

Osteopathic Approach to Vertigo

Developed for OU-COM CORE
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and the
CORE Osteopathic Principles and Practices Committee

Series B – Session #9 Cranial



- Review signs and symptoms of vertigo
- Discuss somatic dysfunction related to vertigo
- Review osteopathic approach to cervico-cranial dysfunction
- Review specific osteopathic techniques for treating vertigo



CC: 28 y/o with c/o room spinning for 30 min after rolling over in bed

Hx CC: Started all of a sudden, no history of trauma.

- Occurred for two mornings in a row after rolling over in bed.
- Room spinning sensation for 30-45 sec.
- Went away on own.
- Nausea, no vomiting.
- Never had it before, did not really bother him once out of bed.
- No hearing loss or tinnitus with it.



PE: CN II-XII intact. Hearing intact. No nystagmus.
PERRLA. Turbinated clear without discharge. Pharynx clear. No carotid bruits. + Dix-Hallpike maneuver.

Osteopathic: OA FRS left. Increased suboccipital tension.
C4 FRS right. CRI at 12 cycles/min with amplitude of 3/5.
Right temporal internally rotated.



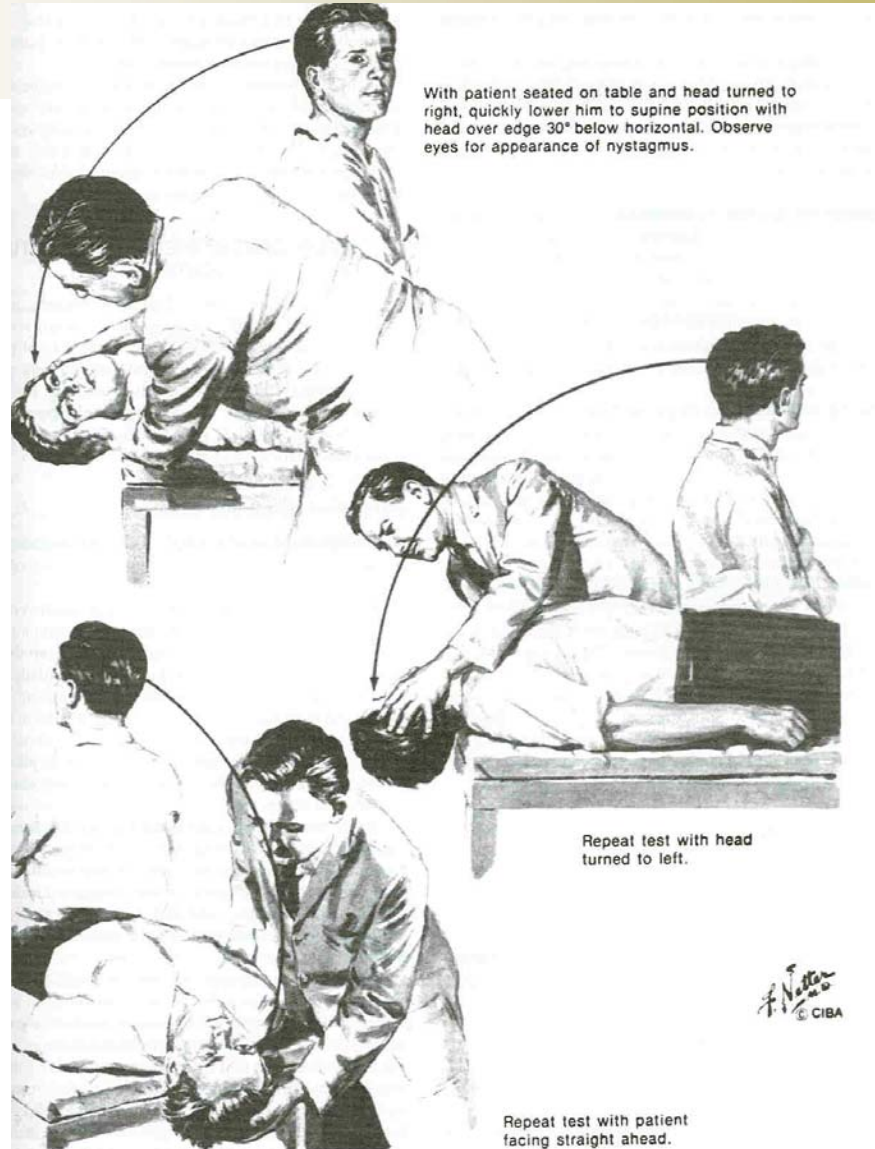


Figure 166-1. Bárány's test for vestibular disease. (© 1981, Ciba Pharmaceutical Company, Division of Ciba-Geigy Corporation. Reproduced from Clinical Symposia by Frank H. Netter, M.D., with permission. All rights reserved.)



- Most common cause of peripheral vertigo
- Theoretically calcium crystals displaced within semicircular canal
- Episodic vertigo lasting for seconds, associated with change in head position
- Dx by Dix Hall-Pike test
- Treatment with repositioning exercises, vestibular suppressants (meclizine), OMT
- Typically self limiting



- Internal rotation of temporal bone
 - CN VIII
- Cranial strain patterns
- Cervical musculature tension
- OA and cervical somatic dysfunction
- T1-T5 somatic dysfunction
 - Sympathetic output to head and neck



- There is articular mobility of the cranial bones throughout most of life
- Trauma or strain can induce dysfunction into the cranial bones
- Restrictions or asymmetry in the mobility of the cranial bones can affect related nerves and their function
- For instance, asymmetry in temporal bone function may contribute to vertigo



