

What a Pain in the Neck?

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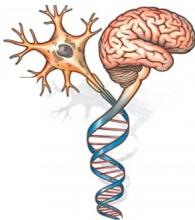


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Disclosure

- Associate Professor University of Toronto
- Staff Neurosurgeon, University Health Network
- Medical Director, Back & Neck Program Altum Health



Objectives

- Review the topic of Neck Pain
- Collaboration between different professionals in management of neck pain

Outline

- Sources of potential Neck Pain
 - *Concussion versus Cervico-genic*
 - *Cervical Radiculopathy*
 - *Cervical Myelopathy*
 - *Multifactorial*

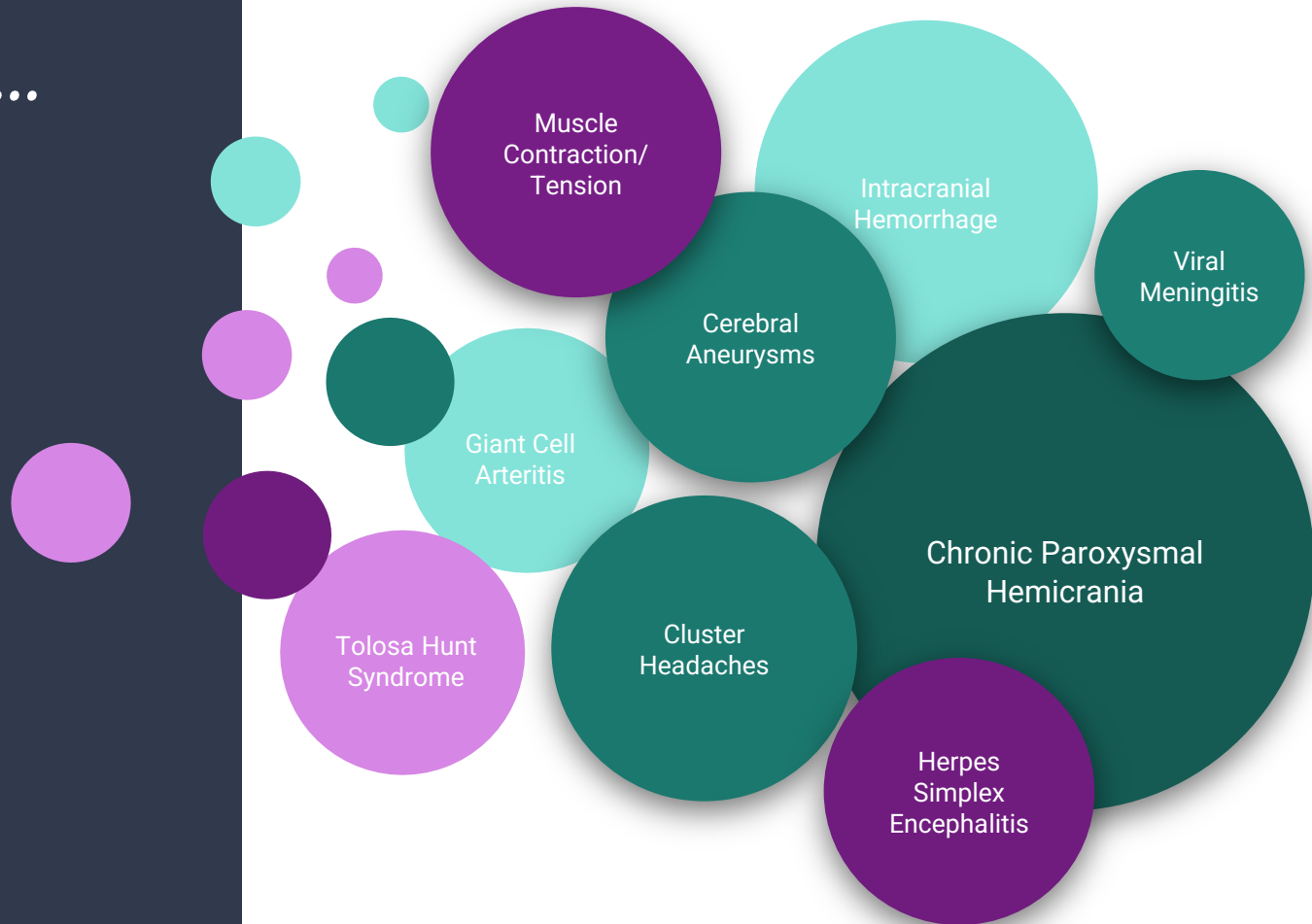
- Management
 - *Rule out Surgical intervention*
 - *Focus on Muscles and Posture*

