

iCLO: A New Method for Resting the Eyes

Hiroki Fujita^{1,2*}, Kenji Sano^{3,4}

¹Fujita Eye Clinic, Chiba, Japan; ²Kuwano Kyoritsu Hospital, Fukushima, Japan; ³Asumigaoka Sano Eye Clinic, Chiba, Japan;

⁴Department of Ophthalmology and Visual Science, Tokyo Medical and Dental University, Graduate School, Tokyo, Japan

DESCRIPTION

Computer Vision Syndrome (CVS) is caused by prolonged or inappropriate use of digital devices such as computers and smartphones and, in addition to eye discomfort (dryness and eyestrain), causes symptoms such as headache, shoulder pain, nausea and dizziness. The estimated prevalence of patients with this syndrome among all display device users is about 70%. It is presumed that the novel coronavirus disease 2019 (COVID-19) pandemic has led to an increasingly high number of those afflicted by CVS due to the widespread practice of teleworking. Therefore, CVS has become a major social problem. The best way to manage CVS is to minimize the time spent gazing at a screen. Currently, there are several guidelines that suggest a fixed time break, such as the “20-20-20 Rule” suggesting taking a 20 seconds break every 20 minutes by looking 20 feet away. However, employees may feel some resistance to taking the sort of enforced, passive breaks or may be unable to take these breaks effectively.

We noted the existence of “times when eye closure would not interrupt work”. For example, the periods that occur while working on a computer when employees can perform tasks that do not require sight, such as intervals between tasks, switching between screens, or contemplating the contents of tasks. We devised a new management method that involves closing and resting the eyes during such times. We call it iCLO, referring to eye closure. We define and promote iCLO as a method wherein one “actively closes one’s eyes even for a short period in a safe environment, when they would otherwise just be idly open and when there would be no detriment caused by closing one’s eyes”. In our study, when employees who use computers were asked to practice iCLO, approximately 5% of their total work time was occupied by iCLO, and their subjective symptoms of dry eye, ocular fatigue, and blurred vision improved [1]. In addition, the interblink interval was shown to be shorter when engaged in iCLO. If the time spent looking at the screen could be reduced by iCLO, this would decrease the time during which the cornea was exposed, diminishing tear evaporation. Therefore, it is expected that iCLO may contribute to reduction of dry eye in employees who use computers. With respect to dry eyes in these employees, iCLO is a simple, inexpensive and economical

method compared to conventional measures, since it requires neither equipment nor drugs. iCLO does not require work interruptions, but allows for the use of active informal breaks. Moreover, iCLO is particularly suitable when working remotely, because it can be done at one’s own pace without the need to pay attention to others and can be implemented when in a small room or sitting facing a wall. Thus, iCLO at work has many advantages, which we believe give it increased utility compared to existing methods such as the 20-20-20 Rule.

The amount of time spent working on computers, but also by people on close work in general, has increased dramatically in recent years, new ways of using the eyes in various “iCLO ~” are thought to be possible depending on how eye closure is practiced in addition to “iCLO working”. For example, in our survey of iCLO during English exams taken by Japanese students, i.e., “iCLO learning”, the mean iCLO time for English listening was more than half of the total answer time [2]. This demonstrates that the amount of time that can be spent on iCLO is quite long during something like a listening exam. Eye closure has been reported to increase concentration and improve learning and work efficiency by cutting off visual information received from the outside world. Therefore, it is also expected that iCLO will help students to focus on the recording and improve their performance during listening exams. In such potential contexts as “iCLO watching TV”, “iCLO web surfing”, and “iCLO playing video games”, eye closure could be practiced when there are repeated images, or under circumstances that only requires listening and not vision. Because spaces where there is little mobility and a person is alone, such as bathrooms and washrooms, are ideal locations for iCLO, “iCLO taking a bath”, “iCLO brushing one’s teeth” and “iCLO blow-drying” are also possible. “iCLO calming down one’s state of mind” may also be effective for improving concentration immediately before important events.

Personal safety and situational awareness are considered major prerequisites for engaging in iCLO. There is a risk of overlooking important things or encountering issues with communication due to iCLO, so the time, place, and other circumstances must be carefully considered. Because of the risk of various problems that may arise when minors perform iCLO, it is not recommended for them to do alone. Prolonged eye closure must be avoided, and the

Correspondence to: Hiroki Fujita, Fujita Eye Clinic, Chiba, Japan, E-mail: hirokicell@yahoo.co.jp

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eyes should be closed only for deep blinks when wearing contact lenses.

To summarize, iCLO is a new method for resting the eyes by selectively and actively controlling the timing and quantity of the visual information received from the outside world. We believe that iCLO can play a significant role in preventing CVS and improving performance as a new way of working and living.

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