DATOS IMPACTANTES, QUE ES, TERMINOLOGIA, SINTOMAS Y MOLESTIAS

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* Digital eye strain (DES) or computer vision syndrome (CVS) is a phenomenon linked to ever increasing digital screen use globally, affecting a large number of individuals
* Digital Eye Strain (DES) or Computer Vision Syndrome (CVS) are synonymous terms referring to eye symptoms related to the use of digital screens, a phenomenon which is on the rise worldwide and is increas ingly being studied. The Covid-19 pandemic considerably increased the time spent on digital screens among people of all ages.
* Extensive screen use can cause a multitude of unwanted effects, including DES, so caus ative elements and alleviating interventions are currently sought for, to mitigate the phenomenon.

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* In fact, it is estimated that around 60 million people suffer from CVS globally and that a million new cases of CVS occur annually [3].
* It has been shown that 30% of workers use computers all the time during their working days based on the findings of the European Working Conditions Survey (EWCS, 2010) [4], and 25% of computers between onefourth and three-fourths of the time spent during the working hours [3]. Moreover, computer use is not restricted to adults, as a recent study involving over 2000 American children between the age of eight and 18 years found that, in an average day, children spend about 7.5 hours using entertainment media, 4.5 hours watching TV, 1.5 hours on a computer and over an hour playing video games [5]

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* Computer vision syndrome (CVS) is a group of symptoms caused by focusing at a computer screen for lengthy periods of time. Due to constant use of computers by the students, it has become one of the growing health risks associated with technology (cell phones and tablets).[1
* CVS is a combination of eye and vision disorders associated with activities that affect near vision and is experienced in relation to or during the use of computers, as defined by the American Optometric Association. It refers to a set of visual symptoms that occur as a result of prolonged looking at the digital screen when the task’s demands surpass the viewer’s ability.[2]
* Dry and irritated eyes, eye strain/ fatigue, blurred vision, red eyes, burning eyes, excessive tears, double vision, headache, and light/glare sensitivity are all symptoms of CVS, also known as digital eye strain.[3]
* Computer use accounts for over 75% of a person’s everyday activity. Sixty million computer professionals around the world suffer from CVS. Nearly 45 million workers spend hours on end looking at the computer screen.[7,8] According to a survey of American optometrists, 14.25% of patients who visited an optometry clinic were experiencing symptoms related to computer use. In today’s world, university students, particularly medical students, spend more time staring at a computer screen for studying and research. Several studies have found a higher prevalence of CVS among computer users, particularly medical students
* According to a research conducted in Jeddah (Saudi Arabia), the ocular and musculoskeletal discomfort linked with CVS may cause 40% of users to be less productive. Also, among the 587 students enrolled in the study, a high prevalence of CVS (558; 95%) was reported.[10
* Computer technology has advanced significantly during the last 30 years. It has practically become a necessary piece of office and household equipment. While it is undeniable that computers have greatly benefited society by making working conditions better and allowing for faster output, they have also been linked to health‑related issues.[1

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* : Digital Eye Strain (DES) is a clinical syndrome manifested with visual disturbances and/or ophthalmic dysfunction related to the usage of screen-enabled digital equipment. This term is gradually replacing the older term computer vision syndrome (CVS) that focused on the same symptoms found on personal computer users. DES is encountered more frequently during the past years due to the explosive increase in the usage of digital devices and subsequent increase in time in front of any screens. It presents with a series of atypical symptoms and signs stemming from asthenopia, dry eye syndrome, preexisting untreated vision issues and poor screen ergonomics.
* Vision problems attributable to prolonged viewing of screen-enabled digital devices have been reported since 19871 with an article detailing both ocular and orthopedic issues that were related to spending long hours in front of a computer termina
* outside the workplace with the advent of home computing and the gradual reduction in size of screens with the shift from cathodic ray tubes to liquid crystal displays (LCDs) and light emitting displays (LEDs).2 “Terminology has changed as well, with the initial terms, which were limited to computer use” (computer vision syndrome – CVS) gradually expanding to “Digital eye strain – DES”,3

