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Review Article

# A SYSTEMIC REVIEW ON OCULAR DISEASE DUE TO VIRTUAL ENVIRONMENT

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**ABSTRACT**

As the COVID-19 epidemic continues, when it comes to studying at home or working from home, there are no escape devices. They serve as an important link in human life and learning and the working environment. As with any useful tool, certain digital devices can sometimes be "very good." The COVID-19 epidemic has led to increased use of digital devices, which poses a greater risk of developing digital eye symptoms. Eye care professionals should educate patients about screen time limitations and digital eye signage management, leading to the challenge of annual visual programs. The effects of ocular surface health and circadian rhythm abnormalities associated with ocular disease such as computer vision syndrome, dry eyes, astigmatism, near vision, muscle mass etc. are increasing. In this covid epidemic 19 the widespread use of Herbal medicine and the use of Ayurvedic medicine increases when conventional medicine does not work in the treatment of diseases. Ayurveda is considered to be one of the best remedies for disease and lead to a healthy lifestyle in ancient India. Trataka treatments and head rubbing are also a good exercise for eye health. Oncological diseases ayurvedic remedies such as Haritaki, Malaki, Vibhitaki, Alovera are widely used. Triphala is a powerful Ayurvedic tonic containing three traditional fruits that have long been used to treat various health conditions of ocular disease. This is a traditional eye procedure and is very easy to keep the eyes healthy. Ginkgo biloba is used in traditional medicine recommended to enhance vision.

**Keywords:** Ayurveda, Amlaki, Computer vision syndrome, Dry eye, E-learning, Eye-disease, Ginkgo biloba, Haritaki, Vibhitaki, Triphala, Virtual environment


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## INTRODUCTION

The eye is quite possibly the most intricate organs in the human body. There are three layers to the natural eye. The external locale comprises of the cornea and sclera. The cornea likewise sends and communicates light to the focal point and retina and shields the eye from disease and underlying harm in the more profound parts. The sclera frames a layer of connective tissue that shields the eye from inside and outside powers and keeps up with its shape. The cornea and sclera are associated with the limbus. The noticeable piece of the sclera is covered by a reasonable mucous film, the conjunctiva. The center layer is comprised of the iris, the ciliary body and the choroid. The iris controls the size of the understudy, so the measure of light arrives at the retina; the ciliary body manages the energy and organization of the focal point and is a wellspring of water creation; and choroid is a layer of conduits that supply oxygen and supplements to the external layers of the retina. The inward layer of the eye is the retina, a perplexing, complex design of tactile nerves that catches and cycles light. The three most clear constructions encompassed by visual layers are called water, glassy and focal point [1-3].

In this Coronavirus pandemics, home seclusion, E-learning in and telecommute caused expanded utilization of computerized gadgets, representing a more serious danger of creating advanced eye stressed side effects and other eye-related issues. Eye inconveniences are normal result of being an understudy or worker in a virtual climate. Individuals invest such a lot of energy on PCs and versatile, web-based media, staring at the television/film it is causing visual sickness. Eye issue ought not be disregarded. There are issues which happen because of virtual climate like eye consuming, dry eyes, and cerebral pains. Eye care proficient ought to instruct patients about restricting screen time and overseeing digitals eye strains disorder [4].

On account of Coronavirus, home isolation, E-learning and schoolwork have prompted expanded utilization of advanced gadgets, which represents a more serious danger of computerized signage and other eye-related issues. Eye issues are a typical aftereffect of being an understudy or a task in an apparent climate. Individuals invest a ton of energy on PCs and mobile phones, via web-based media, sitting in front of the TV/films-practically inescapable sicknesses. Eye issues ought not be neglected. Issues happen because of actual factors like a burn from the sun, dry eyes, and migraines. Eyecare experts ought to teach patients about screen time cutoff points and control strains disorder [5].

As the COVID-19 plague proceeds, numerous parts of our lives are unsure, and better approaches for learning can influence kids' lives from various perspectives, including their perspectives like, More and more computerized learning will make its own challenges, Some youngsters may not hear an opportunity to get the point of view tests they generally get at school-which regularly makes a spot to breeze through a total eye assessment, Parents may not know what vision issues resemble when kids are learning at home. In the shortfall of true leave or outside sports exercises, kids might invest less energy on physical activities [5].

