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# FROM SCROLLING TO SUFFERING: THE LINK BETWEEN SMARTPHONES AND TEXT NECK PAIN

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**ABSTRACT**

Text Neck Syndrome is a modern musculoskeletal condition resulting from prolonged forward head posture while using smartphones, tablets, and other digital devices. The aim is to investigate the rising health challenge of Text Neck Syndrome by exploring its underlying mechanisms, global impact, and practical approaches for prevention and management in today's digitally connected society. With the global surge in screen usage, particularly among adolescents and working professionals, this condition has become increasingly prevalent. The syndrome is characterized by symptoms such as neck pain, stiffness, shoulder discomfort, headaches, and postural imbalances, which arise due to the increased biomechanical load on the cervical spine when the head is tilted forward. If left unaddressed, chronic cases can lead to serious complications, including disc degeneration, nerve compression, and spinal deformities. The pathophysiology of text neck involves abnormal stress on cervical structures, especially when the head tilts at steep angles for extended periods. Prevention focuses on ergonomic modifications, including maintaining screen height at eye level, posture correction, and regular movement breaks. Treatment strategies range from physiotherapy, Kinesio-taping, and exercise regimens to medications and alternative therapies like chiropractic care and yoga. Raising public awareness, implementing digital wellness policies, and encouraging healthy device habits are crucial in mitigating the impact of this condition. As digital dependency continues to grow, addressing text neck through a multidisciplinary and preventive approach is essential to safeguarding spinal health and overall well-being.

**KEYWORDS:** Smartphone, Text Neck, Neck Pain, Posture, Screen Time.

## INTRODUCTION

Smartphones were developed as a result of advancements in mobile phone technology, which were driven by the desire for a faster and more efficient means of communication using computer technology.[1]

Nowadays, the mobile phone is the most popular and widely used device for various daily activities such as exchanging information, accessing the internet, watching movies, using social media sites, gaming, and a variety of other activities. A survey had shown that 79% of the 18–44-year-old people spend most of their time with smartphones.[2]

### Objectives

1. To explore the causes, symptoms, and biomechanical impacts of Text Neck Syndrome resulting from prolonged digital device usage.
2. To analyze global smartphone usage trends and their role in increasing the prevalence of posture-related health issues.
3. To highlight effective prevention and treatment strategies for reducing the health burden of Text Neck Syndrome across age groups.

### The Global Smartphone Boom: Trends, Challenges, and Opportunities"

It effectively covers the "Trends" part by discussing:

- Rapid growth in smartphone usage globally (with accurate stats from 2016 to 2022)
- Regional trends, like Indonesia's rise as a major market
- High penetration in developed nations
- Increase in screen time as a behavioral consequence of smartphone adoption

**Global Trends in Smartphone Usage**

Smartphone use has grown rapidly over the past decade, significantly transforming the way people live, work, and communicate.

- In 2016, approximately 3.668 billion people—about 49% of the global population—used smartphones.
- By 2022, this number had surged to 6.648 billion, accounting for nearly 83% of the world's population.

**The "state of digital" in India in 2025**

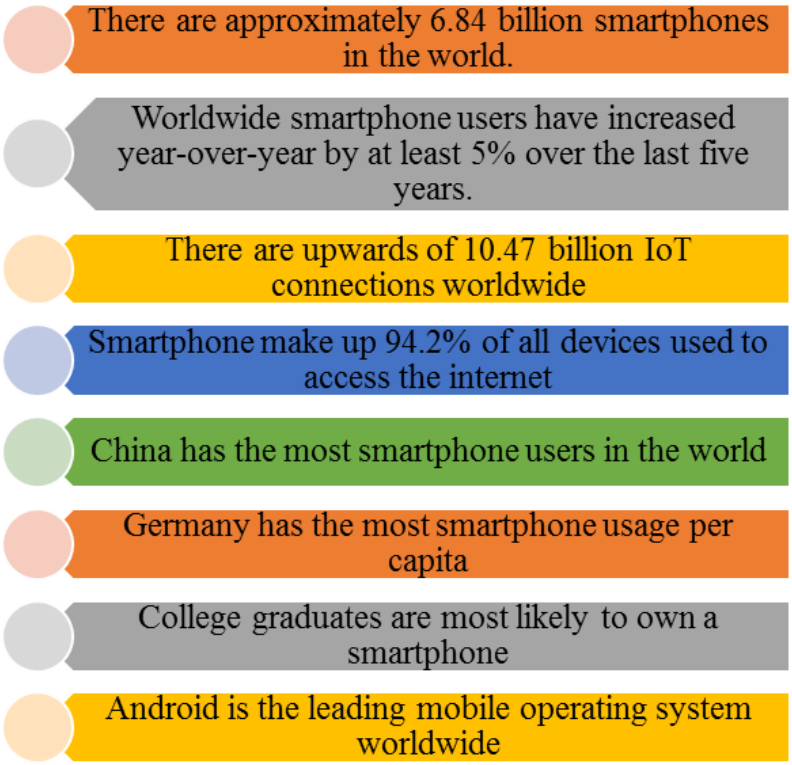
According to Statista, India's digital journey is one of exuberance. The country had the world's second-largest internet population at over 1.2 billion users in 2023. Of these, 1.05 billion users accessed the internet via their mobile phones. Estimates suggest that this figure would reach over 1.2 billion by 2050.806 million individuals were using the internet in India at the start of 2025, when online penetration stood at 55.3 percent.

