ABSTRACT
Technology is an integral part of our daily life. Gadgets like smart phones, cell phones, laptops, Tablets and iPods are used for communication, organization and employment which make life more comfortable. Gadgets are useful to the mankind in many ways, if not used properly it will be harmful to the eye. By following the preventive methods like eye exercise, 20-20 rule, maintaining proper postures while using gadgets and along with effective intervention through Ayurvedic kriyakalpa procedures we can prevent the ill effects of the gadgets. This paper highlights the Preventive measures and creates awareness of the ill effects of gadgets.

KEY WORDS: Gadgets, Eye strain, Ayurveda, Suskakshipaka, Kriyakalpa, CVS and DES.

INTRODUCTION
A Gadget is a small tool such as a machine/electronic device which is powered by electronic principles; it has a particular function, but is often thought of as a novelty. We cannot imagine our life without smart phones, cell phone, laptops, Tablets and iPod which have firm hold on addiction on children’s and adults as well. While technology is impressive, there are certain drawbacks in areas like health, public safety and education that should be addressed as well. These gadgets are affecting the sense organs and even affecting eyes in particular leading to various life style disorders.

As per various survey studies it is found that 65 percent of the people spend between around 3 to 9 hours in front of monitors and A study in 2011 found Internet usage alone was increased to 2.2 billion users when compared to just 3 million users in 1990 and 60 million children will use a computer or digital device for multiple hours a day, which doesn’t include TV time or using a game system. Another survey of 2000 people commissioned by a group of independent opticians found that the average adult stares at a screen for seven hours a day, with under 25-year-olds checking their phone 32 times a day. In May 2016 a new research implied that excessive Smartphone use may lead to a rare form of strabismus, or known as acute acquired committing esotropia (AACE)’

Effects of gadgets on eye
Effects of gadgets on eye can be seen as Redness, Dryness, Blurring vision, Headache, Neck, shoulder and back pain due to poor posture. These above symptoms are found in various life style disorders like Digital eye strain, Dry eye syndrome, Computer vision syndrome etc. Many individuals experience eye discomfort and vision problems when viewing digital screens for extended periods. The level of discomfort appears to increase with the amount of digital screen use.

HEV – High- energy visible / blue or violet light are produced from the computer monitors and can penetrate the macular pigment and cause more rapid retinal changes.

These changes not only damage the retinal structurally but can also decrease visual acuity.

The type of damage depends on the wavelength, Frequency, and exposure time. Ultra violet rays may increase risk of cataract,
AMD and other eye disorders. Main sources of UV rays are sun rays, welders flash and also video display terminals like Computer monitor, Tablets, Smart phones. computer leads to dry eye
Normally a person blinks 12-18 times/min but while working on computer blink rate reduces to 5-6 times/min because of continuous staring at the screen. Blinking is critically important for spreading of the tears to form an even film on the eye surface which keeps the cornea and conjunctiva moist and also oxygen to the corneal epithelium.

PREVENTIVE MEASURES FOR DIGITAL EYE STRAIN
Various measures to prevent digital eye strain are as follows –
The monitor should be just inside arm’s length. Should sit approximately even with the wrist with the arms extended straight out. The monitor should also be slightly lower, approximately 20 degrees below eye level. Use the digital device’s accessibility features, including increasing the font size, using zoom features and choosing different fonts or background colors. Because using digital devices decreases blink rate, patients should remind themselves to blink often while working on a computer or other device. Reduce screen brightness to the level that doesn’t hurt your eyes.
The 20-20-20 rule for computer use is beneficial in decreasing eye strain. Every 20 minutes, take a 20 second break and look at something at least 20 feet away.

Eye Exercises –
Palming - Sit comfortably on a chair. Rub your hands together until they feel warm. Close the eyes and cover them lightly with cupped palms. Avoid applying pressure to the eyeballs.
Take deep breaths slowly and evenly remove palms from the eyes. repeat the palming for 3 minutes or more.
Make a figure 8 - with your eyes. This is a great exercise to practice controlling the physical movement of your eyes. Practice rhythmic eye movements. These movements can help to strengthen your eyes and your hand eye coordination Do directional eye exercises. Moving your eyes in different directions is a good way to exercise your eyes.
Hot and cold compress: Soak one towel in hot water, and the other in cold. Take one and lightly press it to your face, focusing on the eyebrows, closed eye lids, and cheeks .alternate between the two as desired , making sure to end with cold compress.
Eye wash: Take 2 cups full of prescribed Triphala Kashaya .Dip your eyes in the cup and blink the eyes slowly and steadily 10-15 times .Repeat the same procedure for five times, each with fresh Kashaya.

AYURVEDIC PERSPECTIVE
Ocular complaints can be broadly classified in to visual symptoms and non- visual symptoms, visual symptoms generally can be correlated to TIMIRA Lakshanas .Non visual complaints generally correlated to Sushakshipaka having symptoms like excessive burning sensation, pricking and cutting type of pain, difficulty in eye lid movements. These Symptoms can be correlated to Dry eye syndrome These Can be managed effectively through KRIYAKALPA PROCEDURES Like Seka, Aschotana, Pindi, Tarpana, Putapaka, Abhyanga-shiroabhyanga, padabhyanga, Nethraabhyanga, Nasya .
The word “Kriya “means Therapeutic Action and “Kalpana” means specific formulations. Kriyakalpa is a Bahiparimarjana chikitsa (external/local application) and has several advantages over oral administration. The oral drugs find it difficult to cross blood-aqueous, blood–vitreous and blood retinal barriers to reach the target tissues of eye. The topical drugs can reach there and achieve higher bio-availability. The tissue contact time of the drugs can be controlled in Kriya Kalpa. The Medications can be judiciously selected i.e. to increase Usna or Sita, Snigdha or Ruksha in the local area.

DISCUSSION
Dry eye /computervision syndrome is caused due to Defective blinking such as low blink rate as seen in prolonged computer users leading to evaporative type of dry eye.
By following proper posture reduces the eye strain and prevents neck, shoulder and back pain. By following the 20-20-20 rule reduces asthenopia and prevents evaporative dry eye. Eye exercise like palming helps to soothes eyes strained by an effort to see gives relaxation out of all exercise. Hot and cold compresses to eyes improves the circulation of the blood relieves pain in eyes. Hot and cold sensation relaxes the nerve that can trigger the pain signal to the brain. Figure 8 eye exercise improves vision while providing the additional benefit of relieving stress and tension in the eyes. Seka and Aschotana are indicated in Garsha (foreign body sensation) Daha (Burning) Raga (redness) and Tarpana is indicated in Ruksa, Prisuska, Ati Visuska, Suskaksipaka (Dry eye conditions). Tarpana does the Santarpana/Bhrumana Chikitsa (nourishment to the eyes) and the drug used will be Ghritha which is having SNIGDATA, KLEDATVA (unctuousness) which lubricates and reduces Dry eye. By following the above preventive measures and in severe cases intervention through Ayurvedic Kriya Kalpa procedures like Seka, Aschotana, Tarpana etc One can effectively manage the ill effects of electronic Gadgets.

CONCLUSION:
Gadgets have become part and parcel of our lifestyle we have to cautiously use these gadgets and prevent the manifestation of diseases. “Sankshepat kriya yogo Nidana parivarjanam” While technology is impressive, there are certain drawbacks in areas like health, public safety and education that should be addressed as well. Being aware of these dangers can help diminish or reverse these negative effects of gadgets we use.

BIBLIOGRAPHY


Conflict of Interest: Not declared.