Working from home causes PC vision illness in grown-ups and individuals between the ages. When chipping away at a PC, your eyes ought to consistently be engaged a lot. Go to and froth as you read. You might have to peer down the papers and return to composing. Your eyes react to steadily evolving pictures, moving center, and sending prompt pictures to the mind. These exercises require a great deal of exertion from your eye muscles. Furthermore, to compound the situation, in contrast to a book or a piece of paper, the screen adds differentiation, splendour, and brilliance. Likewise, it is demonstrated that we squint regularly when utilizing a PC, which makes dry eyes and obscured vision from time while working. PC work turns out to be more troublesome as you develop more established and the normal focal points in your eyes become more adaptable. Somewhere else in your 40's, your capacity to zero in on all over is probably going to be restricted. Your eye specialist will call this condition presbyopia [5].

There is no evidence that computer use causes any long-term damage to the eyes. In any case, normal use can prompt eye strain and distress. Symptoms include: Blurred vision, blurred vision, thirst, red eyes, irritation of the eyes, headache, neck or back pain [5].

There are several ocular problems due to the visible nature of the eye:

Computer vision syndrome: symptoms caused by prolonged viewing of a computer screen or other digital device screen.

Muscle type: Stretching or tearing of a muscle or tendon. The remains usually appear on the lower back and posterior muscles of the thigh. Symptoms include pain, swelling, muscle stiffness and muscle tightness. Treatment may include pain relief, ice, or fractures.

Dry eyes: A dry eye that occurs when the tears do not provide enough moisture. The danger of fostering this condition increments with age. It is also commonly seen in postmenopausal women. The eye may be dry, red, and inflamed. The fundamental manifestations are distress and affectability to light. Eye contact and eye drops can reduce thirst.

Astigmatism: A common defect in the eyelids. With astigmatism, the front of the eye or the inner lens of the eye is bent differently on one side than the other. The most common sign is blurred vision. Treatment includes doctor's glasses or contact lenses. Laser-helped a medical procedures, like LASIK, can likewise help.

Nearby sight: A situation where nearby objects appear clearly, but distant objects do not show. Close-ups often run in families. The distant objects seem to fade. The condition can develop gradually or rapidly. Treatment options include glasses, contact lenses and surgery such as LASIK [6].

In India, Ayurvedic care offers the largest program through a fully functional network of registered staff, research centres and licensed pharmacists. Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH) are well-known medical programs and have been integrated into the national health care system. Of these, Ayurveda is an ancient medical system with an impressive record of safety and effectiveness. There is a growing awareness, nationally and internationally, of the need to incorporate the contributions of these health information systems into greater compliance with modern medicine limits. A study on the role of AYUSH and Local Health Traditions under the auspices of the National Rural Health Mission (NRHM) in 18 provinces across India, was studied. The pivotal outcomes and perceptions conclude that 80-90% of households aware about utility of AYUSH and Local health traditions (LHTs), co-located services are well utilized in some states, and preference was for chronic illness followed by acute illness and health promotion [7-10].

Ophthalmology (shalakyatantra) is one of eight Ayurvedic-related medical treatments for the management of eye diseases including all other head and neck problems. Ayurvedic eye diseases and treatments are well-known, but their effects are still felt and recognized by medical organizations and the general public. Apart from extensive research and application of various scientific and technological advances, problems with the management of conditions such as retinitis pigmentosa, glaucoma, degenerative neuroophthalmic ulcers, chronic adnexa diseases remain unresolved for decades. With this in mind it is very important to develop and evaluate confidential medical information for better management of such ocular conditions [11].

Ayurveda offers comprehensive and effective ways to manage such situations. Many traditional indigenous eye systems have been severely damaged by the search for tangible evidence of safety and effectiveness; call for scientific research and validation. Ayurveda presents different concepts and principles for the management of eye diseases and the efforts being made to prove the effectiveness of its methods [12-15].

Various plant can provide various therapeutic effects such as improving eye vision, and strengthening eye sights and useful in ophthalmology treatment such as anti-inflammatory, anti-fungus etc.

There are several plants and plant's part are used which provide various therapeutics effect on eyes. Ayurvedic plants like Amlaki, Haritaki, Vibhitaki, Tulsi, Punernava, Palash, Ginkgo biloba, Kalonji, Graecum etc.

