



## *HOW TO PREVENT PLEASURE FROM **BECOMING A PAIN***

*Sleeping, gaming and phone use can wreak havoc on our bodies and minds. Here's how to protect yourself.*

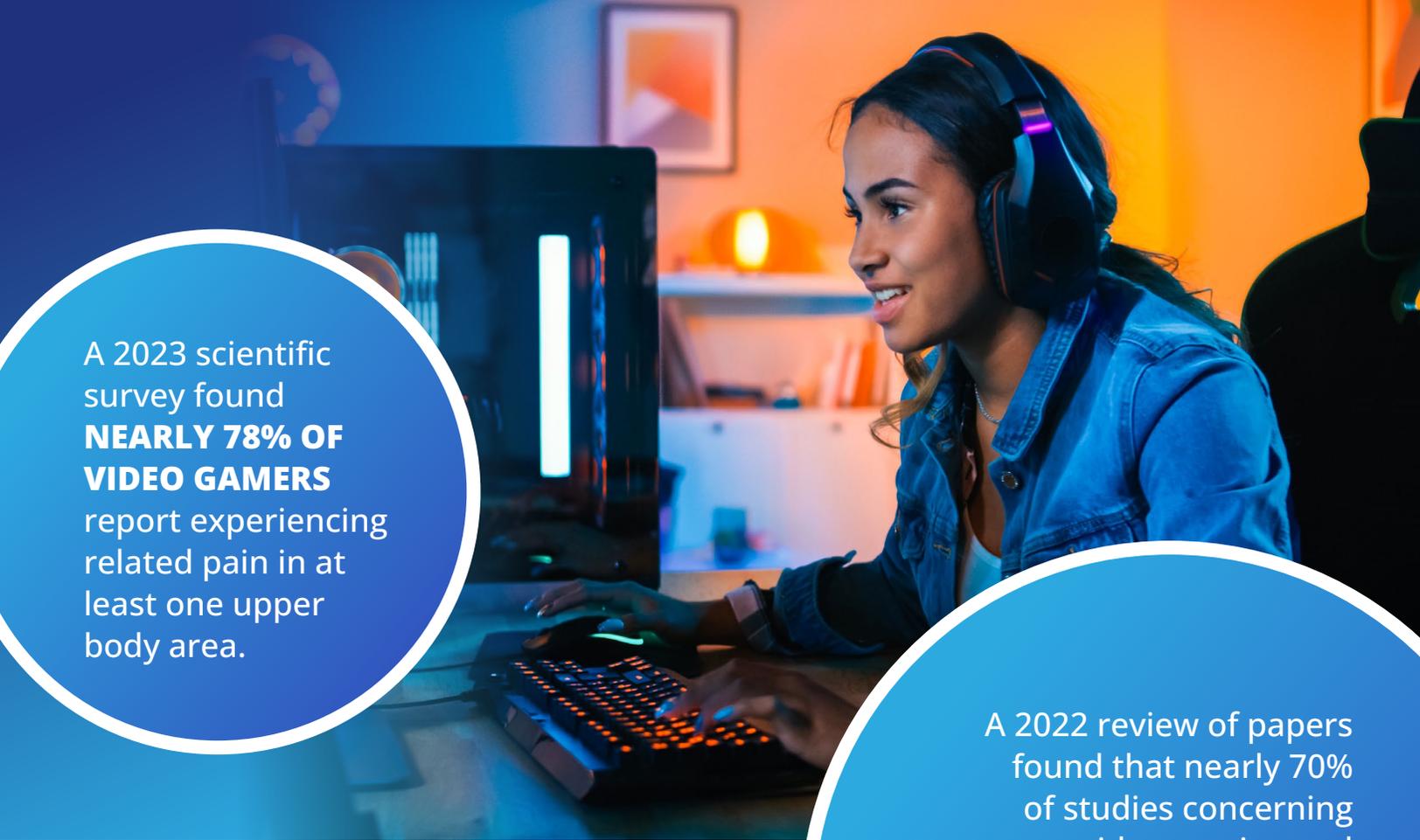
**The average American spends half or more of their day doing just two or three activities:**



We all know that high-quality sleep is essential for our health, while gaming entertains millions of people. For many of us, our phones are crucial to function in our personal and professional lives. Although ordinary and sedentary, these three activities – not to mention the hours office workers spend at their desks – can be dangerous to our physical and mental health. If we do not take deliberate preventive steps, these activities can contribute to poor posture and spinal

misalignment. The result can be long-term neck, back, and joint pain, which will also affect our sleep and eventually harm our mental health.

