

Computer/typing injuries: Keys to prevention

Positioning, posture, and preparation can help clinicians and staff avoid repetitive strain injuries.

John Luo, MD

Assistant clinical professor Department of psychiatry University of California Los Angeles

In a practice that lives on frequent typing and computer use, repetitive strain injuries pose an occupational hazard. These painful injuries can dampen quality of life and disable you or a staff member.

The best way to deal with repetitive strain injuries is to avoid them. Here are some simple precautions.

HOW REPETITIVE STRAIN INJURIES HAPPEN

Repetitive strain injuries result from repeated physical movements. Symptoms vary, but include tightness, stiffness, soreness, or burning in the hands, wrists, fingers, and/or elbows. Tingling, coldness, or numbness in these joints may also occur. Persons with such injuries might be awoken at night by the pain, or they may lose strength and coordination and become clumsy. Pain after a few seconds of typing may signal a repetitive strain injury, as can moderate wrist pain after typing a lengthy document.

Computer typing and mouse use require repeated movements that strain or damage tendons, nerves, and muscles in the hands, arms, wrists, shoulders, and neck. A touch typist who can type fast without looking at the keyboard is at higher risk of repetitive strain injuries than a slower typist who “hunts and pecks” at keys, because slower typing does not cause as much strain.

Today’s medicolegal climate, however, demands that clinicians keep legible (ie, electronic) records, which means additional typing and clicking for you and your staff.

What is worse, computers often are placed in spots for which they were not designed, making mouse and keyboard work awkward and physically taxing. This is particularly true in older hospitals, where charting areas typically were designed for writing but not typing.

PREVENTION STRATEGIES

Harvard RSI Action, a Harvard University student group dedicated to repetitive strain injury education and prevention, offers the following advice:¹

- **Proper technique and posture** at the computer is critical. Position your monitor below eye level and set your chair and keyboard to keep the wrists straight and level. In areas where this is not possible, try placing the keyboard in your lap.
- **While typing**, your wrists should not touch the keyboard and should not be bent up, down, or to the side. Palm rests are designed for resting-not for use while typing-so keep your palms up when typing.
- **Take frequent breaks** , about 10 minutes for every hour of typing.
- **Do not twist your wrist** or use one hand when two hands are needed for special keyboard combinations.

- **Stretch your wrists** before typing to relax the muscles and joints, just as athletes stretch before any activity. [e-stretch](#) lists numerous stretching exercises.

Paul Marxhausen, an engineering electronics technician at the University of Nebraska-Lincoln, also recommends that you eliminate or reduce nonessential computer use, such as by making phone calls instead of typing e-mail messages when feasible.²

A wrist-support garment or other devices can help preserve the muscles, but to avoid further injury stop typing when you feel tired or pain. The [Typing Injury FAQs](#) (frequently asked questions) Web site offers wrist-support and ergonomic devices, for example.

CHOOSING EQUIPMENT

Selection and proper use of equipment also are crucial. Marxhausen offers the following advice:

- Choose a keyboard and mouse that are comfortable in your hand.
- Use a chair that allows the elbows to rest on the armrests. Place the feet on the ground with the back either straight or slightly reclined.
- Type softly and do not grip the mouse too hard.
- Learn keyboard combinations to avoid mouse use.

A touch pad is an alternative to a mouse that may help reduce strain. Touch pads require less force to operate, thus reducing the finger and hand stresses caused by grasping and moving the mouse and button clicking.

ALTERNATIVES TO TYPING

If you suspect that you or a staff member has a repetitive strain injury, consider a voice recognition program or other text-entry method (see "[Text-entry solutions: which 'type' is right for you ?](#)" *Psyber Psychiatry*, February 2003). Do not type if you cannot do so for more than 10 minutes without pain.¹

Voice recognition software not only processes text but can also be used for Web browsing, launching applications, sending e-mail, and completing forms. But although this technology has improved dramatically in recent years, it is not yet 100% accurate or integrated into all computer applications used by physicians. Popular voice recognition programs include Scansoft Dragon [Naturally Speaking](#) and IBM [ViaVoice](#).

Related resources

Typing Injury Frequently Asked Questions. <http://www.tifaq.com>

Disclosure

Dr. Luo reports no financial relationship with any company whose products are mentioned in this article. The opinions expressed by Dr. Luo in this column are his own and do not necessarily reflect those of CURRENT PSYCHIATRY.

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