There is list of some ayurvedic plants which are useful in various type of ocular disease which are mentioned below:

**Emblica officinalies**

Common name: Amlaki, Amla

Chemical constituents: Ellagic acid, gallic acid, phyllantine, chebulic acid, chebulinic acid, tannin, vitamins.

Use: Improve eye sights, Beneficial in the treatment of conjunctivitis and glaucoma and cataract [16, 17].

**Terminalia chebula**

Common name: Haritaki

Chemical constituents: Chebulin, ellagic acid, gallic acid, chebulilinic acid, terflavin A-D, tannic acid, ethyl gallate

Use: The prevention of age-related eye disorders like Age-related macular degeneration (ARMD), Senile Cataract, Open-angle glaucoma and Retinal degeneration [16, 17].

**Terminalia bellerica**

Common name Vibhitaki

Chemical constituents: Bellericosides, hexahydroxydipjenic acid, methyl ester, beta-sitosterol, gallic acid, ethyl gallate, ellagic acid, chebulagic acid, mannitol, glucose, galloyl glucose

Use: Used in cataract, glaucoma, progressive myopia and conjunctivitis [16, 17]

**Boerhaviadiffusa**

Common name Punarnava

Chemical constituents: Punarnavine, punarvoside, beta-sitosterol, tetracosanoic, hexacosanoic, stearic acid, ursolic acid, oxalic acid, mysristic acid

Use: Prevent night blindness and conjunctivitis [16, 17].

**Ocimum sanctum linn**

Common name Tulasi

Chemical constituents: Carvacrol, camphere, eugenol, ascorbic acid, beta-carotene, apigenin, ascorbic acid, glyocosides, saponin, tannin, sitosterol, palmitic acid and oleic acid.

Use: Help in prevent conjunctivitis and cataract, also used as anti-inflammatory and soothing properties that help to protect eyes from environmental damage and free radical [16, 17]

**Butea monosperma**

Common name Palash

Chemical constituents: Palasonin, aleuritic acid, butrin, isobutrin, coreospsin, sulphurein, monospermoside, isomonospermoside, tannic acid, gallic acid, bets sitosterol

Use: Used in conjunctivitis and cataract [16, 17].

**Nigella sativa**

Common name Kalonji

Chemical constituents: alanine, arginine, ascorbic-acid, asparagine, campesterol, carvone, cymene, cystine, dehydroascorbic-acid, eicosadienoic-acid, glucose, glutamic acid, glycine, iron, isoleucine, leucine, linolenic-acid, lipase, lysine, methionine, myristic-acid, nigellin, nigellone, oleic-acid, thymoquinone.

Use: Used in Cataract.

**Trigonellafoenum**

Common name Graecum, Fenugreek seed

Chemical constituents: Ascorbic acid, carotene, beta-carotene, thiamine, niacin, vitamin C, quercetin, kaempferol.

Use: Used in cataract and as an anti-inflammatory agent

**Aloe barbadensis miller**

Common name Aloe vera

Chemical constituents: Aloein, aleo amodine, cinnamic acid, saponin, lignin, vitamin C, amino acids.

Use: Used as anti-inflammatory [16, 17].

**Rosa L. (Bridal Pink)**

Common name: Rose

Common name: Anthocyanins, flavonoids.

Use: Used in conjunctivitis, dry eyes

**Ginkgo biloba**

Chemical constituents: terpene lactones-ginkgolides and diterpenes and ginkgo flavone glycosides-ginkgetin, bilobetin, and sciadopitysin

Use: Used in Glaucoma, dry eyes, improve eye-sights

**Computer vision syndrome**

It is also known as digital eye type, which is defined as eye-related problems caused by the use of a computer, tablet, e-reader, laptop and cell phone. Many individuals experience eye distress and vision issues when watching digital screens for significant stretches of time. The issue-level is ascending with the utilization of digital screens [16, 17].

The normal American worker goes through seven hours every day at the PC either in the workplace or at home. To help reduce digital eye strain, follow rule 20-20-20; take a 20-minute break to watch something every 20 meters every 20 min [18, 19].

Children should be taught how to stay away from screens and for how long. They often adapt to illegal working conditions and pay attention to specific complaints. It takes a lot of work to address the gaps in our knowledge. When there are no major lessons, it is reasonable to assume that children should spend only enough time needed before devices. This will deal with the child's obesity epidemic as well. Over time, we can see that our fears have not been supported but until we make technology completely safe for children, we must develop caution [20].

