

Computer Vision Syndrome

-health education series



What is Computer Vision Syndrome (CVS)?

Computer Vision Syndrome (CVS) is the general term used to describe a variety of vision related symptoms that may be aggravated by regular use of a computer for two or more hours a day.



Who is at risk for CVS?

According to AOA (American Optometric Association), anyone who exceeds two hours of computer use a day is at a risk for CVS.

(In the US, more than 70 percent of the approximately 143 million Americans who work on a computer on a daily basis)



Symptoms



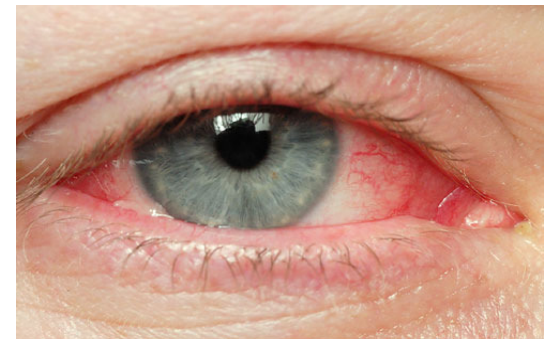
Tired eyes



Headaches

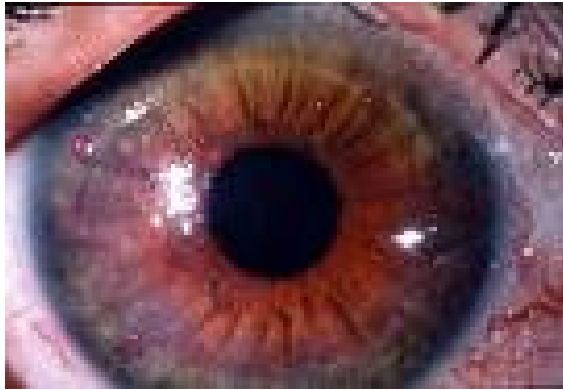


Double vision



Redness and watering of eyes

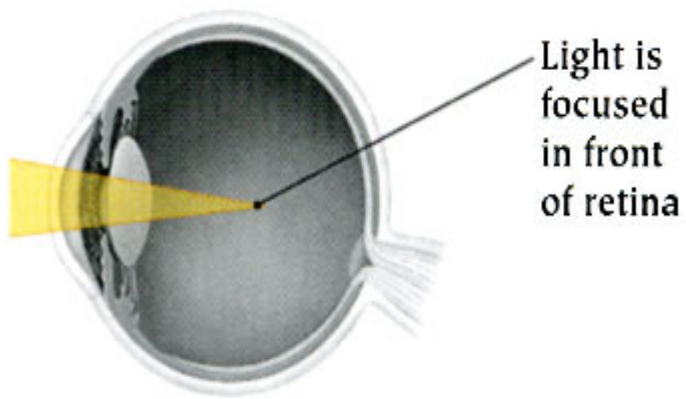
Symptoms



Dry eye



Photo phobia



Temporary nearsightedness



Neck & shoulder aches

What causes these symptoms?

- Characters (pixels) on computer screen do not have well defined edges. They are brightest at the center and diminish in intensity towards the edges.
- This makes it very difficult for eyes to maintain focus.
- Extensive focusing does not give much opportunity to the eye muscles to move and this leads to eye strain, burning, tired – eyes feeling.

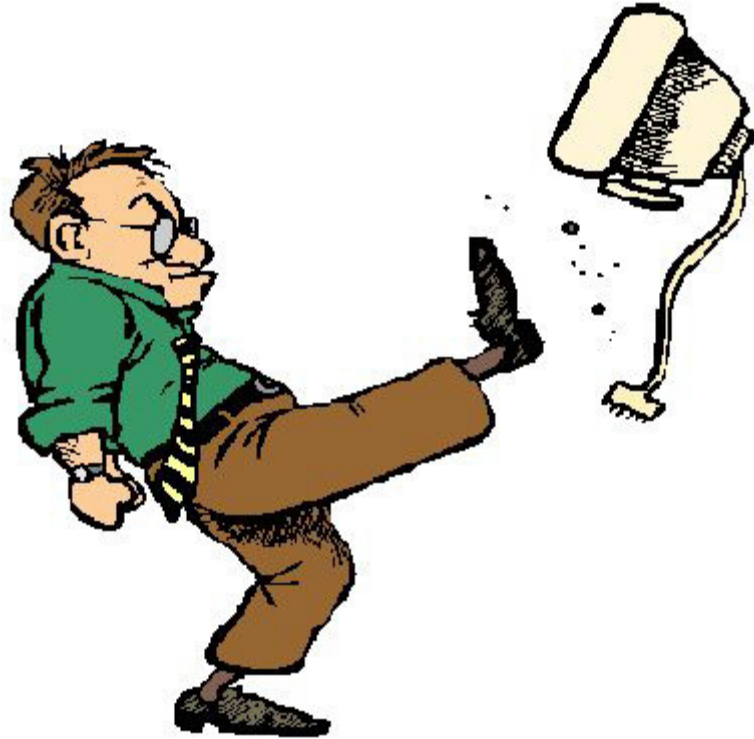
Other contributing factors

- Constant gazing at a near distance at the monitor (which leads to convergence fatigue).
- Fixed posture while working long hours
- The eye muscles do not get much opportunity to move.
- Uncorrected visual defects
- Glare from lighting in the work place and direct light coming in from the exterior

Infrequent blinking

- Normally a person blinks 15 times/min, but while working on a computer, the blink rate comes down to 5 times /min because of continuous staring at the screen.
- Blinking is critically important for spreading of tears to form an even film on the eye surface and also in refreshing this tear film.
- Thus in the absence of adequate blinking, eyes become dry and irritated.

