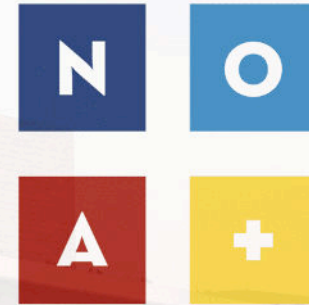




NORSK
OSTEOPATFORBUND



NORDIC
OSTEOPATHIC
ALLIANCE

Nordic Osteopathic Congress: 14.-15. September 2024

5th Annual Nordic Osteopathic Congress



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An Osteopathic Approach to Headache and Cervical Pain



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C- NMM OMM, C-FM OMT

Osteopathic Research Institute Fellowship in Osteopathic Research

Midwestern University Postgraduate Education

ATSU | A.T. Still
University

FIRST IN WHOLE PERSON HEALTHCARE





Causes and Cures



After your Initial History and Physical Examination....

- You have decided that the complaint has a neuromusculoskeletal component and that the headache and neck pain may respond to OMT (Osteopathic Manipulative Treatment).
- You know that **Indirect OMT** can be safely utilized and at the same time can be of diagnostic value as to response and findings.
- Getting a reliable history is important..
- Recognizing pain patterns as well as what make it worse or better is part of history.





Many
decisions and
directions as
to diagnosis
and
treatment:

One has to decide based on
knowledge....

Look to your Osteopathic
principles and practice art.





Osteopathic Health Care MODELS (5)

Postural - Biomechanical



Biopsychosocial



Metabolic - Hormonal



**Neurological –
Autonomic**



**Respiratory
- Circulatory**



“FIVE MODELS OF OSTEOPATHY”

- **Biomechanical**
 - Optimize structure and function of the musculoskeletal system to affect the body’s homeostatic mechanisms
- **Respiratory/Circulatory**
 - Optimize respiratory and circulatory components of homeostatic responses
- **Metabolic/Energetic**
 - Optimizes the body’s biochemical processes, cellular functions, and energy consumption
- **Neurologic**
 - Normalizes nervous system function including somatic and autonomic nerves
- **Behavioral**
 - Utilizes mental, emotional, and spiritual influencers of health



REALIZATION

YOU COULD TAKE BETTER CARE OF YOURSELF BUT
YOU'D JUST BE PROLONGING THE SUFFERING.

History and Physical Warning Signs or “Red Flags” to Consider Before OMT is Provided:

- Some “red flags” that may indicate a headache requires further investigation include:
- Sudden onset: A headache that starts suddenly, abruptly, or in a split second
- Age: A headache that starts after age 50, or a new headache that progresses, especially in middle age
- Severity: A severe headache that reaches peak intensity within five minutes
- Systemic symptoms: Fever, weight loss, stiff neck, or rash
- Neurologic symptoms: Confusion, impaired alertness or consciousness, or focal neurologic signs or symptoms
- Underlying conditions: A headache that occurs with an underlying medical condition, such as HIV, systemic cancer, or rheumatologic disorders
- Head trauma: A headache that occurs after head trauma, especially in patients taking anticoagulants