Concussion Definition

**Immediate &
temporary
alteration of
mental
functioning due to
trauma...**

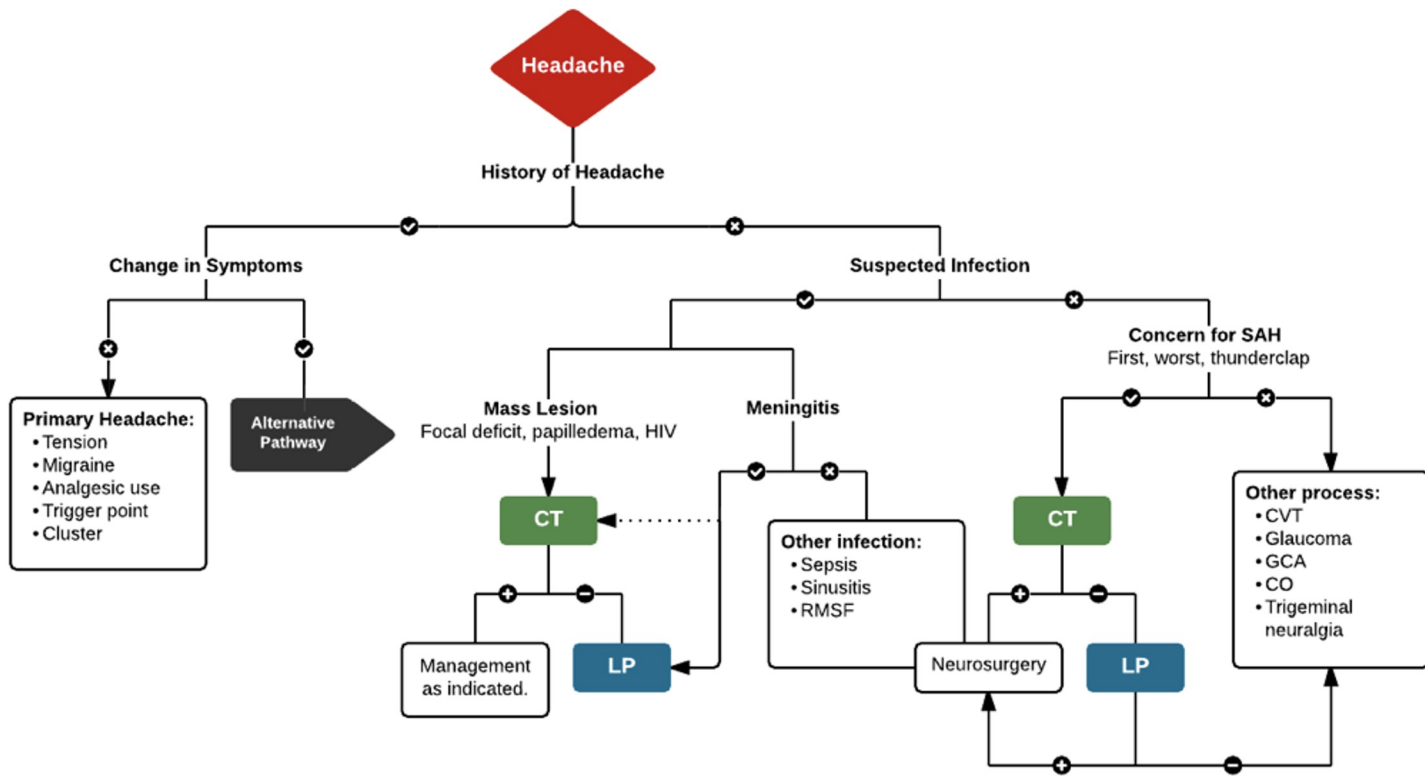
“The trauma does not have to be directly to the head, and can be due to a whiplash effect on the brain from a blow elsewhere on the body...”

http://www. ...



