

LITERATURE REVIEW ON EYE EXERCISE AND YOGIC KRIYA FOR PREVENTION  
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**ABSTRACT**

Eyesight is the most evolutionarily advantageous sense for human beings. It allows for simultaneous, rapid, and efficient processing of information from the environment. This information is subsequently used to facilitate numerous cognitive functions, such as perceiving possible hazards and observation-based learning. Based on the immense reliance we have upon our vision, it is no wonder that many clinical techniques have been developed to assess and treat a multitude of eye and eye-related problems. Eye exercises are often prescribed in vision therapy to resolve issues relating to vergence, ocular motility disorders, accommodative dysfunction, amblyopia, learning disabilities, dyslexia, asthenopia, myopia, motion sickness, sports performance, stereopsis, visual field defects, and visual acuity. Eye exercises are also practiced to enhance sports performance and used during yoga to promote general well-being. Eye exercises have been prescribed to resolve a multitude of eye-related problems. However, studies on the efficacy of eye exercises are lacking, mainly due to the absence of simple assessment tools in the clinic. This article is aimed to review the eye exercise – *Trataka* mentioned in ancient science.

**KEYWORDS:** Eye exercises have been prescribed to resolve a multitude of eye-related problems.**INTRODUCTION**

Eye exercise are aimed at toning up eye muscles and for lessening of eye. In 1920, William Bates wrote a book "the cure of imperfect sight without glasses" where he states that the eye does not focus by varying the power of the lens but rather by elongating the eyeball, through use of the extra-ocular oblique muscles. He believed that refractive errors of eye are caused by tension of these extra-ocular muscles surrounding the eyeball, which he believed prevents the eyeball from sufficiently changing shape when gaze is shifted nearer or farther.<sup>[1]</sup> According to him, this supposed muscular tension is a consequence of a "mental strain", the relief of which he claimed would instantaneously improve sight. Bates felt that corrective lenses, which he characterized as "eye crutches", are an impediment to curing poor vision. In his view, "strain" would increase as the eyes adjust to the correction front of them.<sup>[2]</sup> He thus recommended that glasses be discarded by anyone applying his method. came up with an educational method intended to improve vision by reducing the strain after performing few exercises, Vision therapy is an option for people whose blurred distance vision is caused by a spasm of the muscles that control eye focusing i.e. ciliary muscles.<sup>[3]</sup> Various eye exercises can improve poor eye focusing ability and regain clear distance vision.

Eye exercise which helps to improve and toning up eye muscles are-

1. SUNNING- exploring to early morning sun rays by closing the eye after instilling 2 drops of honey in to the eye.<sup>[4]</sup>
2. PALMING- rub the palm and place it over the close eye. It gives immense relaxation to the eyes and mind.<sup>[4]</sup>
3. SWINGING- swinging body from left to right and back by relaxing the eye without focusing any object. The object in front of you will start moving in the opposite direction. Swinging helps it to relax the eye and corrects the accommodative error.<sup>[4]</sup>
4. EYE BALL MOVEMENT EXERCISE- this can be done by moving the eyeball from extreme right to extreme left or top to bottom without moving the head. The eyeball should be rotate clockwise and anti clock wise. This help in strengthening the extra ocular muscle of the eye.<sup>[4]</sup>
5. EYE WASH WITH *TRIPHLA KASHAYA*
6. CANDLE READING- reading the fine print in the dark room with the illumination of a candle. This stimulate the corneal cell to improve vision.

In ancient science, various *Acharyas* have mentioned about some yogic *kriya* which is very much helpful to

increase confidence level, and promote various psychic abilities. One of the same is *Trataka kriya*.

**TRATAK-** *Tratak* is an ideal meditation for relaxing the eye, which mention in our ancient science.<sup>[5]</sup> Continuous routine wise practice will increase our confidence level, stability in thought and improve the ability to control over the difficult situations. By practicing *Tratak yogik karma* daily, we can improve our mental clarity and capacity of intelligence.<sup>[6]</sup> People of all age will get benefited by practicing *tratak*, specially student who need to concentrate their study, can get immense benefit by practicing by *tratak yogic karma* daily. According to ancient *ayurveda*, *Tratak* is the term using *yoga* for exercising the eye. In this *yogik kriya*, eyes should be focused on any object or light of flame till there is watering from the eye.<sup>[7]</sup> *Tratak* helps in improving the neurological condition of eye and also relieves the burning sensation of eye. To attain a deep state of meditation, the level of energy in the mind must be elevated and single pointed, concentration is the first focusing point of meditation. The *tratak* includes an magnifies this step. The light emitted from a flame is taken in the eye and generate energy. The eye is focusing on the light and the energy of the flame reflex on to the retina and transfer the energy through the optical nerve to the brain. this energy increase and improve the function of penial gland. the penial gland is known as the third eye and convert light in to the electromagnetic energy. So regular practicing of *tratak*, will bring greater awareness of the visual realm, a relax state of mind enhance functioning of brain and increase the concentration power.<sup>[8]</sup> According to WHO 153 million world wide, live with visual impairment due to uncorrected refractive error. 1.49% of people in india is blind, out of which 7-35% is due to refractive error. In india co-related refractive error are the most common cause of visual impairment seconf major cause of avoidable blindness. Avoidable blindness can be defined as blindness, which could be either treated or prevented by known cost effective mains. Vision 2020 launch in the year 1999 is a global initiative aim to eliminate avoidable blindness in the year 2020. In many countries, WHO and international NGOs involved in eye care and prevention and management of blindness, the mission of vision 2020 is to eliminate the main cause of all preventable and treatable blindness by treating them as a public health issue.<sup>[9]</sup> Thus in the present scenario, to maintain the eye and avoidable blindness we need cost effective, without side effect as well as patient convenient solutionas a part of a primary eye care. So, we need to understand the role of yogic *tratak* and eye exercise for strengthening the eye muscle and improving the concentration power.

