Tips For Heavy Computer Users – Migraines / Eye Strain and other related Issues

Computer monitors can cause a tremendous amount of stress on your eyes, especially when settings and placement aren't appropriately adjusted. Here are some must know tips for the heavy computer user who experiences migraine attacks and other related issues

1. ADJUST YOUR MONITOR'S REFRESH RATE

The refresh rate indicates how many times per second your computer screen renews its image. When rates are set too low, monitors can imperceptibly flicker, causing your eyes to strain more than necessary. Go to: computer preferences, display properties, advanced settings. The refresh rate frequency is measured in hertz. You'll want to set this rate as high as it will go to reduce eyestrain.

2. CHANGE THE VIEW MODE

Did you know that your computer offers different display settings depending on what you view most? Make sure your display mode is set to 'photo' if you deal with images, 'film' for frequent video display or 'text' if your screen is most commonly filled with words. Your screen will adjust to give you the best viewing experience.

3. PROPERLY STAGE YOUR WORK SPACE

Your monitor should be placed directly in front of your face, not off to one side or the other. This reduces neck strain and supports a more direct and effortless line of vision. Next, be sure that your monitor is place between 20 and 40 inches away from your face (reduces eye strain). Additionally, monitors should sit at eye level to reduce slouching, which can lead to tension and migraine symptoms. Adjust your chair so that the computer screen properly aligns with your eyes. Lastly, make sure there is no glair on your monitor from another light source. Glares make your eyes work extra hard to focus.

4. ADJUST BRIGHTNESS

The brightness of your computer screen should blend with the brightness *around* your computer screen. If you work in a dim office and stare at an ultra-bright display, your eyes are being forced to operate under two seriously contrasting environments. Your office should provide a well-lit workspace. If it does not, consider toning down your screen brightness and investing in a desk lamp.

5. CHANGE THE FONT SIZE

If you catch yourself squinting to make out text or notice that by the end of the day, your face feels tired or strained, you may need to adjust your font size. Your eyes won't need to work so hard to read, reducing the risk of triggering migraine symptoms.

6. PRACTICE GOOD POSTURE

Try making a conscious effort to sit up straight with your shoulders back and your chin up. Retraining your body to accept this posture could help reduce stress and tension on your body that may be a trigger to your migraine symptoms.

7. TAKE STRETCH BREAKS

Say what you will about frequent breaks but for the sake of migraine symptoms, they are entirely necessary. Stand up every so often and stretch your back, shoulders and neck to alleviate pressure. Allow your eyes to rest a moment away from the glow of your computer monitor. Frequent breaks will refresh your body and brain while improving circulation, which is excellent for migraine prevention.

8. BLINK MORE OFTEN.

Blinking is very important when working at a computer; blinking moistens your eyes to prevent dryness and irritation. When working at a computer, people blink less frequently.

Tears coating the eye evaporate more rapidly during long non-blinking phases and this can cause dry eyes. To reduce your risk of dry eyes during computer use, try this exercise: Every 20 minutes, blink 10 times by closing your eyes as if falling asleep (very slowly). This will help rewet your eyes.

9. EXERCISE YOUR EYES.

Another cause of computer eye strain is focusing fatigue. To reduce your risk of tiring your eyes by constantly focusing on your screen, look away from your computer at least every 20 minutes and gaze at a distant object (at least 20 feet away) for at least 20 seconds. Some eye doctors call this the "20-20-20 rule." Looking far away relaxes the focusing muscle inside the eye to reduce fatigue.

Another exercise is to look far away at an object for 10-15 seconds, then gaze at something up close for 10-15 seconds. Then look back at the distant object. Do this 10 times.

This exercise reduces the risk of your eyes' focusing ability to "lock up" (a condition called accommodative spasm) after prolonged computer work.

10.. GET AN EYE EXAM

If you believe you have 20/20 vision, it still doesn't hurt to checked out. Tell your optometrist that you work on a computer all day and suffer from chronic migraines. They may recommend a light prescription for viewing monitors at close range so that your eyes won't need to work as hard as they do to focus in on text and images. If you already have glasses, make sure your prescription is up-to-date.

You may also be interested in this article: Learn about Retinal Migraines

9. TRY USING COMPUTER GLASSES

Computer glasses are a type of specialty eyewear that will optimize the visual experience of working on a computer screen. They reduce glare, increase contrast and maximize what you see through the lenses to make computer work easier on the eyes.

11. CLEAN YOUR COMPUTER SCREEN

Dust reduces sharpness, which in turn, makes your eyes work harder than they have to. Use a monitor-safe micro cloth to keep your computer screen dust free, smug free and easy to read.