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* Computer vision syndrome (CVS) is the combination of eye and vision problems associated with the use of computers. In modern western society the use of computers for both vocational and avocational activities is almost universal. However, CVS may have a significant impact not only on visual comfort but also occupational productivity since between 64% and 90% of computer users experience visual symptoms which may include eyestrain, headaches, ocular discomfort, dry eye, diplopia and blurred vision either at near or when looking into the distance after prolonged computer use.
* The use of computers and digital electronic devices for both vocational and non-vocational activities including e-mail, internet access and entertainment is almost universal in modern Western society. A recent estimate of internet usage by continent ranged from 77.4% of the population of North America to 10.9% of Africa, with an estimated 1 966 514 816 users worldwide (or 28.7% of the world’s population) (http://www.internetworldstats. com/stats.htm).
* A recent investigation of over 2000 American children between 8 and 18 years of age reported that in an average day they spend approximately 7.5 h using entertainment media, 4.5 h watching TV, 1.5 h on a computer and over an hour playing video games.1
* puter vision syndrome (CVS). The American Optometric Association defines CVS as the combination of eye and vision problems associated with the use of computers. These symptoms result from the individual having insufficient visual capabilities to perform the computer task comfortably
* indicated that up to 90% of computer users may Ophthalmic & Physiological Optics ISSN 0275-5408 502 Ophthalmic & Physiological Optics 31 (2011) 502–515 ª 2011 The College of Optometrists experience visual symptoms including eyestrain, headaches, ocular discomfort, dry eye, diplopia and blurred vision either at near or when looking into the distance after prolonged computer use
* Further, Rossignol et al.3 reported that the prevalence of visual symptoms increased significantly in individuals who spent more than 4 h daily working on video display terminals (VDTs).

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* It was found that there are 17.9 million computer users out of a population consisting of 63.3 million individuals in Thailand [2]. Moreover, computer usage for 5 days per week was equal to 57.7%; the duration of computer use for 8 h/d was measured as 32.6% [3]. However, using a computer inevitably affects the biopsychological system of the user
* This is because computer users are less active and tend to sit in the same position for a long time to focus on their work. The most frequent problems among computer users consist of visual problems (75%- 90%), including Computer Vision Syndrome (CVS) [4 and other visual defects, such as decreased visual acuity, myopia, etc. [1, 6]; followed by musculoskeletal issues, with 22% involving pain in the neck, shoulder, wrist, and back regions [5, 7]. The least common problems consist of psychological conditions, including stress and depression [4].
* Eye fatigue is among the most significant problems encountered by computer users [8]. A study in Thailand found that the prevalence of eye fatigue among computer users equaled 76.6%-96.4% [5]; it was caused by the continuous and prolonged use of the eyes on a computer screen. Additionally, computer usage for >2 hours [1] presents a 50%-90% risk of developing eye fatigue [9], i.e., mainly caused by contracted eye muscles

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* Digital device usage has increased substantially in recent years across all age groups, so that extensive daily use for both social and professional purposes is now normal.
* Digital eye strain (DES), also known as computer vision syndrome, encompasses a range of ocular and visual symptoms, and estimates suggest its prevalence may be 50% or more among computer users.
* Symptoms fall into two main categories: those linked to accommodative or binocular vision stress, and external symptoms linked to dry eye. Although symptoms are typically transient, they may be frequent and persistent, and have an economic impact when vocational computer users are affected.
* Computer vision syndrome (CVS) is characterised by a range of eye and vision-related symptoms and has been a recognised health problem for over 20 years.1
* The terms visual fatigue (VF) and digital eye strain (DES) are also used for the condition, reflecting the variety of digital devices linked to potential problems. These expressions may be more appropriate for communication with patients and the public, who may not consider devices such as tablets and smartphones to be computers.
* Given the massive growth in digital device usage in recent years, many millions of individuals of all ages are at risk of DES
* While symptoms are usually transient, the condition can cause significant, frequent, discomfort for sufferers and may have substantial economic consequences when vocational computer users are affected through increased errors and more frequent breaks.