**Causes and risk factors**

Observing a computer or digital screen continuously often makes the eyes work harder. As a result, the unique features and high visibility requirements of computer and digital screen viewing make more people inclined to develop vision-related features. Irritating vision issues can build the seriousness of PC vision disorder (CVS) or advanced eye indications. Long-term computer viewing is different from reading a printed page. Often the characters in a computer or in a handheld device are not defined accurately or precisely, the comparative level of the background characters decreases, and the availability of bright light and screen appearance can make viewing difficult. Viewing the distances and angles used for this type of activity are also often different from those used for other reading or writing activities. Accordingly, the vision and eye development prerequisites in a computerized screen survey might put extra necessities on the visual framework. In addition, the presence of minor vision problems may significantly affect comfort and performance on a computer or while using other digital screen devices. Inadequate or undergoing corrected vision problems can be major causes contributing to computer-related difficulties. Even people with eyeglasses or contact lenses may find that they do not fit certain viewing angles on their computer screen. Some people are tilting their heads in opposite directions because their mirrors are not designed to look at a computer or they bend down to the screen to see clearly. Their posture can lead to muscle aches or pains in the neck, shoulder or back. In many cases, CVS symptoms occur because the visual needs of the work exceed the visual perception of a person to do it well. Those most in danger of creating CVS are the individuals who go through two hours or even more persistently at a PC or utilizing a digital screen gadget consistently [18-20].

Symptoms:

• Headaches.

• Blurred vision.

• Dry eyes.

• Neck and shoulder pain.

These symptoms can be caused by:

• Poor lighting.

• Brightness on the digital screen.

• Incorrect viewing distances.

• Poor living conditions.

• Unresolved vision problems

The level at which individuals experience visual signals regularly relies upon the level of their visual abilities and the time spent taking looking at the digital screen. Unresolved vision problems such as farsightedness and astigmatism, poor eye focus or eye coordination skills, and eye agility, such as presbyopia, can all help to improve visual acuity when using a computer or digital screen device. Most of the symptoms visible to users are temporary and will go away after stopping computer operation or the use of the device. However, a few groups might keep on decreasing their visual sharpness, like obscured vision, and even get-togethers quit working on a PC. In case nothing is done to tackle the reason for the issue, the indications will proceed to repeat and maybe deteriorate with the utilization of future computerized screens [18, 19].

**Pathophysiology**

The focus of the human eye is not the same as the printed text and visual display unit but it provides feedback in a variety of ways. Each printed letter is made up of a well-defined letter throughout its space, and VDT characters are made up of pixels above the screen. Each pixel is illuminated in its center and with dim light to the other side. So that human eyes can strengthen focus on pixel letters. Instead, the focus program stays behind the computer screen due to the precise position of the computer user's preferred position in relation to reading printed text. This point is called the black focus. So, the eyes are always at rest in the dark or in the dark and striving to get the focus on the pixel character on a regular basis. This repeated and repeated focus on the ciliary body causes eye fatigue and causes permanent symptoms associated with CV. This lag of residence leads to ocular symptoms associated with CVS. Notwithstanding these, the pictures framed by pixels and raster need sharp edges thus which makes an under the incitement of convenience and causes linger of convenience behind the screen because of obscured characters of writings [21-25].

**Diagnosis**

CVS, or computer-assisted eye fatigue, can be diagnosed with a comprehensive eye examination. Testing, with an exceptional emphasis on visual requirements on a PC or computer gadget's operating range, may include Patient history of determining any manifestations a patient experiences and the presence of any broader medical conditions, medications taken or genetic variables that may add to the indications identified for PC use. Visual sharpening measurement to assess the extent to which the view can be influenced. It also decides to determine the appropriate concentration strength that is expected to be made for any retrieval errors (partial blindness, blurred vision or astigmatism). Exploring how the eyes are in the middle, how they move and how they interact. To get a clear picture, one of which is visual, the eyes must adequately alter the center, move and function as a joint. This test will look at the problem that prevents the eyes from concentrating properly or making it difficult to use both eyes together. In this experiment, the eye drops may not be used to determine how the eyes respond under normal visual conditions. In some cases, for example, when part of the focus of the eye may be combined, eye drops may be used. They briefly held the eyes back from changing the concentration while the test was completed. Using the data from these tests, in addition to the results of a separate test, an optometry specialist may determine the presence of CVS or computer-assisted fatigue and recommend alternative therapies [18, 19].

