

A photograph of a person's back and neck from behind. The spine is highlighted with a glowing orange-red effect, and a hand is resting on the person's right shoulder. The background is plain white.

A Pain in the Neck

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Outline

- **Prevalence/Incidence**
- **Risk Factors**
- **Anatomy and Classification**
- **Causes of neck pain**
 - **Prevention??**
- **Physical Therapy**
 - **When to seek medical attention**
- **Exercises**

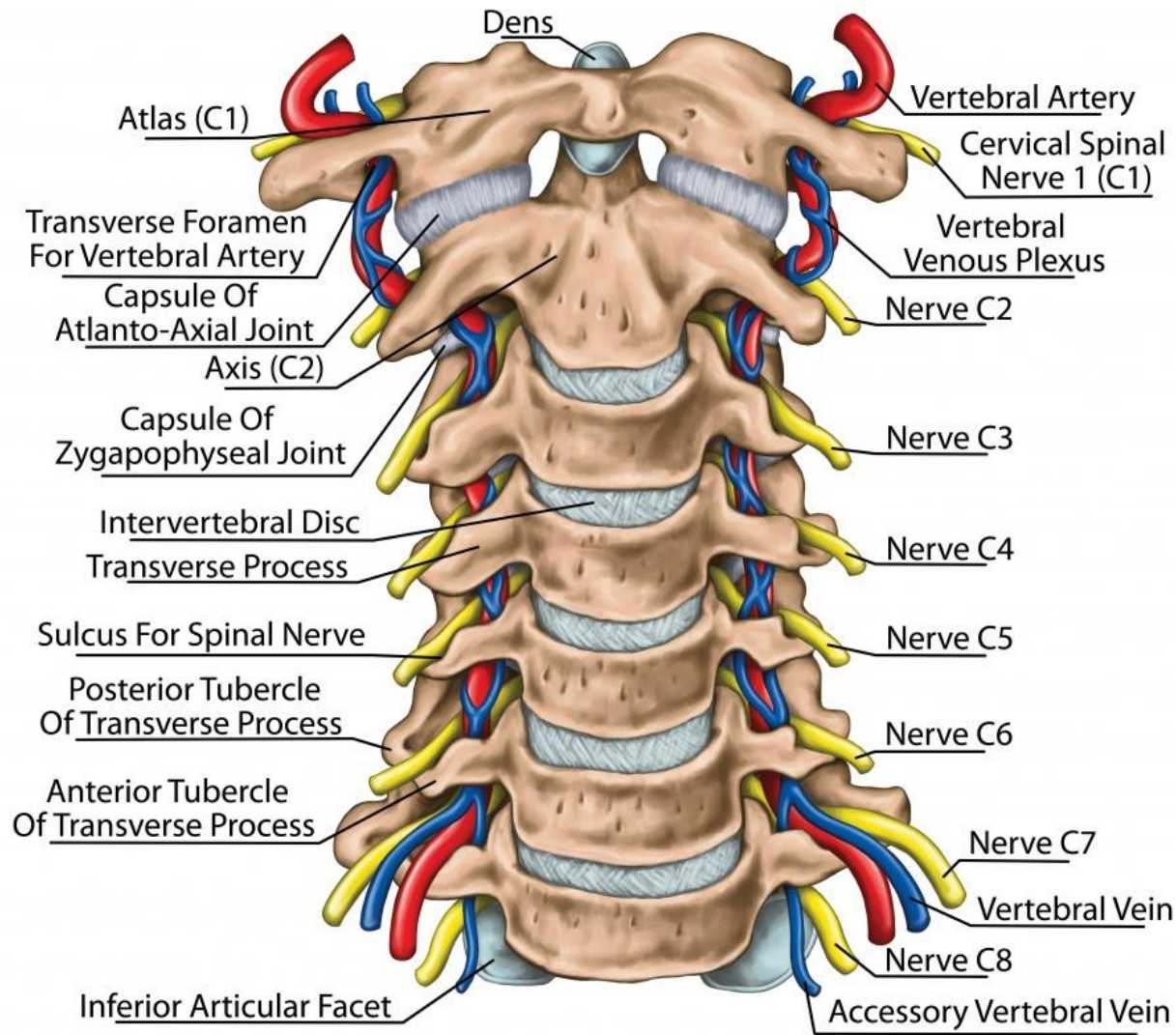


Prevalence and Incidence of Neck Pain

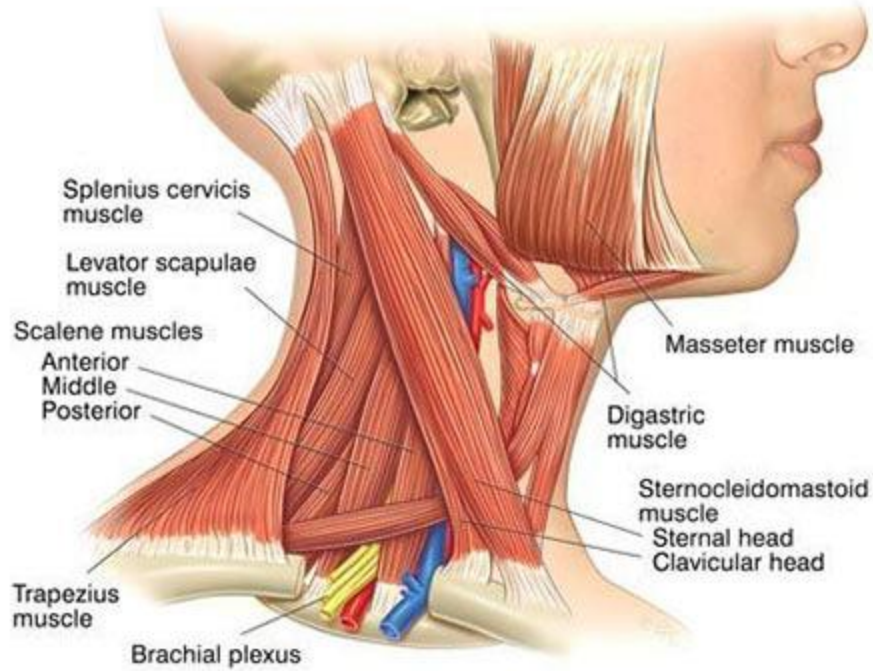
- Neck pain is the 4th leading cause of disability in the U.S.
- Up to $\frac{2}{3}$ of people will be affected at some point in their lifetime
- Neck pain can be episodic and recurrent throughout the lifespan
 - Greater than 60% experience another episode of neck pain within 1 year of their initial episode
- Annual cost of neck and low back pain is \$87.6 billion in the U.S., behind only diabetes and heart disease

Risk Factors

- **Females more likely than males**
- **Middle age**
- **Genetics**
- **Biopsychosocial factors**
- **Sleep problems**
- **Smokers**
- **Sedentary lifestyle**
- **Obesity**
- **Trauma history**
- **Occupations**
 - **Office workers, manual laborers**
 - **Low job satisfaction and perceived poor workplace environment**



anterior view

[illegible]

Classification of Neck Pain

- **Duration**

- Acute <6 weeks