This eBook describes the different ways sleeping, gaming and phone use contribute to neuromusculoskeletal dysfunction and how simple adjustments to these activities can help prevent long-term pain and improve mental health.



A 2023 scientific survey found **NEARLY 78% OF VIDEO GAMERS** report experiencing related pain in at least one upper body area.

## Chapter 1: **GAMING**

Video games, whether played on a smartphone, tablet or console like a Nintendo Xbox or Sony PlayStation, are popular among many age groups. However, Americans ages 15 to 19 spend over 98 minutes a day playing video games. Similarly, adults ages 24 and younger spend over an hour (71 minutes) playing video games.

Given their youth, one would assume they would be free of the neck, back and joint pain more common among those of their parents' and grandparents' ages. However, an online survey of Generation Z adults (ages 18 to 24) conducted by the Foundation for Chiropractic Progress, found this type of pain was common. The majority of Generation Z first experienced chronic neck, shoulder or back pain when they were younger than age 16. While most young people reported that their sleeping position or a heavy bag was responsible for the pain, 37% revealed it was due to their hunched posture while gaming.

A 2022 review of papers found that nearly 70% of studies concerning video gaming and neuromusculoskeletal pain found associations with neck, shoulder, and/or back pain, especially **WHEN GAMING WAS 3 HOURS A DAY OR MORE.**

**GAMERS ARE SIX-TIMES MORE LIKELY** than non-gamers to experience lower arm/wrist pain.



## Saving the **GAME**

A video gamer's posture while playing on a smartphone or tablet (which we will explore in the next chapter) differs from a desktop computer or console system connected to a monitor or TV. For this type of gaming, a supportive chair and accessories designed for the activity can help ensure proper spinal curvature.

Features of the gaming environment should include:

- A lumbar cushion that supports the lower back and promotes a natural curve in the spine.
- A headrest and padded armrest are ideal for ergonomic comfort.
- A footrest should be used if the adolescent is not tall enough for their feet to be flat on the floor and their legs at a 45-degree angle.

For gaming marathons, players should stand 1 to 2 minutes every 30 minutes or 5 to 10 minutes every hour. They can also follow the 20-8-2 rule (see chart).



A properly designed gaming environment can prevent poor posture and neuromusculoskeletal pain and also improve gaming performance. Players' circulation and respiration will improve, supporting faster reactions, better decision-making and fewer errors.

# Satisfied **PATIENTS**

Like gaming, poor posture while using our phones contributes to long-term posture problems, neck and back pain. Smartphones, however, present an even greater risk to most people than gaming due to the time we spend on them, typically around 5 hours each day.

Aside from having negative effects on our mental health, personal relationships and work performance, phones can wreak havoc on our necks and shoulders. That is because our posture is usually poor when using the devices, as our heads are tilted down and forward, out of proper alignment with our spines.

The forward leaning angle of the typical 10-to-11-pound human head intensifies the strain on our spine. In fact, one study found a 30-degree curve adds as much as 40 pounds of pressure. It is no wonder that “tech neck syndrome” is a growing pain condition – and not just among adults. A 2022 study found adolescents who reported pain and used smartphones leaned their heads forward 13.6 to 29.4 degrees more than the control group. Researchers also noted their lower backs were less curved and their upper back was more curved, creating the appearance of a hump.

## STUDIES SHOW...

The cultural revolution caused by smartphones is scientifically studied worldwide in terms of how it affects our health. Here are some recent findings:

- University students using their phone adjusted their posture more often: leaning forward and back, twisting left and right, side to side and tilting. These movements were even more pronounced in students with pre-existing neck and back pain.
- Even while walking, researchers found that using a smartphone reduces our cadence, walking speed and step length, while step duration and moments when both feet are on the ground increase.
- In addition to physical pain, excessive smartphone use was associated with higher mental and physical fatigue levels and significantly worse sleep quality scores.