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* Digital eye strain (DES), also called computer vision syndrome (CVS), is a major global health concern of the 21st century.1 It affects nearly 70–75% of all electronic device (ED) users, with a worldwide estimation of 60 million people and millions of new cases each year.
* According to the American Optometric Association (AOA), DES is a set of visual and ocular discomforts occurred after extended exposure to an ED screen
* The risk factors of DES include poor brightness and luminosity, glares, inappropriate screen distances, improper ergonomics and postures, non-corrected refractive errors, and environmental factors.

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* Collectively referred to as digital devices (DD), smartphones, tablets, electronic book readers, and computers have significantly increased in recent years and resulted in several ocular and visual symptoms related to their use, conjointly now known as digital eye strain (DES) or computer vision syndrome (CVS)
* Common symptoms of the aforementioned include eye strain, headache, blurred vision as well as neck or shoulder pain that often increases in severity with the amount of video display terminal (VDT) use [1]. The increased use of digital screens not only increases the odds of developing CVS, but also occupational overuse syndrome (OOS), an injury to fingers and wrists caused by repetitive movements, headache as well as psychosocial stress [2].

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* Prolonged computer use has been associated with several eye and vision problems; these eye-related complaints have been grouped under the term “computer vision syndrome”, or more broadly “digital eye strain” (DES).[1,2] With the emergence of new technologies DES has become increasingly prevalent. According to recent findings, the prev alence of DES lies between 65 % and 33 % – a wide range is probably attributable to the range of methodologies that have been applied to identify sufferers and the different population groups analysed; they tend to be highest amongst young adults with an estimated prevalence of 74 to 77 % [3–5].
* Ocular symptoms associated with DES are often split into two main and distinct categories based on the type of sensation and perceived location.[6,7] The first group, termed external symptoms, is related to dry eye and includes symptoms of burning, irritation, dryness, tearing, foreign body sensation, sensitivity to bright lights and discomfort. The second group, termed internal symptoms, encompasses symptoms of eyestrain, eye ache, headache, diplopia, blurred vision and difficulty in refocusing, and is linked to accommodative and/or binocular vision stress.

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* Most of the people complain of ocular visual discomforts such as asthenopia, headache, tired eyes, eye strain, dry eyes, eye irritation, blurring of vision, burning sensation, redness, and diplopia,[4] that impair the efficiency of near and intermediate tasks.[2]
* Eye fatigue can be triggered by various aspects such as artificial or deficient lighting condition (poor visual hygiene), prolonged watching of visual displays, malnutrition, poor working and inefficient EOMs, prolonged working hours at working place and academic tasks, psychosocial and emotional status, stress, and aging.[5] Proper diagnosis and treatment plan should be done along with exercises and adequate diet plan to improve the quality of life of patients, otherwise may lead to strabismic anomalies and various other complications.[2,3]

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* Computer vision syndrome (CVS), also referred to as digital eye strain, is a growing public health issue, with global estimates suggesting that nearly 60 million people suffer from it.1,2 This is mainly a result of the amount of time spent behind digital screens, which has increased dramatically in the past few decades.3 In addition, CVS is believed to reduce work productivity, increase the error rate, affect job satisfaction and impair visual ability.1,2 Almost 90% of computer users may experience visual and ocular symptoms such as headaches, eye strain, ocular discomfort, dry eye, diplopia and blurred vision.4,5
* The American Optometric Association defines CVS as a combination of eye and vision problems associated with the use of computers. These symptoms result from the individual having insufficient visual capabilities to perform the computer task comfortably.
* The prevalence of visual symptoms resulting from CVS was higher amongst subjects who spent more than 4 h working on video display terminals (VDTs).6 Smita et al. reported that almost 62% of individuals who use computers for more than 6 h daily have CVS symptoms.7