**Treatment**

- Solutions to the digital problems associated with digital screens vary. However, they can often be reduced by getting regular eye care

and making changes in the way the screen is viewed. In some cases, people who do not need the use of daily exercise glasses can benefit from glasses that are explicitly approved for PC use. In addition, people who are already wearing glasses may find their current medications do not offer a good computer view.

- Optical eyeglasses or contact lenses for normal use may not be sufficient for computer function. Lens designed to meet different computer viewing requirements may be required. Special lens designs, lens strength or lens colour or coverage can help enhance visual and luxury skills.

- Some computer users have problems with eye focus or eye contact that may not be adequately repaired with eyeglasses or contact lenses. A vision therapy program may be needed to treat this problem. Vision therapy, also called visual training, is a systematic program of visual acuity activities to improve visual skills. It trains the eyes and the brain to work together with great success. These eye tests help with acute deficits in eye movements, eye-focus, and eye contact and strengthen eye-brain contact. Treatment may include office procedures and home training procedures [18, 19].

**Viewing the computer**

Body posture suitable for computer use. Other important factors in preventing or reducing CVS symptoms are related to the computer and how it is used. These include lighting conditions, the comfort of the chair, the location of appliances, the monitoring area, and the use of leisure breaks.

- Computer screen location: Most people find it comfortable to look at the computer with their eyes down. Ideally, the computer screen should be 15 to 20 degrees below eye level (approximately 4 or 5 inches) as measured from the center of the screen and 20 to 28 inches from the eyes. Materials: These items should be located above the keyboard and under the monitor. If this does not happen, the document holder may be used next to the monitor. The purpose is to place the documents, so the head does not need to be reset from the document to the screen.

- Lighting: Set up a computer screen to avoid light, especially in high light or on windows. Use blinds or drapes on windows and switch lights in desk lights with low wattage bulbs.

- Anti-glare screens: If there is no way to reduce light from simple sources, consider using a screen glare filter. These filters reduce the amount of light emanating from the screen.

- Seating: Seats should be well-fitted and comfortable. The height of the seat should be adjusted so that the feet sit flat on the floor. Weapons should be adjusted to provide support while typing and the wrists should not remain on the keyboard when typing.

- Rest breaks: To prevent eyestrain, try to rest your eyes while using the computer for extended periods of time. Eye contact 15 min after 2 h of continuous computer use. Also, for every 20 min of computer viewing, look into the distance for 20 seconds to allow the eyes a chance to meet.

- Blinking: To reduce the risk of dry eye while using a computer, try to blink regularly. Blinks retain the frontal area of moisture and eye. Regular eye examinations and proper eye examination habits can help prevent or reduce the development of symptoms associated with CVS [16, 17].

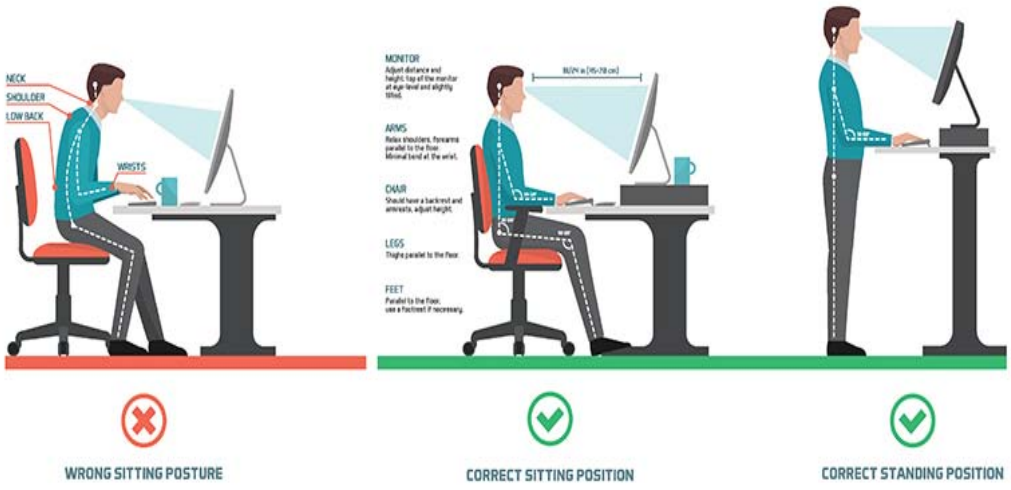


**Fig. 2: Position of viewing the computer**

**Prevention**

Preventing or minimizing vision problems associated with CVS or digital eyestrain includes taking steps to control brightness and brightness on the device screen, establishing performance scales and good screen viewing and ensuring that minor vision problems are properly corrected.