12. FLUORESCENT LIGHTING AND FLICKER

Fluorescent lights and computer screens do have one thing in common: flicker. Flicker is known as the change in light intensity that results from voltage fluctuation. In computer screens, the flicker is caused by the monitor's refresh rate. Interestingly, a monitor's refresh rate is at almost the same frequency as fluorescent lighting – about 50 to 60 hz or a rate of about 60 flickers per second. For most people, this flicker goes completely unnoticed. But migraine sufferers aren't most people.

Those who suffer from migraines have extremely sensitive brains. They are overly sensitive to a number of potential migraine triggers

PREVENTING MIGRAINES CAUSED BY FLUORESCENT LIGHTS

There is no perfect solution to prevent fluorescent lighting from triggering migraines, but there are three things commonly done to address this:

- 1. Changing the lighting (most commonly from fluorescent to incandescent).
- 2. Wearing sunglasses or glasses with either yellow or blue-tinted lenses.
- 3. Simply turning the lights off.

OPTIONS FOR ACCOMMODATIONS:

Screen Glare:

Get a glare hood

A glare hood is a device that will make your computer totally glareproof! We like this one for your 13" MacBook Pro on Amazon for \$70.

More: How To Apple Big Tech iPad -



Cover your mobile devices too.

For those struggling with iPad glare, try an anti-glare film for your screen. We like this one for \$25.

There are also anti-glare films for your iPhone, Droid, and portable video game systems. Protect them all.







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So / So reviews – glass having slight yellow tint and extra film on them. They take a while to notice the difference if working or not.



Educational Insights Fluorescent Light Filters (Tranquil Blue), Set

- Harsh glare and flickering lights can cause eyestrain, headaches, even anxiety.
- Four fabric panels fit over standard ceiling fluorescent light fixtures with sturdy, sewn-in magnets, creating a soothing working environment.
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HOW BLUE LIGHT CAUSES COMPUTER EYE STRAIN

Computer eye strain (eye fatigue, computer vision syndrome) has also been associated with blue light emitted by digital display devices. Computer eye strain is a big problem if you are blue light sensitive and you need to stare at screens a lot. Moreover, emerging research suggests that there are other longer term health hazards, e.g. retina damage, sleep disorder, depression, etc. Blue light filters are a possible solution to blue light induced computer eye strain.

Computers require *intense use of the eyes*, often *for extended periods of time*. Moreover computer screens (most digital screens) are <u>sources of light</u>, they are <u>prone to glare and reflections</u>, and they <u>emit High Energy Visible (HEV) blue light</u> with high intensity (E-readers using E-lnk technology – not backlit – are an exception).

How blue light causes computer eye strain:

Visible light in the violet and blue areas of the spectrum (shorter wavelengths ~380-500nm) is not as easily focused as longer wavelengths due to greater scattering and aberrations.

When abundant (as in the case of digital displays) violet and blue light may reduce contrast making things appear hazy, glary and out of focus.

Our eyes' futile struggle to focus eventually causes computer eye strain. When violet and blue light is filtered out, contrast is improved, the eye finds it easier to see detail and computer eye strain is relieved

There are a few people who are particularly sensitive to blue light, other few who don't seem to be affected much, and the majority somewhere in between these two extremes.

If you are experiencing computer eye strain and you have already eliminated other possible causes, such as for example glare and reflections on your screen, you might be among the more light sensitive.

POSSIBLE ACCOMMODATIONS



Iris is software for eye protection, health and productivity. https://iristech.co/iris/

Iris works automatically and detects if it's day or night. Based on that it will change your screen Color Temperature and Brightness. When you open the control panel of the program you can select different modes and types of Iris.

Iris mini and Iris are free, but there are some Pro versions with more features.

- You can decrease the amount of blue light emitted from the screen
- Control the brightness without PWM flicker
- It has a much larger blue light reduction color range, brightness without pulse-width modulation, manual settings, color effects, font rendering, magnification and partial screen blue light reduction with the help of full screen overlays.



Twilight App

The Twilight app makes your device screen adapt to the time of the day. It filters the flux of blue light emitted by your phone or tablet after sunset and protects your eyes with a red filter. The filter intensity is smoothly adjusted to the sun cycle based on your local sunset and sunrise times.

Bluelight filter (by Eyecare) is another app

NightShift

Apples new Nightshift feature changes the color temperature of your display when it's dark outside. The later and darker it gets, the warmer the temperature.

You can find the settings for Night Shift in the main settings app by heading to **Settings** —> **Display & Brightness** —> **Night Shift**. From there, you can control when you want the feature to kick in. You can also manually adjust the display's color temperature with a slider.

Nightshift can also be used on your MAC

Night Light feature

Windows 10 (update released April 2017) – Called "Night light," this feature shifts the Windows 10 display to show warmer colors that reduce the amount of blue light that's emitted. Go to the Action Center and click on All Settings, then click on the System button, and then select Display. Night light can be toggled on and off (see instructions document for PC and MAC)



f.lux f.lux makes your computer screen follow the pattern of indoor/outdoor (time of day) lighting. Free for windows https://justgetflux.com/