Tech Neck

The Causes and Implications of Tech Neck

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What is Tech Neck?

- Basic Anatomical Structures
- How does it present itself?
- Who does it effect you?
- How can you prevent and treat symptoms?
Neck pain caused from forward head posture and spending too much time in a flexed cervical spine position.

Tech neck often becomes symptomatic in individuals who display poor posture while using the computer or smartphones.

As a result, premature aging of the neck can occur.
What is Tech Neck?

- Tech Neck is a relatively new condition
- The prevalence of tech neck is increasing dramatically due to new technology
Tech Neck Can Effect Everyone

Tech Neck is beginning at a young age due to the advancements in technology.

It is effecting those who primarily work at a desktop computer.

If not addressed it will effect individuals for the rest of their lives.
Chronic neck pain
- Inability to hold neck in the proper posture

- Strained neck muscles
- weak neck muscles

- HNP (Herniated nucleus pulposus) or bulging discs

- Nerve problems
- Radiating pain
- Numbness and Tingling
- Radicular symptoms in cervical spine along with arms and hands
The cervical spine is meant to have a slight lordotic curve
Anatomy of the Spine

Cervical Spine

Lumbar Spine

Discs

Vertebral Body

Superior articular process

Transverse process

Inferior articular process

Spinous process

Intervertebral disc

Inferior articular process
For every 5 degrees of flexion the weight on the head increases by a factor of 3.
Degenerative Disc Disease and Spinal Stenosis

- Bone spurs (osteophytes)
- Disc degeneration - flattening of the disc

Healthy Cervical Spine vs. Cervical Stenosis
Anatomy

C2
C3
C4
C5
C6
C7
C8

2
3
4
5
6
7
The SCM laterally flexes the head to the same side, rotates to the opposite, and bilaterally flexes the head forward.

The Scalenes laterally flex the head to the same side, bilaterally cause forward flexion and rotate the head and neck to the contralateral side.

Muscles of the Cervical Spine
Muscles of the Cervical Spine

The upper traps when fired bilaterally, extend the neck and head

The Paraspinal muscles bilaterally extend the neck and head
Erector Spinae Group is responsible for extension of the vertebral column. 

Rhomboids adduct the shoulder blade (scapula). Rhomboids also elevate and downwardly rotate the shoulder blade (scapula).
When compressed a referred pain is often elicited.

**Trigger Points**

“hyperirritable spots in skeletal muscles”

When compressed a referred pain is often elicited.
Causes of Tech Neck

1. Poor posture
2. Excessive neck flexion, excessive kyphotic posture, scapular protraction
3. Texting, staring at a computer, gaming, general lack of movement
4. Looking at a computer for a significant part of the day
5. At work people have many opportunities to look down, moving into bad posture
Causes of Tech Neck – What the Research says

Sitting for more than 95% of the work day = 2x higher risk for neck pain

Bad posture causes a continuous load on the neck causing pain and radicular symptoms
Correct Postural Training

Prevention

Good Posture:
1) Ears aligned with the shoulders
2) Shoulder blades (Scapulae) retracted by being pulled back and squeezed together

Bad Posture:
1) Ears are aligned in front of shoulders with neck looking down (flexed positioning)
2) Shoulders are slumped and/or rounded forward
3) Shoulder Blades (Scapulae) are not retracted
Correct Sitting Posture
**Prevention**

Keep Good Posture Throughout The Day

Take Micro breaks and Stretch at work

**Desk Stretches**

1. Drive shoulders up and hold for 5 seconds.
2. Move head slowly up to look at the ceiling. Hold for 5 seconds.
3. Roll head down, tucking chin to chest. Hold 5 seconds.
4. Grasp hand and hold fingers with a slowly bend your wrist down and hold for 5 seconds. Repeat several times.
Prevention

- It is also important to remember every generation is at risk
- Promote good posture with children at a young age
- Prevention is key!
Prevention

- Are you sitting correctly at work?
- If you have symptoms of Tech Neck, visit the OHF for an evaluation
- Contact your safety officer for an ergonomic evaluation of your work space

- OHF Evaluation: 867-3346

- Self-Check
  - Matt Middlesworth-Ergonomics Plus
  - http://ergo-plus.com/about/matt-middlesworth/
Modalities (Electrical stimulation, ice, heat)

Active posture awareness and correction of postural habit

Therapeutic Massage

Therapeutic Exercises
Following an exercise protocol, subjects demonstrated ability to maintain neutral cervical posture during prolonged sitting.

Therapeutic exercise is the best medicine! Get active!
Treatment

Stretching – apply overpressure with your hand

Neck extension

Neck side bending

Neck rotation
Chin Tucks, Prone Hanging Extensions, Side Lateral Flexion

Therapeutic Exercise
Thoracic 3s
Therapeutic Exercise
Conclusion

Tech Neck is effecting all age groups.

It is important to take an preventive approach and be proactive with signs of tech neck.

Practice good posture daily, until it become habit!

Help educate the younger generation by assisting them with good posture habits.
Thank you!

Questions?
Resources


Feel Like You are Suffering from Tech Neck?

Come see us at RehabWorks!
Schedule your free consult to be evaluated and receive advice and strengthening recommendations to prevent further symptoms.
Phone: 867-7497
Email: KSC-RehabWorks@mail.NASA.gov