

THE C.H.E.K INSTITUTE'S

10 Tips for Healthy Ergonomics



1

Keyboard Height

Keyboard heights are fixed at most workstations, so you will need to adjust your seat height and body position in relation to the keyboard.

Sit with relaxed shoulders and good upright posture. Place your hands on the keyboard in a typing position. Now, adjust your seat height until your elbows are bent at 90-degrees, as in the picture below.



Next make note of the position of your knees and feet. Ideally, there will be a 90-degree angle at your knees, and your feet will rest flat on the floor. If your knees are higher than your hips (the knee angle is less than 90-degrees), you should consider raising your keyboard or desk. You may need to replace your desk with a taller one.

If you cannot place your feet flat on the floor with your knees at 90-degrees (the knee angle is more than 90-degrees), use a footrest to lift your feet to the required height - see Tip #2.

If you are tired of your office chair and want a fun, ergonomically-sound replacement - try a ball! Used as chairs, exercise balls (also called stability or Swiss balls) promote good posture, provide a cushion for your spine and will help make your work environment more fun. Balls also encourage movement of the spine, which helps spinal discs stay hydrated and healthy.

Choosing the correct size of ball to use as a chair is important. Your thighs will be slightly above parallel to the floor and the angle at your knees will be slightly greater than 90-degrees, as seen here.



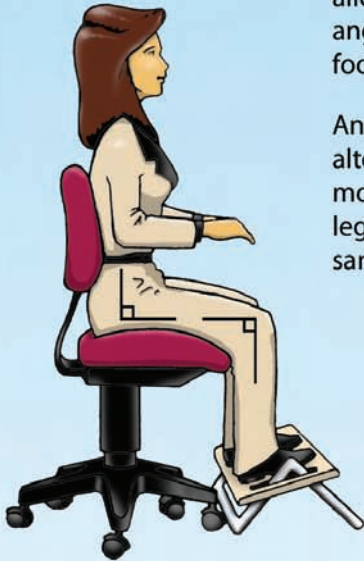
2

Footrest



Poor posture and inadequately supported feet when sitting can cause the chair seat to place excessive pressure on the back of the thigh, which compresses the sciatic nerve. This often results in tingling, numbness and pain in either the back of the thigh, the lower leg or both.

To avoid this problem, take note of where your feet are placed once you have adjusted your chair height as described in Tip #1. If your feet do not rest on the floor when your knees are at a 90-degree angle, you will need to support them with a footrest.



When selecting a footrest, choose a height that allows your hips and knees to be at 90-degree angles, as described in Tip #1. Adjustable footrests are ideal.

An adjustable height Wobble Board is a good alternative to a footrest. The dynamic movement of the Wobble Board means that your legs and feet will not get tired of being in the same position for hours.