India was home to 491 million social media user identities in January 2025, equating to 33.7 percent of the total population.[3]

In developed countries, smartphone adoption is even higher, with more than 75% of the population in the top ten economies owning a smartphone.

As global smartphone ownership rises, so does screen time. By 2025, the average global screen time had reached approximately 6 hours and 40 minutes per day, highlighting the growing dependence on digital devices**.**

**Smartphone Usage Trends: A Global Perspective**




**Text Neck Syndrome: A Growing Health Concern**

As smartphone usage continues to rise, so does the time people spend looking down at screens. This habit places repeated stress on the neck and upper spine, leading to a condition known as Text Neck Syndrome. It is especially common among young people and office workers who use smartphones for long periods without proper posture.

Text Neck Syndrome is characterized by symptoms such as neck pain, shoulder tightness, headaches, and a forward head posture. If left unaddressed, it can lead to long-term musculoskeletal problems. Health professionals are increasingly reporting cases related to screen overuse, making this a pressing public health issue in the digital age**.**

**Screen Time and Its Impact on Health**

The widespread use of smartphones and digital devices has dramatically increased screen time across all age groups. As of 2025, the average person spends 6 hours and 40 minutes daily in front of a screen, equivalent to over 46 hours each week. This constant digital engagement has serious implications for posture, mental health, and physical well-being.

***Key Screen Time Statistics (2025)***

- *Global daily screen time: 6 hours 40 minutes*
- *United States: 7 hours 3 minutes/day*
- *South Africa: 9 hours 24 minutes/day (highest globally)*
- *Teens: 41% spend over 8 hours/day on screens*
- *Gen Z: 7 hours 18 minutes/day on average*

- *Social media use: 2 hours 24 minutes/day per person*
- *Average American checks their phone 96 times a day*

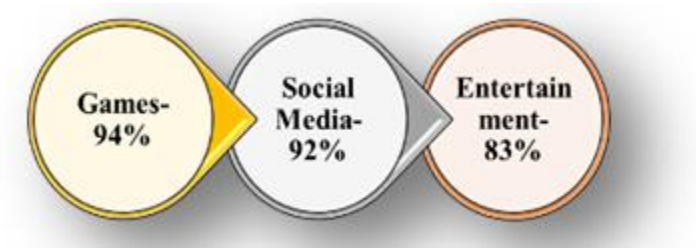
*Indian users are reportedly spending an average of five hours per day on social media, gaming, and video streaming. The report highlights how the affordable internet and expanding digital access are reshaping media consumption in the world's most populous nationThe report reveals that while India ranks third in daily mobile screen time—behind Indonesia and Brazil—the collective hours spent by users in the country add up to 1.1 trillion hours in 2024, making it the world's largest digital market.*

**Demographic Insights:**

- Women aged 16–24 and men aged 25–34 report the highest screen time.
- Older adults (55–64) have the lowest, averaging just over 5 hours daily.
- 79% of individuals aged 18–44 keep their smartphones within reach almost all day
- Even preschool children are being introduced to digital devices early on.

**Text Neck Syndrome: The Postural Cost of Screen Time**

The increased screen time observed across all age groups has given rise to Text Neck Syndrome, a posture-related condition resulting from prolonged use of smartphones or tablets. As the head tilts forward, the pressure on the neck muscles and spine increases significantly, up to 60 pounds of force when bent at a 60-degree angle.



