

TRATAKA KARMA A HOLISTIC APPROACH FOR COMPUTER VISION SYNDROME

¹Dr. Sakshi Sharma ²Prof. Mahendra Kumar Sharma

¹Assistant Professor at Dept. of *Swasthavritta & Yoga*, SBLD Ayurved Vishwa Bharti, Sardarshar, Rajasthan ²Professor & Head at P.G Dept. of *Sharir Rachna*, Dr. S.R Rajasthan Ayurved University, Jodhpur, Rajasthan, India

ABSTRACT

Eyes are vital sense organs in the body all our daily activities whether related to personal or professional lives depend on our eyes. As we are slowly converting into fully modernized scientific society, we are gradually becoming totally dependent on gadgets. Due to relentless use of video display terminal/computer screen, people are facing an occupational disorder, i.e., computer vision syndrome. The most common symptoms associated are eye strain, headache, blurred vision, dry eyes, and neck and shoulder pain etc. *Trataka Karma* is classified among *Shat Karma* and is indicated as the remedy for most of the eye related problems. Hence an attempt has been made to prepare eye exercise protocol for the patients suffering from Computer Vision Syndrome to provide them relief through the holistic, non-pharmacologic and therapeutic intervention

KEYWORDS: *Trataka Karma*, *Shat Karma*, Computer Vision Syndrome, holistic, non-pharmacologic

INTRODUCTION

Eye fatigue and several computer vision-related symptoms is a frequent complaint due to computer usage for academic or recreational purposes or social networking. Previous studies have suggested that eye disorders are commonly related to the fatigue of ocular muscles exacerbated by pain and tension resulting from computer work. Therefore, relaxation practices may help to relieve the eye¹

As we knew that when we are willing to strengthen any part of our body then the first thought which strikes our mind is exercising of that particular part this concept can be applied to the computer vision syndrome also as due to prolonged working on

computer our eyes also get tired by performing eye exercises we can strengthen our eyes muscles to cope up with such condition. Eye exercises will have a strengthening and toning up effect on visual ocular muscles. Regular practice of this can result in strong eyes and good vision perhaps to the end of life.

AIM

The main aim is to create eye exercise protocol for the patients of Computer Vision Syndrome to provide them relief from the related symptoms by the help of holistic approach like *Trataka Karma*.

EYE EXERCISE PROTOCOL:

Pre- *Trataka Karma*:

Following steps were included in the Pre-*Trataka karma* portion of eye exercise protocol which strengthens the ocular muscles of the eyes which is most affected in of Computer vision syndrome.

-Patients should remove contact lens or spectacles before performing all these exercises.

1. Eye Rotation:

i) Patient is advised to sit in *sukhasana* with straight back and neck, back, and hips lying in straight alignment.

ii) Patient should stretch his/her right hand and make a sign of thumb. A Thumb sign is used here to fix the gaze of the person in a particular direction which makes the eye exercise procedure easy.

iii) Patient should start rotating his hand in a clockwise direction by keeping the thumb sign intact and focusing on the thumb with his/her eyes.

iv) Patient should start rotating both of his eyeballs simultaneously with the rotation of his hand i.e. when the hand rotates in a clockwise direction the movement of the eyes will also be in the same direction.

v) Patient should do this rotation exercise three to four times with one hand.

vi) After this keep your hand in a relaxed position, close your eyes and relax for some time.

vii) Patient should stretch his/her left hand in the thumb sign and should start the same exercise but rotation of hand should be in the anticlockwise direction this time simultaneously with the hand eyes will also rotate in an anticlockwise direction.

viii) Repeat it three to four-times.

