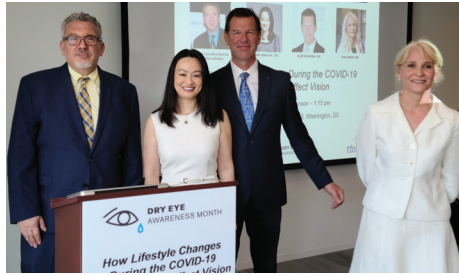


EDUCATION

Speakers Urge More Dry Eye Research While Discussing How Lifestyle Changes During the COVID-19 Pandemic Can Affect Vision



Left to right: The Briefing faculty consisted of AEVR's James Jorkasky, Bridgitte Shen Lee, OD (Vision Optique), Scott Schachter, OD (Vision Source and Adjunct Clinical Professor, Marshall B. Ketchum University), and Esen Karamursel Akpek, MD (Johns Hopkins University)

On July 8, AEVR and the Tear Film & Ocular Surface Society (TFOS) joined with the vision community and coalition partners (see bottom box) in recognizing July 2020 as *Dry Eye Awareness Month* in its fifth annual Congressional Briefing entitled *How Lifestyle Changes During the COVID-19 Pandemic Can Affect Vision*. AEVR focused on this topic since billions of individuals globally at all stages of life have been reliant on digital communications to learn, conduct work, and to stay in communication with loved ones during the recent stay-at-home orders. As a result, prolonged device exposure time can have many consequences, including Digital

MGD incidence in the pediatric population is sparse, Dr. Shen Lee urged more research into the long-term effect on ocular health from an increasing digital lifestyle.

Cosmetics, Contact Lenses, and COVID-19

Scott Schachter, OD (Vision Source and Adjunct Clinical Professor, Marshall B. Ketchum University) initially spoke about the use of cosmetics and the incidence of DED. Since at least 41 percent of Americans wear some form of the nearly 40 types of makeup daily, he described how ingredients in commonly used eye makeup and beauty products can cause or exacerbate dry eye symptoms by affecting how the meibomian glands function and lubricate the tear film, increasing the inflammation-inducing evaporative load of patients with DED. He also recognized that cosmetics include carcinogens, endocrine disruptors, neurotoxins, and reproductive toxins—many ingredients which are banned in the European Union but not in the United States as a result of outdated registration requirements for ingredients in personal care products regulated by the Food, Drug, and Cosmetic Act. Dr. Schachter also addressed COVID-19 in tears, noting that much is still unknown about its presence

Dr. Shen Lee urged more research into the long-term effect on ocular health from an increasing digital lifestyle.

Eye Strain (DES), which can result in a short-term effect such as blurred vision, as well as both short- and potential long-term effects, such as Dry Eye Disease (DED).

Digital Eye Strain (DES)

Addressing the omnipresent Digital Eye Strain, Bridgitte Shen Lee, OD (Vision Optique) presented multi-year results from The Vision Council's Vision Watch Surveys which revealed that adults and children are spending more time than ever on a multitude of digital devices due to working, learning, and socializing. Dr. Shen Lee predicted a significant uptick in usage in 2020. Concomitantly, adults have been reporting increased DES symptoms, including visual (blurred, fluctuating or double vision, difficulty focusing, and dry eyes), musculoskeletal (neck, shoulder, back, and wrist pain), and headache. In her clinic, Dr. Shen Lee sees that children also experience similar physiological symptoms, as well as behavioral symptoms such as poor behavior, irritability, and reduced attention span. While Meibomian Gland Dysfunction (MGD) is the leading cause of DED, as 86 percent of patients with dry eye have MGD—a condition often seen in adult DED patients, cataract patients, and contact lens wearers as a result of changes to or degradation of the meibomian glands which produce the lipid necessary for a healthy tear film—children are also now increasingly susceptible to this ocular discomfort. Since literature on

and potential mode of transmission through the eye. Dr. Schachter also addressed the use of contact lenses during the pandemic, citing statements from each the American Academy of Ophthalmology and American Academy of Optometry illustrating that although there is no concrete evidence that contact lens wear puts an individual at greater risk, hygiene is key.

Nutrition and Depression and Dry Eye, Especially During COVID-19

Esen Karamursel Akpek, MD (Johns Hopkins University) spoke about the role of nutrition in DED and Ocular Surface Disease (OSD), emphasizing the important role of Omega-3 fatty acids, Vitamins A, B12, C, and D, the metal selenium (found in fish), and compounds found in food such as curcumin (spices) and flavonoids (fruit). These substances can either regulate healthy cellular processes or provide protection from oxidative stress. Dr. Akpek expanded upon the role of nutrition by addressing how eating and working habits during the pandemic can affect psychological health, including depression, especially if work habits lead to visual stress (eye strain, blurred vision, reduced reading ability, and dry eye). She concluded by describing various surveys being conducted during the pandemic to gauge increased eye strain and its physiological and psychological impacts.



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The speakers, experts in the management of DED as well as active members of TFOS, have served as either TFOS Global Ambassadors or members of the TFOS Dry Eye Workshop II (TFOS DEWS II™) Report, released in July 2017 and published in *The Ocular Surface* journal. In this re-examination of DED since the initial report issued in 2007, TFOS DEWS II™ updated the definition, classification, and diagnosis of DED; critically evaluated the epidemiology, pathophysiology, mechanism, and impact of the disease; addressed its management and therapy; and developed recommendations for the design of clinical trials to assess pharmaceutical interventions. The Report also addressed multiple aspects of the physical, psychological, and socioeconomic impacts of DED, and explained why lifestyle choices, such as environment, surgery, social media use, contact lens wear, anti-depressant medications, and cosmetics are risk factors for the condition.

Even before the pandemic, dry eye had been identified as a global problem, affecting more than 40 million people in the United States alone. It occurs when the eye does not produce tears properly or when the tears are not of the correct consistency and evaporate too quickly. For some people, it feels like a speck of sand in the eye, or a stinging or burning that does not go away. For others, dry eye can become a painful chronic and progressive condition that leads to blurred vision or even vision loss if it goes untreated due to inflammation that can cause ulcers or scars on the cornea—the clear surface of the eye. Moderate-to-severe dry eye is associated with significant quality-of-life consequences, such as pain, role limitations, low vitality, poor general health, and depression.

Joining AEVR and TFOS, the following vision community and its coalition partners signed onto a June 24 press release to support the July 2020 *Dry Eye Awareness Month* educational activities, including:

American Academy of Ophthalmology
American Academy of Optometry
American Autoimmune Related Diseases Association
American Optometric Association
Association for Research in Vision and Ophthalmology (ARVO)
Healthy Women
Prevent Blindness
Research to Prevent Blindness
Sjögren's Foundation

AEVR thanks ARVO for live-stream support and Novartis for event management support. Video of the event is on the AEVR Web site.