others do not use the infected person's towel or handkerchief.
- wash hands after touching eyes

if you have conjunctivitis.

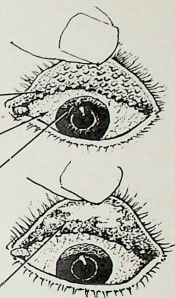
- avoid bathing in canal or pond water
- avoid meeting others in crowded places
- if possible, try and use dark glasses

## **TRACHOMA**

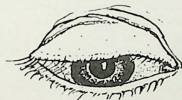
Trachoma is a chronic form of conjunctivitis that slowly gets worse. It may last for months or many years. If not treated early, it sometimes causes blindness. It is spread by touch or by flies, and is most common where people live in poor, crowded conditions.

**Signs:**

- Trachoma begins with red, watery eyes, like ordinary conjunctivitis.
- After a month or more, small, pinkish gray lumps, called follicles, form inside the upper lids. To see these, turn back the lid as shown on p. 262.
- The white of the eye is mildly inflamed.
- If you look very carefully, or with a magnifying glass, you may see that the top edge of the cornea looks grayish, because it has many tiny new blood vessels in it (*pannus*).
- The combination of both follicles and pannus is almost certainly trachoma.
- After several years, the follicles begin to disappear, leaving whitish scars.



These scars make the eyelids thick and may keep them from opening all the way.



Or they may pull the eyelashes down into the eye, scratching the cornea and causing blindness.

**Treatment of trachoma:**

Put 20% sulfacetamide eyedrops inside the eyes three times a day for a month. If it does not become better, put tetracycline eye ointment inside the eyes three times a day for a month. For complete cure, also take a sulfonamide or tetracycline by mouth for 10 days to 2 weeks (p. 400, 402)

**Prevention:**

Early and complete treatment of trachoma helps prevent its spread to others. All persons living with someone who has trachoma, especially children, should have their eyes examined often and if signs appear, they should be treated early. Also, it is very important to follow the Guidelines of Cleanliness, explained earlier in this chapter.

**Cleanliness helps prevent trachoma.**



## INFECTED EYES IN NEWBORN BABIES (NEONATAL CONJUNCTIVITIS)

In the first 2 days of life, if a newborn baby's eyes get red, swell, and have a lot of pus in them, this is probably gonorrhoea (p. 280). The baby has picked up the disease from his mother at birth. It must be treated **at once** to prevent the baby from going blind.



### Treatment:

- Inject crystalline penicillin (p. 398) or give 250 mg. (half a 500 mg tablet) of triple sulfa, ground up and mixed with breast milk or boiled water, 4 times a day for a week. for dosage see p. 413.
- Also make penicillin eyedrops. Boil half a teaspoon of salt in half a cup of water. After cooling, add 10 lakh units of injectable (crystalline) penicillin. Put a drop of this mixture in the baby's eyes every 10 minutes for an hour, then every hour for 6 hours, then every 2 or 3 hours for 3 days.
- Before using drops, clean out pus as described on page 263.

### Prevention:

All babies' eyes should be protected against gonorrhoea, especially the eyes of babies whose mothers may have gonorrhoea or whose fathers have pain when passing urine. (Mothers may have gonorrhoea without knowing it.)

Put a drop of 1% silver nitrate solution **once only** in each eye at birth. If you do not have silver nitrate drops, use a tetracycline eye ointment 3 times a day for 3 days.

If a baby develops gonorrhoea of the eyes, **both** parents should be treated for gonorrhoea.

## IRITIS (INFLAMMATION OF THE IRIS)

### Signs:



NORMAL EYE

EYE WITH IRITIS



pupil small,  
often irregular

redness around iris

severe pain

Pain may begin suddenly or gradually. The eye waters a lot. It hurts more in bright light. There is no pus as in conjunctivitis. Vision is usually blurred.

**This is a medical emergency.** Antibiotic ointments do not help. **Get medical help.**

## GLAUCOMA

This dangerous disease is the result of too much pressure in the eye. It usually begins after the age of 40 and is a common cause of blindness. **To prevent blindness, it is important to recognize the signs of glaucoma and get medical help fast.**

There are 2 forms of glaucoma.