2. **Eye Marching:** Patient is advised to sit in *sukhasana* with straight back and neck, back, and hips lying in straight alignment.

i) Patient should stretch both hands and make a sign of thumb.

ii) Start moving both your hand far from each other slowly focus on the right thumb first and then on the left thumb keep focusing on both this thumb simultaneously one after the other as the thumb moves away from each other but the focusing should go on without interruption.

iii) After reaching a distance up to which thumbs can be easily visible, bring it back slowly to the original position but the movement of eyeballs should go without interruption.

iv) After coming to the original position relax your hand and eyes and relax for some time.

v) Again stretch both hands and make a sign of thumb again start moving both your hand in the opposite direction to each other but this time eye movement should be in opposite direction focus on your left thumb than on right thumb keep this movement continues with the movement of thumbs.

vi) After reaching a distance up to which thumbs can be seen without any difficulty one should start moving the thumb toward the original position but the movement of eyeballs should go without interruption.

vii) After coming to the original position relax your hand close your eyes and relax for some time.

viii) Repeat it three to four-times.

3. Eye Up and Down-

i) Patient is advised to sit in *sukhasana* with straight back and neck, back, and hips lying in straight alignment.

ii) Patient should stretch his/her hands and make a sign of thumb.

iii) Start moving your right hand towards the upward direction and your left hand towards the downward direction.

iv) Focus on the right thumb and then on the left thumb keep focusing on both these thumb simultaneously one after the other as the thumb moves away from each other but the focusing should go on without interruption.

v) After reaching a distance up to which thumbs can be seen without any difficulty one should start moving the thumb toward each other but the movement of eyeballs should go without interruption.

vi) After coming to the original position relax your hand close your eyes and relax for some time.

vii) Again make the thumb sign this time move left hand in the upward direction and right hand in the downward direction. But this time eye movement should be in the opposite direction focus on your left thumb than on your right thumb keep this movement continues with the movement of thumbs.

viii) After coming to the original position relax your hand close your eyes and relax for some time.

ix) Repeat it three to four-times.

4. Eyes far & near:

i) Patient is advised to sit in *sukhasana* with straight back and neck, back, and hips lying in straight alignment.

ii) Patient should stretch his/her hands and make a sign of thumb.

iii) By keeping your left hand at its original position move your right hand towards your body.

iv) Focus on the right thumb first and then on the left thumb keep focusing on both these thumb simultaneously one after the other as the thumb moves away from each other but the focusing should go on without interruption.

v) Move your thumb as much it is visible to our eyes easily, after that bring it back to its original position but the movement of the eyeball should remain constant from right to left.

vi) After coming to the original position relax your hand close your eyes and relax for some time.

vii) By keeping your right hand at its original position move your left hand towards your body.

viii) Now focus on your left thumb first and then on your right thumb keep focusing on both these thumb simultaneously one after the other as the thumb moves away from each other but the focusing should go on without interruption.

ix) Move your thumb as much it is visible to our eyes easily, after bringing it back to its original position but the movement of the eyeball should remain constant from left to right.

x) Repeat it three to four-times. After this keep your hand in a relaxed position, close your eyes and relax for some time.

***Trataka Karma* -**

*Hatayoga pradipika*² and *Gheranda Samhita*³ explains *Trataka Karma* one among the *Shat Karmas* it has been described as a bridge between *yoga & Raja yoga*.

The procedure of *trataka kriya* in our classics which means that one has to focus on the object until tear starts coming from his eyes.

Swami Swatmarama says to gaze at a small point or *sukshma lakshyam*. In *trataka* an object is gazed at until its form start manifests in front of the closed eyes. The point of concentration is commonly a symbol or object which can activate the inner potential and can absorb the mind. An object

is used to focus so that even after closing the eyes, the impression of that particular object remains for some time and *antaranga trataka* can easily be practiced. The main purpose behind focusing an external object is to stimulate the internal vision and to make that vision stable by stopping the eye movements.