Differential Diagnoses

Approach to headache



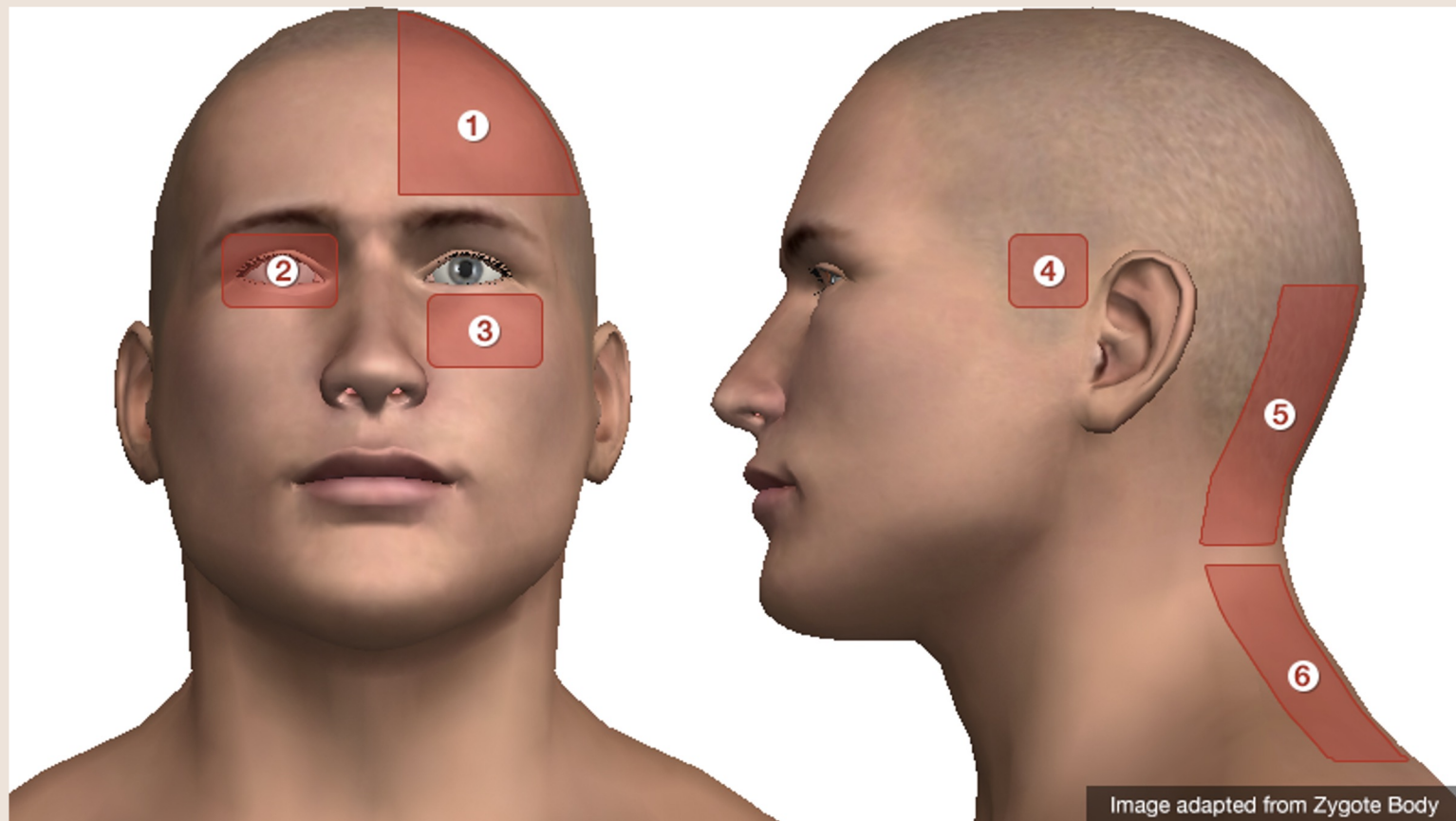
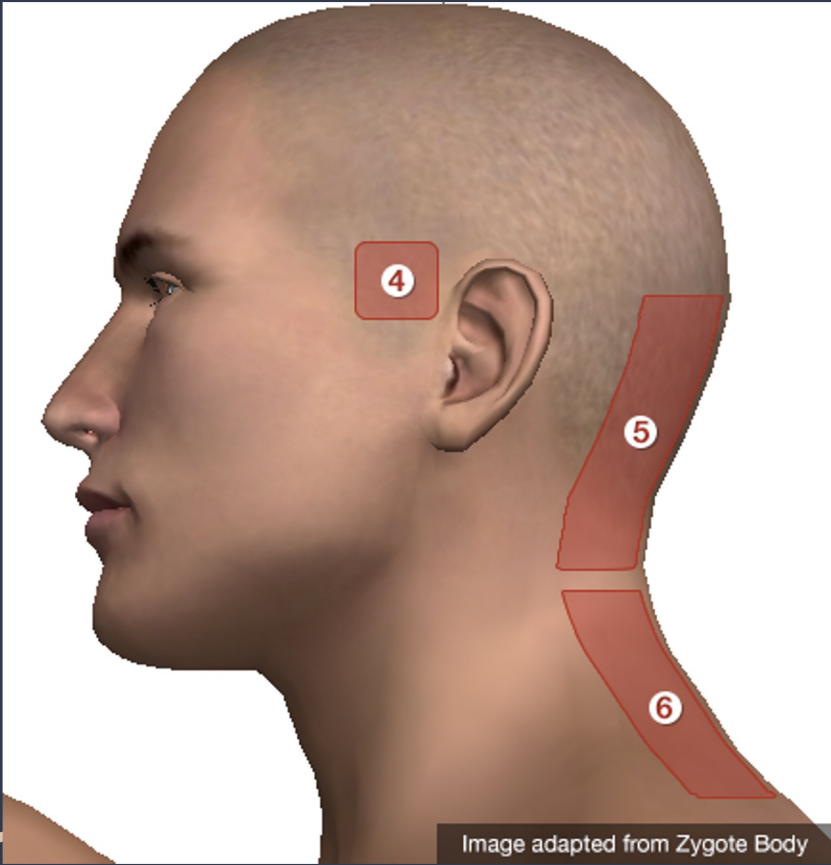


