Eye Surgeons & Consultants, P.A.

www.myeyesurgeons.com

Alan D. Mendelsohn M.D., F.A.C.S. • Nathan Klein, O.D.

THE MENACE OF BLUE LIGHT

The Vision Council determined that 95% of Americans spend 2 or more hours every day on digital devices including computers, tablets and smartphones. Blue Light, known as High Energy Visible, or HEV Light, is emitted from these digital devices and fluorescent bulbs. This exposure to Blue Light is cumulative over your life and is one of the major risk factors contributing to frequency and severity of macular degeneration, the nation's leading cause of severe vision loss and legal blindness in adults. Researchers are concerned by the increase prevalence and, more worrisome, and earlier onset of macular degeneration in people utilizing digital devices on a frequent basis.

Additionally, Blue Light is emitted from the sun, including at times when it is cloudy or rainy. The extent of Blue Light exposure increases considerably in southern states. Of note, even when light comes through the car's windshield and windows, as well as home and office windows, harmful effects of Blue Light persist.

While the development of macular degeneration always remains a serious concern, Blue Light even more commonly is the instigator in Digital Eye Strain ("DES"). Digital Eye Strain is characterized by eye fatigue, blurred vision, red and/or dry eyes, general eye discomfort, and decreased productivity. Sometimes headaches can also be present. As expected, the risk of Digital Eye Strain increases with lengthier use of digital devices. The Vision Council notes that 72% of adults are not aware of potential damage caused by Blue Light overexposure and do not know that digital devices emit Blue Light.

While avoiding the emission of Blue Light from the sun and digital devices is not feasible, there now exists a new wave of new ophthalmic lenses, which dramatically minimize or eliminate Digital Eye Strain. Furthermore, of great import, in laboratory research, quality lenses with blue blocker substantially reduced retinal cell death while in real life situations, the research points to reducing drusen and macular degeneration. Very disappointingly, most optical labs use an ineffective lens coating and/or tinting while claiming supposed "protection." In reality, the blue blocker must be built within the ophthalmic lens so as to protect from harmful Blue Light while concurrently allowing beneficial light to pass through.

Lastly, an interesting dilemma has arisen from the multitudes of Americans who have achieved superb visual outcomes from refractive surgery (LASIK or PRK) or from cataract surgery with an intraocular lens implant (IOL). For example, these individuals can frequently utilize digital devices with no help from glasses or contact lenses. However, while unaided, UV Light and Blue Light have ready access to penetrate to and thereby damage our retinal cells. A similar occurrence, but to a greater extent, occurs outdoors with sunlight exposure to these individuals, especially those post cataract surgery because the cataract is no longer present to mitigate UV Light and Blue Light transmission to the retina. Therefore, for all those post cataract surgery, it is of paramount importance to make it a habit to conscientiously wear sunglasses outdoors and during daylight hours.