- Subacute < 3 months
- Chronic > 3 months

- **Mechanism**

- Mechanical
 - pain originating in the spine or its supporting structures
- Neuropathic
 - pain resulting primarily from injury or disease involving the peripheral nervous system, which generally involves mechanical or chemical irritation of nerve roots
- Mixed Mechanical and Neuropathic
- Secondary to another cause



Pathoanatomy of Neck Pain

- Specific tissue that causes pain often unknown
- Neck pain is classified as non-specific when the pathophysiology is relatively unknown or unclear
 - no underlying pathology or systemic disease
- Numerous anatomical structures in the cervical spine which could cause pain
 - Most probably have multiple pain generators due to the association between adjacent structures

Causes of Neck Pain

- Physical factors of the person
 - Strength, flexibility, posture, physical activity during leisure time
- Workplace psychosocial factors have been shown to be strong predictors for the development of neck pain in office workers
 - High job strain
 - high job demand and low job support
 - Low levels of satisfaction/comfort with workplace environment
 - Sustained sitting
 - Close keyboard position to the body (less than 15 cm)
 - Low task variation

Physical Therapy Classifications

- **Neck Pain with Mobility Deficits**
- **Neck Pain with Radiating Pain**
- **Neck Pain with Movement Coordination Impairment**
- **Neck Pain with Headaches**

