

#### **BY JANE LANGILLE**

DR. KENNETH HANSRAJ, a Costco member and chief of spine surgery at New York Spine Surgery & Rehabilitation Medicine, in Poughkeepsie, New York, wondered why a 30-year-old male patient still suffered from neck pain long after Hansraj had surgically repaired a herniated disk in his back. The man was unable to return to work in spite of months of physical therapy. At a follow-up exam, the source of his pain was crystal clear: He admitted to spending four hours a day playing Angry Birds on his iPad and showed his doctor how he looked down at the screen.

Like Hansraj, Dr. Dean Fishman, a Costco member and chiropractor in Plantation, Florida, has noticed an alarming trend of more patients showing signs of early disk degeneration in the cervical spine (the upper part of the spine that supports the neck). He coined the term "text neck" and founded his practice, the Text Neck Institute (text-neck.com).

The trend is worrying, since 92 percent of American adults have a mobile phone, up substantially from 65 percent in 2004. Almost

three-quarters of teens ages 13 to 17 have a smartphone or have access to one. More than half go online several times per day, and a quarter of them say they go online "almost constantly," according to the Pew Research Center.

Dr. Karen Jacobs, an occupational therapist, ergonomist and clinical professor at Boston University, says, "With all of these new technologies, we are adopting more awkward postures and 'turtling in' as screens get smaller and smaller."

### **Text neck**

"When you stand with good posture, there is a normal curvature in your cervical spine. From a side view, it looks like the letter 'C', with the curve's convexity at the front of the neck and the concavity at the back," explains Fishman. With "text neck," the normal spine curvature is lost, causing a host of problems over time, including neck and shoulder pain, headaches and premature disk degeneration that can lead

to arthritis, bone remodeling and a hunched back.

With good, neutral spine posture—ears in line with shoulders and shoulder blades pulled back—the head weighs about 10 to 12 pounds. A recent study by Hansraj, published in the journal Surgical Technology International, found that when the head is flexed forward at an angle of 60



These illustrations show how the weight of one's head increases as one looks down at a mobile device, putting increased pressure on the cervical spine.





degrees to look at a mobile device, the effective weight of the head increases significantly, to 60 pounds, putting extra stress on the cervical spine. "For a teenager with their head down two to four hours daily, that's up to 300,000 pounds of stress over 5,000 hours during high school," says Hansraj.

# Don't stick your neck out for tech

In a case study of patients ages 13 to 27 at his practice, Fishman instructed half of the participants to use their device at eye level every time. The other half used their devices as usual. Both groups received physical therapy, exercises and chiropractic treatment. After one month of care, patients in both groups reported decreased pain and showed improved results for range of motion and X-ray findings, but those who used their devices at eye level experienced a significantly greater correction in cervical spine curvature.

Hansraj's patient improved too: He stopped playing Angry Birds with his head down and worked with a physical therapist to improve his posture. "His neck pain is much better, and he is back to work in a labor-intensive job at a car wash," says Hansraj. That's great news, since we are not about to give up texting, searching, posting on social media, accessing emails or watching videos on our phones anytime soon. C

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# Tips to help prevent text neck

# Practice perfect posture.

"Stand and sit with a neutral spine, with ears over shoulders and your shoulder blades retracted, rather than hunching shoulders forward," says spine surgeon Dr. Kenneth Hansraj. Check your posture by looking at photos of yourself.

Vary postures, set limits and take breaks. As soon as you feel uncomfortable, change your posture. Consider using a sit-stand desk. A free iOS and Android app called Stretch Break for Kids reminds kids to take breaks and demonstrates stretches.

Bring devices up to eye level. Sit on the floor with your back to a wall, knees bent, holding the device on your knees. Place your tablet

on a table and use a case that allows you to prop it at a higher angle so you don't have to tilt your neck. Dr. Dean Fishman's Text Neck Indicator app for Android phones, available in free and paid versions at Google Play, notifies you when the screen angle is too low.

Make technology work for vou. Use the talk-to-text function. Search using Siri on iOS or Voice Search on Android devices.

Strengthen your neck muscles. Try neck and shoulder muscle strengthening exercises, such as the Upward Dog yoga pose. In all cases, move to where you feel a gentle stretch. If you have questions, consult first with your health care practitioner.—JL