

HEALTH by Patricia Hagen

System Overload

Gadgets, from computers to cell phones, can lead to pain in the neck

In a "Zits" comic strip, a teenager clutches his cell phone with both hands and stares at the little screen. He tells his friend he's tired of texting, so he's writing a novel. On that teeny, tiny screen. Typing every word with his thumbs on that teeny, tiny keyboard.

He's kidding, right? That's the kind of joke that makes physical therapists freak. They see the painful problems that can result from too many hours — working or playing — on computers, phones, video games and other high-tech devices.

You don't have to be a geek or gamer to run into trouble. Anyone who spends hours repeating the same motions with his or her hands, arms or shoulders is a candidate for an overuse or repetitive stress injury to muscles, tendons and joints.

Dr. Arthur Rettig of Methodist Sports Medicine/The Orthopedics Specialists says patients have complained about pain from sending too many messages on a hand-held computer such as a BlackBerry. His practice also has treated a few folks aching after playing Wii, a game system on which players do virtual tennis, bowling and other sports.

"I think we're going to see more and more of them. You hear stories of people playing for hours and hours," says Rettig, who practices in Indianapolis.

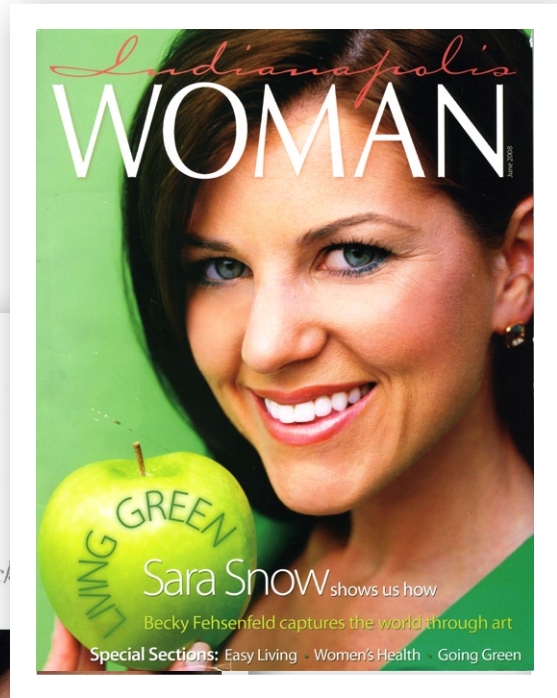
Though those are relatively new gadgets, there's nothing new about overuse injuries. The problem's been around as long as computer keyboards and video games.



Sit Right

- > Keep feet flat on the ground, with your knees at a 90-degree angle. If necessary, set feet on a small stool to bring your knees up to 90 degrees. Hips should be level with or slightly higher than your knees.
- > Sit with a slight arch in your lower back, supported by the chair or a small towel roll.
- > Face the computer screen and keyboard. Do not twist your shoulders or neck so you can see the screen.
- > The top of your head should be parallel with the top of the screen. Looking up stresses the back of the neck.
- > Type with your elbows bent and your hands slightly lower than your elbows. Keep your wrists straight.
- > When using a mouse, rest your wrist on the desk. Use your shoulder, not just your hand, to move the mouse.

Sources: www.apta.org and physical therapists Joani Essenmacher and Cheryl Caldwell.



Unknown culprits

People lose track of time when they're hammering out a project on the computer or playing a new game and do damage before they realize it, says Joani Essenmacher, a spokeswoman for the American Physical Therapy Association. She adds poor posture and being in poor physical condition increase the risk of developing aches and pains anywhere from the hand to the neck.

She's concerned about young people who spend a lot of time on keyboards, musical instruments and video games. "People who combine all those activities are going to be the ones with problems," predicts Essenmacher, a physical therapist at Riverview Rehab & Fitness in Noblesville.

For most people, the discomfort that comes from spending too much time on a gadget or game is temporary and mild. But some people need medical attention.

“By far, the most important thing is rest from the offending activity.”

Ally Davis, a Ball State University student, spent hours every day on computers doing assignments for her Web courses and designing pages for the student newspaper. Instead of a mouse, her laptop had a trackpad, which required constant back and forth movements with her right hand. When she used a desktop at work, her arm had to hang off the edge of a too-small desk.

"We would be designing at night for six or seven hours in a row," she says. "I was having pain all the way back to my elbow."

Sometimes a couple of fingers on her right hand went numb. By the end of the term, when she had a lot of projects due, the pain was constant. "You feel like you can't do anything, because your arm hurts too bad," she says.

Davis, 22, was diagnosed with carpal tunnel syndrome during her senior year. The carpal tunnel is a narrow passageway of ligament and bone in the wrist, housing the median nerve. If tendons and other tissues in the wrist get irritated from hand movements, they can swell and press on the nerve, causing pain, weakness and numbness in the hand and wrist, according to the National Institute of Neurological Disorders and Stroke.



Preventing Problems

To prevent overuse injuries from working on computers:

- > Take frequent stretch breaks. Walk around and stretch your back, shoulders and arms. Roll your shoulders in small forward and backward circles five to 10 times, or squeeze your shoulder blades together for a second and release.
- > Make sure your posture is correct and your chair and work surface are set at the right height.
- > Add some cardiovascular exercise to your day if you are sedentary. A short walk gets the blood moving and increases flexibility in the back and other muscles.
- > Strengthen your upper back and shoulder muscles. Try lying face down on floor, your arms at your sides, and squeezing your shoulder blades together. Or use a rowing machine.



The syndrome is three times more common in women than men, perhaps because the carpal tunnel is smaller in women, the institute reports. Carpal tunnel syndrome is only one problem that can develop. Other repetitive motion injuries include tendonitis, muscle strains and tendonopathy. Cartilage and ligaments in joints also can be injured.

Damage control

Pain or swelling is a sign you need to back off, Rettig says. Stop or reduce the time spent

doing the activity. Or try changing your technique or improving your posture.

If the pain persists, you should see a physician and get a diagnosis as soon as possible, Rettig says. Often, the problem can be resolved quickly if it's treated quickly.

First, a doctor will try to identify the problem, pinpointing which muscle, tendon or other tissue is injured. Treatment generally consists of rest, ice and sometimes a splint. "By far, the most important thing is rest from the offending activity," he says.

When physical therapy is prescribed, the therapist observes how the patient performs the activity and then modifies the patient's equipment and movements to reduce the stress on the injured tissue, says Cheryl Caldwell, a spokeswoman for the American Physical Therapy Association.

For example, if the problem is sore shoulder and neck muscles, the therapist helps the patient adjust her work surface and chair height, so her arms are supported at the correct angle for typing and her shoulders are aligned.


Therapists often prescribe home exercise programs to address muscle imbalances and weaknesses that contribute to the pain, says Caldwell, an assistant professor at the Washington University School of Medicine in St. Louis. In a few cases, taping, braces or other devices might be needed to support the affected tissues.

Davis, the student, was given a wrist splint to wear at night and an armrest for her mouse hand. She also changed her work and study habits.

"I know what to stay away from now," says Davis, who graduated in May. During her senior year, she left her laptop at home so she wouldn't be tempted to open it on her lap. She avoided the trackpad on her laptop and used a mouse instead, with her arm properly supported. At school and work, she used a desktop computer. She sat in a good chair set at the correct height. And, she made sure her elbow was a little higher than her hand on the desktop.

The changes helped. "I haven't really had any more problems," she says. W

Hagen has been writing about health and fitness for 25 years. She tries to sit up straight in the adjustable chair she bought for her home office.



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