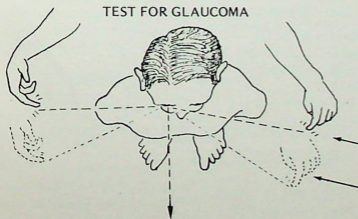
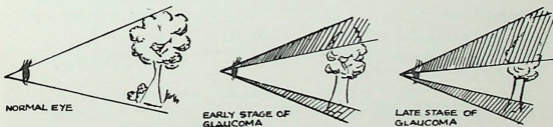
### Acute glaucoma:

This starts suddenly with a headache or severe pain in the eye. The eye becomes red, the vision blurred. The eyeball feels hard to the touch, like a marble. There may be vomiting. The pupil of the bad eye is bigger than that of the good eye. When a person with glaucoma looks at the light, he may see colored rings around the light. This is a very serious sign.

If not treated very soon, acute glaucoma will cause blindness within a few days. Surgery is often needed. **Get medical help fast.**

### Chronic glaucoma:

The pressure in the eye rises slowly. Usually there is no pain. Vision is lost slowly, starting from the side, and often the person does not notice the loss. Testing the side vision may help detect the disease.



Have the person cover one eye, and with the other look at an object straight ahead of him. Note when he can first see moving fingers coming from behind on each side of the head.

Normally fingers are first seen here.

In glaucoma, finger movement is first seen more toward the front.

Glaucoma can also be detected by testing the pressure in the eye.



Ask the person to look toward his feet. Place the index fingers of both your hands side by side on the eye. Like this. Keep one finger still and gently press upon the eye through the lid with the other finger. If the pressure is high, the eye feels hard like a marble. (to be certain, compare the pressure with your own eye.)

If discovered early, treatment with special eyedrops (pilocarpine) may prevent blindness. Dosage should be determined by a doctor or health worker who can measure the eye pressure periodically. Drops must be used for the rest of one's life.

#### *Prevention:*

Persons who are over 40 years old or have relatives with glaucoma should have their eye pressure checked once a year.

## INFECTION OF THE TEAR SAC (DACRYOCYSTITIS)

#### *Signs:*

Redness, pain, and swelling beneath the eye, next to the nose. The eye waters a lot. A drop of pus may appear in the corner of the eye when the swelling is gently pressed.



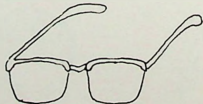
#### *Treatment:*

- Apply hot compresses.
- Put antibiotic eye drops or ointment in the eye.
- Take penicillin (p. 397).

## TROUBLE SEEING CLEARLY

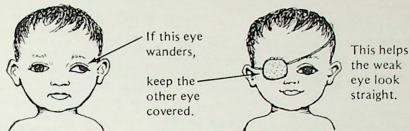
**Children** who have trouble seeing clearly or who get headaches or eye pain when they read may need glasses. Have their eyes examined.

**In older persons**, it is normal that, with passing years, it becomes more difficult to see close things clearly. Reading glasses often help. If possible, they should be carefully prescribed, so as to prevent eye strain and headache.



## CROSS-EYES AND WANDERING EYES

If a baby or young child has one eye that turns in (cross-eye) or out (wall-eye) or that sometimes looks the wrong way (wanders), try covering the **good** eye with a patch.



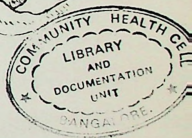
If possible, do this when the child is 6 months old. Keep the good eye covered until the other eye stays straight. For a 6-month-old baby this may only take a week or two. Older children take longer—up to a year for a 7-year-old, so for an older child discuss this with a health worker first.

Early patching of the good eye often prevents a child from staying cross-eyed or wall-eyed for life.

If one eye is always turned the wrong way, it is less likely that covering the good eye will help. Special glasses sometimes help. The eyes can perhaps be straightened by surgery, but this does not usually help the person see better.

## STY (HORDEOLUM)

A red, swollen lump on the eyelid, usually near its edge. To treat, apply warm, moist compresses with a little salt in the water. Use of an antibiotic eye ointment 3 times a day will help prevent more sties from occurring.



## PTERYGIUM

A fleshy thickening on the eye surface that slowly grows out from the edge of the eye and onto the cornea; caused in part by sunlight, wind, and dust. Dark glasses may help calm irritation and slow the growth of a pterygium. It should be removed by surgery before it reaches the pupil.



