

# Know your eyes

Dr V. Arvind MS, MRCO (UK), FGEC (Canada)  
Chief Medical Officer  
Vasan Eye Care Hospital,  
Anna Nagar,  
Chennai

# STATISTICS



- Every 8 sec somebody goes blind
- What is the incidence of blindness among children?

# STATISTICS

- Estimated 161 million people are visually impaired.
- 18.7 million blind in India alone.
- 9.5 million cataracts.
- 3.2 million due refractive error.

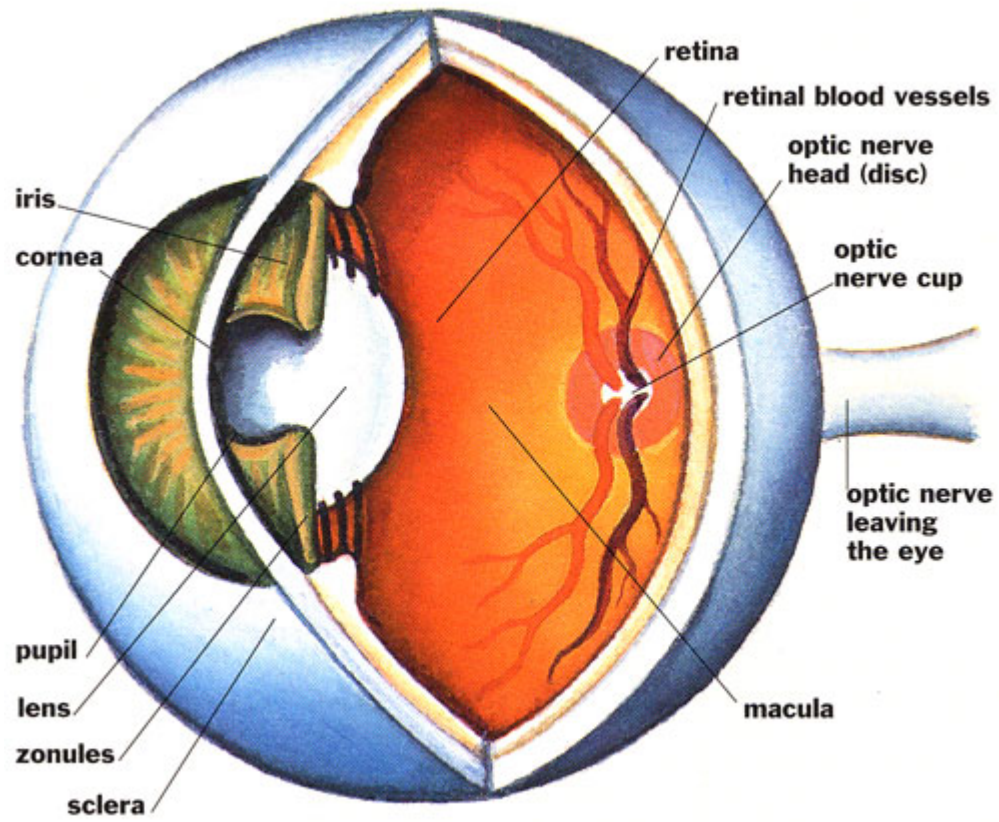
# **Eye and related diseases**

# Common Eye problems

- Refractive error.
- Headaches.
- Allergy.
- Madras eye/ eye infection.
- Foreign body.
- Trauma.

# Significant eye problems

- Cataract
- Glaucoma
- Diabetic retinopathy.
- Macular degeneration.
- Corneal infection.



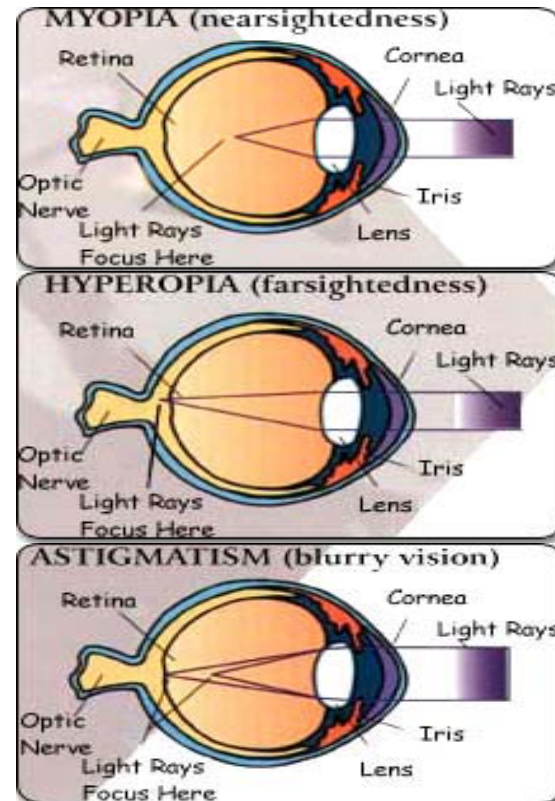
# What is refractive error?