Suggestions for patients with computer vision syndrome:

- Don't take a vision problem to work: Even if glasses are not needed for driving, reading or other activities, they still may offer benefits for a minor vision problem that is aggravated by computer use. A mild glasses prescription may be needed to reduce vision stress on the job. It's a good idea for computer users to get a thorough eye exam every year.

- Glasses should satisfy the need of the work: If glasses are worn for far off vision, perusing or both, they may not give the most effective vision to survey a PC screen, which is around 20 to 30 crawls from the eyes. Tell the doctor about job tasks and measure on-the-job sight distances. Accurate information will help get the best vision improvement. Patients may benefit from one of the new lens designs made specifically for computer work.

- Minimize discomfort from blue light and glare: blue light from LED and fluorescent lighting, as well as monitors, tablets and mobile devices, can negatively affect vision over the long term. Special lens tints and coatings can reduce the harmful impact of blue light. Minimize glare on the computer screen by using a glare reduction filter, repositioning the screen or using drapes, shades or blinds. Also, keeping screens clean; dirt-free and removing fingerprints can decrease glare and improve clarity.

- Adjust work area and computer for comfort: When using computers, most people prefer a work surface height of about 26 inches. Desks and tables should be 29 inches high. Place the

computer screen 16 to 30 inches away. The top of the screen should be slightly below horizontal eye level. Tilt the top of the screen away at a 10-to 20-degree angle.

- Use an adjustable copyholder**:** Place reference material at the same distance from eyes as the computer screen and as close to the screen as possible. That way the eyes won't have to change focus when looking from one to the other.

- Take alternative task breaks throughout the day: Make phone calls or photocopies. Consult with co-workers. After working on the computer for an extended period, do anything in which the eyes don't have to focus on something up close [16, 17].

**Dry eye**

Dry eye incidence of 10.1-21.5% among office workers has been reported from different subgroups in Japan. It is hypothesized that dryness, consumption, dirt, or greatness after a lengthy meeting at the workstation might be ascribed to visual surface issues. Clients' eyes sometime even hyperlacrimate trying to re-establish the compound equilibrium and rewet the eye. Environmental factors like dry air-conditioned interiors, draught from ventilation fans, static build-up, airborne paper, and general office dust can have some bearing on the ocular surface symptoms [26, 27].

The level of blinking while working on a computer has been reported to be significantly lower than normal. This leads to a low level of tear film. Lower browsing rate decreased from 22 per minute free and up to 10 per minute while reading the book and 7 per minute on VDT in a study of 104 office workers. However, the quality of the tear film measured by the duration of the tear, the experiments of Schirmer I and Jones were not significantly affected while using the computer. Various blink patterns have been described in patients with the disease but none of them have been proven in subsequent studies. Blink values found to decrease with reduced font size, reduced variation, increased job demand, and space between characters and lines. The words with a combination of major and minor cases are better tolerated than all major case documents. It is recommended that spacing between characters and lines should allow for half a character space between words and a single character space between lines. The black letters facing the small back light screen are better received in contrast to the contrast. The use of elastoviscous drops is not associated with the development of blinking levels. A study of 112 non-computerized contact lenses found that 68% of men and 73% of women reported symptoms of dry eye [26-31].

Studies based on videokeratoscopy have shown that the optical system of the cornea is adversely affected by a set of the tear film. Ocular fatigue has been associated with ocular dryness in the past. Increased evaporation and decreased blinking during computer use lead to changes in the ocular surface and as a result were believed to lead to eye fatigue. The frequency of dry eye has been accounted for to increment with age. The predominance of dry eye and is more normal in women than in men. Artificial tears can be helpful for this group with dry eye conditions. Other than that, it does nothing to reduce symptoms. Often, the view changes from the printed word to the screen and vice versa is associated with eyestrain and should be addressed. The snatching was said to mean eyelash extraction by Sheedy *et al.* And was believed to reduce the level of blinking but recent research has shown that the symptoms were mild when swelling was used in laboratory conditions. Dry eye has been reported to be the cause of eye strain and its associated symptoms in the subcategory. Evidence of intent is still disputed in the matter [32-37].