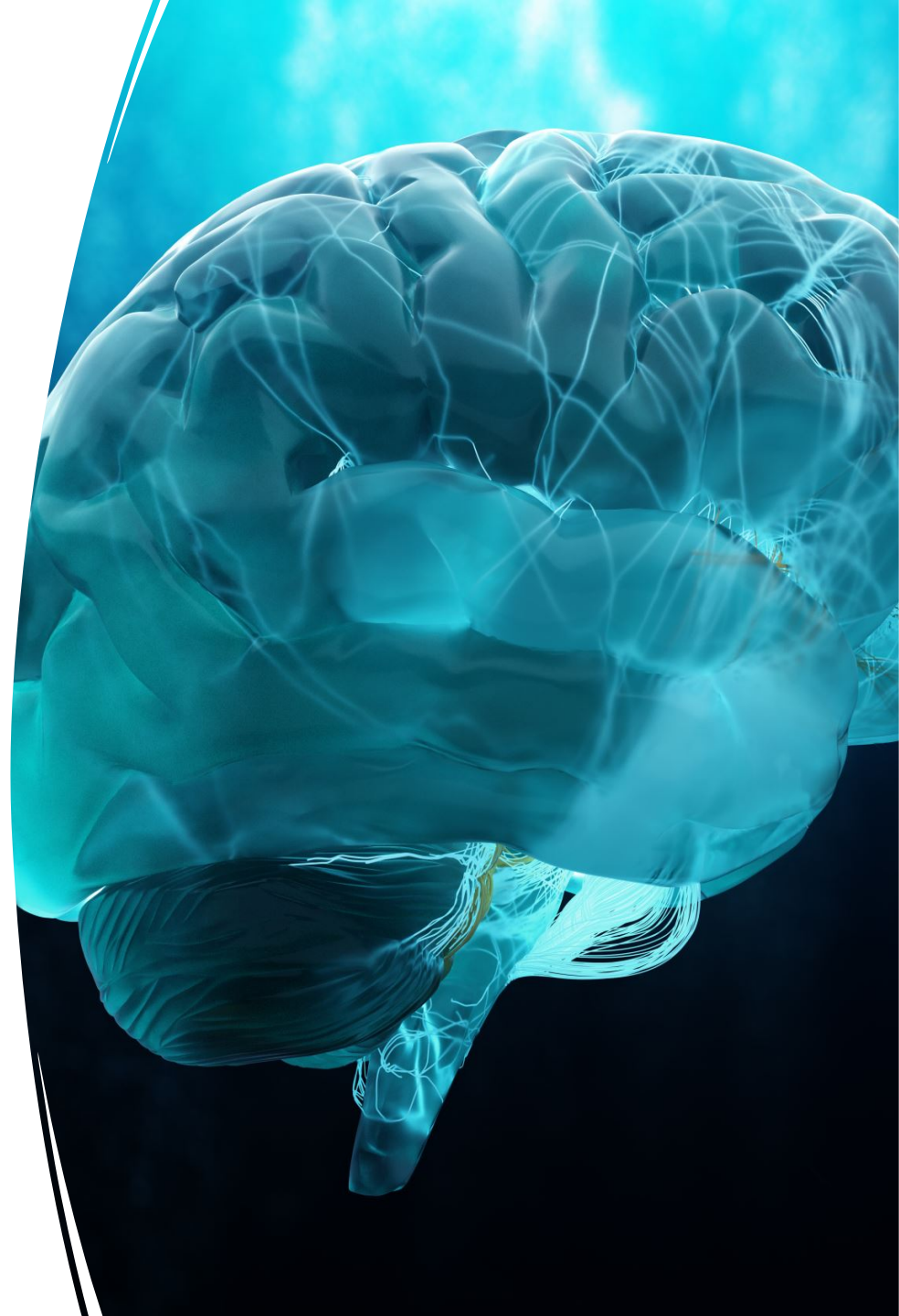
Classification of Headaches

- Acute PRIMARY HEADACHES: No *Organic Disease* as cause
 - Migraine with or without aura
 - Muscle Tension headache
 - Cluster Headache(And Other less common Primary Headache Disorders)



Classification of Headaches

- **Acute SECONDARY HEADACHES:**
Underlying *Organic* Disease as cause:
 - Headache associated with head trauma
 - Acute Post traumatic headache
 - Headache associated with vascular disorders
 - Subarachnoid hemorrhage
 - Acute ischemic cerebrovascular disorder
 - Unruptured vascular malformation
 - Arteritis (such as temporal arteritis)
 - Venous thrombosis
 - Arterial hypertension