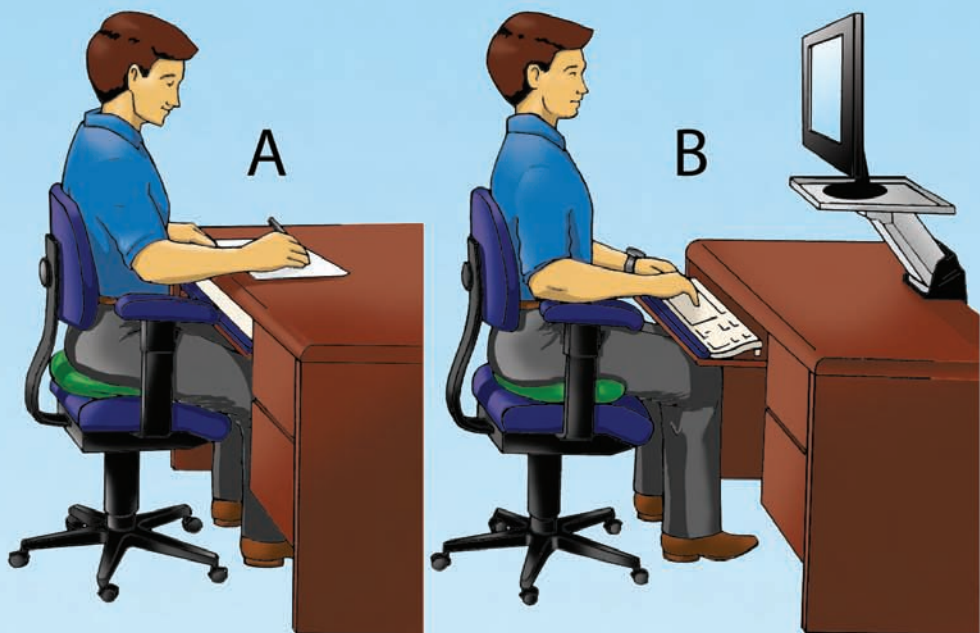


You can stand on a Wobble Board when talking on the phone. This is a great opportunity to enhance your balance and proprioception!

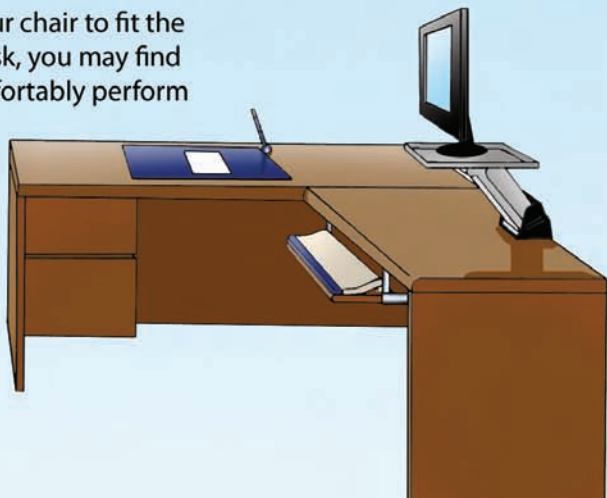
3

Desk Height

Desks designed for writing are usually too high to use a keyboard comfortably (A). Conversely, desks designed for computer use are often too low for a comfortable and ergonomically correct writing position (B).



Once you have adjusted your chair to fit the keyboard height of your desk, you may find your desk is too low to comfortably perform other activities such as reading or writing. So you can either readjust your chair height during these activities or organize your workstation as shown here. Tip #9 gives more ideas for reading positions.

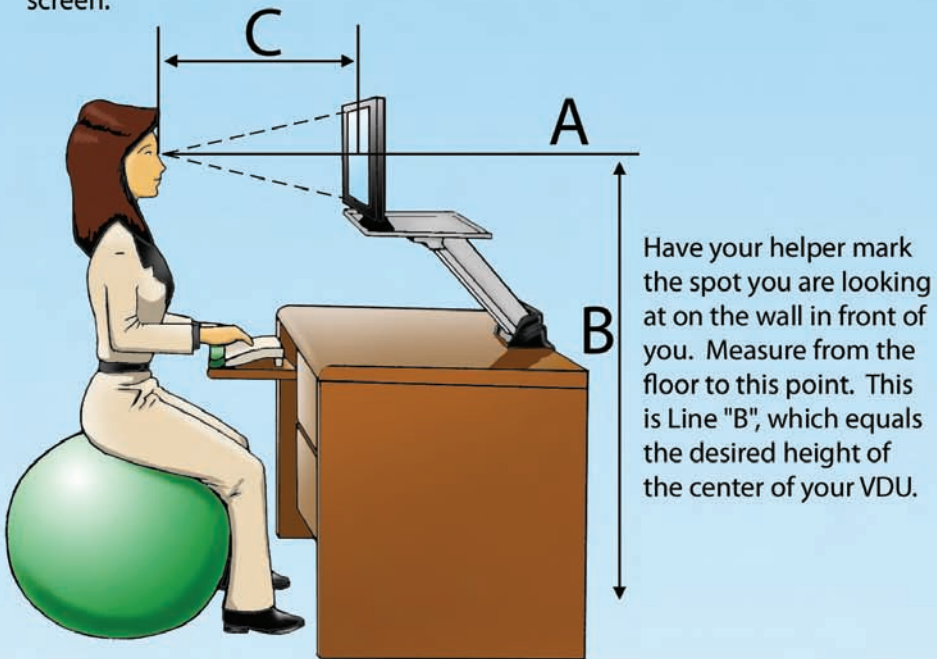


4

Video Display Unit

Once you have set-up your chair and workstation for optimal ergonomic typing position, adequate foot support and proper desk height, the next step is to set your video display unit (VDU) height. You may need someone to help with this.