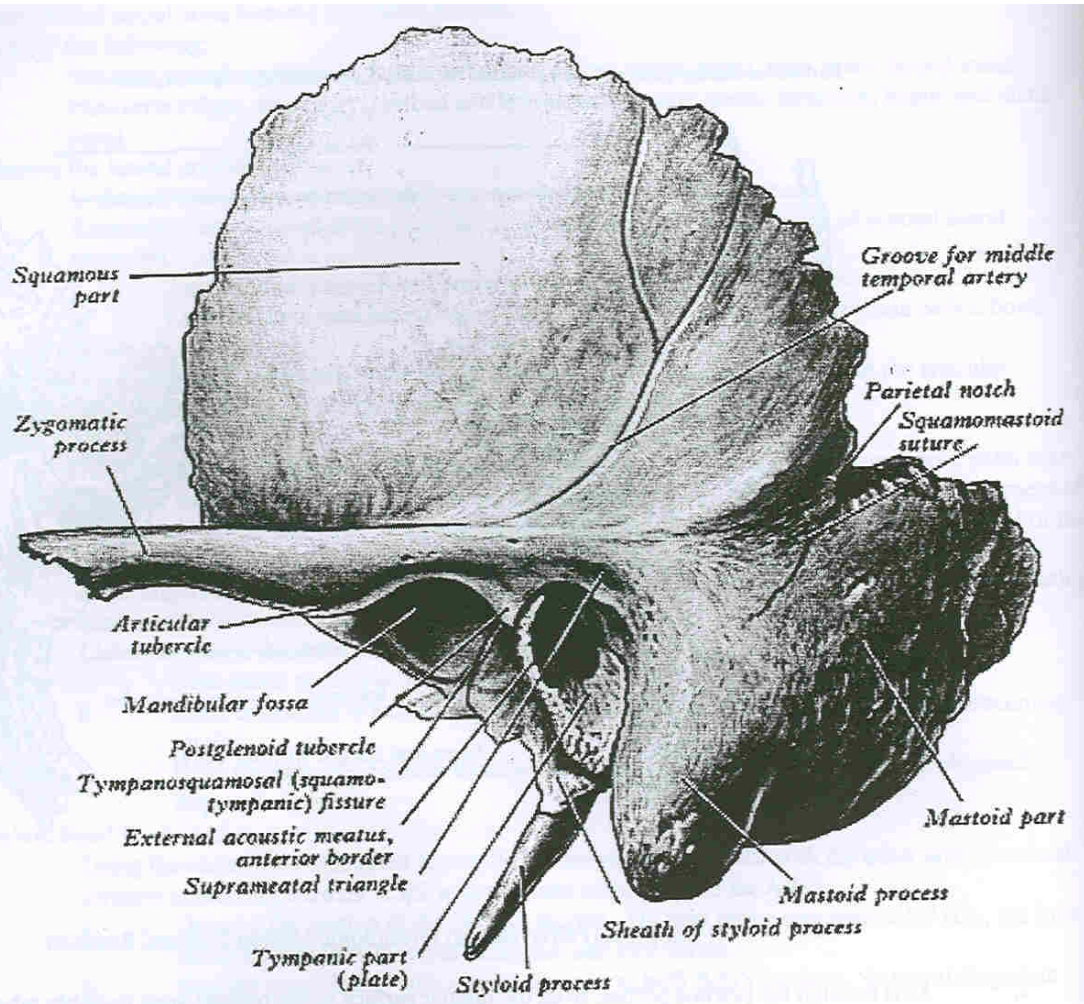


INTEGRATE:

Orthopedic
Neurologic
&
Structural

EXAMS



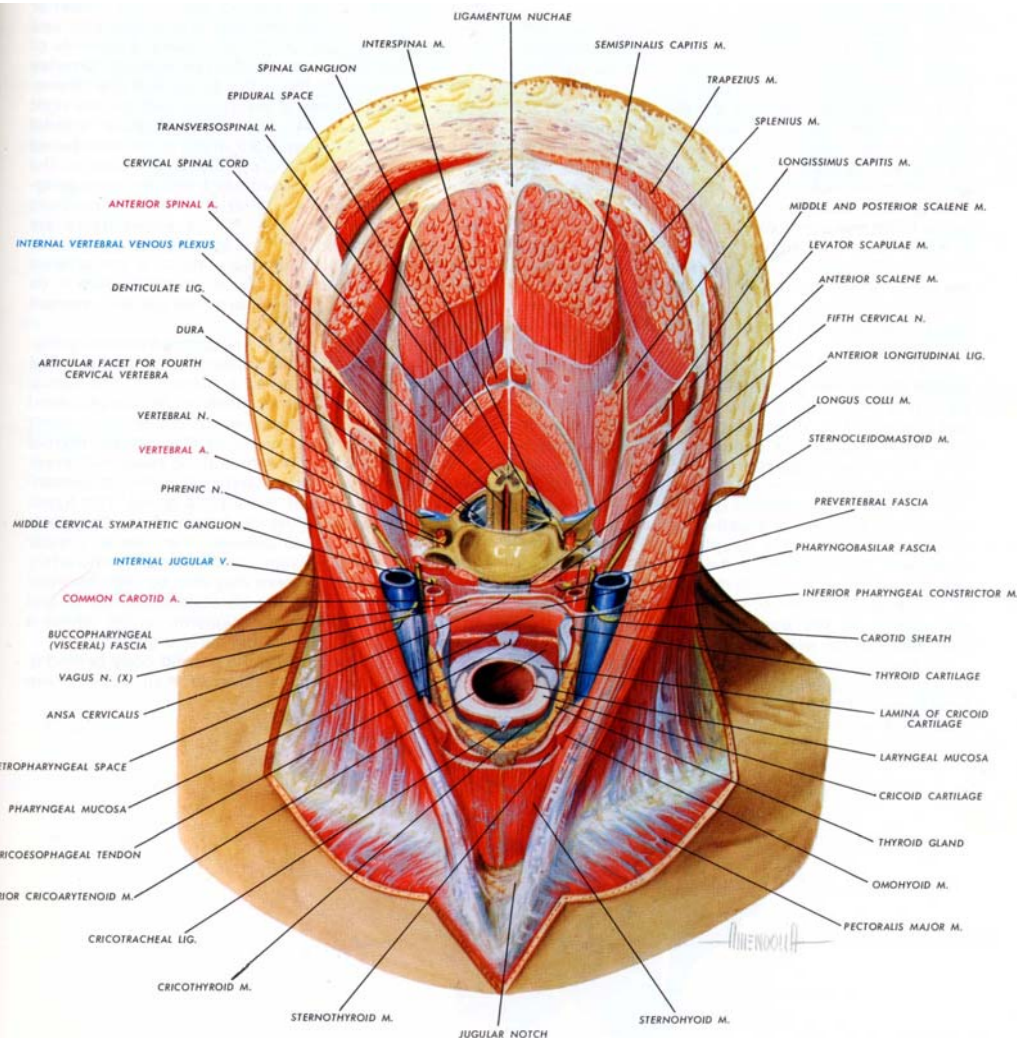


- Temporal bones externally rotates with craniosacral flexion
- Common dysfunction in vertigo
- Articulates with sphenoid, occiput, parietals, zygomas, and mandible

Atlas de Anatomia Humana 1970



Sternocleidomastoid

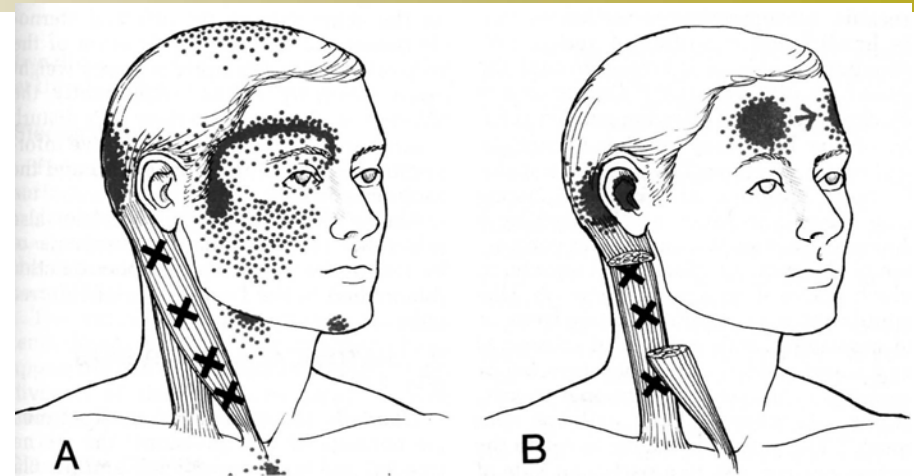


- SCM is a major postural muscle
- Evaluate the SCM by palpating for tenderpoints in the belly and clavicular attachments

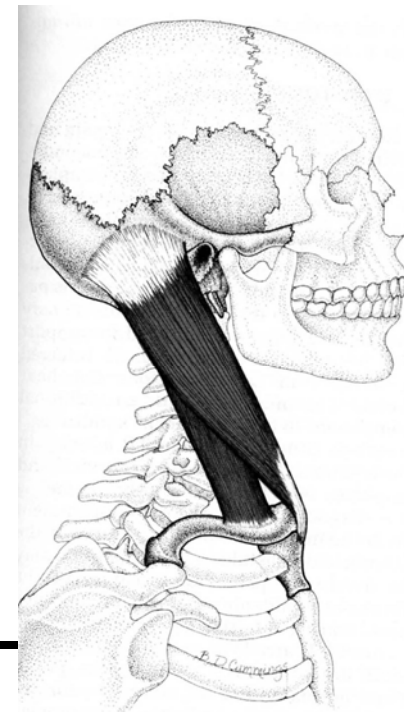


Sternocleidomastoid

- SCM Triggerpoints can radiate pain into forehead, around eye and behind ear



- SCM dysfunction can also cause dizziness



Travell, J, 1983



- Pt given meclizine for acute attacks of vertigo
- Repositioning exercises performed in office and taught to patient
- OMT provided
 - Suboccipital inhibition
 - ME to cervicals
 - Temporal decompression
 - Occipital compression (CV4)



- Counterstrain SCM (Jones' C7 anterior TP)
- Basic evaluation of cranium
- Temporal Decompression
- Parietal Lift
- Cervical ROM stretching, and treatment of any specific segmental dysfunction
- Occipital compression (CV4)
- V-Spread for OA
- Temporal Rocking



- A Common tender point is at clavicular attachment (Jones' Anterior C7 - C8)
- Treatment is cervical **flexion** and rotation
- Hold for 90 sec.
- Slowly return to neutral

Yates & Glover, 1995.

