

THE HIDDEN PLAGUE

The number of people suffering from computer-related injuries is steadily increasing.

If you work in an office then the chances are that you, or the person sitting next to you, has experienced symptoms of occupational overuse syndrome (OOS) or, as it used to be called, repetitive strain injury (RSI). This is the finding from a number of studies, and experts believe the problem will reach epidemic proportions over the next 10 years as more people, especially children, incorporate IT into their everyday lives.

THE CAUSE

OOS covers a range of hand, arm and neck ailments caused by nerve and muscle damage, such as tenosynovitis, epicondylitis (tennis elbow) and carpal tunnel syndrome, and is far more common than most people think. **An Australian study conducted by Comcare, for example, surveyed 2,000 ACT government workers with alarming results.** Of the 1000 who participated, eight out of 10 respondents who hadn't claimed workers' compensation had OOS symptoms and two out of 10 had severe symptoms, meaning, in other words, that they were in constant pain. The results were even worse for those who had claimed workers' compensation.

"Somewhere between two-thirds and three-quarters of office workers, in any survey in just about any office setting you do, report discomfort associated

with using their computers," says Leon Straker, associate professor of physiotherapy at Curtin University of Technology. "Of that, though, there's only a small proportion that have disabling symptoms; so for the vast majority of people, they would get aches and pains and discomfort increasing over the day but overnight that goes away, and tomorrow and the next day they're OK. For a small proportion, which is probably about 10 per cent, those discomforts accumulate and become disabling for them."



NOTEBOOKS

Another possible problem is that computers are continuing to get smaller, despite the fact that this makes them less ergonomic. Notebooks are often described by manufacturers as desktop replacements while handheld PCs, such as the Palm and those running Windows CE, are increasingly being used by more people.

"I don't approve of notebooks at all," Quilter says. "They can't be arranged properly so that the body can remain in good posture. If you have your

hands at the proper angle, the head must look down too low. If you have your screen raised at the proper angle for viewing, the hands are too high. Plus the keyboard is usually too small, especially if the user is big, and it's not able to be split or tilted [like many ergonomic keyboards] so you can get your hands in a better position."

MOBILE PHONES

Quilter believes mobile phones pose a similar problem, especially with the dramatic rise of SMS text messaging and other mobile services.

"It's an accident waiting to happen because you have this tiny little tool that you have to use and handle in a similar way to playing a musical instrument, and so there's a lot of static loading," she says.

"Static loading is a medical term that means holding your muscles in contraction, so in other words, you have to stabilise everything and hold something still while you are making these tiny, repetitive movements. A lot of people believe that repetitive strain injury only happens because people make tiny hand movements but, in fact, holding still is just as big a risk factor. And with text messaging, you are doing both of these things at once, so you are compounding the problem."



Caple argues, however, that the ergonomics of a product depend on how you use it. “Each product is designed with a particular application in mind, so a laptop is designed on the assumption that you carry it from one place to another and therefore use it for short periods of time at those locations,” he says.

“If you have a laptop and you’re planning to use it at home or at work for a long period of time then you need to get a separate keyboard and mouse and possibly a laptop station because a laptop is not designed for prolonged use.”

In a similar way, Caple believes mobile text messaging isn’t that bad provided it’s done in moderation. “Although it’s not a fantastic posture, the duration that they’re doing it for is relatively short and then there is a break, and that probably reduces the risk, because it’s not like a document on the computer where they can type for prolonged periods of time without a rest,” he says. “So it probably isn’t as bad as it looks simply because of the brief duration that it is done for.”

Dr Laurie Tassell, national president of the Chiropractors Association of Australia, agrees about mobile phones but says that users should be careful when using notebooks. “With text messaging, you don’t have a lot of weight there and it’s very mobile, so you can lift it to where it feels comfortable,” he says.



“Where you’re going to get into more problems is with things such as laptop computers, where you are using them in positions over a long period of time where it is not ergonomically aligned; in other words, it’s not sitting on your desktop at the proper height with the arms and elbows in the right position and the screens in the right position. So laptop computers are probably going to give you more problems than anything else.”

EMAIL

Hardware issues aside, the sheer volume of hours people spend at the computer puts them at risk and, says Ann Thompson, president of the RSI and Overuse Injury Association of the ACT, email is becoming increasingly responsible for this.

“I think email is replacing face-to-face communication,” she says. “For example, people often email each other within a large organisation. So, instead of getting up from their desk and walking to the lift or the stairs and going down to the third floor and finding so-and-so and sitting and having a chat, and basically having a break from repetitive-type hand exercises, they’re just doing more of it. They even email people on the same floor.”

MENTAL WELLBEING

In fact, says Straker, your mental wellbeing can play just as big a role as your PC. “The research that’s been done shows the psyche and the body are intimately linked,” he says.

“For example, one of the most common sites of problems is the trapezius muscle, which is the muscle between the shoulder and your neck, which you love people to rub most of the time. If you’re working that muscle at just five to 10 per cent of its maximum, but over the whole day of your job, then that will put you in the high risk group of getting a disorder there.



“And that level of muscle activity that you need, I can generate either by the physical setup of your workstation such as the height of your desk, the position of your mouse or I can get it just by having a stressful situation, meaning that if you have a deadline in 20 minutes, you’ll get muscle activation at the same level as having poor posture. So the whole debate over whether it’s a psychological response or a physical response is nonsense, because both of them feed into putting increased tension into your body.”

Dan Kaufman, Sydney Morning Herald, December 2001.
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