

# Beyond Blocks and Bricks

Number Ten

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## Why my neck hurt (past tense)

Although I prefer scurrying around building sites, sitting with designers clarifying details, and teaching how to use masonry better, I spend most of my time sitting at a desk, working with keyboard and mouse. If, compared to laying bricks, this is physically undemanding, why, some days, does my neck hurt, my right hand hurt, or my lower back hurt?

Because the relationship among my monitor, my keyboard, my mouse, the top of my desk, the seat of my chair, and the arms of my chair is not what it should be.

A few months ago, I thought that I had these relationships worked out, but my neck continued to bother me. I fixed that by raising my monitor by three layers of old particle board shelving. Two layers were not enough, but three layers were. I also tweaked the height of my desk by an inch so that when the seat was adjusted so that my arms were parallel with the floor and at the same plane as the keyboard, my thighs were comfortable.

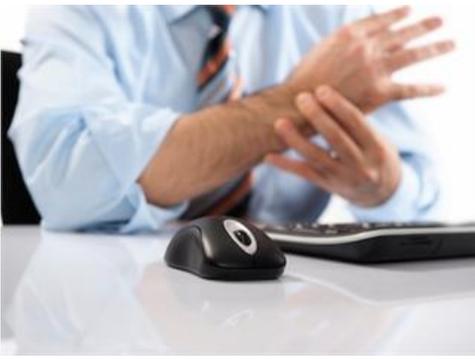
How you arrange your workplace is important. Kate Lister reflects on this. She's done here homework and has some good suggestions.

Remember, too, that you change. What works 'forever' will change as you do.

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## Office Ergonomics: Lessons Learned From Physical Therapy

Kate Lister via Courtyard by Marriott



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In my younger days, I thought of ergonomically designed desks, chairs, keyboards, etc. as nothing more than an office equipment manufacturer's pursuit of higher margins—a bait and switch aimed at gullible buyers. Now, at 50-something, I wish I'd taken the bait. While I'm still not convinced that any office chair is worth thousands of dollars, I could have paid for an office full of them with what I've spent in doctor's bills and physical therapy.

"Repetitive stress injuries such as carpal tunnel, tendonitis and bursitis cost companies millions," says Sharon MacDougall, owner of [Remote Workforce Consultants](#), a California-based firm that specializes in outfitting home offices. "They're not only one of the top workplace injuries, they also result in prolonged absenteeism and costly lost productivity." And the problems are getting worse.

[CIO.com](#) reported that repetitive strain injury cases [jumped over 30 percent](#) from 2008 to 2009. They estimated the cost to U.S. businesses at over \$600 Million in lost productivity—not to mention the debilitating pain to affected employees. CIO pointed to Microsoft research that revealed "the rapidly emerging trend of mobile working, and increased usage of laptops and mobile devices is behind this alarming climb in work-related injuries and spiraling costs to businesses."

*Want to read more about staying healthy at work? Check these out:*

- [5 Ways To Stay Healthy On The Road](#)
- [5 Tips To Make Better Decisions About Food](#)
- [How To Work From Home—And Not Get Fat](#)

What's more, according to the Bureau of Labor Statistics, the median time away from work for a repetitive stress injury is more than double that of the average injury (18 days compared to eight days). It's no wonder. Over a 40-year career, a typical office worker spends more than seven years staring at a computer screen and banging on a keyboard.

According to MacDougall, common problems that result from incorrect seating and orientation to work tools include:

- Head and neck ache due to constant leaning forward.
- Back pain due to unnatural hunching.

- Breathing and digestive problems that result from organ compression due to slouching.
- Poor circulation due to an incorrect angle between thigh and lower leg.

So, straighten up and pay attention to these tips for how to sit, scroll, see and stretch your way to a pain free future.