The simple solution???



What can be done : 5 Es

- Examination
- Ergonomics
- Exercises
- Effective breaks
- Eye wear



Eye Examination

This is the most important thing you can do to prevent or treat computer vision problems. According to the National Institute of Occupational Safety and Health (NIOSH), computer users should have an eye exam before they start working on a computer and once a year thereafter. Be sure to tell your eye doctor how often you use a computer at work and at home.



Eye Exercises

To reduce your risk of tiring your eyes by constantly focusing on your screen, look away from your computer every 20 minutes and gaze at a distant object outside or down the hallway. Looking far away relaxes the focusing muscles inside the eye to reduce fatigue.

Another exercise is to look far away at an object for 10-15 seconds, then gaze at something up close for 10-15 seconds. Then look back at the distant object. Do this 10 times. This exercise reduces the risk of your eyes' focusing ability to "lock up" (a condition called accommodative spasm) after prolonged computer work.

Both of these exercises will reduce your risk of computer eye strain. Remember also to **blink frequently** during the exercises to reduce your risk of computer-related dry eye.



P.S: Blink - not to be confused with Wink...

Ergonomics- Screen to eye distance

The screen should be at a distance of 16-30 inches from the eyes



Ergonomics-Adjusting height of the seat

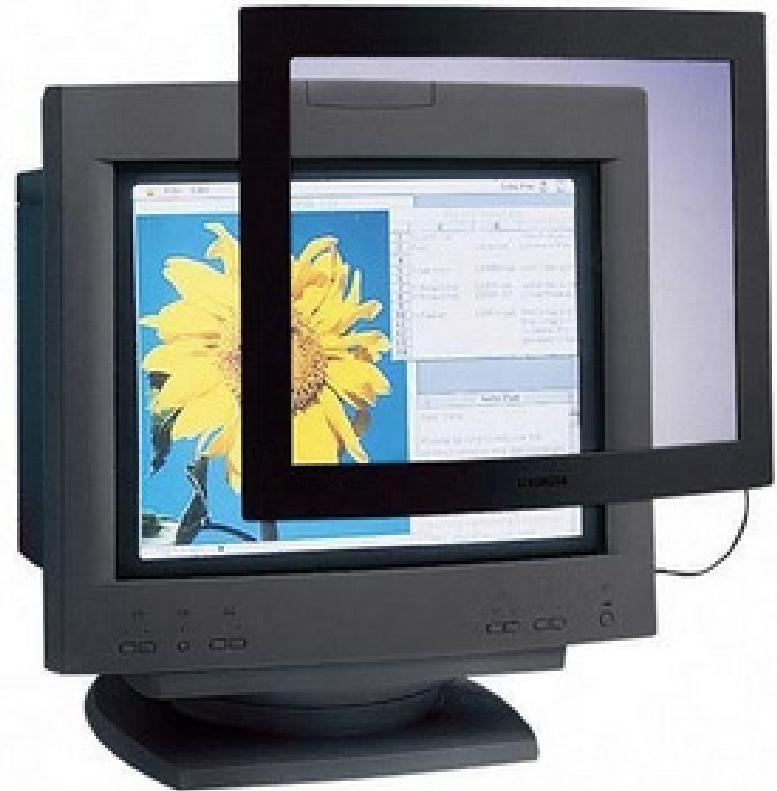
Adjust the height of the desk or chair so that the middle of the computer screen is about 20 degrees below eye level.



Ergonomics-Minimize glare

- Direct the overhead lights away from computer screens
- Position your monitor so that all windows are to the side rather than to the back or front.
- Adjust window blinds so that sunlight is away from screen and your eyes.

Install an anti-glare optically coated glass filter on the computer screen..



Eyewear -Computer glasses

- These glasses have a special tint that reduces glare and the intensity of the produced by an average computer monitor. They also feature a special U coating that blocks UV rays produced monitors and fluorescent lighting.
- These glasses are designed for people who don't need vision correction or who wear contact lenses to correct their vision.
- But be aware that tints alone don't address the underlying cause of computer eyestrain, which is focusing fatigue.



Eyecare -Use lubricating eye drops

- Lubricating eye drops are meant to provide moisturizing relief to your eyes, which have become dry and irritated by working for long hours on the computer.
- Lubricating eye drops help in soothing the eyes and relieving irritation, redness & the eyestrain.
- Lubricating eye drops can be used as often as you want, especially the newer ones, which are safe to the eye enabling their frequent use.

Effective short breaks

Computer users can reduce fatigue by taking breaks from work and can benefit from taking a five minutes break for every 30 minutes of work.



Happy ending?



health education series



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