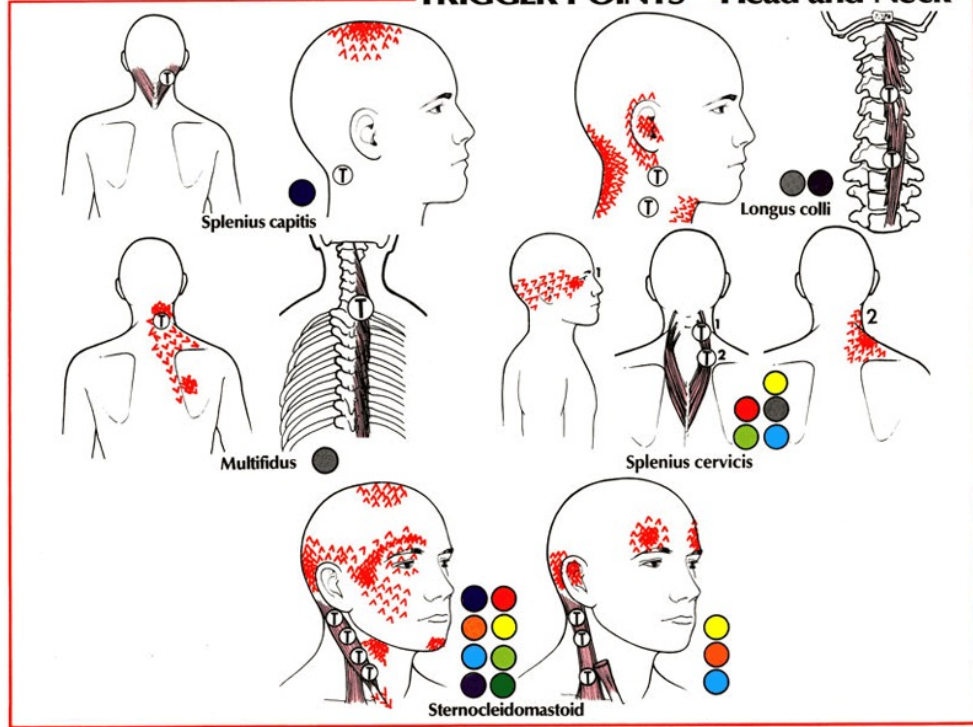
Image adapted from Zygote Body

1. Unilateral: migraine
2. Periorbital: glaucoma, CVT, optic neuritis, cluster
3. Facial/maxillary: trigeminal neuralgia, sinusitis
4. Temporal: GCA
5. Occipital: cerebellar stroke
6. Nuchal: meningitis

Pathophysiology of Headache ("cephalalgia")
Sensation via meninges and blood vessels, mediated via CN V.