Classification of Headaches

- Acute SECONDARY HEADACHES:
Underlying Organic Disease as cause:
 - Headache associated with head trauma
 - Acute Post traumatic headache
 - Headache associated with substance use or withdrawal
 - Headache associated with infection
 - Headache associated with metabolic disorder

Examples: Headache or facial pain associated with Somatic Dysfunction of cranium, cervicals, thoracic spine, upper body, eyes, ears, nose, sinuses, teeth, cranial sutures (Somatic Dysfunctions of head, neck, upper thoracic spine, upper ribs, shoulders)

 - All of which may be helped with OMT as part of an Osteopathic treatment plan.



•Considerations for Referral to a Headache Subspecialist*

Physician has inadequate level of comfort in diagnosing or treating patient's headache.

Patient requests a referral.

Initial diagnosis is in question.

Patient does not respond to treatment.

Patient's condition or disability continues or worsens.

Physician is unable to classify patient's headache according to diagnostic criteria for primary or secondary headache disorders.

Habituation or rebound headaches limit outpatient management.

Patient has intractable or daily headaches.



**Information from Solomon GD, Cady RK, Klapper JA, Ryan RE. Standards of care for treating headache in primary care practice. National Headache Foundation. Cleve Clin J Med 1997;64:373-83.*

An
assessment
and
treatment
sequence
using OMT
for Headache
and Cervical
pain....

Besides a careful history and History of Present Illness (HPI), always look to the upper thoracic spine, thoracic cage, and the shoulders. Also consider the lumbosacral region or sacrum.

Treat them **first**, if indicated from your evaluation-

THEN the cervical spine

Then the Cranium

An anatomical illustration of a human brain, viewed from a slightly elevated, anterior perspective. The brain is rendered in shades of purple and pink. A specific region on the frontal lobe, near the base of the brain, is highlighted in a bright red color. This red area is roughly triangular and contains some internal branching structures. The rest of the brain's surface is shown with its characteristic gyri and sulci.

•HEADACHE Patterns

The following are very COMMON MUSCULOSKELETAL and MYOFACIAL PAIN PATTERNS that COUNTERSTRAIN OMT and other INDIRECT OMT CAN ADDRESS.

HVLA is not considered...

Trapezius

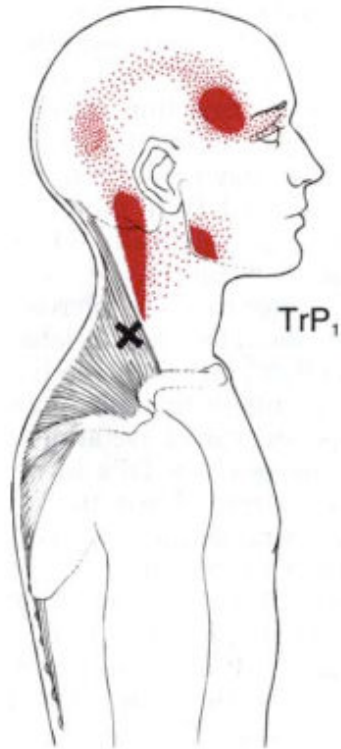


Figure 6.1. Referred pain pattern and location (X) of central trigger point 1 in the middle of the most vertical fibers of the upper part of the trapezius muscle. Solid red shows the essential referred pain zone while the stippling maps the spillover zone.