The function of the eye is to see clearly the objects around us. The inability of the eye to accurately focus the rays of light on the retina is called refractive error.



# ***Refractive Errors***

- *Myopia*
- *Hypermetropia*
- *Astigmatism*
- *Presbyopia*



**Do you find near objects**



**Blurred ?**

7/22/2009

**You need to get , Your eyes checked**

**You may have**

***Hypermetropia***

**(Far – sightedness )**

**If can see far but have headaches and  
problems using your computer**

# You need to get Your eyes checked



**You may have Myopia  
( Near – Sightedness )**

**Do you experience fading of colour ?**



7/22/2009

vasan eye care

# You need to get Your eyes checked

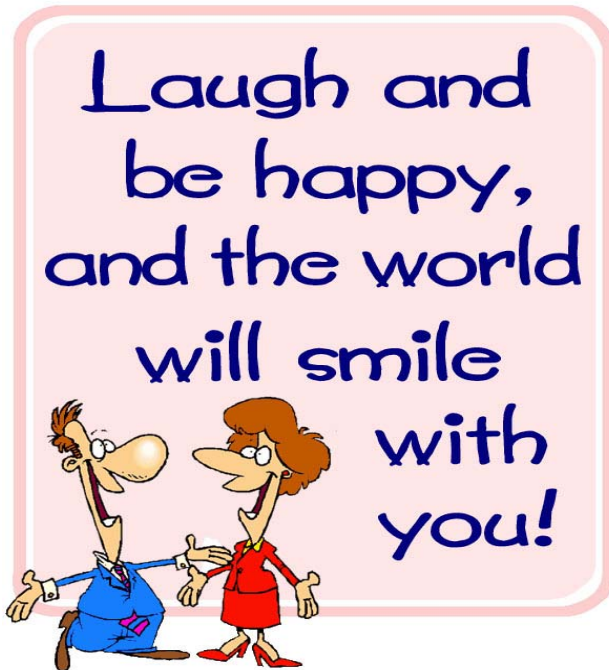


# WHAT IS PRESBYOPIA?

Presbyopia is the normal aging process (loss of accommodation). The distance vision may be normal, but the near vision becomes blurred with age greater than about 45 years. This is corrected by wearing reading glasses (plus) for the near work.



Do you experience difficulty in reading?



**Normal Reading**



**Difficulty in Reading**



# What is the solution ?

1. Glasses.
2. Contact lens
3. Zyoptic ( LASER vision correction)



# ZYOPTIC LASER



is the painless  
and newest  
refractive  
surgery option.

# LASER Vision Correction

[Video](#)

# Zyoptic LASER Vision Correction

- Safe.
- Effective.
- Painless.
- Unmatched results.
- Maximum performed surgery in USA

# ICL

- For people with high powers.
- Not eligible for LASIK.
- Vision as good as LASIK and even better

# Intralase LASIK

[ICL Video](#)

# DIABETIC RETINOPATHY

**Most common serious vision threatening complication of uncontrolled diabetes.**

# Signs and Symptoms

- Generalized Blurry Vision
- Cataract
- Preretinal fibrosis
- Tractional retinal detachment
- Vitreous Hemorrhage
- Combined rhegmatogenous-tractional retinal detachment





- **Diabetic Retinopathy is the leading cause of preventable blindness in INDIA.**
- **After 15 years of diabetes, 90% of the patients developed diabetic retinopathy of which 50% of patients are unaware of the problem.**
- **Effective treatment is available which is cost effective too.**