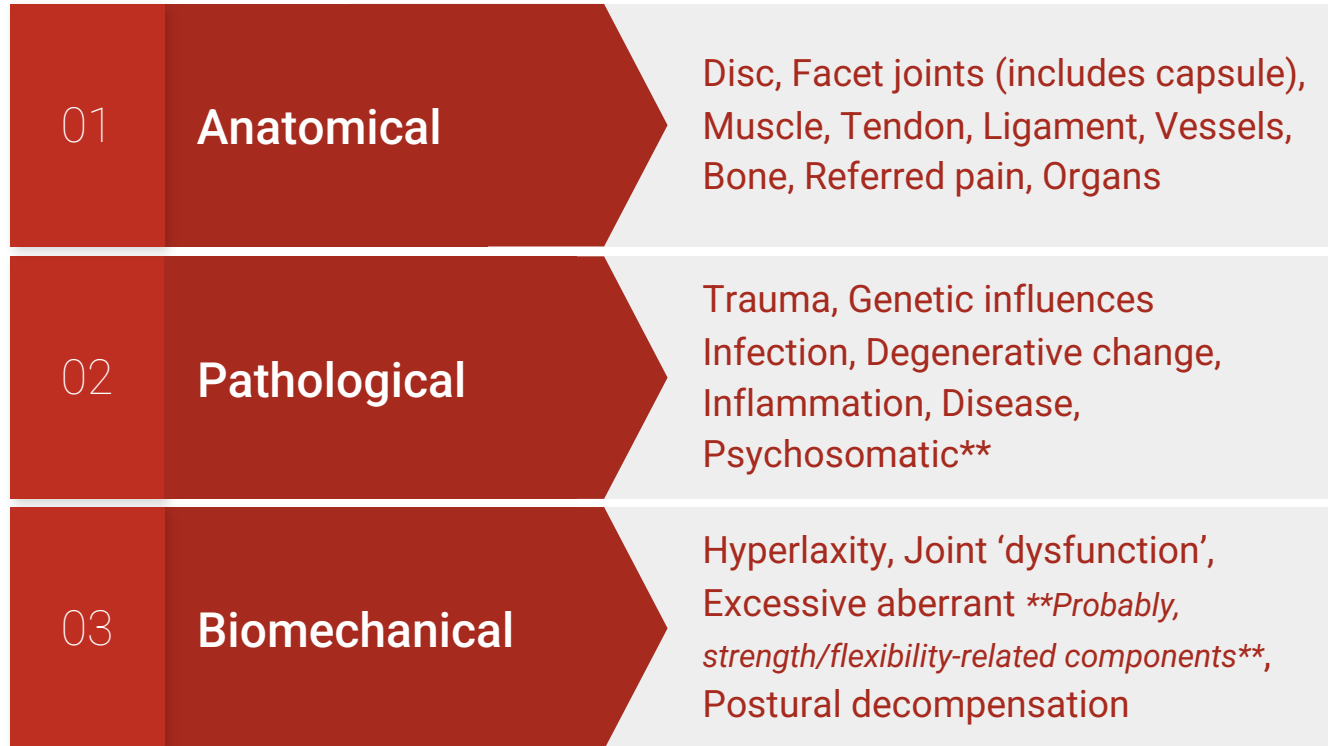


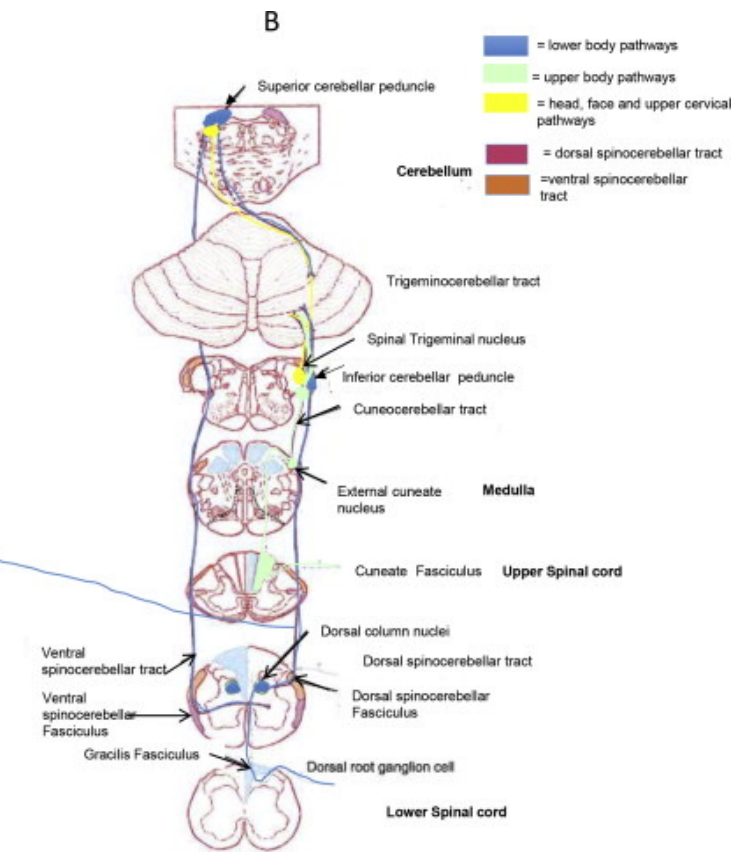
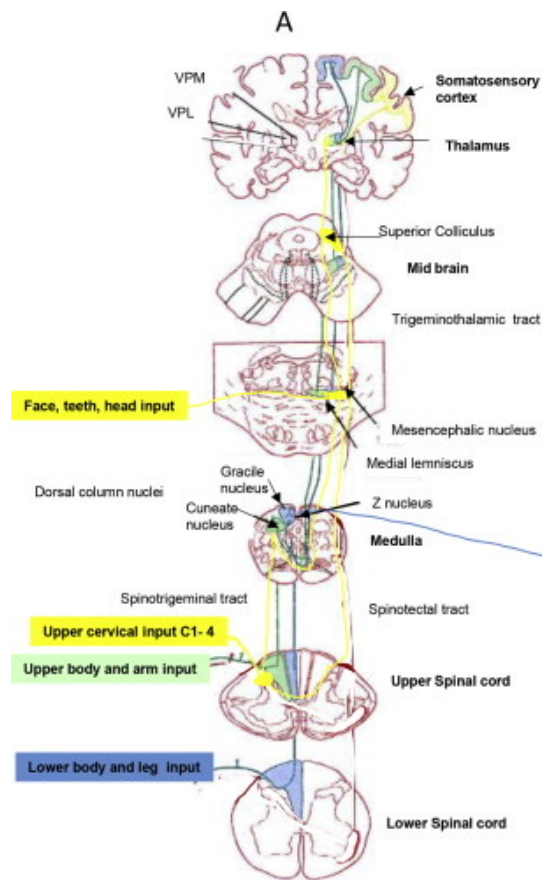
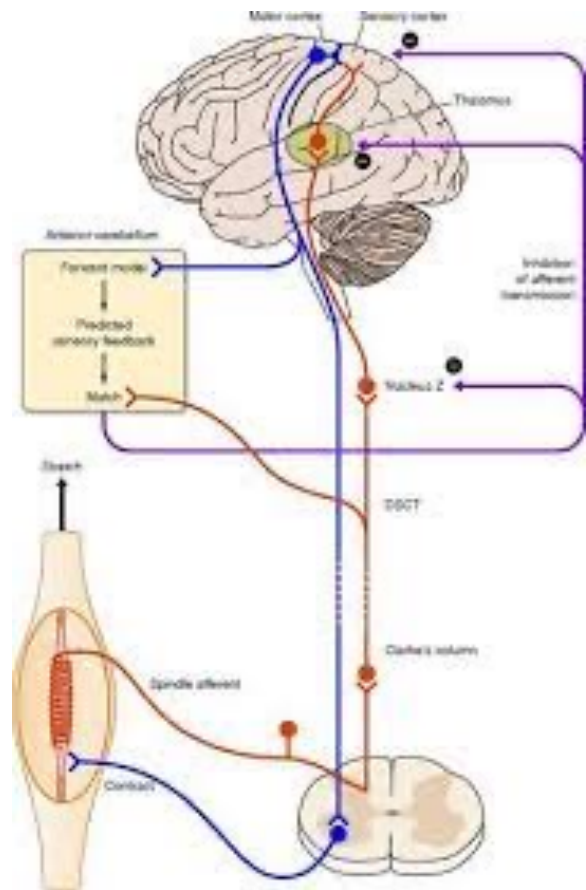
TRIGGER POINTS — Head and Neck



