

Ergonomics Simplified

Most diagnostic and surgical equipment was designed with little thought for the comfort of your hands, wrists, arms, shoulders, back, or neck. Slit lamps and indirect ophthalmoscopes, for example, have made neck and back injuries an occupational hazard. And outside of work, the pervasive use of cell phones, tablets, and computers can exacerbate this damage. Such devices encourage you to tilt your head forward, which puts your cervical spine in an unnatural state of flexion—a problem known in lay terms as *tech neck*.

Bad habits cause physical deconditioning. You may be combining this forward cervical flexion with a relaxed and slouched posture, in which you don't use your muscles to support your spine. As a result, your upper back and shoulders become tight and weak, your core becomes deconditioned, and the proximal muscles in your legs may lose some of their strength. The good news is that your muscles can be retrained.

It Is All About Posture

If you watch the Academy's course on ergonomics,¹ you will notice that the best practices all have something in common—good posture, with proper spinal alignment. Thus, improving your neutral spinal posture is at the root of good ergonomics.

Build body awareness. When you sit at your desk, what's your posture? Many people let their axial skeleton

collapse—they relax their core, which sends their spine out of alignment, compresses their lungs, and shallows their breathing. Instead, sit up straight with your belly button pulled in toward your spine, lengthen through the crown of your head, and create space between each of your vertebrae. Tuck your chin in if it is drifting forward and relax your shoulders away from your ears. Breathe in deeply and allow your lungs to expand in all directions. Pause to consider how this feels. Which muscles are activated? What feels relaxed? If you are not used to sitting in proper spinal alignment, this may initially feel like hard work.

Retrain your body's neutral position through good posture and breathing techniques. The more time you spend practicing good posture, the more likely it will become your neutral position.

Once you have built muscle memory of good posture, your body will be able to maintain a neutral position more easily when you use equipment. It is helpful to combine your practice of good posture with diaphragmatic breathing—see the discussion of the *one breath* technique in “Physician Be Mindful” (November 2022, *EyeNet*) at aao.org/eyenet/archive.

Incorporate exercise and yoga into your daily routine. Yoga does not require that you spend an hour on a mat to get physical and mental benefits. Release muscle tension by performing brief yoga sequences in short increments throughout the workday. These can be



POSTURE PROBLEMS. Don't let the job you love become a pain in the neck.

done in the exam rooms in regular work clothes in as little as 1 or 2 minutes. For a video that demonstrates these sequences, see “Stress? Back Pain? Try Yoga Sequences That Are Tailored for Ophthalmology” (July 2019, *EyeNet*).

Practice, practice, practice. Find moments throughout the day to take a deep breath and practice good posture. Eventually the act of taking that breath will cue good posture, reducing your risk of debilitating pain in the future.

¹ aao.org/course/ergonomics-best-practices-course. Accessed Feb. 2, 2023.

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MORE ONLINE. For ergonomic pearls and a course suggestion from AAO 2022, see this article at aao.org/eyenet.

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