



Lockdown and Your Eyes

Mukherjee B*

Consultant Eye Surgeon, Dr. Nihar Muns Eye Foundation, India

*Corresponding author: Bhaskar Mukherjee, FRCS (Glasg), Ph.D, Consultant Eye Surgeon, Dr. Nihar Muns Eye Foundation, 7c, Abinash Banerjee Lane, India, Tel: 91339830073412; Email: drbhaskarmukherjee@hotmail.com

Opinion

Volume 3 Issue 5

Received Date: September 07, 2020

Published Date: September 30, 2020

DOI: 10.23880/jqhe-16000181

Opinion

All of us are subjected to three months of lockdown period due to Covid 19 pandemic. We are now forced to work from home and our children are attending on line virtual classes. Therefore our usage of computer, smart phone, television and other electronic devices has increased considerably. It has been estimated that in the last three months, screen time of our population has increased by 30 -40%. The common nomenclature used to describe all these devices is VDU (Video display unit). In this article, I shall discuss the common problems faced by VDU users and their possible remedies in layman's terms.

People working with any VDU system often complain about the following eye problems:

- Persistent tiredness of eyes
- Grittiness, heaviness and burning sensation
- Occasional or persistent redness and itching
- Presence of stringy mucus discharge and transient blurring of vision

These eye problems decrease the efficiency of all professionals working with VDUs. All these happen because of a particular eye condition known as "DryEye".

There are four aspects of tear dynamics that lead to dry eye.

- Decrease in tear secretion from lacrimal gland
- Unequal distribution of tear during blinking
- Increase evaporation from ocular surface
- Less drainage through the nasolacrimal duct

Tear Secretion

Tears are produced by the lacrimal gland and spread over the ocular surface by blinking. Some of the tear evaporates and the rest are drained by the nasolacrimal duct. Tear film secretion drops during sleep and when the patient is under general anaesthesia. Excessive exposure to VDUs and AC

temperature causes decrease in tear production.

Distribution by Blinking

Tears are spread over the ocular surface and drained through the lacrimal puncta by blinking. Alteration in the blink can cause improper tear distribution leading to gritty sensation. Normal human blinking rate is 15-20 times per minute which slows down while reading, writing, watching VDUs, while driving or in darkness. The average blinking time per minute is 4.2secs. This is reduced to 1.77 secs. Blinking is initiated by decrease in corneal temperature. For a given humidity, the blink rate is inversely proportional to the ambient temperature.

Evaporation from Ocular Surface

In a normal eye, 10% of the tear volume evaporates and 90% is drained through the puncta. The rate of evaporation can increase up to 3-4 times in up gaze as compared to down gaze which is a cause of ocular fatigue in VDU users.

Tear Drainage

In case of subnormal tear production, a decreased rate of clearance of the tear film can cause a prolonged contact of the ocular surface with the substances present in tear film causing a foreign body sensation, burning sensation and discomfort.

Preventive Measures for VDU Users

- Follow rule 20. After every 20 minutes of computer/ smart phone work take a pause of 20 seconds by looking at a distance of 20 feet or more and count 1 to 20.
- Consciously increase blinking rate while you are working with the computers.

- Lower the computer display screen to your eye level to reduce the up gaze which reduces the exposed ocular surface.
- Adequate lighting of computer room is required, preferably at the side walls. The video screen & background wall should not reflect such light sources.
- Ambient room temperature is required. Use of air conditioners with room humidifiers is useful
- Do not work with VDUs in a dark room.
- Not to work with computers at a stretch for more than 2 hours. Apart from eye problems, it causes back pain, cervical problem, wrist pain, deep vein thrombosis in legs.
- Use of eye glasses with correct power coated with anti reflective coating(ARC) is helpful
- Your eye – VDU distance should be more than 24 inches. Comfortable table sitting arrangements and proper placement of keyboard are required.
- Use of different tear substitutes prescribed by your eye doctor helps to relieve discomforts.

Whether it is work, entertainment or education, we cannot escape VDUs in today's world. We have to adjust our life style according to our needs and also giving priority to our health by using VDUs judiciously.