Folk treatments using powdered shells do more harm than good.

## A SCRAPE, ULCER, OR SCAR ON THE CORNEA

When the very thin, delicate surface of the cornea has been scraped, or damaged by infection, a painful **corneal ulcer** may result. If you look hard in a good light, you may see



a grayish or less shiny patch on the surface of the cornea.

If not well cared for, a corneal ulcer can cause blindness. Apply antibiotic eye ointment, give penicillin, and cover the eye with a patch. **Seek medical help.**

A **corneal scar** is a painless, white patch on the cornea. It may result from a corneal ulcer, burn, or other injury to the eye. Surgery (corneal transplant) is the only treatment. This is expensive and does not always give good results. Surgery should only be done if the person is blind but can still see light.



## BLEEDING IN THE WHITE OF THE EYE

A painless, blood-red patch in the white part of the eye occasionally appears after lifting something heavy, coughing hard (as with whooping cough), or being hit on the eye. The condition results from the bursting of a small blood vessel. It is harmless and will slowly disappear without treatment.



Small red patches are common on the eyes of newborn babies. No treatment is needed.

## CATARACT

The lens of the eye, behind the pupil, becomes cloudy, making the pupil look gray or white when you shine a light into it. Cataract is common in older persons, but also occurs, rarely, in babies. If a blind person with cataracts can still tell light from dark and notice motion, surgery may let him see again. However, he will need strong glasses afterward, which take time to get used to. Medicines do not help cataracts.



## NIGHT BLINDNESS AND XEROSIS (VITAMIN A DEFICIENCY)

This eye disease is most common in children between 2 and 5 years of age. It comes from not eating enough foods with vitamin A. If not recognized and treated early, it can make the child blind.



### Signs:

- At first, the child may have **night blindness**. He cannot see as well in the dark as other people can.
- Later, he develops **dry eyes** (xerosis). The white of the eyes loses its shine and begins to wrinkle.
- Patches of little gray bubbles (Bitot's spots) may form in the eyes.
- As the disease gets worse, the cornea also becomes dry and dull, and may develop little pits.
- Then the cornea may quickly grow soft, bulge, or even burst. Usually there is no pain. Blindness may result from infection, scarring, or other damage.
- Xerosis often begins, or gets worse, when a child is sick with another illness like diarrhea, whooping cough, or tuberculosis. **Examine the eyes of all sick and underweight children.**



### Prevention and treatment:

Xerosis can easily be prevented by eating foods that contain vitamin A. Do the following:

- Breast feed the baby—up to 2 years, if possible.
- After the first 6 months, begin giving the child foods rich in vitamin A, such as dark green leafy vegetables and yellow or red fruits and vegetables. Whole milk, eggs, liver, and kidneys are also rich in vitamin A.
- If the child is not likely to get these foods, or if he is developing signs of night blindness or xerosis, give him a capsule of vitamin A, once every 6 months (p.424). Do not give to babies under 6 months of age.



- If the condition is already fairly severe, give the child a 200,000 unit capsule of vitamin A. (p. 424) If the eyes are not well in a week, give another capsule.

**WARNING:** Too much vitamin A is poisonous.

If the condition of the child's eyes is severe, with a dull, pitted, or bulging cornea, get medical help. The child's eyes should be bandaged, and he should receive vitamin A at once, preferably an injection of 100,000 units.

**Dark green or yellow vegetables prevent blindness in children.**

## SPOTS OR 'FLIES' BEFORE THE EYES (MOUCHES VOLANTES)

Sometimes older persons complain of small moving spots when they look at a bright surface (wall, sky). The spots move when the eyes move and look like tiny flies.

These spots are usually harmless and need no treatment. However, if they appear suddenly in large numbers and vision begins to fail from one side, this could be a medical emergency (detached retina). Medical help is needed at once.

## DOUBLE VISION

Seeing double can have many **causes**.

If double vision comes suddenly, is chronic, or gradually gets worse, it is probably a sign of a serious problem. Seek medical help.



If double vision occurs only from time to time, it may be a sign of weakness or exhaustion, perhaps from malnutrition.

Read Chapter 11 on good nutrition and try to eat as well as possible. If sight does not improve, get medical help.

The book *Where There Is No Doctor* is available at Rs 29/- plus postage. Multiple copies of reprints of various chapters are also available.

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