## **Sit**

- One size definitely does not fit all when it comes to office chairs. Choose one that allows you to adjust the angle and position of the backrest, the armrest height and position, and the seat height, angle and depth.
- Avoid chairs with a hard edge under your knees.
- Find one with a non-slip and breathable fabric.
- In terms of how you sit, think right angles for your arms and legs and straight lines for your back, neck, wrists and feet.
- Place your feet flat on the floor or on an angled footrest if that's more comfortable.
- Your chair should be positioned to create an angle of about 105 degrees between your torso and thighs. The back of your legs should not be pinched by the edge of the chair.
- Adjust the armrests to support your arms when using the keyboard or mouse.
- Relax. Actively pay attention to the muscles you're using when you're typing. If your shoulders are tense, find a position that allows them to relax. If you're holding your arms up, even slightly, find a way to support them. Even something as simple as hovering your fingers over the mouse and keyboard can eventually cause a repetitive stress injury. Pay particular attention to keeping those shoulders and neck muscles relaxed when you're under stress.
- If you find yourself *vulture-necking*, adjust your lighting, screen distance or glasses to keep you from craning forward.
- If you use more than one screen, be sure to position them at equal distances with one positioned directly in front of you. Try to keep the active window on the screen in the center. Be careful not to lean in the direction of the second screen when you're using it for extended periods.

## **Scroll**

- Think Goldilocks when choosing a mouse. You want one that's comfortable in your hand—not too big, not too small, but just right.
- Place the mouse as close your keyboard as possible, you shouldn't have to reach for it—remember the right angle for your elbow.
- Position the mouse in a way that allows you to keep your wrist and fingers in a straight line.
- Choose a mouse that allows you to set the scrolling speed and sensitivity.
- Set the sensitivity so that you can rest your hand on the mouse without causing it to click.
- Replace common mouse functions with keypad shortcuts.
- Choose a keyboard with a light touch. Avoid pounding.
- Position your keyboard so that it allows you to type with your arms in a relaxed position, preferably resting on the desk with your elbows at right angles.

- Pay careful attention to how your wrist sits on the desk when you're mousing and keyboarding. Avoid resting it on the edge of the desk. A wrist rest may help, but be careful to choose one that doesn't increase the angle of your wrist.
- Some people find a track pad to be a good alternative to a mouse, but all the same ergonomic rules apply.

### **See**

- The top of your computer screen should be at eye level and 15 to 27 inches from your eyes.
- If you wear reading glasses, you may want to use a lower magnification than you use for reading to account for the relatively longer distance. By the way, if you're over 40 and not wearing reading glasses, you're likely kidding yourself.
- Avoid bifocals as they will encourage you to tip your neck back when you're looking at the screen. Avoid wearing your glasses low on your nose for the same reason. (*I have used an inexpensive set of glasses cut to a weaker bifocal prescription for years—rjh.*)
- Avoid any direct drafts on your eyes. If they're dry or they tear excessively (oddly, a symptom of dryness), use artificial tears.
- Refocus your eyes every half hour or so by looking at a distant objects.
- Your lighting should ensure that there are no excessive shadows or glare on your monitor or work area. Overhead lighting should be diffused.
- Use a document holder to keep what you're working on in the same plane as your monitor. Use task lamps to illuminate paperwork without creating screen glare.
- Try to keep the text of what you read the same size. Switching between a document viewed at 150 percent and 100 percent or between a 10 point and 14 point type size is hard on the eyes.
- Adjust the brightness and contrast on your monitor to your own comfort, but avoid the extremes.
- Choose a monitor with good resolution. Huge screens are great, but monitors bigger than 19" compromise clarity.
- Remember that as the sun angle changes, you may need to close the blinds to avoid screen glare.

### **Squirm and Stretch**

- The human body was not designed to sit for long periods. Experts recommend you take 5-10 minute breaks every hour and longer breaks (15 to 30 minutes) every 3-4 hours of sitting. Even just a bit of squirming or changing from an inclined to reclined position can help relieve the strain.

Typing this article required more than five thousand keystrokes. That's the metacarpal equivalent of a 2 mile run, on my tiptoes! Gotta go, it's time for my walk.

### **Additional resources:**

- [OSHA's Visual aids and guidelines](#) for proper ergonomic seated and standing positions
- Mayo Clinic's primer on [office stretching](#)
- The National Institute of Health's [guide for computer workstation](#) users.