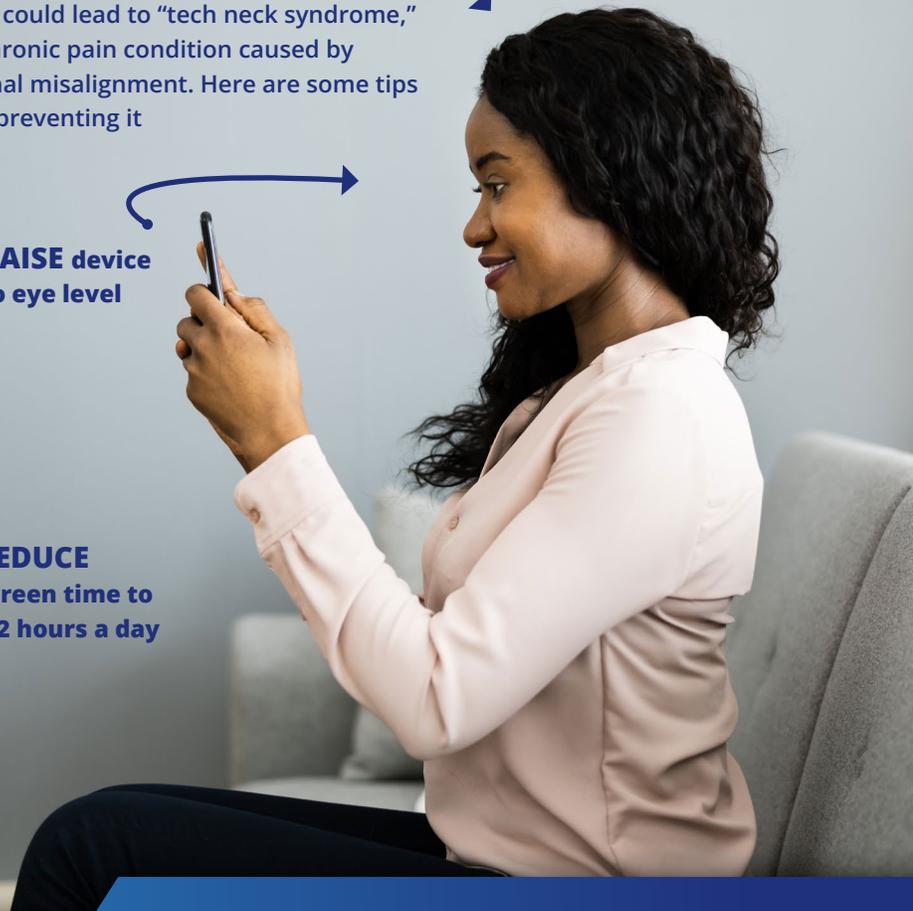
## Prevent Tech Neck Syndrome

Tilting your head forward for hours each day could lead to “tech neck syndrome,” a chronic pain condition caused by spinal misalignment. Here are some tips for preventing it

**HOLD** head upright supported by spine

**RAISE** device to eye level

**REDUCE** screen time to 1-2 hours a day



## Chapter 3: **SLEEP**

We are unlikely to reap the full benefits of proper posture and spine-protection habits during our waking hours if our sleeping environment, sleep quality and hygiene are poor. For example, taking our phones to bed and scrolling before we try to sleep may seem like a harmless way to unwind, but it has been shown to negatively affect both time asleep and sleep quality. Conversely, a study of university students with good sleep hygiene and habits, such as regular bedtimes, no screens in the bedroom and a dark/quiet environment, were four times more likely to have quality sleep.



## Mattress **MATTERS**

Consistent bedtime habits must coincide with sleeping in a spine-friendly bed to protect our physical and mental health. Here are some tips:

- **SUPPORTIVE PILLOW.** Sleeping on a pillow that doesn't support our neck and shoulders or that is too high could lead to worse sleep and neck pain. One study shows that a high pillow can even increase the risk of spontaneous vertebral artery dissection, a leading cause of stroke.
- **BALANCED MATTRESS.** Sleeping on a mattress that is too soft or firm can also cause muscle stiffness and joint pain. Results of systematic review of studies show that a medium-firm mattress is optimal for promoting sleep comfort, quality, and spinal alignment.
- **PERFECT POSITION.** People who slept on their back reported sleeping peacefully, feeling better rested and prepared for their day than those who slept in other positions. For side sleepers, a biosensor study found lying on our right side and infrequent turning in the bed are the most critical factors affecting sleep quality.

