What a pain: The iPad neck plagues women more

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A UNLV study published this month in The Journal of Physical Therapy Science found that gender and posture are among the most significant risk factors behind developing 'iPad neck.' Credit: R. Marsh Starks/ UNLV Creative Services

Is your iPad being a literal pain in the neck?

The answer is likely yes—especially if you're a young adult or a woman. "iPad neck"—persistent pain in the neck and upper shoulders caused by slouching or bending into extreme positions while using tablet computers—is a growing problem among Americans, according to a new UNLV study.

Findings, released last week in the *Journal of Physical Therapy Science*, show:

- "iPad neck," sometimes called "tablet neck," is usually associated with sitting without back support, such as on a bench or on the ground, or slumping over the tablet while it rests in the user's lap. Other postures significantly associated with pain included using tablets while lying on the side or back.
- The condition is more prevalent among young adults than older adults.
- Women were 2.059 times more likely to experience musculoskeletal symptoms during iPad use than men.
- Those with a history of neck and shoulder pain reported experiencing more neck and shoulder symptoms during tablet computer use.

UNLV physical therapy professor Szu-Ping Lee, lead author of the study, said the results concern him, especially given the growing popularity of tablet computers, e-book readers, and other connected devices for personal, school, and business purposes.

"Such high prevalence of neck and shoulder symptoms, especially among the younger populations, presents a substantial burden to society," he said.

"We were able to quantify exactly how frequent those problems are and what common factors contribute to them," Lee said. The top risk factor

was surprising. "Theoretically, the more hours you spend bent over an iPad, the more neck and shoulder pain you experience—but what we found is that time is not the most important risk factor. Rather, it's gender and specific postures."

UNLV—in conjunction with researchers from hospitals and physical therapy centers across Southern Nevada—conducted a survey of 412 public university students, staff, faculty, and alumni (135 men and 275 women) who are touchscreen tablet computer users about their device usage habits and neck/shoulder complaints. (No word on how many of those surveyed completed the questionnaire on an iPad.)

The most frequently reported symptoms were stiffness, soreness, or aching pain in the neck, upper back/shoulder, arms/hands, or head. Most (55 percent) reported moderate discomfort, but 10 percent said their symptoms were severe and 15 percent said it affected their sleep.

Postures that led to pain included those that cause the tablet user to "slump" over and gaze downward:

- Sitting without back support (This increased odds of pain by over two times)
- Sitting with the device in the lap
- Sitting in a chair with the tablet placed on a flat desk surface

Flexing the neck forward for long periods of time can put pressure on the spine, causing neck and shoulder muscle strain and pain.

Researchers found that the group of university students, staff, and alumni they studied reported a higher prevalence of neck and shoulder pain than the general population—likely attributed to posture and sedentary behavior commonly observed among people in a university setting. Researchers noted that students especially are less likely to have

a dedicated work space while on the go so might sit in uncomfortable postures such as slouched cross-legged on the floor when studying on their tablet computers.

Still, only 46 percent of respondents said they'd stop using the device when experiencing discomfort.

Regarding gender differences, 70 percent of female respondents reported experiencing symptoms compared to just under 30 percent of men. Interestingly, women were also more likely (77 percent) to use their tablets while sitting on the floor than men (23 percent).

The pain disparity among genders might be explained by size and movement differences. According to the researchers, women's tendency to have lower muscle strength and smaller stature (for example: shorter arms and narrow shoulders) might lead them to assume extreme neck and shoulder postures while typing.

Preventing iPad Neck

Lee offered these tips:

- Sit with in a chair with back support. "And perhaps that's something for building planners to think about: Installing benches or other chairs without back support invites people to crunch down with iPads in their laps, contributing to posture-related pain problems," Lee said.
- Use a posture reminder device. Also known as "posture trainers" or "posture coaches," these small, wearable devices adhere directly to the skin or clip on to clothing and beep to let you know when you're slouching.
- Take a stand. Place your iPad on a stand (rather than a flat surface) and attach a keyboard in order to achieve a more upright

posture when using your tablet.
- Exercise to strengthen neck and shoulder muscles. This is particularly important for women who experience neck and shoulder pain.

"Using these electronic devices is becoming a part of our modern lives," Lee said. "In order to reduce the risk of developing long-term neck and shoulder problems, we need to think about how technology like tablet computer affects human ergonomics and posture."

More information: Szu-Ping Lee et al, Gender and posture are significant risk factors to musculoskeletal symptoms during touchscreen tablet computer use, *Journal of Physical Therapy Science* (2018). DOI: 10.1589/jpts.30.855

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