



## Utility of plant sourced homoeopathic medicines in eye strain during covid lockdown– An overview

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### Abstract

The lockdown declaration is mandatory to prevent spread of Covid-19 infection, so there is an increase in usage of digital devices from studies till work. Eyestrain is an emerging challenge we have to face from usage of Electronic Gadgets. This Article highlights about Eye Strain, its risk factors, ways to prevent Eye strain, Diet for Eye Health, and an overview about Vegetable Sourced Homoeopathic Medicines to treat it.

**Keywords:** homoeopathy, eye strain, computer vision syndrome, plant medicines, herbs, botany

### Introduction

#### Digital Eye Strain

Digital Eye Strain (DES) or Computer Vision Syndrome as defined by the American Optometric Association highlights a range of visual and ocular symptoms arising due to the prolonged use of digital electronic devices. Due to Covid - 19 lockdown there is a need to study and work, from students to workers, using gadgets like mobiles, computers, laptop and tablets, which may lead to digital eye strain in people. Viewing such gadgets can create an eye strain which can lead to development of vision related symptoms. If it is uncorrected it can increase the severity of Digital Eye strain symptoms <sup>[1]</sup>. The list of symptoms includes Eyestrain, headache, blurred vision, dry eyes, neck pain and shoulder pain. Burning eyes, photophobia, ocular discomfort and dryness of eyes can also be seen <sup>[3]</sup>. Usually these symptoms are caused by Poor lighting, glare on digital screens, poor seating position and uncorrected vision problems. Uncorrected vision problem which predisposes to digital eye strain includes far sightedness, astigmatism, eye coordination disabilities and presbyopia <sup>[1]</sup>.

Digital Eye Strain can be diagnosed through a comprehensive eye examination. Testing, with special emphasis on visual requirements at the computer or digital device working distance, may include:

1. Patient's history - general health problems, medication taken and other environmental factors which may contribute to symptoms related to computer use.
2. Test to find out visual acuity.
3. Refraction to take care of refractive errors
4. Test to check for eye movements and eye coordination.

Using the information obtained from these tests, along with results of other tests, the optometrist can evaluate Digital Eye Strain and can advise on treatment options <sup>[2]</sup>. Eye strain in children can lead to myopia or permanent short-sightedness. Hence care should be taken in eye health. Solutions to digital screen-related vision problems are varied.

However, they can usually be alleviated by obtaining regular eye care and making changes in how the screen is viewed.

#### Ways to take care of Eyes

1. When we focus on a close object like a screen, the contraction of ciliary muscles changes the shape of the lenses inside the eyes, focusing the image on to the retina. Relaxing the muscles in and around your eyes can help in relieving eye strain. Once in 20 minutes, just look at something at least 20ft away, for 20 seconds.
2. Blinking will clear away dust and dirt and wash the surface of the eye with tear fluid. Tear fluid keeps the cornea of the eyeball moist. When we read from a screen we blink less often hence we can suffer from eye strain. So stop working on your screen every once in a while - and close your eyes completely.
3. Keeping the right distance between screen and face is essential to prevent eye strain. At Least 40 to 75 cm distance should be maintained especially while working in laptops. Even usage of external keyboards with laptops will help significantly.
4. The screens of the computer should be set up at, or slightly below the eye level can minimize eye strain. Looking up, or too far down, may also give you shoulder and neck problems.
5. Choose the correct font size while working according to your convenience. Avoid working on smartphones and tablets which can worsen eye strain.
6. Avoid working in a dark room with a bright screen. Dark text on a light background is generally better for your eyes than light text on a dark background.
7. Getting outdoors for a break is a great way of relieving pressure on your eyes <sup>[4, 5]</sup>

#### Nutrition for Eye Health

Taking an antioxidant rich diet can help in improving our eye health.

### 1. Vitamin A

Vitamin A deficiency is one of the most common causes of blindness in the world. Deficiency of Vitamin A can lead to Night blindness and dryness of eyes. Vitamin A is abundant in liver, egg yolks, and dairy products. Provitamin A carotenoids fulfills 30% of one's vitamin A requirements. The most efficient of them is beta-carotene, which is found in high amounts in kale, spinach, and carrots.