### 5 KEYS TO A RESTFUL, **RESTORATIVE SLEEP**

Sleep is an underappreciated biological necessity for humans. The following are 5 reminders to ensure you maximize your down time.

- No screentime for at least an hour before bed.
- Establish and maintain consistent sleep schedule and length, typically 7 to 8 hours for most adults.
- Ensure your bedroom is dark and quiet with a slightly cooler temperature (around 65-70 degrees).
- No consumption of alcohol or food for at least 2 hours before bed and no caffeine for at least 6 hours (No caffeine at all is best).
- Sleep on a supportive pillow and mattress that enables a natural spinal curve.
- Use a pillow between the knees if laying on your side to align hips and under knees if you fall asleep on your back to support the lower back.



## Chapter 4: Benefits of Protecting Posture

The benefits of a healthy posture extend far beyond projecting confidence and strength to others. A natural and neutral spinal posture, whether it be while gaming, using our phones or sleep, helps promote proper spinal alignment, which can help prevent neck, back, shoulder and other types of neuromusculoskeletal pain. It has also been shown to support healthy respiration, circulation and nervous system functioning.

Healthy posture involves more than just “standing up straight,” as some of our mothers told us as children. It means maintaining a natural S-curve in our spine that balances our weight throughout our body and reduces the strain on our muscles and joints.

Hours of activity and sleep every day which disrupt that balance can lead to muscles and ligaments becoming overworked, stretched and weakened. Eventually, the cartilage between the spinal discs can wear down, nerves become compressed and blood flow throughout the body is disrupted. The evidence of this wear and tear is the stiff neck or back we feel after getting out of bed or just before bed after spending hours staring at screens at work and home.

### A Cyclical Relationship

The good news is that improving our posture, as described in this eBook, can prevent pain, which, in turn, often enhances sleep quality. Likewise, better sleep helps manage pain physically and mentally. In a recent study and others, improved sleep quality was linked with reduced inflammation throughout the body, as well as better

cognitive health and quality of life in older adults. Here are some other benefits researchers have found are associated with natural posture and spinal alignment:

- **STRONGER LUNGS.** Participants who used smartphones for less than 4 hours a day had better posture and could exhale more quickly than subjects who used phones for more time each day.
- **LOWER STRESS.** Researchers found that a right-leaning posture triggered the strongest reaction of the sympathetic nervous system, which activates our “fight-or-flight” response, increasing heart rate and blood pressure. Neutral postures, on the other hand, are more often associated with the parasympathetic nervous system, which works to slow heart rate and promotes relaxation.
- **BETTER DIGESTION.** Neutral posture is associated with more efficient digestion and fewer instances of heartburn. Likewise, bathroom problems such as urinary incontinence and constipation are more often related to poor posture.
- **IMPROVED MENTAL HEALTH.** Study subjects who reported mild to moderate depression were asked to deliver an impromptu speech without notes. Half were asked to sit upright and the other half were allowed to slouch. The upright posture group used more positive, outward-focused language, indicating that their body position influenced their symptoms.
- **IMPORTANTLY, LESS TIME SPENT ON OUR PHONES OR PLAYING VIDEOS** and more time with family and friends is also better for our mental and cognitive health.

# Conclusion: **Chiropractic Care Can Straighten You Out**



We often associate physical injuries with singular events, such as car collisions, falls or trying to lift very heavy objects. However, it is much more common for neuro musculoskeletal pain to be the result of frequent, repeated acts of small, often imperceptible damage to our bodies over a long time.

As this eBook has shown, playing video games, scrolling on our phones and sleeping are sedentary – even pleasurable – activities. Yet research has shown and continues to demonstrate that performing these activities with poor posture will likely lead to several types of acute and long-term pain and worsened mental health.

Doctors of chiropractic (DCs) have known for 130 years that maintaining a natural, neutral posture can help prevent the injuries caused by these sedentary daily activities and many others. These doctors have long advised their patients that changing our daily habits and making healthier choices helps us maintain a neutral posture over the long term, which can, in turn, improve its quality.

To learn more about strengthening your posture, visit your DC who can identify and correct potential problems before they become a literal pain in the neck.



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