# COMMON SYMPTOMS

**Floaters**

**Flashes**

**Blurred Vision**

**Loss of Vision**

**Metamorphopsia, Micropsia**



Normal Vision

Vision with  
Diabetic Retinopathy

# Risk factors

**Duration of diabetes**

**Good metabolic control**



# EARLY DETECTIONS

- Consult an ophthalmologist at yearly intervals.
- Do not wait for symptoms



# ***OUR APPROACH TO PATIENTS WITH RETINAL PROBLEM***



# Vision Loss from Diabetic Retinopathy



**Normal or Mild Diabetic Retinopathy**



**Severe Diabetic Retinopathy**

## How is Diabetic Eye Disease avoided?

- Eye Care About My ABCs
  - HgA1c, **B**lood pressure, **C**holesterol
  - **E**ye Exams
- Annual **dilated** eye exams!
  - Diabetics with excellent control of blood sugar.
- Uncontrolled diabetics...
  - Diabetics who have fluctuating blood sugar or who have shown signs of diabetic retinopathy may require more frequent exams.

# COMPUTER VISION SYNDROME



**“complex of eye vision problems related to near work which are experienced during or related to computer use”  
– American Optometric Association**



# **CVS: The Problem**

Working at the computer all day is a physically demanding job. When working at the computer all day long the eyes receive the worst punishment. When working on the computer one full day, your eyes perform a near-task an amazing 25,000 times that matches one heartbeat.

# CVS: The problem continues

When using the computer your blink rate decreases by a drastic 70 percent. Generally speaking means that instead of blinking an average of 14 times per minute, you are now blinking 7 times per minute.

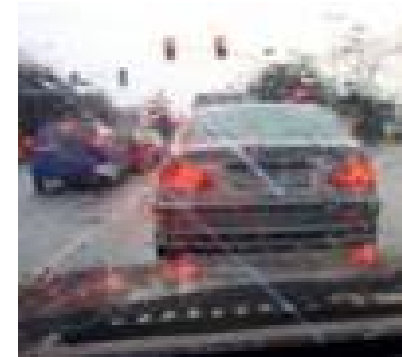
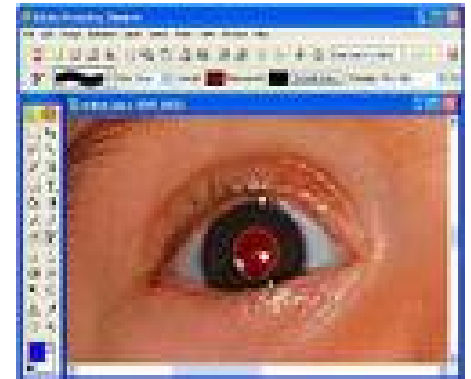


## Symptoms

- **Eyestrain**
- **Headaches**
- **Blurred vision**
- **Dry and irritated eyes**
- **Neck ache and backache**
- **Sensitivity to light**
- **Double vision**



- **Slowness in changing the focus of your eyes**
- **Red eyes**
- **Contact lens discomfort**
- **Changes in color perception**
- **Glare sensitivity**
- **Excessive tearing**



## **The solutions to Computer Vision Syndrome**

- **Install a glare guard, an optically coated glass anti-glare filter. The high resolution, high contrast filter increases view ability.**
- **Have a thorough eye exam**
- **Install a screen or partition behind your computer to reduce both outside light and overhead glare.**

## Other cures for Computer Vision Syndrome

- Use a non-reflective paint or coverings on the walls facing the computer.
- Use equipment with brightness controls or add such controls to your screen
- If possible, relocate lamps that causes reflections on the screen.
- Add dimmer switches to overhead lights or use coverings on fluorescent lights.

# Other solutions to Computer Vision Syndrome

- **Make sure there is sufficient light to read hard copy without straining.**
- **Adjust the height of your desk or chair so the middle of the computer screen is about 20 degrees below eye level. The screen itself should be 16- 30 inches from your eyes.**
- **Use a stand for hard copy so that source documents and the computer screen are at roughly equal distance from the eyes.**