### 2. Lutein and Zeaxanthin

Lutein and zeaxanthin are yellow carotenoid antioxidants which help to prevent eye damage from sunlight and harmful blue light from mobile and laptop screens. Lutein and zeaxanthin are rich in food like Spinach, swiss chard, kale, parsley, pistachios, red grapes and green peas.

### 3. Omega-3 Fatty Acids

The long-chain omega-3 fatty acids EPA and DHA are important for eye health.

DHA is especially essential for brain and eye development in infants.

The best dietary source of EPA and DHA is rich in fish and microalgae.

### 4. Gamma-Linolenic Acid

Gamma Linolenic acid is a form of omega 6 fatty acid, which is known for its antioxidant property. It even has anti-inflammatory properties. Gamma Linolenic acid is rich in primrose oil and starflower oil.

### 5. Vitamin C

Vitamin C has antioxidant properties hence its intake can benefit us. It is rich in the Aqueous humor of Eyeball. Peppers, citrus fruits, guavas, kale, and broccoli are rich sources for Vitamin C.

### 6. Vitamin E

Retina has a high concentration of fatty acids. Vitamin E, a fat soluble vitamin that acts as an antioxidant which protects fatty acids from oxidation threat. Vitamin E is rich in almonds, sunflower seeds, and vegetable oils like flaxseed oil.

### 7. Zinc

Zinc helps in formation of visual pigments of Retina. Zinc deficiency can lead to Night Blindness. So intake of Zinc rich food can take care of Eye health. Zinc is rich in oysters, meat, pumpkin seeds, and peanuts [6].

### Homoeopathic Medicines in Eyestrain

The Plant sourced Homoeopathic Medicines for Eye strain includes Arnica Montana, Belladonna, Bryonia Alba, Euphrasia Officinalis, Physostigma Venenosum, Onosmodium Virginianum, Pulsatilla Nigricans, Rhus Toxicodendron, Ruta Graveolens, Senega, Staphysagria. These Medicines are considered by referring Synthesis Repertory and rubrics considered were Eye - Pain - light from (Artificial light, Bright light, Dim Light), Eye - Pain - exertion of eyes aggravation and Eye – Strained [7].

**Table 1:** List of Medicines, its Common name and Family

Sl.No.	Medicine Name	Common Name	Family
1.	Arnica Montana	Leopards Bane	Asteraceae [8]
2.	Belladonna	Deadly Nightshade	Solanacea [9]
3.	Bryonia Alba	White Bryony	Curcurbitaceae [10]
4.	Euphrasia Officinalis	Eyewort	Scrophulariaceae [11]
5.	Physostigma Venenosum	Calabar Bean	Leguminosae [12]
6.	Onosmodium Virginianum	Virginia False Gromwell	Boraginaceae [13]
7.	Pulsatilla	Windflower	Ranunculaceae [14]
8.	Rhus Toxicodendron	Poison Oak	Anacardiaceae [15]
9.	Ruta Graveolens	Rue	Rutaceae [16]
10.	Senega	Seneca Snakeroot	Polygalaceae [17]
11.	Staphysagria	Stavesacre	Ranunculaceae [18]

### Discussion

Lockdown is mandatory to prevent rapid transmission of Covid 19. At the same time studies and work should not be compromised. Hence home based learning programmes by online classes for students and work from home by workers with electronic gadgets like computers, laptops, mobiles, tablets etc has become essential. At the same time, usage of electronic gadgets can lead to digital eye strain in the long term. Conventional medicines have limited medicine access to treat Digital eye strain, alternative systems of medicines have good scope in treating such conditions. The list of medicines to treat Eye Strain is available in Homoeopathic Literatures. After referring to Homoeopathic books, the list of medicines is highlighted with its common name and family. The medicines should not be self-administered instead with proper advice of Homoeopathic physicians it can be safely taken. With lifestyle modifications, intake of dietary substitutes and with indicated Homoeopathic medicines, eye health can be taken care of and eye strain can be treated.

### Conclusion

The Research can be conducted in people who are suffering from eye strain with indicated Homoeopathic medicines, the leading medicines for eye strain can be identified and utilized in future. Since Homoeopathic medicines are cost effective and free from side effects, it can be considered to treat larger populations.

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