Sources of Neck Pain

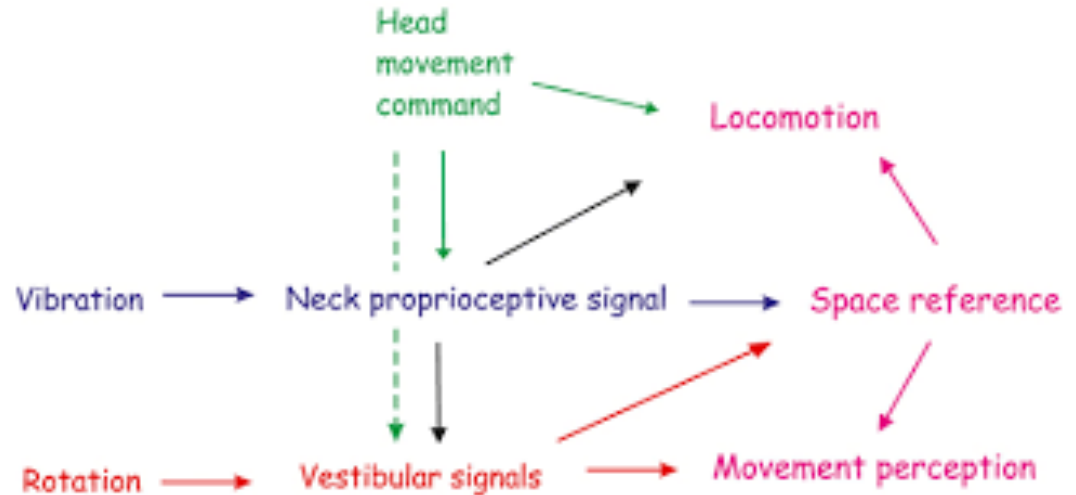
What are the sources of neck pain?





Neurological System











- Simplified version



Neuro Anatomy



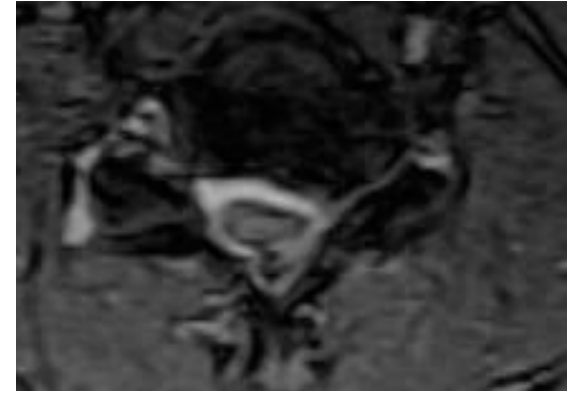
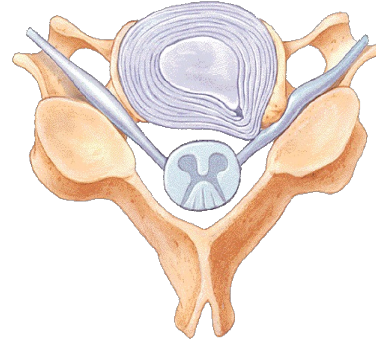
Red flags

-  Progressive neurologic deficit
-  Recent bowel or bladder dysfunction
-  Unsteady gait
-  Traumatic event
-  Age young (< 50)
-  Cancer history
-  Constitutional symptoms (e.g. fever, weight loss)
-  Hx UTI/other infection, IV drug use, TB exposure
-  Immunosuppression, Steroid use history
-  Previous surgery

CLINICAL PRESENTATION

I. RADICULOPATHY

- ▶ NERVE ROOT COMPRESSION



II. MYELOPATHY

- ▶ SPINAL CORD COMPRESSION

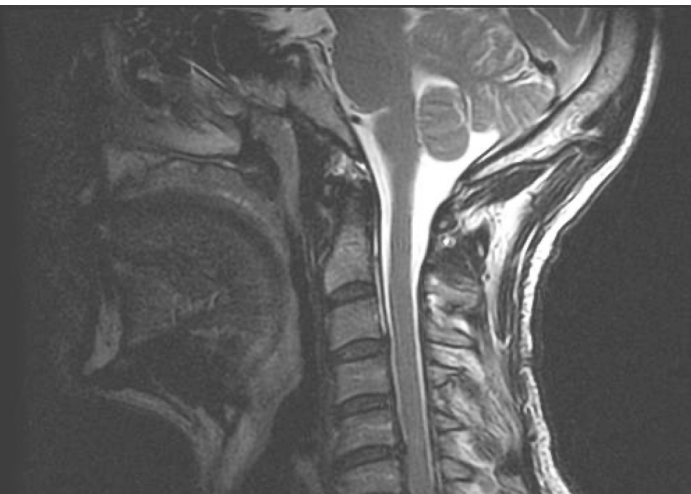


III. COMBINATION

IV. AXIAL NECK PAIN



Case Presentation – Cervical Radiculopathy



CLINICAL DETAILS:

- ▶ 42 YR-OLD MALE
- ▶ PRESENTATION OF RADICULOPATHY FOR 10 MTHS
- ▶ C7 RADICULOPATHY INTO RIGHT ARM
- ▶ MRI CONFIRMING DIAGNOSIS

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Case Presentation – Cervical Radiculopathy