CLINICAL GUIDELINES	
JOHN D. CHILDS, PT, PhD • JOSHUA A. CLELAND, PT, PhD • JAMES M. ELLIOTT, PT, PhD • DEYDRE S. TEYHEN, PT, PhD ROBERT S. WAINNER, PT, PhD • JULIE M. WHITMAN, PT, DSc • BERNARD J. SOPKY, MD JOSEPH J. GODGES, DPT • TIMOTHY W. FLYNN, PT, PhD	
Neck Pain:	
<i>Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability, and Health From the Orthopaedic Section of the American Physical Therapy Association</i>	
J Orthop Sports Phys Ther 2008;38(9):A1-A34. doi:10.2519/jospt.2008.0303	
RECOMMENDATIONS	A2
INTRODUCTION	A3
METHODS	A4
CLINICAL GUIDELINES: Impairment/Function-Based Diagnosis	A9
CLINICAL GUIDELINES: Examinations	A14
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For author, coordinator, and reviewer affiliations, see end of text. ©2008 Orthopaedic Section American Physical Therapy Association (APTA), Inc., and the Journal of Orthopaedic & Sports Physical Therapy. The Orthopaedic Section, APTA, Inc., and the Journal of Orthopaedic & Sports Physical Therapy consent to the photocopying of this guideline for educational purposes. Address correspondence to: Joseph J. Godges, DPT, ICF Practice Guidelines Coordinator, Orthopaedic Section, APTA Inc., 2920 East Avenue South, Suite 200, La Crosse, WI 54601. Email: icf@orthopt.org	

Evaluating Neck Pain

- **History**

- Symptoms - Location

- **Physical Examination**

- Range of motion
- Strength
- Sensation
- Reflexes
- Special Tests

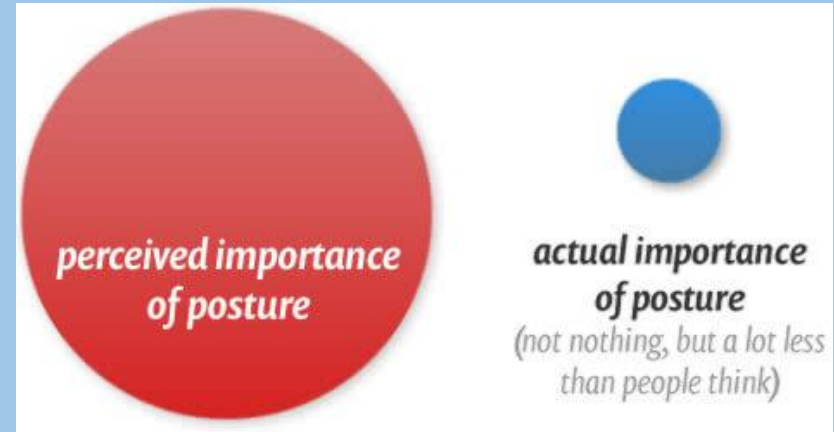
- **Diagnostic Work-up**

- X-ray
- MRI.....NOT typically recommended unless serious “red flags” present!!!



Prevention

- Exercise effective in preventing neck and low back pain
 - Most importantly, just frequent movement
- Limited evidence to support or refute the effectiveness of ergonomic modification
- Poor posture does not (always) equal pain....



Benefits of Exercise for Neck Pain

- Strongest evidence for conservative therapy...exercise!!
 - Active or passive physical exercises designed to strengthen or stabilize the spine that may reduce pain, prevent injuries, and improve posture and body mechanics
- Strong evidence for frequency of exercise/physical activity
 - Stretching
 - Can decrease pain and improve flexibility
 - Strengthening
 - New evidence suggests strengthening is superior
 - Endurance
- Weaker evidence for massage, acupuncture, and spinal manipulation

Exercises



Disclaimer!!!

- The following exercises, though selected by a medical provider, are intended to demonstrate general ideas, education, and demonstration of exercises for mild neck pain.
- These exercises should not be used to self-treat or self-diagnose any condition
- Do not use these exercises to avoid going to your own healthcare professional
- If you so chose, exercises are to be used at your sole risk, and Jen is not liable for any losses, injuries, or damage.