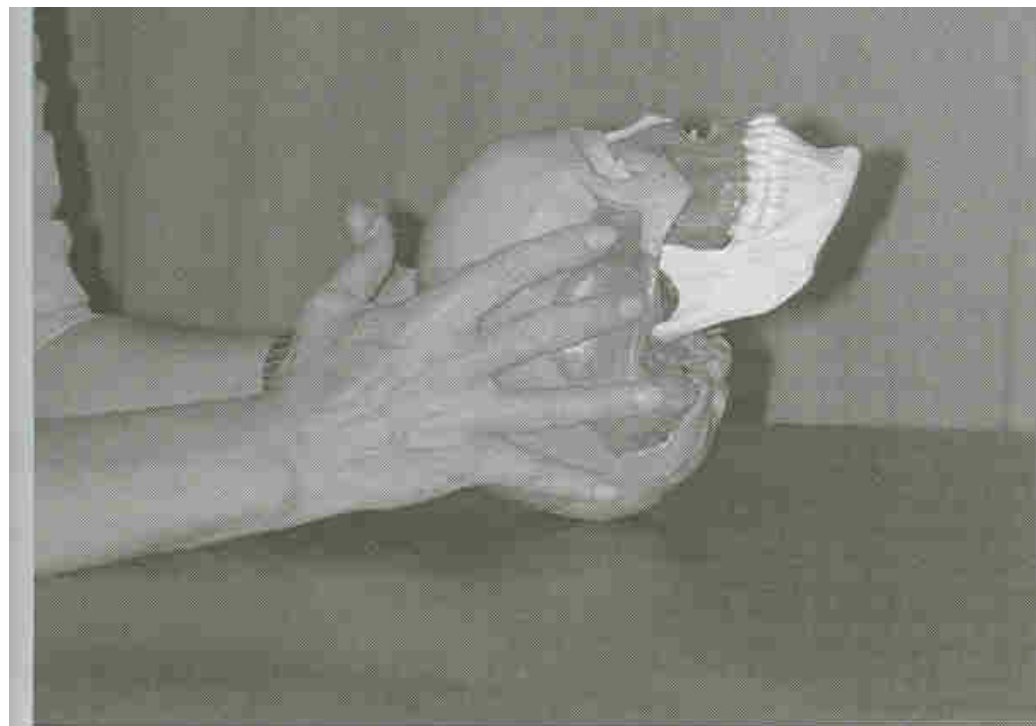


Vault Holds

Evaluate cranial symmetry & motion



Posterior temporal hold



Vault hold



- Used to correct restricted temporal bone mobility
- Gently pull earlobes in a posterolateral direction until slight give is equal on both sides
- Recheck



- Can be used to free up motion of temporal bone
- Gently contact parietals superior to squamous suture
- Press medially and gently lift parietals superiorly until give is equal on both sides



Parietal lift



It can be of great benefit - especially in the elderly- to take the patient's cervical spine through general range of motion; slowly, gently, and with mild traction:

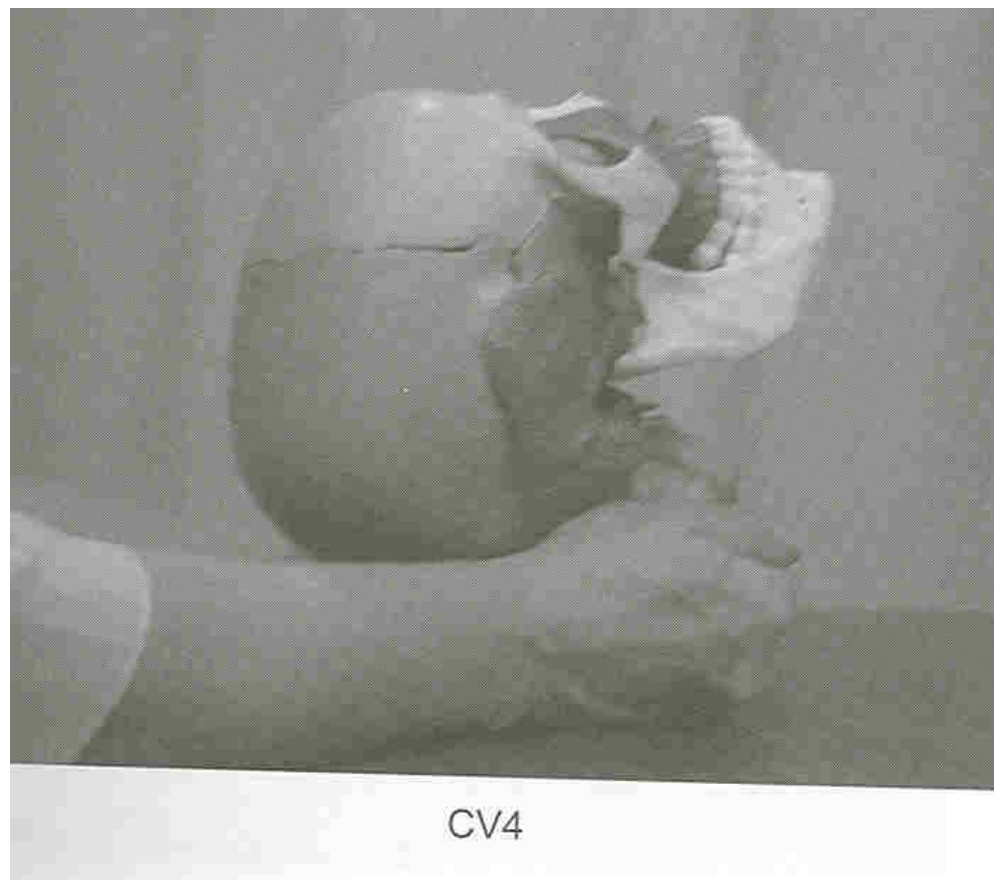
- Sidebending
- Rotation
- Flexion and segmental extension (careful whenever inducing cervical extension)



Additional useful OMM techniques

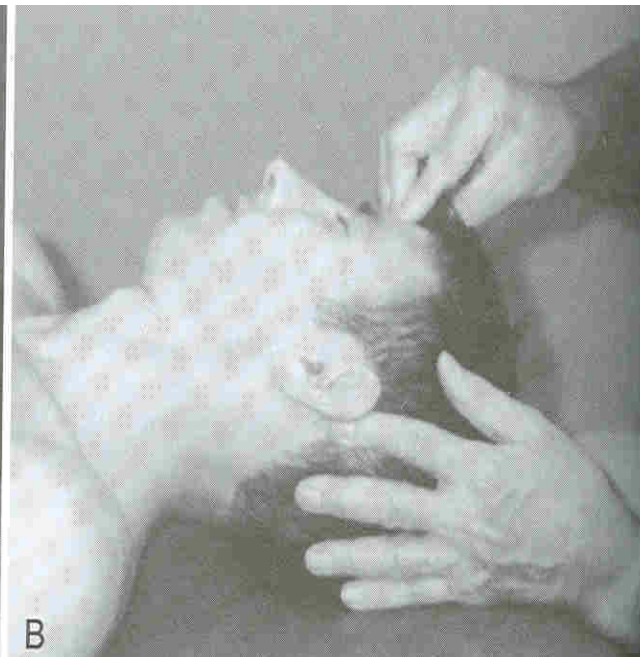
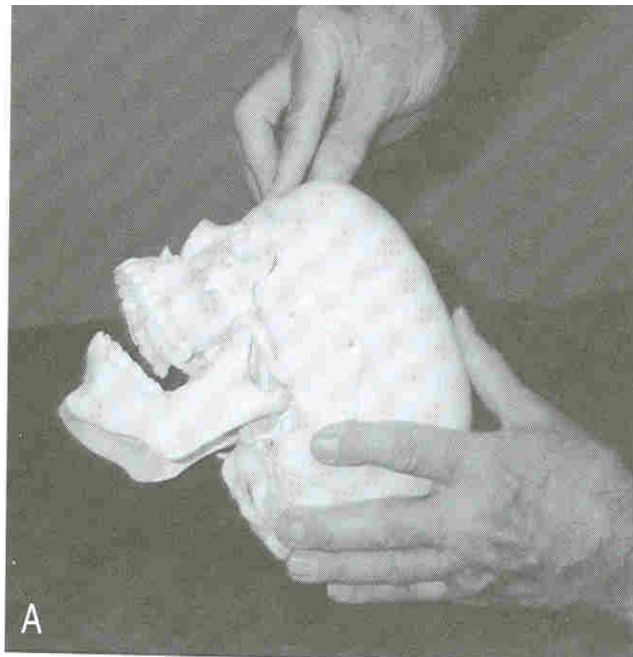