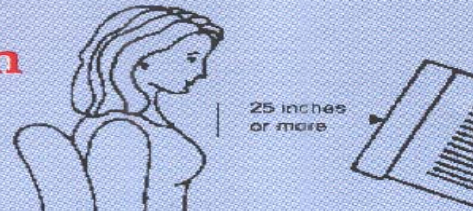
## **Other solutions to prevent CVS**

- **Be sure to blink frequently and take visual breaks. A good rule of thumb is 20/20, 20 minutes, look 20 feet away for 20 seconds.**
- **Place reference to typing materials close to the computer screens.**
- **If your eyes are dry or irritated, use eye drops to moisturize and lubricate**
- **If any symptoms are worse or your sight is deteriorating, make an appointment to see your eye care professional.**





## Eye to Screen Distance

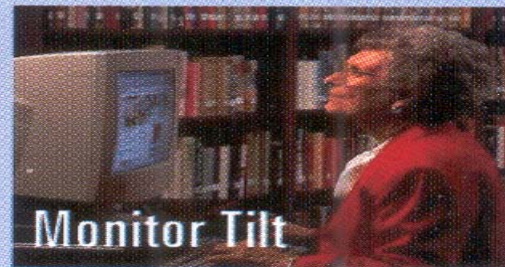


Keep at least 25 inches distance, preferably more.



## Monitor Tilt

Keep top of the monitor slightly farther from the eyes than the bottom of the monitor.





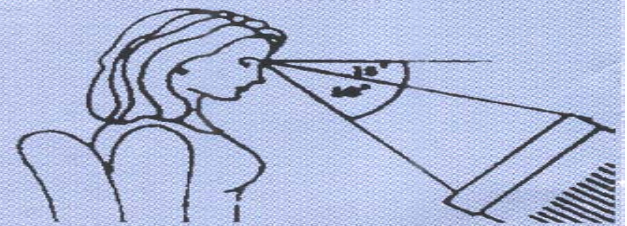


## Screen Colours

Use dark letters on a light background

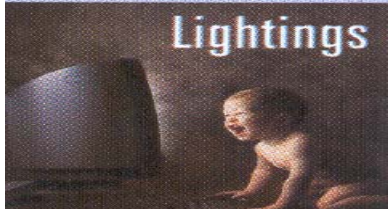
## Vertical Location

Ensure that the viewing area of the monitor is between  $15^{\circ}$  and  $50^{\circ}$  below horizontal eye level.

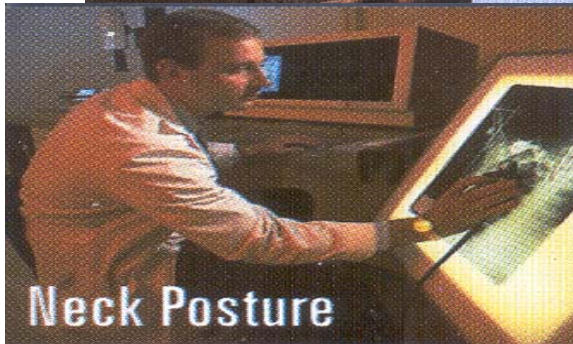
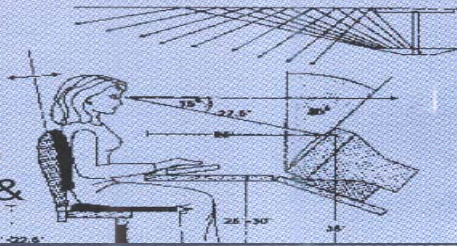




## Lighting

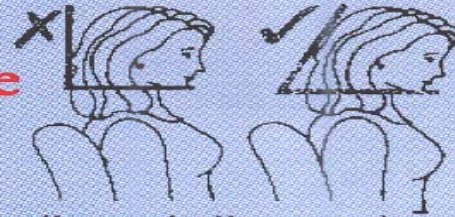


Have ceiling suspended indirect lighting. Use blinds, shades & curtains to control outside light & avoid reflection.



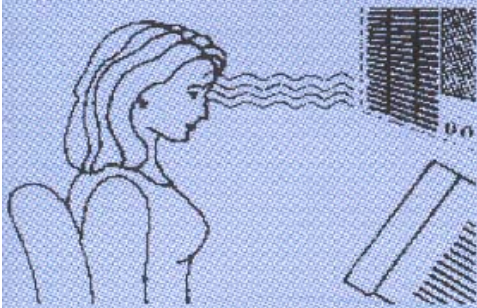
## Neck Posture

Always use a chair with arms. Note that flexion (head-tilt post) causes less fatigue than head-erect posture.