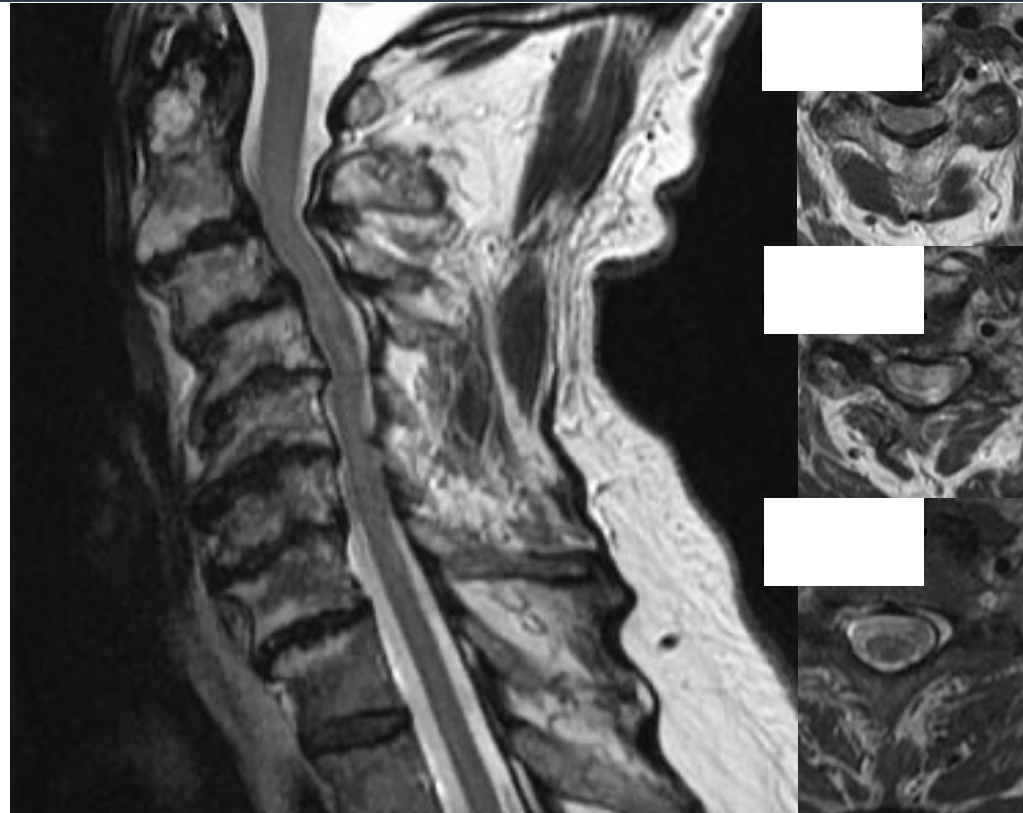
- Anterior Cervical Discectomy C6-7
- Synthes spacer inserted
- Skyline anterior cervical plate instrumentation



Outcome metrics




Case Presentation – Cervical Myelopathy



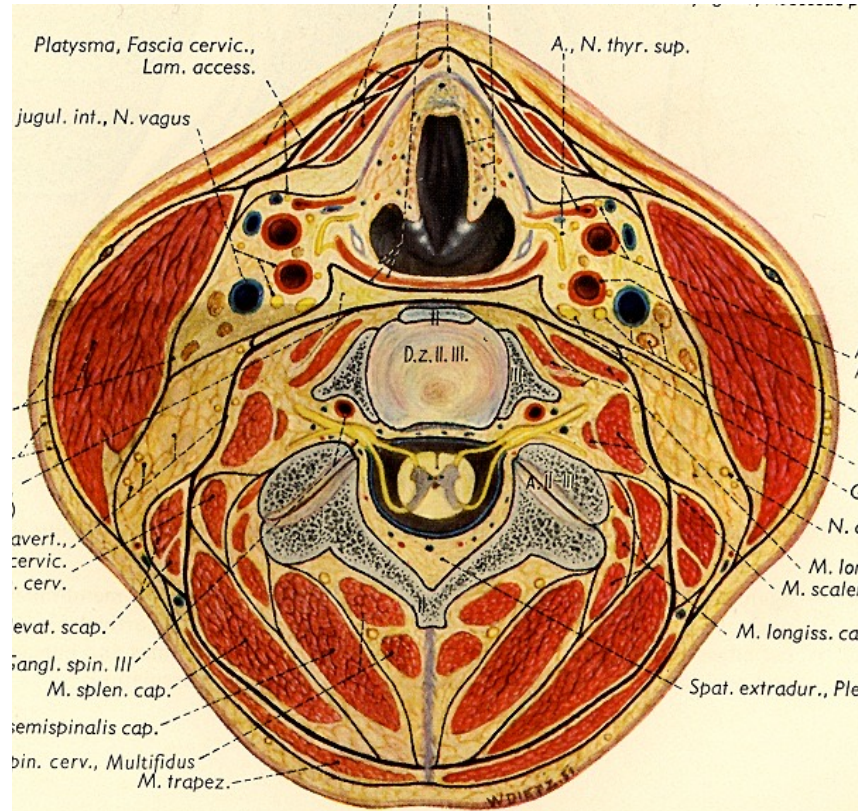
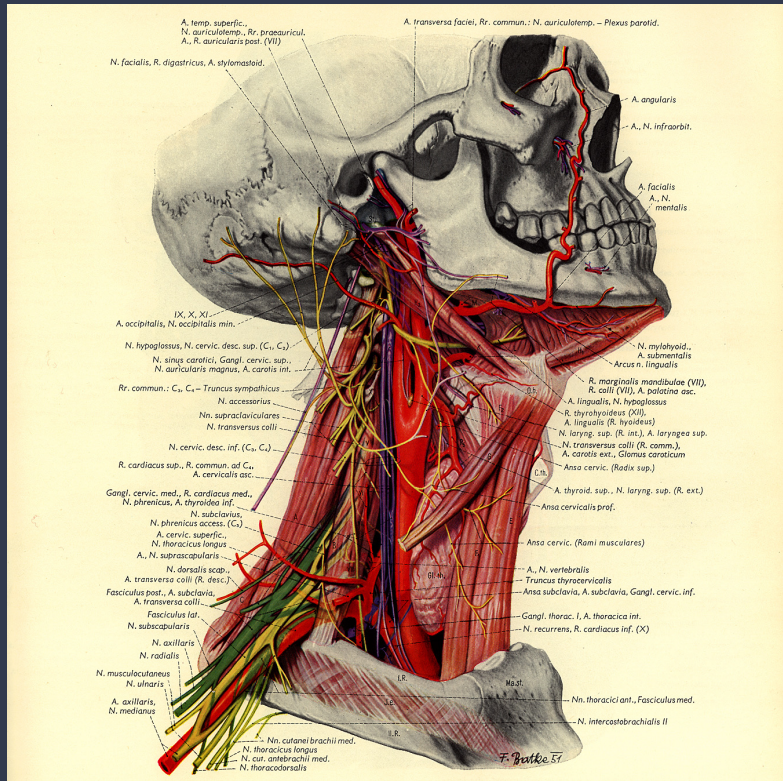
Case Presentation – Cervical Myelopathy