Bindu Trataka Karma:

A dot is made on paper and placed at an appropriate distance and the patient is advised to focus on that *bindu* until tear starts coming from his eyes. *Bindu* has been used as the object for *trataka* because the patients which are already suffering from computer screens will find it easy to focus on something which is not illuminated and rather provides a soothing effect to the eyes. *Yogi Swatmaram* has quoted that one should focus on *Sukshyma lakshaya for trataka karma*, *bindu* can be considered as the best option for *Sukshyma lakshaya* than any other object

Method:

- i. Patients were advised to remove contact lenses and glasses before starting the procedure.
- ii. One should relax the whole body, close the eyes, and prepare as for any meditative practice. Make oneself calm and quiet and be prepared to keep the body perfectly still throughout the whole practice.
- iii. It should be practiced in a dark room which is free from draughts and insects.
- iv. Switch off the fans because excessive air creates a uncomfortable environment for eyes during *trataka karma*.
- v. Take an A4 size paper and make a small dot in middle.
- vi. Patients were advised to seat in *sukhasana* with straight back and neck, back, and hips lying in straight alignment.

vii. Paper with *bindu*, should be pasted on a plain wall with not any other highlighted image or object which can disturb our focusing procedure.

viii. Patient is advised to seat approx. 3 feet away from the *bindu* on a comfortable *asana in sukhasana*.

ix. Patient should focus on the *bindu* try to keep the eyes perfectly steady and not blink. Stare as long as possible (in starting days eyes can blink during *trataka* but it will get improved by practice so one should not get concerned about this)

x. Try to keep the mind empty free from any thoughts.

xi. This practice is not as simple as it looks; it requires patience, self-confidence, and complete discretion.

xii. After a few minutes when eyes get tired or if they begin to water, close them and relax completely.

xiii. Don't rub your eyes after *trataka karma* clean the tears with a dry and clean clothes.

xiv. Don't wash your face immediately after *trataka karma*.

Timings: Can be done at any time, but preferable time is early morning and evening hours.

Post-Trataka karma-

Patient is advised to close his eyes, relax his body and normal breathing should be done, try to keep from mind free from any other thought. Stay in this relaxing position for at least five minute.

Benefits of Trataka Karma:

Trataka eliminates all eye diseases, fatigue it is also said to be giving "*divya drasthi*". It benefits not only the eyes but a whole range of physiological and mental functions. The *Gheranda Samhita*⁴ mentions that it promotes the perception of subtle manifestations. The

other purpose is to arouse inner vision i.e. *ekagrata*.

During *trataka* it is very important to preserve the inner awareness so that when the mind is suspended all that remains is the awareness. *Trataka* channelizes the inherent energy to the dormant areas of consciousness.

People who are constantly working on computers have a decreased number of blinking rate which leads to dryness of eyes and other eye-related symptoms like eye strain, eye fatigue, etc.

Yogi Swatmaram in Hatayogapradipika states that by regular practice of *trataka* one can get rid of all types of *netra roga*, *trataka* also creates a refreshment feeling by removing lethargy, fatigue, and tiredness. *Yogi Swatmaram* has considered *trataka* as “*gopyam*” and has advised to preserve it as “*hatakpatkam*” which means a box full of gold⁵. According to him, *trataka* should be practiced alone in a peaceful place away from any sort of disturbance or noise like we keep a gold box away from all eyes. It is very important because practicing *trataka* in “*ekagrata*” i.e. focusing which is the most important part of *trataka* can never be achieved and one can never get full benefits of *trataka* without this.

Trataka is visual cleansing practices which increase visual perceptual sensitivity by decreasing optical illusion⁶ that leads to reduction in anxiety⁷ which is associated with a higher blinking rate. Yoga practice leads better self-rated relaxation⁸ as well as physiological relaxation⁹.

Yoga practices increases physical as well as mental health benefits via down regulation of the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system¹⁰ Studies suggest that yoga eye exercises improve

ocular motility and relieve symptoms of asthenopia and eye fatigue¹¹. *Trataka* stimulate external ocular muscles to work more efficiently, it also increases the blink reflex and aqueous humor circulation, which encourages nourishment of the ocular tissues.