Where
There Is
A Will

There Is A Lawsuit

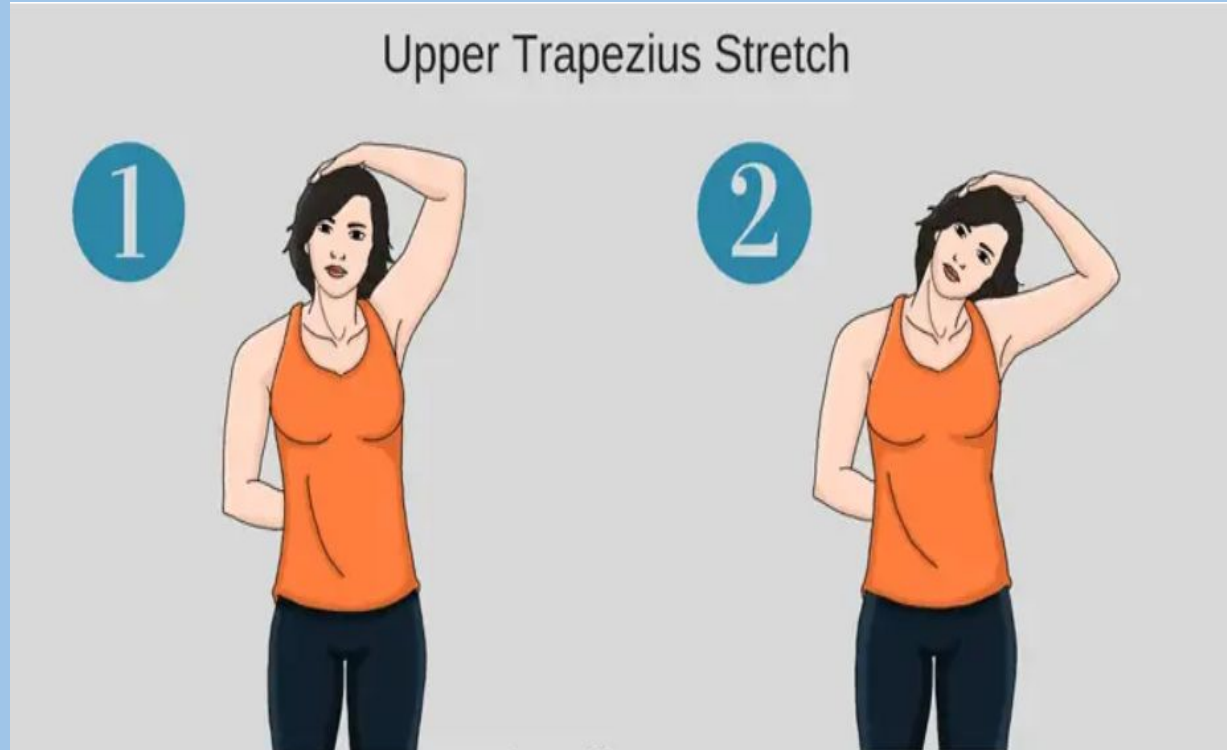
Chin Tuck

- Good for “posture” and activating the deeper stabilizing muscles of the neck
- Pull chin straight back as if you are giving yourself a double chin
- 8-10 repetitions



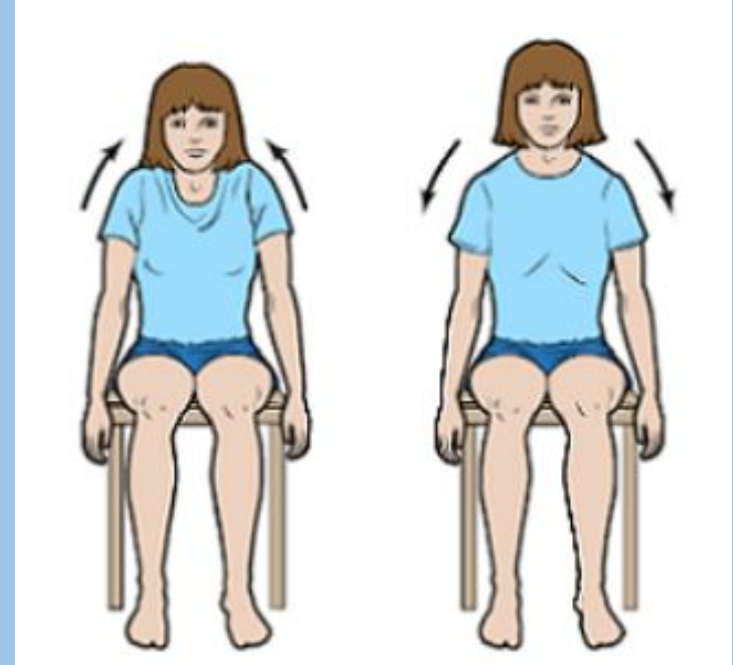
Upper trapezius stretch

- Gently tilt head to one side with hand, should feel a comfortable stretch in the upper shoulder and into neck



