

# Your Bottom Buddy: Chairs and Healthy Sitting Habits



By Tamara Mitchell

What is the most important piece of equipment in your office? Your computer? Your telephone? In terms of your ergonomic well being, it can be argued that it's your chair. Most people spend a majority of time sitting on a chair, whether they are working at their computer, in a meeting, talking on the phone, or working in a lab. Yet little thought is given to this very important piece of furniture, and sometimes too much money is spent on the wrong chair! In addition, many people do not even know how to adjust the chairs they sit in.

## **Making adjustments.**

Even if you have a marvelous new chair, it can cause you lots of trouble if it isn't adjusted properly. Your chair needs to fit your body size and shape, and it needs to be adjusted to support the unique curve of your back and the length of your legs. To correctly design your workstation, the proper adjustment of your chair is crucial. All other equipment and worksurface heights follow after your chair is adjusted (unless they are standing-height worksurfaces).

If you are experiencing back or shoulder pain, if your legs ache or feel numb, or if your hips ache, it is very possible that a minor adjustment to your chair can eliminate these problems. Assuming your chair is not a dinosaur from the Pleistocene era, it is probably quite easy to adjust. Check our webpages that discuss selecting and adjusting your chair:

<http://www.working-well.org/chair.html>

Guys, take the wallet out of your back pocket! The tilting of your pelvis caused by sitting on a wallet all day can cause spinal misalignment and lower back aches.

An adjustable chair is just as important at home as it is at work. If you spend significant time on your computer at home, make sure your home office is well-designed, too. Refer to our webpage on workstation design to help you create an office at home that will not create ergonomic problems for you outside of work: [http://www.working-well.org/wkstn\\_design.html](http://www.working-well.org/wkstn_design.html).

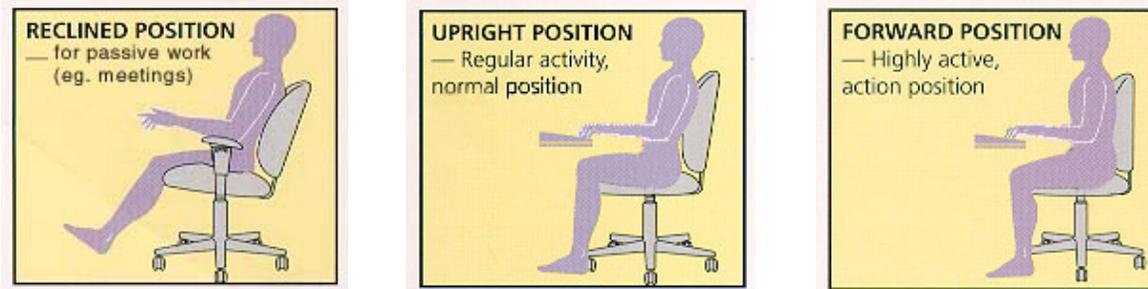
## **Staying active.**

Did you know the average American sits 14 hours a day?!? Unless you have a job that requires you to sit and stand every 30 minutes, you sit too long. A chair that fits you cannot take away back pain unless you change your position often. Getting out of your chair at least once an hour is critical for injury prevention. A common piece of advice is "*find a good chair and then leave it!*"

Active sitting means that you are not planted in your chair in an immovable or “correct” posture. Since we were young, we’ve been taught to “sit up straight and stop squirming”. This often promotes learning unnatural postures that, when held statically, can strain the back muscles and spine. Of course, we are not suggesting that you slouch or slump, but sitting in one position for long periods of time, even a comfortable upright position, is not advisable. Experts agree that changing your posture frequently is extremely beneficial in maintaining a healthy back. So, go ahead and squirm!

Rocking in your chair is very useful because whole-body movement helps keep your spine lubricated and healthy. Many adjustable chairs have a lever that activates the rocking function (usually it is the first adjustment on the right side of the chair). For those people without a rocking adjustment, roll forwards and backwards over your “sitbones” at the base of your pelvis every once in a while.

Sitting postures vary depending on the type of activity you are engaged in.



The most helpful dictum is: “The best position is the next position.” In other words, keep changing your position and use your chair adjustments to help you. Find a position that supports your task at each moment.