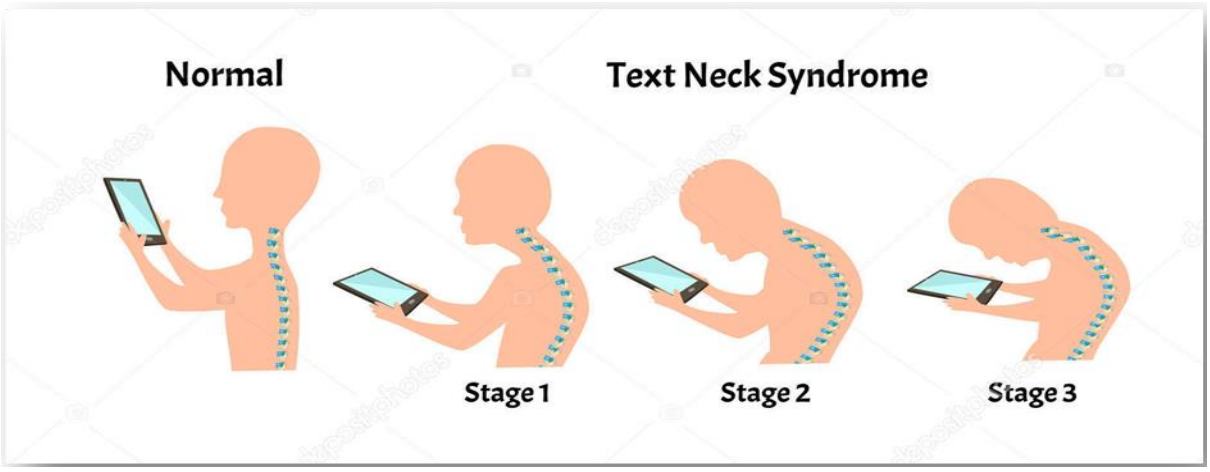

***Common symptoms include***

- ***Persistent neck pain***
- ***Upper back and shoulder tension***
- ***Headaches***
- ***Poor posture and forward head tilt***

Children, teens, and working adults are especially at risk, as they spend long hours engaged with screens for school, work, and entertainment. The condition reflects a broader issue: how modern technology is reshaping not just our habits, but also our physical health.

**The Pain Behind the Scroll: All About Text Neck Syndrome**

Text Neck Syndrome is a repetitive stress injury or overuse syndrome that results from maintaining a forward and downward head posture for extended durations. This posture places excessive strain on the deep cervical muscles and shoulder girdle, often leading to both acute and chronic neck pain. Additionally, chronic tension headaches are frequently associated with this condition. The prevalence of text neck has grown alongside the widespread and prolonged use of handheld digital devices, including smartphones, tablets, e-readers, and iPads. As a result, text neck is now considered a global public health concern. Despite its increasing recognition, there remains a lack of consensus on the formal definition and diagnostic criteria of text neck, posing challenges for both clinical assessment and scientific research.



**The Birth of the Concept: Text Neck**

The chiropractor Dr. Dean L. Fishman, who practices in the United States, first used the phrase "Text Neck" to refer to a clinical disease that is characterized by upper back muscular tension and neck pain brought on by repeated forward bending of the neck when gazing down at portable devices. This abnormal position, which is often used while using tablets or smartphones, throws off the cervical spine's natural curvature and may lead to both acute and chronic musculoskeletal discomfort. Text neck, often known as the "Pain of the Modern Era," is a distinguishing musculoskeletal issue in today's tech-dependent society since it represents the physical effects of extended use of contemporary digital devices, especially smartphones, laptops, and tablets.

**The Science Behind Text Neck Syndrome**

When a person is standing straight up and down, their head weighs around 10 to 12 pounds, which puts very little stress on the cervical spine. This natural position is good for your spine and might help keep your neck from hurting. But when the neck bends forward, such as when you use a smartphone or tablet, the strain on the cervical spine goes up significantly with each degree of tilt. This may cause more tension and pain.

Studies have shown that:

- At a 15° forward tilt, the effective weight on the neck increases to 27 pounds.
- At 30°, it rises to 40 pounds.
- At 45°, the neck supports approximately 49 pounds.
- At 60°, the cervical spine endures a load of over 60 pounds—more than five times the weight experienced in a neutral posture.


*Source:https://www.spinesurgeonpune.co.in/spinesurgeonpune/terms/text-neck-syndrome-cause-effect-amp-solution-by-dr-ajay-kothari/5177*

This gradual rise in pressure puts a lot of pressure on the neck muscles, ligaments, and intervertebral discs, which may lead to Text Neck Syndrome and make it worse. When people are exposed to these stressors for a long time and again and over again, they might have microtrauma, muscle fatigue, and problems with their posture. This is a major biomechanical cause of neck discomfort in people who use technology.

