

An Ounce of Prevention

Complimentary

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Blue Light And Your Eyes

Current understanding of the effects of blue light from digital device screens on your sight or your child's sight

What is Blue Light?

Sunlight is made up of red, orange, yellow, green, blue, indigo and violet light. When combined, it becomes the white light we see. Each of these has a different energy and wavelength. Rays on the red end have longer wavelengths and less energy. On the other end, blue rays have shorter wavelengths and more energy. Light that looks white can have a large blue component, which can expose the eye to a higher amount of wavelength from the blue end of the spectrum. Setting limits when children are young is easier than cutting back when they're older. As a family, agree on basic screen time rules that everyone understands and shares. Consider developing a family media plan to guide when, how and where screens can—and can't!—be used.

Where Are You Exposed to Blue Light?

The largest source of blue light is sunlight. In addition, there are many other sources:

- Fluorescent light
- CFL (compact fluorescent light) bulbs
- LED light
- Flat screen LED televisions
- Computer monitors, smart phones, and tablet screens

Blue light exposure you receive from screens is small compared to the amount of exposure from the sun. And yet, there is concern over the long-term effects of screen exposure because of the close proximity of the screens and the length of time spent looking at them. According to a recent NEI-funded study, children's eyes absorb more blue light than adults from digital device screens.

Related link:

<http://www.ncbi.nlm.nih.gov/pubmed/21600300?report=abstract>

What Are the Benefits to Blue Light?

Blue light is needed for good health:

- It boosts alertness, helps memory and cognitive function and elevates mood.
- It regulates circadian rhythm – the body's natural wake and sleep cycle. Exposure to blue light during daytime hours helps maintain a healthful circadian rhythm. Too much exposure to blue light late at night (through smart phones, tablets, and computers) can disturb the wake and sleep cycle, leading to problems sleeping and daytime tiredness.
- Not enough exposure to sunlight in children could affect the growth and development of the eyes and vision. Early studies show a deficiency in blue light exposure could contribute to the recent increase in myopia/nearsightedness.

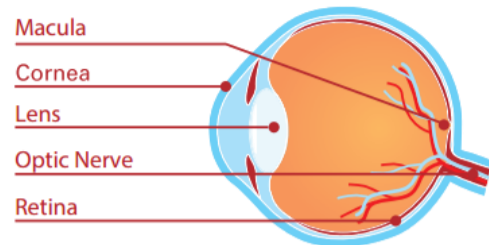
Related links:

www.ncbi.nlm.nih.gov/pubmed/25535358

www.arvo.org/webs/am2015/abstract/275.pdf

How Does Blue Light Affect Eyes?

Almost all visible blue light passes through the cornea and lens and reaches the retina. This light may affect vision and could prematurely age the eyes. Early research shows that too much exposure to blue light could lead to:



parts of the eye

Digital eyestrain: Blue light from computer screens and digital devices can decrease contrast leading to digital eyestrain. Fatigue, dry eyes, bad lighting, or how you sit in front of the computer can cause eyestrain. Symptoms of eyestrain include sore or irritated eyes and difficulty focusing.

Retina damage: Studies suggest that continued exposure to blue light over time could lead to damaged retinal cells. This can cause vision problems like age-related macular degeneration.

What Can You Do to Protect Your Eyes from Blue Light?

If constant exposure to blue light from smart phones, tablets, and computer screens is an issue, there are a few ways to decrease exposure to blue light:

Screen time: Try to decrease the amount of time spent in front of these screens and/or take frequent breaks to give your eyes a rest.

Filters: Screen filters are available for smart phones, tablets, and computer screens. They decrease the amount of blue light given off from these devices that could reach the retina in our eyes.

Computer glasses: Computer glasses with yellow-tinted lenses that block blue light can help ease computer digital eye strain by increasing contrast.

Anti-reflective lenses: Anti-reflective lenses reduce glare and increase contrast and also block blue light from the sun and digital devices.

Intraocular lens (IOL): After cataract surgery, the cloudy lens will be replaced with an intraocular lens (IOL). The lens naturally protects the eye from almost all ultraviolet light and some blue light. There are types of IOL that can protect the eye and retina from blue light.

Talk to an eye care professional about options about ways to protect your family and your eyes from blue light.

Blue Light Information to Download and print:

<https://www.preventblindness.org/blue-light-and-your-eyes>

https://www.preventblindness.org/sites/default/files/national/documents/fact_sheets/FS104_BlueLight_1.pdf

The Science and Power of Music

Have you ever stopped to think about how profound music has been for you in your life? Just the beginning of a song can change someone's mood, drop us into a state of reflection on life, reduce stress or even prepare us for a better athletic performance.

For many people there may be a calming effect to Billy Joel's "Piano Man." Or Rachel Platten's "Fight Song" can create a surge of energy bringing up a feeling of courage and confidence. Or Harry Chapin's "Cat's in the Hat" can drop you into a reflective mood on the impermanence of life and the longing for connection. Apparently, science shows that Beethoven's 9th symphony can have positive impacts on our health and well-being.