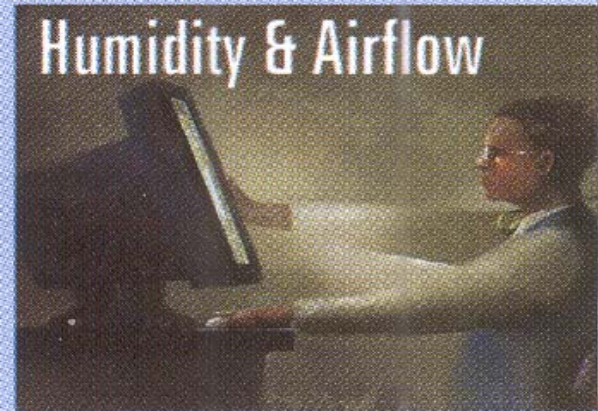


## Humidity & Airflow



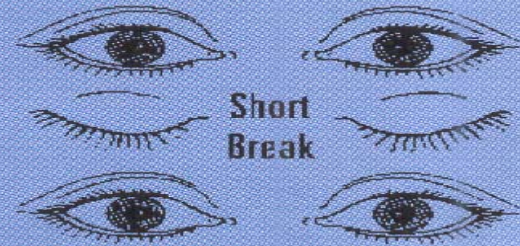
aggravates dry eye conditions.

Avoid direct flow or draft of air on your eyes. Avoid low humidity or fumes as it



## Break

Take a short visual break every 20 minutes to avoid strain.





## **Exercise**

**Blink your eyes a few times. Close eyelids and roll the eyes behind your closed lids once clockwise & once anti clock wise. Take a deep breath & open eyes while releasing breath.**



## **Doctor's Advice**

**Follow your doctor's advice & use lubricating eye drops as advised.**



## General Eye Care

- Don't rub your eyes
- Wash your eyes with copious water
- Don't apply castor oil, breast milk or any other household remedies into your eye.
- Antibiotic eye drops - If you are not able to contact your eye doctor immediately
- Seek expert's help.



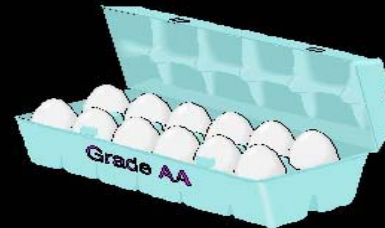
# TIPS



- Wearing sunglasses
- Anti reflection glass
- Tear Drops
- Wash your eyes
- Keep your hands off your eyes
- Good Diet
- Proper orientation of the monitors
- Eye exercises



# *Diet Good for eye*





# DIET AND VISION

Everybody's heard of the old belief that eating carrots can help you see in the dark.



# DIET AND VISION

That may or may not be true, but a rapidly growing body of evidence indicates that eating certain foods can indeed help to safeguard your vision.



# DIET AND VISION

A major US study has found that vitamins of the A-C-E complex plus zinc can slow down the development of age-related macular degeneration in existing and low-grade AMD patients. Vitamins C and E may also help to inhibit the

development or progression of cataracts.



# Lutein and Zeaxanthin

- Lutein and zeaxanthin are deposited in the eyes and act as antioxidants, "mopping up", or neutralizing, the free radicals, which can cause cell damage. One cause of free radical oxidative damage is overexposure to the sun's UV radiation.
- There are also indications that one or both of these substances can act like natural sunglasses, physically helping to filter out harmful blue light and stopping it from reaching and damaging the back of the retina. At least one study has shown that Lutein and zeaxanthin may also play a role in preventing cataracts.



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# Where?

Lutein and zeaxanthin are often found together in many, usually dark-coloured, fruits and vegetables. They include:

Spinach, squash, sweet corn, kale, broccoli,  
green beans, Brussels sprouts,  
orange  
peppers, peas, kiwifruit, grapes, oranges,



Mango, papaya, peaches, prunes, pumpkin,  
sweet potatoes, melon, courgettes,  
dark green lettuce

# HOW ?

For maximum benefit, eating the vegetables in lightly cooked is better than eating them raw, as cooking breaks cells down, increasing *bioavailability* (that is, making it easier for the body to absorb the lutein or zeaxanthin). Overcooking, however, can sap the vegetables of their goodness (lutein, zeaxanthin *and* vitamins).



THANK YOU

Questions?