Visual Comfort:
A Key Factor in Contact Lens Wearing Success

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From the first fit to the follow up and beyond, comfort plays an integral role in whether a patient will achieve success as a contact lens wearer.[1,2] Just consider, about one in four new contact lens wearers drop out within the first year,[2] with roughly one-third citing discomfort as the number one reason why they walk away from contact lenses.[2] Comfort is also important to existing wearers who attribute discomfort as a prime factor for discontinuing wear.[1]

With comfort playing such an important role for contact lens wearers, it's no surprise that it has been a central point of studies, with much focus spent on how contact lenses interact with the ocular surface and tear film.[3] Physical comfort is, of course, important in contact lens wear. But ocular surface factors alone represent just one piece of the complete contact lens comfort picture.[3]

Visual comfort is vital in a patient's daily life and represents an equally important part of their contact lens wearing experience.[4-9] Unlike physical comfort, visual comfort has been linked to visual stimulus from environmental factors and a patient's daily activities, many of which may involve spending time on screens for work, school, and leisure.[10,11]

Asthenopia: Two Distinct Paths of Contact Lens Comfort

A study by Sheedy et al. looked at whether all asthenopia was the same or whether symptoms could be attributed to more than one source.[12] From their research, Sheedy and his team determined that asthenopia was caused by two distinct mechanisms and symptom sets:

- **Ocular discomfort:** Caused by a disruption of the ocular surface with symptoms such as burning, irritation, dryness, or tearing.
- **Visual discomfort:** Caused by a strain of the visual system with symptoms including eye strain, headache, double vision, and blur.

While these two groups originate from different sources, they may be difficult to differentiate.[3] And treatment focused on the wrong source of discomfort can lead to unresolved issues and drop out.[3]

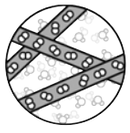
Environmental Strategies for Visual Comfort

A recent report from CooperVision found screen time hasn't slowed since the COVID-19 pandemic but instead continues to rise in the U.S.,[13] along with more individuals experiencing symptoms related to digital device use.[14] The recent TFOS Lifestyle Report also affirms the large demand for treatments to relieve symptoms related to screen time.[15]

There are numerous environmental interventions for digital eye strain, which can include adjusting screen brightness and device settings.[15,16] Additional behavioral strategies like taking regular breaks from screens and following the 20-20-20 rule have also been explored.[15,16]

Contact Lens Technology to Help Combat Asthenopia

CooperVision has developed two unique contact lens designs and material technologies that, in combination, may help address asthenopia caused by both internal and external factors in digital devices users.



Aquaform® Technology

- To help address eye dryness, **Aquaform® Technology** allows MyDay Energys® and Biofinity Energys® contact lenses to deliver a high level of oxygen combined with high moisture retention and optimal modulus to help support a healthy and comfortable lens wearing experience—even during times of reduced blinking such as when using digital devices.[17]

DigitalBoost™ Technology

- To help combat eye tiredness, CooperVision developed **DigitalBoost™ Technology,***[17,18] found in both MyDay Energys® and Biofinity Energys®. This unique single vision aspheric lens design delivers a +0.3D boost, which may help reduce ciliary muscle stress from overworked muscles during digital device use.*[18]

DigitalBoost™ Technology Positively Influences Visual Comfort in Wearers[18,19]

A study by Kajita et al. compared changes in accommodative micro-fluctuations (AMF), which are small dioptric changes that occur during accommodation.[18] Participants wore either a spherical (Biofinity®) or aspheric (Biofinity Energys®) silicone hydrogel lens. The research team reported that the AMF response to a 20-minute reading task differed significantly between the two groups, with the aspheric lens design resulting in a much smaller change in AMF compared to the spherical lens design.[18]

Of note: the authors concluded that DigitalBoost™ Technology may help ease ciliary muscle stress and accommodative burden so wearers can shift focus from on-screen to off-screen with less effort.*[18]

Complimenting these findings, another paper by Montani et al. found Biofinity Energys® wearers experienced significantly lower AMF compared to their counterparts who wore Biofinity® sphere lenses.[19]

Patients Seek Solutions to Digital Eye Strain

With the rise of digital device use,[13] patients are clearly looking for ways to address their symptoms. In fact, CooperVision's recent report on digital eye strain found:

- Nearly seven in 10 survey respondents reported experiencing symptoms associated with digital eye strain.[20]
- Nearly four in 10 say they experience symptoms multiple times per week or more.[21]
- 99% of vision-corrected patients have tried at least one method for reducing symptoms.[22]

Most patients turn to their eye care professionals for education and insight on the latest innovations in eye care. With digital eye strain on the rise and treatments now available to help address symptoms, a significant opportunity exists for both the patient and the practice.

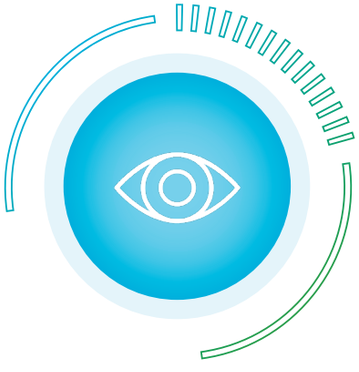
Underscoring the opportunity: nearly 60% of respondents said they have never talked to an eye care professional about how digital device use affects their eyes.[23]

Communication Starters About Digital Eye Strain

CooperVision's Digital Eye Strain Research Report[24] details several conversation starters ECPs can have with patients. These include:

- **Patient lifestyle**
- **Experience with digital eye strain**
- **Time spent each day on digital devices**
- **Symptoms and their frequency**
- **Symptom-reducing tools or techniques used and their effectiveness**

It's important to note that any patient typically fit into a spherical contact lens could be a candidate for either MyDay Energys® or Biofinity Energys®.[25]



Talk to Every Patient About Visual Comfort

Eye care professionals should place as much focus on evaluating the visual system as the ocular surface to help reduce symptoms. Today, eye care professionals can turn to innovative, highly effective evidence-based designed treatments that can help with digital device related symptoms.

Start having the visual comfort conversation with every patient. Download the Visual Comfort white paper and discover more insights and communication strategies for your patients. Routinely ask your patients about digital device use and provide them innovative solutions by fitting them in MyDay Energys® and Biofinity Energys®.

Download the Visual Comfort White Paper:

CooperVision®

* Based on a statistically significant difference of the mean change in Accommodative Microfluctuations and when compared to a lens without DigitalBoost™ after reading on an iPhone 5 for 20 minutes held at a distance of 25 cm. Study conducted with Biofinity Energys and sphere.

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