Conservative Treatments for Neck Pain



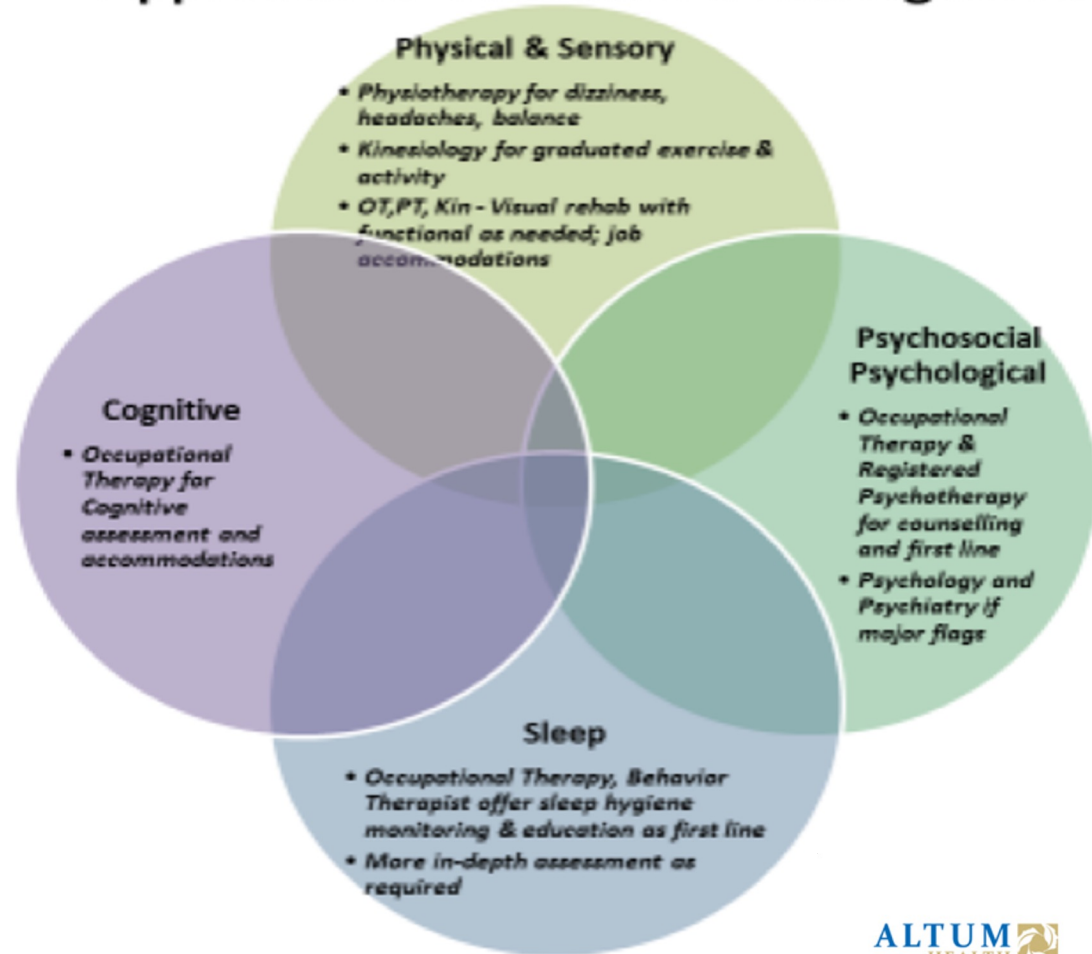
Our best evidence synthesis suggests that therapy involving exercise ... and educational interventions ...are more effective than alternative strategies for patients with neck pain...



mTBI/ Concussion:

Early Assessment & Treatment Programs

Approach to Concussion Management



Take home messages

A hiker with a large red backpack is walking across a suspension bridge that spans a deep valley filled with dense green forest. The bridge is made of metal cables and a mesh floor. In the background, there are rolling mountains under a hazy sky. The text "Take home messages" is overlaid on the left side of the image, with a short horizontal line above it.

Multiple Sources of neck pain

Multifaceted approach to management but most important is conservative treatment with a focus on muscles.

Thank you.

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