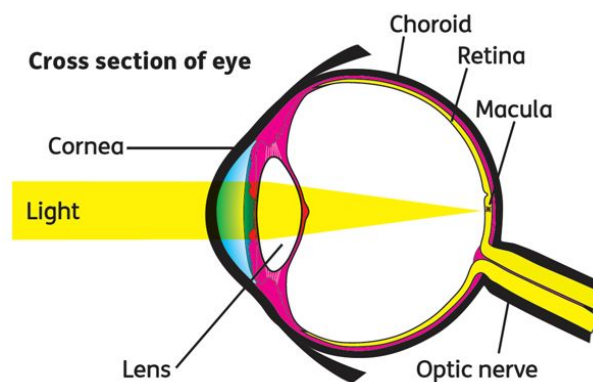


The Unseen Effect of Electronic Devices

Electronic devices like laptops, smartphones, tablets, and more are everyday aspects of our lives. They have become indispensable aids that help us day to day but there may be a price to pay for the increased exposure and use.

The hours spent looking at device screens are slowly taking its toll on our vision and not just in the form of digital eye strain. The symptoms of digital eye strain are usually temporary, but long-term exposure can be quite serious and it can result in permanent damage like age-related macula degeneration.

The screens of digital devices emit light, more specifically, blue light. Blue light is part of visible light and is the most harmful and can cause damage to our eyes. The cornea and lens of the eye are very effective at blocking UV rays from reaching the light-sensitive retina at the back of the eyeball, however, our eyes are not very good at blocking out blue light. Meaning that nearly all blue light passes through the cornea and lens and reaches the macula. While our digital devices expose us to blue light, they are not the only source. Other sources of blue light include the sun, compact fluorescent light bulbs as well as LED lights.



Blue light can damage light-sensitive cells, photoreceptors, which are responsible for sharp clear vision. Once the damage is done, it is irreversible. The eye does have a protective system in place using macula pigment which is found in the macula.

The macula is a small area of the eye and is found at the back of the eye near the centre of the retina. It is responsible for what we call our centre vision, basically what is directly in front of us. It is the macula that allows us to perform detailed activities such as writing, reading, sewing and it also allows us to see colour properly.

The macula is yellow in colour and as such acts as a natural sunblock by absorbing excess blue and ultraviolet light that enter the eye. The yellow color comes from its content of lutein and zeaxanthin. It is the combination of these carotenoids that form the natural defence against harmful blue light. Lutein and Zeaxanthin are the only nutrients that are deposited specifically into the eye for this purpose.

Finding a balance between appropriate use and overuse of our devices is a continual challenge in the digital age. As such it is important to include foods rich with these two nutrients or to take supplements that have the required daily dosage of 10mg Lutein and 2mg Zeaxanthin since our bodies are unable to make Lutein and Zeaxanthin and relies solely on what we put into our body through our diet for these important nutrients.

If our body does not get the required daily dosage, it results in a less dense defence which will allow more of the blue light by putting our eyes at a greater risk of permanent eye damage.