**Improving eye health with ayurveda**

Let's try to understand the importance of eye care according to Ayurveda and learn simple ways to incorporate eye care techniques into our diet and lifestyle to prevent such issues.

The eyes are considered the seat of the pitta dosha and require proper care, cooling and regular brushing. If the blink of an eye is much lower than normal, this cooling and softening process is interrupted, thus increasing the chances of complications related to eye pressure. If it's not too much trouble, see beneath a portion of the eye care tips suggested from Ayurveda [38].

**Ayurvedic eye care tips**

Always rinse your eyes with cold water in the morning. This removes dried mucus and dirt that has accumulated in the eyes and stimulates the eyelids. The eyes always benefit from the cool creation.

Don’t use any chemical beauty products around the eyes. Try using Ayurvedic Kajal or eyeliner daily treatment to cleanse and nourish the eyes.

Regular head massage is good for improving circulation around the area and relaxing the muscles needed to maintain the ability to look and rejuvenate the tear glands. You can use coconut oil or any of its medicinal varieties.

**Fig. 3: Head massage**

**Palming the eyes**

Rub the palms of your hands quickly for 10 seconds and wrap your hands over them. Avoid putting any pressure on the eyeballs. Rest in this position for 2-3 min, then try to repeat every 30 min especially if you are very active on the screens. Take a deep breath and look at the space in front of your eyes.

Try to stay in the shade and avoid direct exposure to strong sunlight. Wear a hat or good protective glass if you are sitting outside for several hours [38].

**Trataka meditation**

Exercise is also an important factor in maintaining good vision and eye health. The traditional way to do this would be by meditating on the so-called trataka view in Yoga. According to the ancient book, 'Hatha Yoga Pradipika', trataka is defined as 'a steady, steady gaze from a small point to tears.' This is one of the shat kriyas or six cleansing methods described in Hatha Yoga, and they also help to cleanse and heal the eyes [38, 39].

**Fig. 4: Trataka aasan**

**Ayurvedic herbs used in ocular disease**

Apply a cotton swab dipped in cold frozen water over the eyes for 10 min once daily to relax and clean the eyes. This will also reduce the tendency for dark circles around the eyes. Cucumber slices are also considered good.

Strain the aloe vera meat into a cube large enough to hold your finger well and freeze separately. When the eyes feel tired, take one cube out of the fridge and rub the face and the area around the eyes at the same time every day preferably in the evening. When the cube is finished, keep your cold finger on the eyes to calm them down [38].

**Fig. 5: Aloe vera**

**Fig. 6: Rose water**

**Triphala**

Also known as the "three fruits", Triphala is a powerful Ayurvedic tonic with three traditional fruits that have long been used to treat various health conditions-Amla or Amlaki (Emblica officinalis), Haritaki (Terminalia chebula) and Bibhitaki (Terminalia belerica). This is a traditional eye procedure and is very easy to keep the eyes healthy [38].

**Haritaki**

Its plant source is Terminalia chebula and is called Chebulic Myrobalans in Latin. Charaka even says that Haritaki is as nourishing and beneficial to everyone as mother's milk. He talks about it as an eye rasayana, which is why it can be used to prevent eye infections. It helps to improve agni, and thus improves the absorption of nutrients from the digestive system supported by various studies. Another good quality of this fruit is that it cleans the major circulatory channels, known as shrotovishodhini, meaning that it can clear channels, larger and smaller, called sarvah dosha prasamani (silences all-doshas), and fewer fruits and herbs with this name. It also supports the immune system. Above all, Haritaki has an anti-aging value "vayasthapani" (anti-aging). Therefore, it is recommended to prevent age-related eye disorders such as age-related macular degeneration (ARMD), Senile Cataract, Open-angle glaucoma and Retinal degeneration [39-41].

**Fig. 7: Haritaki fruit**

**Vibhitaki**

The source of the plant is Terminalia bellerica. It is said to be the leading homeostatic, which means it helps to control the internal environment especially the circulation of pure blood in the body. It is a good herb for the peace of both Pitta and Kapha. Acharayacharaka quotes vibhitaki as netrehitam, which means it is beneficial to the eyes and cleanses Rasa (plasma), Rakta (blood), Mamsa (muscle tissue) and Medo dhatus (tissue) adipose) when they act as dushyas (mature tissue) in the pathophysiology of disease formation [42].