Shoulder Shrug

- Move shoulders straight up towards ears, then focus on pulling shoulder blades down and back
- 10-15 repetitions



Shoulder blade squeezes

- Squeeze shoulder blades down and back
- 10-15 repetitions
- Good for those who sit for long periods
 - Activates the muscles that are often not worked enough when we sit forward



Pec stretch/Chest Opener

- Stand in open doorway, raise arms up with elbows bent, place palms on door frame
- Step forward with one foot or lean forward until you feel a gentle stretch in the front of your shoulders and chest
- Stand up tall with head up
- Hold 20-30 seconds
- Repeat 3 times



Open Book

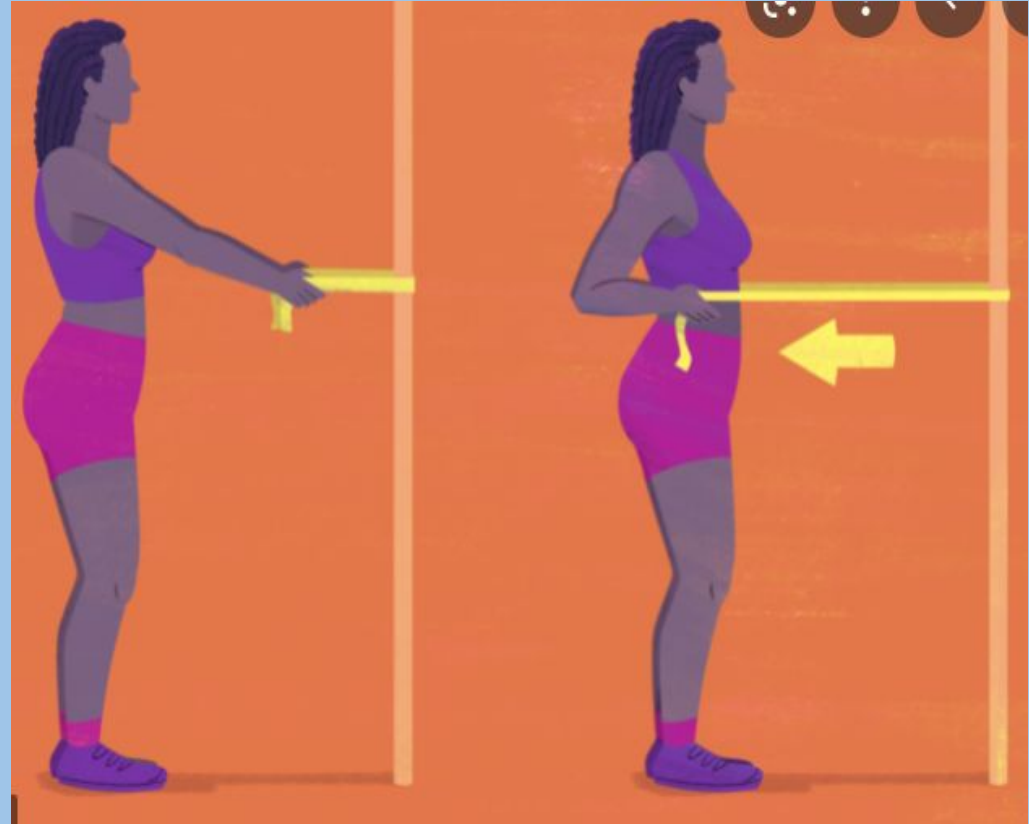


Cat Cow



Theraband Rows

- Strength progression of shoulder blade squeeze
- Use resistance band or tube
- Stand tall and pull on ends of band as you squeeze your shoulder blades down and back
- Repeat 10-15 times.