**Risk Factors**

1. Duration of device usage (over 4 hours/day increases risk significantly).
2. Poor posture habits (slouching, forward head tilt, unsupported back).
3. Lack of physical activity.
4. Ergonomic deficiencies in workplace/home setups.
5. Use of multiple screens without alignment.

**Signs And Symptoms Of 'Text' Neck**

- ***Stiff neck:*** When you attempt to move your neck after using it for a long time, it generally hurts and is hard to move.
- ***Pain:*** It might be focused on one point or spread out across a larger region, generally the lower portion of the neck. It might feel like a dull ache or, in really bad situations, like a sharp or stabbing pain.
- ***Radiating pain:*** discomfort may frequently spread to the shoulders and arms.
- ***Weak muscles:*** the trapezius, rhomboids, and shoulder external rotators are commonly weak.

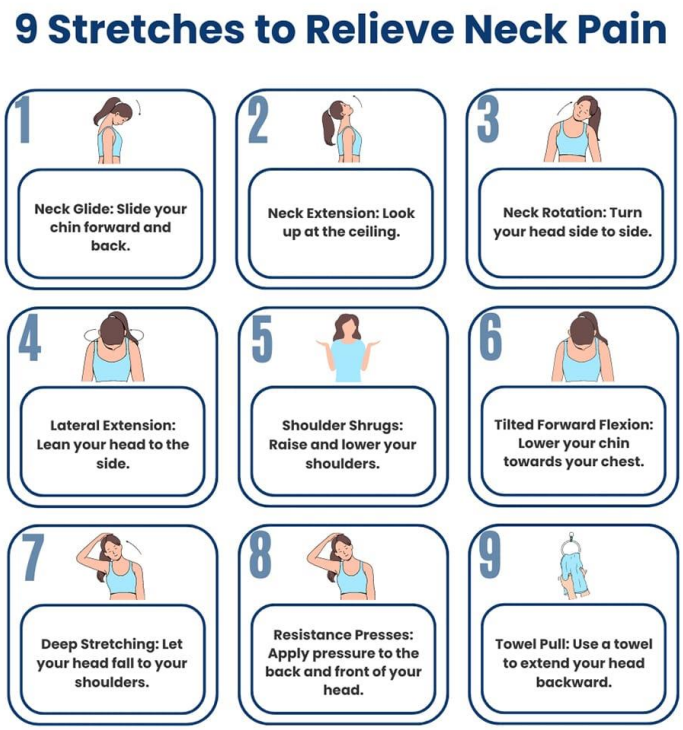
- ***Headache:*** Stiffness in the sub-occipital muscles may cause tension-type headaches.
- A flattening of thoracic kyphosis and a reduction in the range of motion in the cervical and upper thoracic areas
- Early onset arthritis, spinal degeneration, and disc compression
- Loss of lung capacity
- Cervicogenic dizziness
- Pain in the temporomandibular joint
- If not treated, it might create plastic changes in the nervous system, leading to sensorimotor integration problems and further dysfunction in the long run.

**Treatment**

Text neck syndrome can be treated with exercises, pain medication, and ergonomic modifications.

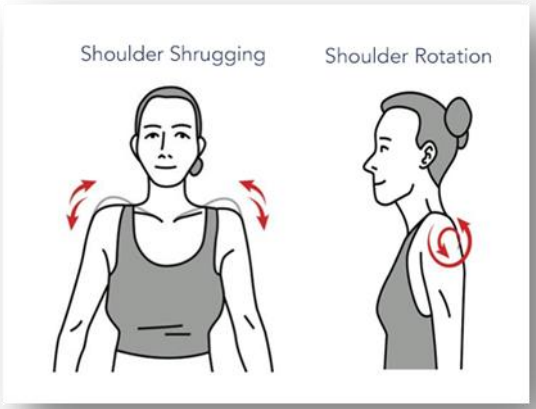
- **Chin tucks:** First, sit or stand straight and tall. Then, imagine that you are lying flat on your back with a pillow at the base of your neck. Keeping your gaze straight forward, press back, imagining you are pressing your neck into the pillow. Hold this stretch for 10 seconds, then relax. Repeat 3 times.


- **Neck stretches:** Sit or stand up straight with your shoulders relaxed. Look straight ahead. •Gently tilt your head to the right, bringing your right ear towards your right shoulder. •Hold for 5–10 seconds. •Return to the start position. •Repeat on your left side.