Due to prolonged working on computer in day time movement of eyes during day is more than that at night. While practicing eye exercises described above, the bulbomotor muscles are stretched continuously and maximally in all directions that naturally increases metabolic demand of muscular tissues due to extra work¹². Studies shows that much milder repeated eccentric contractions where elongation of muscle is slow can be an effective way of increasing muscle strength¹³. Hence ocular muscles get stronger which in turn strengthens the muscles to work more capably, whereas, concentric and eccentric contraction of ocular muscles leads to an raise in intra orbital blood circulation acts as a pump for an effective intra orbital venous outflow¹⁴. The levator palpebral superioris and orbicularis oculi are responsible for blinking mechanism. Oculomotor nerve control levator muscles which is identical to the innervation of external ocular muscles¹⁵. Like external ocular muscles, both levator and orbicularis are striated muscles and it works with external ocular muscles during yoga practice¹⁶.

Trataka karma can be considered as a non-pharmacologic and therapeutic intervention for reducing symptoms as well as relieving the severity of computer vision syndrome.

REFERENCES

1. Effects of yogic eye exercises on eye fatigue in undergraduate nursing students Sang-Dol Kim Department of Nursing,

College of Health Science, Kangwon National University: 346 Hwangjo-gil, Dogye-eup, Samcheok-si, Gangwon-do 245-907, Republic of Korea

2. Hathyoga Pradipika by Swami Svatmarama verse 31 chapter 2
3. Gharanda samhita, Chaukhamba Sanskrit Sansthan, Varanasi, by Dr. Hiralaal Sharma, chapter 1 verse 54
4. Gharandsamhita, Chaukhamba Sanskrit Sansthan, Varanasi, by Dr. Hiralaal Sharma, chapter 1 verse 55
5. Hathyoga Pradipika by Swami Svatmarama verse 31 chapter 2
6. Vani PR, Nagarathna R, Nagendra HR, Telles S: Progressive increase in critical flicker fusion frequency following yoga training. Indian J Physiol Pharmacol 1997, 41:71-74.
7. Brown D, Forte M, Dysart M: Differences in visual sensitivity among mindfulness meditators and non-meditators. Percept Mot Skills 1984, 58(3):727-733.
8. Malathi A, Damodaran A: Stress due to exams in medical students – role of yoga. Indian J Physiol Pharmacol 1999, 43(2):218-224
9. Effect of yoga on self-rated visual discomfort in computer users Shirley Telles KV Naveen†, Manoj Dash, Rajendra Deginal and NK Manjunath.
10. Beets MW, Mitchell E. Effects of yoga on stress, depression, and health-related quality of life in a nonclinical, bi-ethnic sample of adolescents: A pilot study. Hisp Health Care Int. 2010; 8:47–53
11. Kumar MA, Rajalakshmi AR, Kumbhat M. Effect of yoga eye exercise on medical college students with refractive error. J Curr

Trends Clin Med Lab Biochem. 2014; 1:1006.

12. Dimitrova G, Trencева A. The short-term effect of yoga ocular exercise on intraocular pressure. Acta Ophthalmol. 2017;95:e81–2. [PubMed: 26359939]
13. The Effects of Physical Activity on Skeletal Muscle. Univ. Sheff. [Last accessed on 2018 Dec 24]. Available from: <https://www.futurelearn.com/courses/musculoskeletal/0/steps/25159>
14. McMonnies CW. Intraocular pressure and glaucoma: Is physical exercise beneficial or a risk? J Optom. 2016;9: 139–47. [PMCID: PMC4911456] [PubMed: 26794458]
15. Snell RS, Lemp MA. Clinical Anatomy of the Eye. Malden, MA: Blackwell Science; 1998. The ocular appendages; p. 92
16. Remington LA. Clinical Anatomy and Physiology of the Visual System. St. Louis, Missouri: Elsevier: Butterworth-Heinemann; 2012. Ocular adnexa and lacrimal system; pp. 159–79.

CORRESPONDING AUTHOR

Dr Sakshi Sharma

Assistant Professor, Dept. of *Swasthavritta & Yoga*, SBLD *Ayurved Vishwa Bharti*, Sardarshar, Rajasthan, India

Email: drsakshi1993@gmail.com

Source of support: Nil

Conflict of interest: None Declared

Cite this article as

Dr Sakshi Sharma: *Trataka Karma A Holistic Approach for Computer Vision Syndrome*; VII(2): 2034-2039