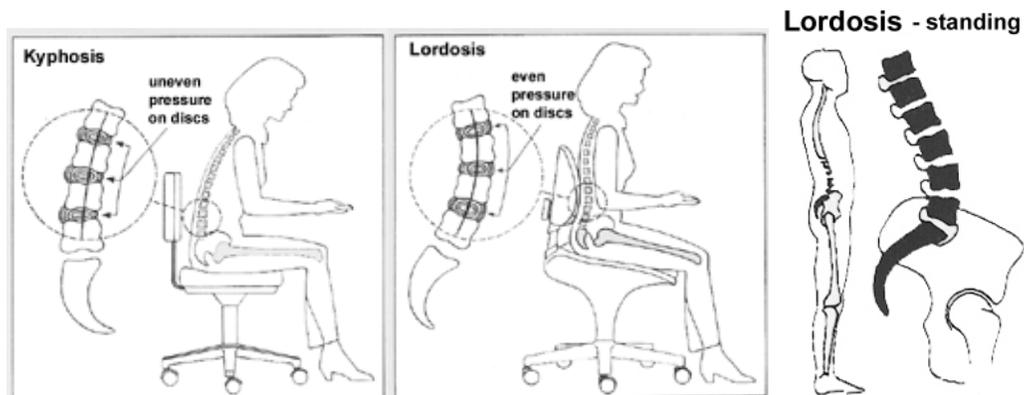
- Switch to a new position BEFORE you start aching or feeling uncomfortable.
- Stand up to work or talk on the phone.
- Stand up and stretch frequently, swing your limbs, dance around, or at least take a walk down the hall.
- Do some stretches. Movement and stretching increases circulation and prevents muscle tension and fatigue.

### **Alternative seating.**

There's a good chance you've seen advertisements for new types of seating and alternative chairs that are intended to promote "active sitting" and better postures. One of these, the kneeling chair, has been around for a few decades. More recently, companies have been promoting exercise balls, moving discs and bouncing stools as alternative active seating. Should you invest in one of these? Are they better for you from an ergonomic standpoint?

An "ergonomic" chair is the chair that supports the users' natural postural alignment. Users of alternative seating need to be particularly aware of their pelvic angle and spinal alignment. Alternative seating is a great improvement over traditional nonadjustable seating that increases lumbar pressure up to 30%. When a chair seat is flat, it reduces the natural curve in the lower

spine, compressing the vertebrae and causing lower back strain. This posture is called "kyphosis" and is illustrated below. If a seat (or ball or stool) permits the pelvis to rest in its natural position (a slight downward tilt), the spine stays curved, reducing strain in the back, neck and shoulders. This "open hip angle" is called "lordosis" and is the natural curve of the spine when you are standing (illustrated below). This angle is not possible when an individual sits in the slump position. Slumping is not a natural postural alignment, however, researchers have found it is a habituated posture when our attention is distracted by functional tasks.



The most positive aspect of alternative sitting is the continual posture correction that reduces the static loading of the spine. Traditional nonadjustable chairs do not encourage movement. The end result is that our body becomes weaker, less able to support itself, and less able to cope with the pressures that we put on it. A healthy body is an active body. However, some people do not have strong enough abdominal and back muscles to support them in the "active" positions for long periods of time. Some people need firm support in their low back, while others need a narrow support on their mid back.

Most (not all!) alternative seating options encourage movement while sitting which improves circulation to the intervertebral discs and lower extremities, improves conditioning of low back muscles and improves stabilization of the spine. If users sit too long on alternative seating and have weak back muscles, they will quickly fatigue and be unable to sit in a natural position. If an individual sits too long in a kneeling chair that does not move, there will be increased pressure on the knees and spine. The original kneeling chair was a rocking chair designed for short term sitting. The fitness ball was designed to be used during physical therapy sessions as part of a spinal stabilization exercise program. Both the kneeling chair and the fitness ball can be used in an office setting IF they are the correct size (or can be adjusted to the correct height) for you and your workstation. NO seating will prevent back pain if the environment is not adjusted to fit the user. The fitness ball tends to be unstable when a user needs to move around the office to open file drawers or access various other things around them. In addition, sitting on them for an extended period tends to encourage slumping as the back muscles fatigue.

If you are considering alternative seating, find the model that fits you best. This will take some research and sit time. The only way you will be able to decide if it is appropriate for you is to sit on it while you are being distracted by functional tasks. Alternative seating is indeed an excellent supplementation to an adjustable chair that is adjusted to fit the user. Give it a try and see what you think!

**Reference:**

The Body at Work Newsletter, 1/14/02, by Hilary Bryan and Claudia Singer

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