Sit at your desk and look straight ahead. This is Line "A" in the picture below. This line should ideally pass through the middle of your VDU screen.



Have your helper mark the spot you are looking at on the wall in front of you. Measure from the floor to this point. This is Line "B", which equals the desired height of the center of your VDU.

Line "C" indicates the distance your VDU should be from your eyes. This distance should measure no less than 14" (35cm) and no more than 30" (76cm). If you cannot focus on the screen within these distances, consider seeing an eye specialist.

A fixed monitor stand can be used to raise the VDU on a workstation dedicated to only one user. However, workstations that have multiple users will benefit from an adjustable video display arm.

5

Material Positioning



The placement of reference material is very important when creating a healthy, ergonomic work environment. Always position reference material as close to your horizontal gaze and VDU as possible, so that you can view the material and your VDU using only eye movement. Document holders that attach to the VDU are ideal.

If you are using a book as reference material, place a bookstand as close to your VDU as possible, at the same height.



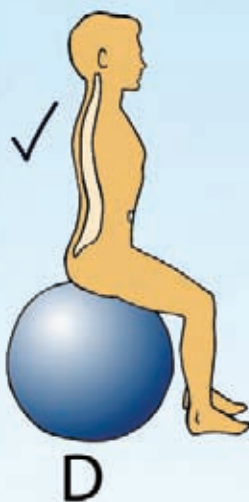
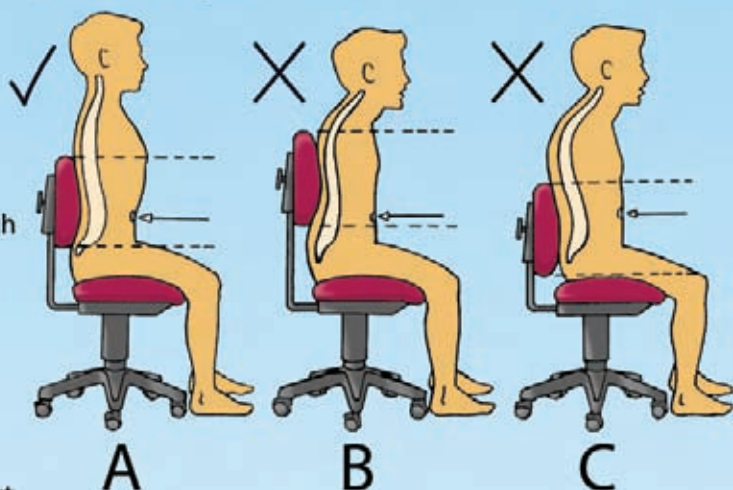
An option for people with minimal workspace or who are using multiple reference materials is to use a telescoping music stand. Adjust this to the same height as your VDU for proper viewing.

6

Lumbar Support Positioning

Most good desk chairs are made with an adjustable lumbar support. When positioned at the correct height and curve, the convex surface of the chair will match the concave curve of your lumbar spine (A). This helps to prevent premature fatigue.

If the lumbar support is positioned too high (B), it will tend to push you forward. This will quickly tire your neck and back muscles and make it hard to concentrate. If the lumbar support is positioned too low (C), you will have a tendency to slouch, which causes poor concentration and fatigue.



When using a ball as a chair, make sure the ball is properly inflated and your knees create a slightly greater angle than 90-degrees (D). This will promote good lumbar curvature and sitting posture.

A ball that is too small or too soft will result in poor alignment and poor posture (E).

7

Tilting Seat Pan

A tilting seat pan is recommended when a chair is used for both computer work and writing tasks. Research has shown that individuals using a chair with a tilting seat pan experience less back fatigue and discomfort than those who did not. You can adjust the angle of the seat pan for different tasks as shown below.



If your chair does not have a tilting seat pan, you may want to consider using a Sitting Disk such as a DuraDisk or SitFit.