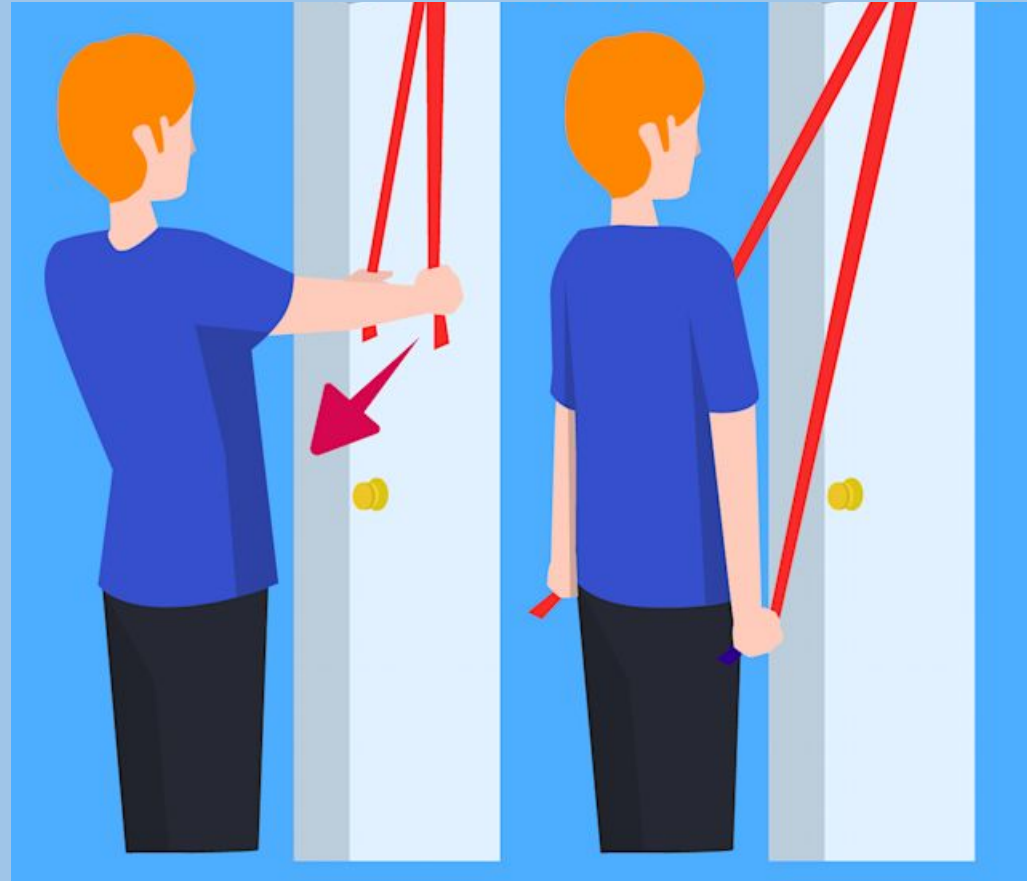
Banded Pull Aparts

- Use resistance band or tube
- Stand with arms out straight in front of you and parallel to ground
- Keep elbows straight, pull band apart to chest and back
- 10-15 times



Banded pull downs

- Attach resistance band or tube inside door
- Hold ends of band, keep elbows straight and pull band down towards hips
- Keep tops of shoulders relaxed
- 10-15 times



Natural Course of Neck Pain

- Most acute cases will resolve in 2 months, but approximately 50% of patients will continue to have some pain or frequent recurrences up to 1 year after
- No association found between the degree of radiographic degeneration and prognosis
- Neuropathic pain tends to have worse prognosis than non-neuropathic pain
- Recovery appears to happen most rapidly within the first 6 to 12 weeks post-injury
 - Slowed recovery after 12 weeks

Recent evidence....working from home during pandemic

- Effect of working from home on neck pain among office workers in Sweden
- Data yielded no evidence that neck disability, number of work breaks, or number of hours of computer work changed between pre-COVID-19 pandemic (working in the office) and follow up
 - Actually found evidence of a 0.68 point reduction in neck pain intensity during the lockdown
- Second hypothesis, that poor workstation ergonomics, the number of breaks at work, and long working hours at a computer would be associated with higher neck pain intensity was partially confirmed

When to seek medical attention??

- Wait and see???.... Unless:
 - You have symptoms radiating into one or both arms
 - Pain is constant, not changed by movement or certain positions
 - Pain is severe
 - Pain is associated with dizziness, severe headaches, balance issues
 - Sudden fever, unexplained weight loss, difficulty walking, incontinence
- Consult your primary care physician or physical therapist if pain persists or if you have any questions regarding exercise!!

**Pain is
personal.**

**Treating pain
takes teamwork.**

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