

What Causes Eye Strain or Tired Eyes?

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We all complain about eye strain from time to time, but what does eye strain really mean? How do our eyes become strained? As an eye doctor, I hear the complaint of eye strain every day, often several times per day.

Eye strain is a symptom felt by people when their eyes feel tired and achy. Some people state that they just want to close their eyes and go to bed when they have eye strain. They feel exhausted. Sometimes, eye strain can give you a headache or even make you dizzy. Let's explore several different causes of the discomfort.

Ciliary Body Fatigue

Eye strain is caused by different things. First, any time you do extended near work (at a close distance), the ciliary body, a muscle found inside the eye, is forced to work overtime. The ciliary body is the focusing muscle and allows humans to focus on near objects. When you stare or concentrate on a new object, that muscle contracts and allows the lens to get thicker and increase the total power of the eye.

Extraocular Muscle Fatigue

Another set of muscles that contract when doing extended near work is the [extraocular muscles](#). There are six extraocular muscles per eye. Two of these, the medial recti, do a lot of the work when focusing on a near object. To keep the image in focus and to prevent you from seeing double, the medial recti cause the eyes to converge inward. Once again, when those muscles contract for an extended period of time, they eyes may feel strained. Another activity that causes eye strain is when looking back and forth for an extended period. For example, let's say you are copying a paper that you have down by your side and you have to look back and forth to type the written text into a computer. The constant eye movement back and forth can also cause significant eye strain. Plus, it

wears on your mental status. Constantly looking back and forth begins to make your brain feel tired too.

Ocular Surface Disease

Eye strain can also come from an often over-looked culprit. People often complain of eye strain after reading for long periods of time. In some cases, it may not be the focusing of the eye that causes the problem but rather a [dry eye](#) causing it. Whenever we focus on a computer screen or just reading a book for a long time, our blink rate decreases. Anytime we concentrate on something our blink rate slows down. When we don't blink normally, our natural lubricating [tear](#) film does not get renewed. When our eyes are not lubricated properly, they feel tired and strained.

Uncorrected Vision Problems

Another cause of eye strain is an uncorrected vision problem. Small uncorrected vision problems are almost worse than having a large vision problem. When an individual has a large vision problem, they don't even try. They usually give up and go to the eye doctor because they can no longer function. When you have small uncorrected vision problems, you attempt to compensate by squinting and focusing hard. Attempting to compensate may cause [accommodative spasm](#) and leave you exhausted at the end of the day.

Glare

Unwanted glare can cause eye strain. Glare is a visual phenomenon caused by excessive and uncontrolled brightness. Sometimes glare can be downright debilitating. Many employers spend a lot of money setting up wonderful work stations for their employees. However, they totally forget to address the right type of lighting for certain work environments. The right type of lighting can create all the difference in the productivity of employees. Although our computer monitors are of much better quality now than they were a few years ago, generic fluorescent lighting can sometimes cause glare that creates a very uncomfortable environment. Most debilitating glare comes from the sun while driving to and from work. In fact, it can limit visibility so much that it can become dangerous.

Sources:

Computers, Digital Devices, and Eye Strain. American Academy of

Ophthalmology. <https://www.aao.org/eye-health/tips-prevention/computer-usage>