In this study, Oxford University scientists took 24 healthy volunteers and had them listen to a variety of different forms of music. They found that listening to music with a 10-second repetitive cycle like Beethoven's third movement No. 9 can lower blood pressure and prevent heart disease.

There's no question about it that music has dramatic effects on our thoughts, emotions and sensations. Matisyahu's "One Day" can inspire a sense of global hope and instantly bring a smile to your face.

Does this resonate with you?

When it comes to your brain's ability to believe what I'm saying, talk only goes so far, but experience takes it to the next level. If you'd like to investigate this for yourself, Beethoven's 9th Symphony is over an hour and you can find it here. But I believe you'd have to listen to the entire hour to replicate the study.

In the six month online mentorship program *A Course in Mindful Living*, a element we use to better understand ourselves is music. We post music and watch how it impacts our thoughts, emotions and sensations from moment to moment. Take some time to consider what relaxing tunes are to you, create some space, put them on and notice what comes up for you. If you need any help, here's a Relax and Retune Playlist that was compiled by the last group that went through the course.

After listening, tell us how music impacts you! Share with us other music that inspires any of these feelings for you – calm, wakefulness, self-acceptance, self-compassion, joy, happiness, energy, compassion, generosity, and balance.

Let's learn from one another, allowing for the creation of a Playlist for life.

~Elisha Goldstein, Ph.D.

<https://blogs.psychcentral.com/mindfulness/2017/09/the-science-and-power-of-music/>

Study: Yoga + Meditation = Better Brain Function, More Energy

Emerging research from Canada suggests practicing brief sessions of Hatha yoga and mindfulness meditation can significantly improve brain function and energy levels.

The University of Waterloo study found that practicing just 25 minutes of Hatha yoga or mindfulness meditation per day can improve brain functions.

Specifically, researchers discovered the practice can aid the brain's executive functions, enhance cognitive abilities linked to goal-directed behavior, and boost the ability to control impulsive emotional responses, habitual thinking patterns, and actions.

The study appears in the journal *Mindfulness*.

"Hatha yoga and mindfulness meditation both focus the brain's conscious processing power on a limited number of targets like breathing and posing, and also reduce processing of nonessential information," said Dr. Peter Hall, associate professor in the School of Public Health & Health Systems.

"These two functions might have some positive carryover effect in the near-term following the session, such that people are able to focus more easily on what they choose to attend to in everyday life."

For the study, 31 participants completed 25 minutes of Hatha yoga, 25 minutes of mindfulness meditation, and 25 minutes of quiet reading (a control task) in randomized order.

Following both the yoga and meditation activities, participants performed significantly better on executive function tasks compared to the reading task.

"This finding suggests that there may be something special about meditation — as opposed to the physical posing — that carries a lot of the cognitive benefits of yoga," said Dr. Kimberley Luu, lead author on the paper.

The study also found that mindfulness meditation and Hatha yoga were both effective for improving energy levels, but Hatha yoga had significantly more powerful effects than meditation alone.

"There are a number of theories about why physical exercises like yoga improve energy levels and cognitive test performance," said Luu.

"These include the release of endorphins, increased blood flow to the brain, and reduced focus on ruminative thoughts. Though ultimately, it is still an open question."

Hatha yoga is one of the most common styles of yoga practiced in Western countries. It involves physical postures and breathing exercises combined with meditation. Mindfulness mediation involves observing thoughts, emotions, and body sensations with openness and acceptance.

"Although the meditative aspect might be even more important than the physical posing for improving executive functions, there are additional benefits to Hatha yoga including improvements in flexibility and strength," said Hall.

"These benefits may make Hatha yoga superior to meditation alone, in terms of overall health benefits."

~By Rick Nauert, Ph.D.

<https://psychcentral.com/news/2017/09/07/yoga-meditation-better-brain-function-and-more-energy/125664.html>

"THESE ARE THE SIX DANGERS INHERENT IN HEEDLESSNESS CAUSED BY INTOXICATION:

- **Loss of immediate wealth**
- **Increased quarreling**
- **Susceptibility to illness**
- **Disrepute**
- **Indecent exposure**
- **Weakened insight"**



~ Buddha

Pick Me Ups

Yes... You're right. The early bird does get the worm. But the second mouse gets the cheese!

A synonym is a word you use if you can't spell the other one.

Hard work never hurt anyone, but why take the chance.

When nothing is going right, turn left!

You got to feel sorry for people who don't have dogs.

They're stuck having to pick up the food they just dropped on the floor.

Parenting Corner:

How to Raise Emotionally Healthy Children

<https://psychcentral.com/lib/how-to-raise-emotionally-healthy-children/>

Modeling Healthy Behavior For Your Children

<https://psychcentral.com/lib/modeling-healthy-behavior-for-your-children/>

Self- Help Corner:

Alcoholics Anonymous:	780-424-5900
www.alcoholics-anonymous.org	
Al-Anon/Alateen:	780-433-1818
Support Network / Referral Line:	211
Distress Line:	780-482-4357
Cocaine Anonymous:	780-425-2715

Informative Links:

The National Women's Health Information Center:

<http://4woman.gov>

75 Things You Can Control

<https://blogs.psychcentral.com/weightless/2017/09/75-things-you-can-control/>