***Sources: https://www.painfreenyc.com/9-stretches-to-relieve-neck-pain/***

- **Shoulder shrugs**: Raise your shoulders towards your ears, hold, and then lower them.




- **Wall angles**

•Stand with your back against a wall, and your heels 2–4 inches from the wall.
•Tuck your chin in.
•Make sure your upper back, tailbone, and head are touching the wall.
•Inhale deeply and raise your arms up the wall, keeping your elbows and hands on the wall at a 90-degree angle.
•Repeat five times.


**Sources:**https://www.bodylogics.co.uk/the-wall-angel-why-you-need-this-exercise-in-your-life/

- **Yoga poses: Try** downward dog, cat-cow, or cobra.

**Prevention**

Although prevention is best, these techniques can help relieve symptoms in more serious cases:

1. **Keep Your Screen at Eye Level:** One of the easiest ways to prevent tech neck is to adjust the screen height. Whether you're using a computer, tablet, or smartphone, keeping the screen at eye level reduces the need to bend your neck downward. Use a monitor stand or stack books under your laptop to elevate it. If you're using a phone, hold it higher rather than constantly looking down. Making this simple change helps keep your spine in a more natural alignment.
2. **Maintain Good Posture:** Hold your phone at eye level and keep your back straight while sitting or standing. Use a backrest to reduce neck strain. Support your arms with a table, armrest, or cushion to reduce muscle load.
3. **Avoid Staying Still Too Long:** Take breaks every 30–40 minutes. Gently rotate your neck 10 times to warm up the muscles.
4. **Do Stretching Exercises:** Try neck stretches like side neck, front neck, and levator scapulae stretches. Hold each stretch for at least 10 seconds.
5. **Strengthen Muscles:** Perform chin tucks and scapular retraction exercises (pulling the shoulder blades together) for 20–30 seconds. These help support your neck and improve posture.
6. **Get Enough Rest:** Rest allows the muscles and tendons to heal naturally.
7. **Use Cold or Heat Therapy:** Apply an ice pack to reduce swelling and pain. After a couple of days,

alternate between ice and heat. Avoid using continuous heat, as it may worsen swelling.

8. **Try Massage:** Gentle massage can relieve muscle tension and reduce spasms and pain.
9. **Use Pain Relief Medications (If needed):** Over-the-counter anti-inflammatory drugs may help lower swelling and block pain signals.
10. **Talk More, Text Less:** Reduce the amount of time spent texting to give your neck a break

**Advanced Treatment Techniques for Text Neck:**

In addition to posture correction and stretching, other techniques can help manage and treat text neck:

**1. Kinesio-Taping:** Kinesio tape is a soft, stretchy tape applied to the skin. It reduces pain, muscle spasms, and swelling. Improves blood flow, supports weak muscles, and helps keep the neck properly aligned without restricting movement. Research shows taping the upper trapezius muscles on both sides for over 3 days can significantly relieve pain and discomfort.

**2. Progressive Resistance Exercise (PRE):** PRE involves gradually increasing resistance to strengthen neck muscles. It helps muscles regain their ability to produce force after weakness due to injury. Proven to be effective in managing chronic neck pain.

**3. Global Postural Re-education (GPE):** GPE focuses on stretching tight neck muscles and strengthening their opposing (antagonist) muscles. Helps restore muscle balance and improve overall posture. Long-term use has been shown to reduce neck pain and disability.

**4. Electrotherapy (e.g., TENS, EMS):** Techniques like Transcutaneous Electrical Nerve Stimulation (TENS) and Electrical Muscle Stimulation (EMS) may reduce pain. However, studies on their effectiveness are limited and often low quality.

## CONCLUSION

Text Neck Syndrome is a new musculoskeletal problem that is becoming more common because of how we live our lives nowadays. The illness is quite easy to control if people are aware of it, take steps to avoid it, and get help early. People, teachers, businesses, and healthcare workers all need to work together to make this avoidable issue less of a problem. We need to change the way we stay healthy in a digital age, as technology changes.

Smartphone users increase periodically. When users spend hours on their phones and tilt their heads down, they may strain their neck and upper back muscles. Neck flexion should be less than 15° while using cell phones or media devices to reduce cervical spine strain. Simple treatments include improved posture and regular pauses with short stretches or exercises. Parental role modelling and proactive contact are optimal for children. Text neck syndrome is spreading due to new technology and the risky addiction to mobile phones and computers while reading or texting. Postural correction reduces pain and improves quality of life.

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