**Fig. 8: Vibhitaki**

**Amalaki**

The source of the plant is emblica officinalies. It helps to cleanse the body of toxins, by increasing the absorption of food. When our metabolism is strong, the food we eat is converted into nutrients rather than digested and produces impurities (aama). Therefore, it removes toxins from the body. The eyes are another vital organ in malachi's case. In fact, the amalekites are called chakshusya, meaning “eye-catching rasayana [38].

This is because Amalaki develops both Ranjaka Pitta (one type of Pitta that regulates liver function and blood composition) and Alochaka Pitta (another type of pitta that controls the object of the eye/vision). Due to its high content of Vitamin C, Amalaki is a powerful antioxidant. Scientific research shows that Amalaki is a very powerful antioxidant, very effective in removing many free radicals, which are the basis of degenerative disease and aging. All of these qualities make Malachi an invaluable immune system [43-45].

**Fig. 9: Amlaki**

Make Triphala tea in distilled water using 1 tsp of powdered water in 200 ml. Strain the liquid when it is cold, using a cotton swab. Apply this cold solution in a face wash for both sides for 5-7 min. The astringent effect of Triphala berries causes a burning sensation but only at the beginning. Once the eyes are accustomed to it, it feels cool and comfortable. This is good to do once in the evening, and it works (endless) dry eyes, red eyes, and irritated conjunctiva.

**Ginkgo biloba**

Today, Ginkgo biloba is used in traditional medicine around the world. The remedy is widely used to support mental health as a brain tonic and to improve blood circulation in the body. Like natural antioxidants, the pot is considered beneficial for the eyes and is often recommended for strengthening or protecting eyesight. Due to its widespread use in natural medicine, herbs have become the subject of numerous studies. Their antioxidant properties protect them from stress-causing eye damage, but studies show other vision benefits. A study in Korea found that extracting ginkgo helped many people with glaucoma improve their vision. Ginkgo is one of the remedies for epilepsy due to its neuroprotective effects [46-50].

**Fig. 11: Ginkgo biloba**

**Natural ayurvedic diet to improve vision**

- Consumption of large amounts of apples and grapes helps to improving eye vision and eye-sights.
- Carrots contain vitamin A, which is beneficial for improving vision.
- Cucumber juice is also useful in improving eye vision.
- Adding spinach to diet on daily basis improve eye vision and it also purifies the blood, increases haemoglobin and improve vision.
- Many vegetables like Beetroot, tomatoes, lettuce, cabbage,green peas, orange and dates are a good source of vitamin A and useful in improvement of eye vision.
- Almonds are enhancing eyesight and soothe mental stress.
- Consuming blueberry juice is beneficial to the eyes [50].

**Summary**

The eye is quite possibly the most intricate organs in the human body. On account of Coronavirus, home isolation, E-learning and schoolwork have prompted expanded utilization of advanced gadgets, which represents a more serious danger of computerized signage and other eye-related issues. Working from home causes PC vision illness in grown-ups and individuals between the ages. The effects of ocular surface health and circadian rhythm abnormalities associated with ocular disease such as computer vision syndrome, dry eyes, astigmatism, near vision, muscle mass etc. are increasing. In this covid epidemic 19 the widespread use of Herbal medicine and the use of Ayurvedic medicine increases when conventional medicine does not work in the treatment of diseases. Ophthalmology (shalakyatantra) is one of eight Ayurvedic-related medical treatments for the management of eye diseases including all other head and neck problems. Ayurveda presents different concepts and principles for the management of eye diseases and the efforts being made to prove the effectiveness of its methods. Trataka treatments and head rubbing are also good exercise for eye health. Ayurvedic remedies such as Haritaki, Malaki, Vibhitaki, Alovera, ginkgo biloba, palash, Punernava are widely used. Triphala is a powerful Ayurvedic tonic containing three traditional fruits that have long been used to treat various health conditions of ocular disease. This is a traditional eye procedure and is very easy to keep the eyes healthy. Ginkgo biloba is used in traditional medicine recommended to enhance vision.

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**CONFLICT OF INTERESTS**

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