Similar to sitting on a ball, an air-filled Sitting Disk enables you to move your pelvis around which helps to hydrate your spinal discs throughout the day, maintaining a healthy spine.

Sitting on a Sitting Disk will not only allow you to tilt your body in the necessary position for proper ergonomics, it also provides extra cushioning for your spine and is fun to sit on!



8

Keyboard

If, while typing for extended periods of time, your wrist muscles and/or tendons rest on the edge of a keyboard or desk, some type of pain will be likely.



Chronic exposure to pressure on the underside of the wrist, as in figure A, is commonly associated with carpal tunnel syndrome, plus neck pain (double crush syndrome) and chronic tension in the forearm muscles.



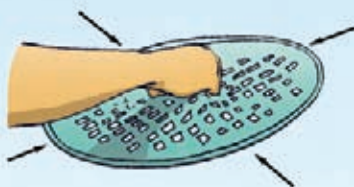
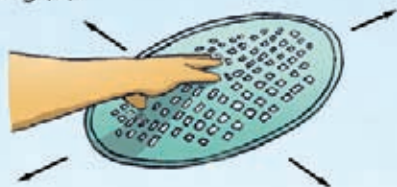
For optimal comfort and performance at your computer, a wrist support is recommended (B).



Individuals with shorter fingers may find it more comfortable to lift the back of the keyboard while typing (C).



People with longer fingers may prefer to elevate the front of the keyboard while typing (D).

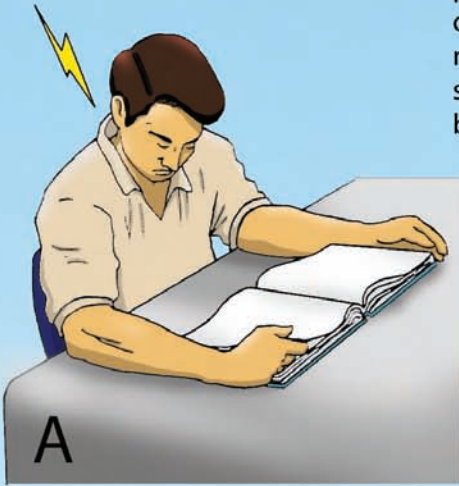


Using the Power Web for just a few minutes during breaks or at lunch will help strengthen fingers and may help reduce the risk of carpal tunnel syndrome.

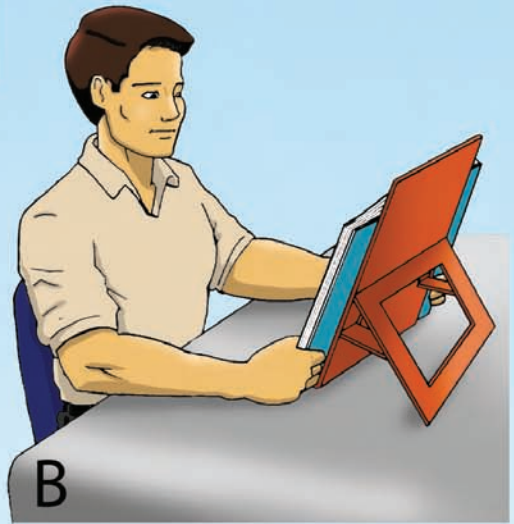
9

Book Stands

Everyday, more and more people are suffering from shoulder, neck and head pain. Part of the problem may be caused or exacerbated by extended periods of reading while in poor posture (A). A solution to this problem is to use a bookstand while reading (B).



Not only will this reduce fatigue and discomfort, it will promote good posture, increase blood flow to the brain and improve concentration.



Reading stands are available at many book and office supply stores for as little as \$5.00. Why wait any longer?

10

Head Set

Many people talk on the phone, sometimes for long periods of time, by holding the phone to their head with their arm or shoulder.

Prolonged exposure in this position will inevitably result in neck and shoulder pain.



Using a telephone headset will eliminate these problems and promote good posture. Wireless and remote headsets are easy to find for those who need to move around frequently.



Apply these 10 Tips for Healthy Ergonomics to your work place and combine them with a regular exercise program and proper nutrition, and you will be on your way to a healthy and productive life!

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