Ergonomics for Kids

Laptops and desktops have proliferated in schools over the past several years, with computer companies heading up programs to fully integrate computers into classroom instruction. Yet with the increasing amount of computer use by ever younger children, the physical ergonomic issues related to hours glued to the screen are often overlooked.

As a new generation of avid computer users grows, ergonomic experts say parents need to start encouraging good habits now. Most people know what bad computer posture looks like: leaning towards the computer with slumped shoulders and eyes glued to the screen. “Poor posture can lead to accelerated fatigue, eventual soreness and cumulative trauma/pain,” says Jeffrey Chung, PhD., CEO of the International Children's Ergonomic Foundation.

A recent study by Cornell University shows that repetitive motion injuries are cropping up in younger people. It takes about 10-15 years for an injury to develop. The study shows that in the 1990’s the average age of workers reporting carpel-tunnel syndrome was late 30s to early 40s. Now, the average age has dropped to the mid-20s. That means these injuries didn't start in the workplace, they started during the body's formative years.

While it may seem unbelievable that a child of 6 or 7 could develop carpel-tunnel syndrome from too much time at the desk, Chung says in some ways kids are more prone to these types of injuries for three main reasons. First, children aren't as attuned to the position of their bodies “so it's particularly important to watch your children's posture and habits,” says Chung. Second, the musculoskeletal system of a child is more flexible, and that means it's not strong enough to hold non-neutral postures.

Finally, Chung says, kids are famous for their ability to form bad habits that become very difficult to break later in life.

However, there are definite steps that parents can take to improve their child’s ergonomic set-up at home, including products that adjust to the child's changing size and homemade solutions. Here are a few ideas to consider:

**What to look for in a chair?**

Chung says parents should be making sure that the child's upper and lower back are well-supported. “This may mean a sturdy chair with a high back, and possibly inserting a rolled-up towel or pillow to support the lower back,” he says. Another rule of thumb is the 90-degree rule: the child's hips and thighs should be at approximately a 90-degree angle. The same goes for thighs and knees, and ankles and feet. “If a child’s feet are dangling, a phone book, a stool, or even a wooden block could be used under the child's feet to create support,” Chung said. There are also products out there that specialize in helping kids keep good chair posture. Ergoworks, a computer accessories maker, sells an adjustable, rocking footrest that promotes good circulation and will grow along with your child. Finally, Chung says parents should consider the height of the chair: eyes should line up with the upper portion of the computer screen.

**What about the keyboard and mouse?**

Basically, parents should make sure the keyboard is at elbow height, and that your child's arms are close to her body, not outstretched. If you and your child share a workspace, Chung suggests investing in an adjustable keyboard that attaches to the bottom of the desk. “This helps the workstation adjust comfortably to either size,” he says. The other issue with keyboards is size. Adult-sized keyboard require a significant amount of reach for little fingers and arms. “A child's wrists should not be angled, but held close to a neutral position when typing,” he says. This is where a miniature keyboard comes in handy, where the keys are smaller and there is a shorter
distance between them. They also make smaller options in mice, but Chung says children, because of their fine motor limitation, may find a track ball easier to negotiate. Ergoworks carries a three-inch track ball, the largest on the market, which allows for a second-mouse connection for simultaneous participation. To avoid outstretched arms, Chung says parents may have to move the mouse or trackball into the middle of the workspace. The keyboard may need to be moved, and Chung suggests placing it in the child’s lap on top of a pillow.

Chung says that in addition to setting up an ergonomic workspace, parents should encourage kids to take breaks often. That means that kids using the computer for an hour or more at a time should get up every 20-30 minutes for 3-5 minutes at a time. “Active breaks and frequent changes of position increase circulation, and let the eyes relax,” Chung says.

We know today's kids will be using computers for their entire lifetime. And that's why Chung says their ergonomic education is so important. “Just as parents teach their children to eat the right food, they should be teaching their children good computer habits,” he says.

For more information on footrests, miniature keyboards, mice and trackballs check out the Ergoworks web site at www.askergoworks.com