**AIM-** To draw an attention, over the role of *yogic tratak* and eye exercise as a primary eye care majors.

**Trataka-**In *Gherand Samhita*, *trataka* is defined as gazing at a minute object without moving eyelids till

tears roll down. The author mentions that, practice of *trataka* helps to achieve the *shambhavi mudra*, elimination of eye disorders, and improve and enhance the vision. *Hatha yoga Pradeepika*, another *yoga* text book describes that-*trataka* is an ancient *yogik kriya*-observing a minute object without eye movement upto rolling down of tears from eyes.

#### Types of *Trataka*

**TRATAK-** it is divided in to 2 types, first is *Abhayantra tratak* and another one is *Bahya tratak*, *Bahya Tratak* means gazing at an external object.

*Abhyantara Tratak* means the eyes are to be focused on tip of the nose or in between the eyebrows.<sup>[10]</sup>

*Bahyatratk* is again divided in to *sudoor* and *sameep* type. In *sudoor* type vision is focused on distant object like things which are visible through window means sun, moon, star etc. In *sameep tratak* the distance between the object and eye in between 45 to 60 cms. The object are flame of a candle or it could be a dot and statue of worshipped and mirror image of once eye.

#### JYOTI TRATAK

Procedure- In this procedure flame of candle is selected as the object. This should be stable, room should be quite, window and door should be closed to prevent the direct air entry. Moreover the flame should be placed at eye level of the observer. And the observer should focused and concentrate over the flame.

Method- the observer has to be seated in a comfortable position preffered mudra- *swastikasana*, *padmasana*, *vajrasana*.<sup>[11]</sup> After comfortably seating observer should gazing at the flame continuously without blinking eyelid and this process is continued till watering from the eye. then close the eye and seated for some time.

After closing the eyes the image of the flame is perceived when this image disappear, gently press the eye with palm and then slowly open the eye and then wash the eye with cold water.

#### BINDU TRATAK

In this procedure, observer should focused, on a dot of 1/4<sup>th</sup> inches size. This dot can be made by pen or pencil on a light colour wall or paper. A sticker *bindi* can be use as a object.<sup>[12]</sup>

#### OBSERVATION

*Tratak* is a very simple *yogic kriya* practices in any age all over the india. It do not take much more time for the observer. It does not take to much prepration, and it is very cost effective. In many studies it is observe that the *tratak yogic kriya* has got benefits to improve vision and effective to improve various eye disorder like nystagmus, refractive error. It enhance concentration and will power.

**DISCUSSION**

Vision is a combination of clarity of image captured by human eye and processing of those images by brain. due to contraction and relaxation of ciliary muscles and changing the curvature of the lens, Human eye refers to adjustment at various distance for seeing the object. Commonly, eye muscles acts asymmetrically which may increase the chances of eye strain or watering or vision problems. But by using the binocular accommodation which is the coordination of both eye movement we can prevent the above eye problems. Binocular vision is the ability of brain so by *tratak yogic kariya* we can achieve this ability and childrens who maintain binocular vision are less prone to developed lazy eye (emblyopia). Now a days people spending more time in front of TV, computer or cell phone continuously without changing the focus and same things happened with the childrens also, so the eye muscles get use excessively and hence excessive use of eye muscles the fixablity of the eye muscles get affected. Therefore early attention needs to pay the maintain the eye and regain the fixablity the muscles. Here, by doing the eye exercise and *tratak yogic kriya*, it can strengthen four type of eye muscles by controlling upward, downward, left and right movement of eyeball. *Tratak kriya* ehnnace the metabolism of rods and cons through the mechanism or dark and light adaptation. By *jyoti Tratak* have significant role over the concentration and memory level over the subject.

**CONCLUSION**

In this review work and attempt has been made to understand the ancient *yogic kriya tratak*.

Further research is needed on eye exercises to determine whether they are an effective treatment for patients with cognitive and eye-related disorders.

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