- Thenar eminences on occipital bone medial to occipitomastoid sutures
- Palpate cranial flexion and extension
- Gently encourage extension and resist flexion until CRI stops
- Maintain this extension still point until CRI returns, typically at a greater amplitude



V-Spread Occipita-mastoid Suture

- Contact bone on either side of suture with index and middle finger and apply steady traction to separate suture
- Place index and middle finger of other hand on opposite side of the head and exert slight repetitive impulse toward restricted suture
- Continue sutural traction and contralateral impulse until give is finished

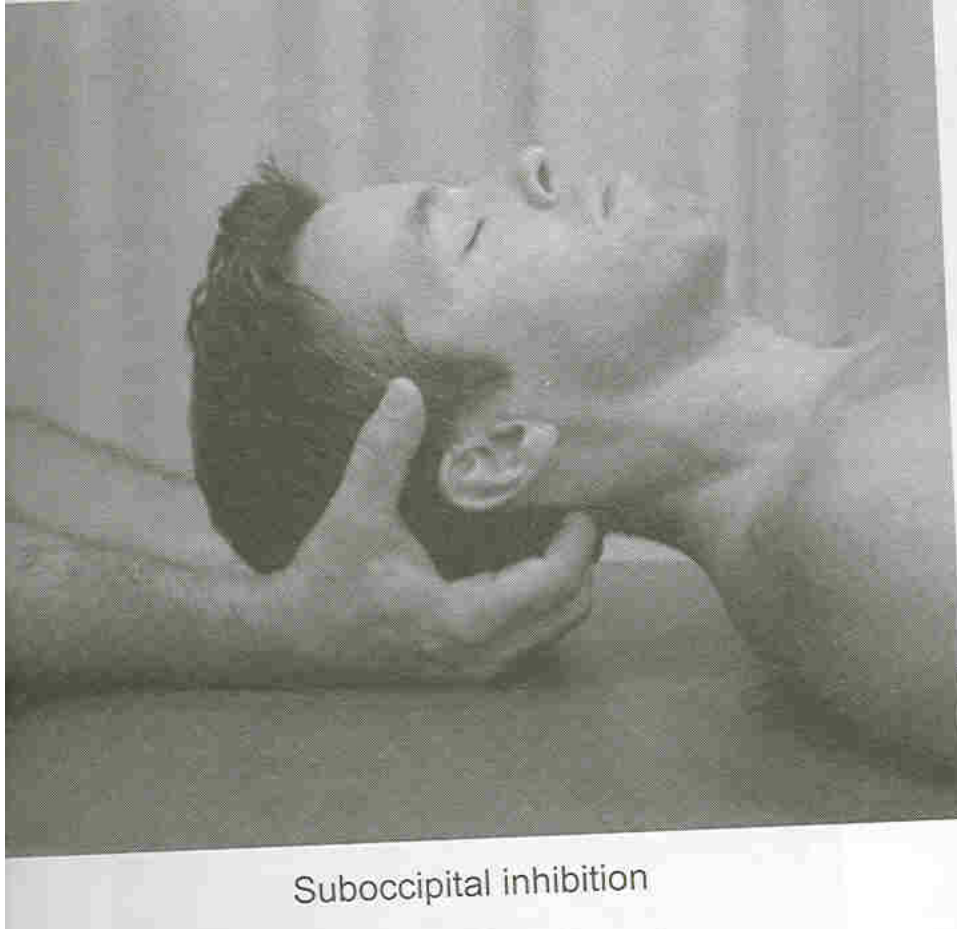




Posterior temporal hold

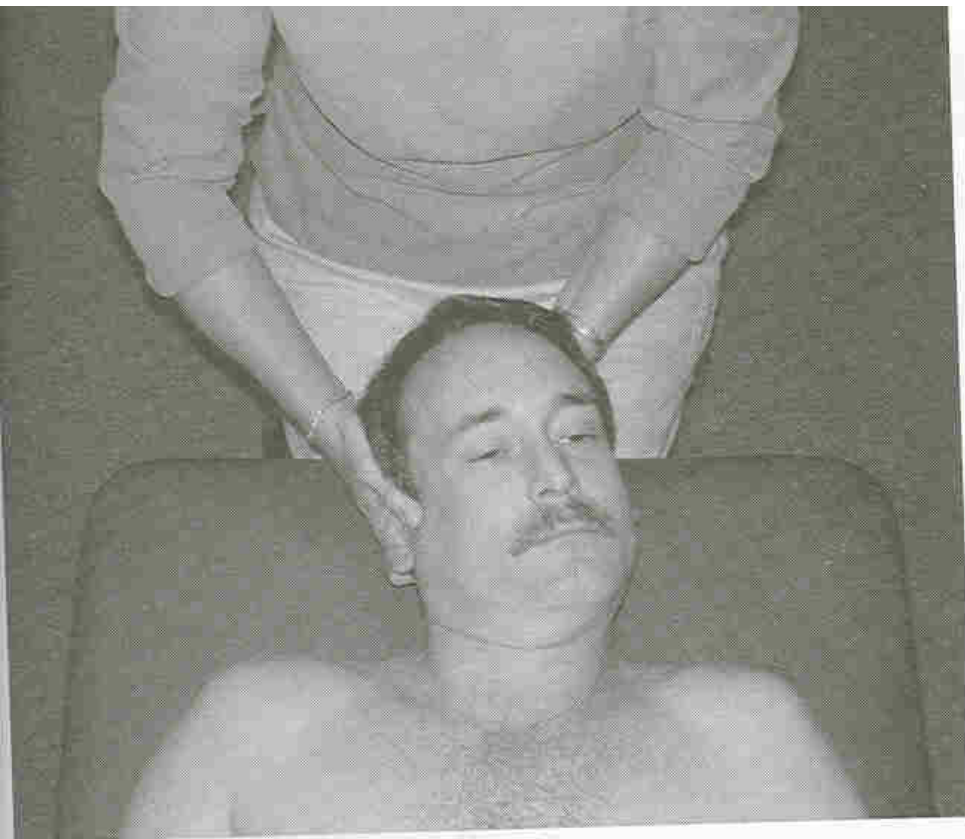
- One hand exaggerates left temporal in flexion and the other hand dampens right temporal into extension
- The process is reversed
- Can reach a still point
- Return of CRI results in improved temporal bone motion





- Hold occiput in palms and align fingertips inferior toinion
- Straighten fingers to press fingertips into muscles
- Hold until relaxation and head drops into palms





OA flexion, sidebending right, rotation left

- Place OA at direct barrier
- Ask patient to side bend gently away from the restriction against your resistance for 3-5 seconds
- Repeat 3-5 times, each time moving to new restriction barrier



- Vertigo is a common condition that can be ameliorated or successfully treated with OMT
- Temporal bone and cervical somatic dysfunction are commonly implicated
- Knowledge of some basic cranial techniques can be helpful in treating vertigo



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