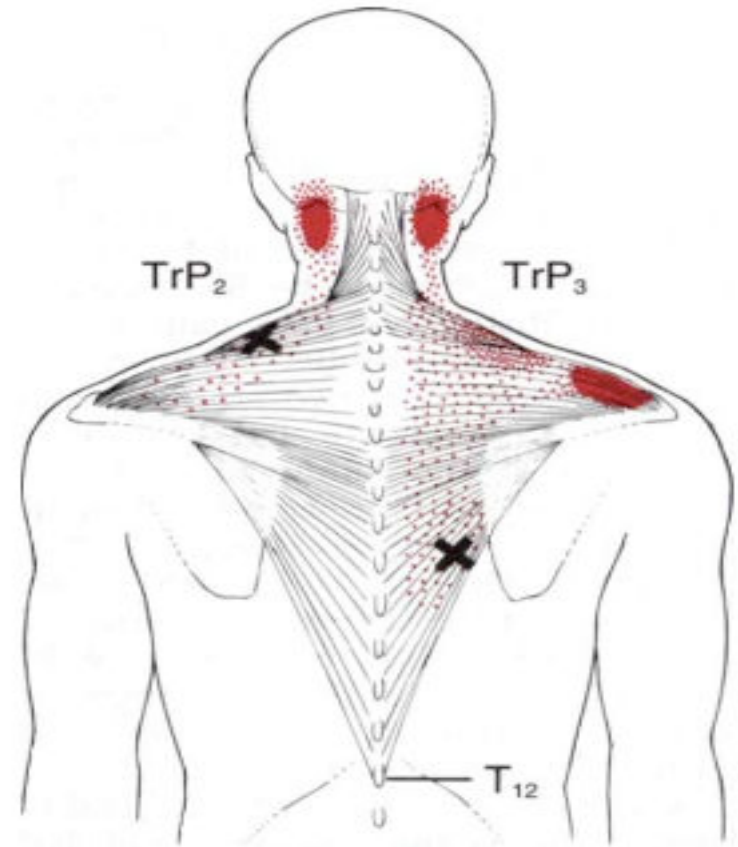


Figure 6.2. Left side of figure shows referred pain pattern and location (X) of central trigger point 2 in the middle of the more horizontal fibers of the **upper** part of a left trapezius muscle. Right side of figure shows referred pain pattern and location (X) of central trigger point 3 in a right **lower** trapezius; this is likely to be a key TrP that induces satellite TrPs in the region to which it refers pain in the upper part of the trapezius muscle. (Conventions are as in Fig. 6.1).

TRAPEZIUS

Location of Tender Point:

Medial Point/Lateral Point

- 1) Medial in the fibers of the muscle at the junction of the neck and shoulder.
- 2) Lateral in the fibers of the muscle overlying the supraspinatus muscle.

Anatomical Correlation: Trapezius muscle in the areas mentioned.

Direction to Press on Tender Point:

- 1) Squeeze the muscle between the thumb and finger.
- 2) This can also be elicited by pressing in a caudad direction mid-way between the point of the shoulder and the base of the neck. *Be aware that you might be palpating a Tender Point in the supraspinatus muscle that is under the trapezius.*

Treatment Position(s):

- 1) With patient supine, place your finger over the Tender Point and sidebend cervical spine toward, with slight rotation away, until you feel maximum relaxation.
- 2) Sidebend the neck slightly toward the side of the Tender Point. Flexion of the shoulder is 150° to 170°. Apply traction on the arm by pulling in a cephalad direction.

Frequency of Occurrence: Very common.

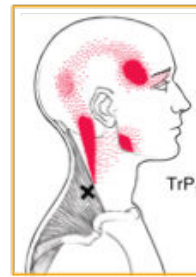
Clinical Correlation(s):

- 1) Pain in the posterior neck, suboccipital area behind the eye and temporal area.
- 2) Pain in the posterior neck, shoulder, and suboccipital area.

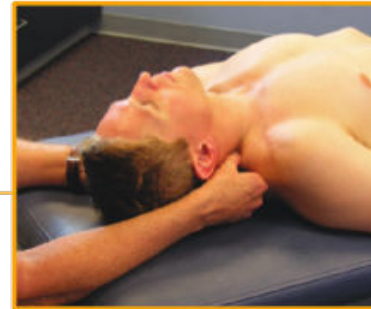
Associated Pain Referral Pattern: Same.

Alternate Names/Nomenclatures: None.

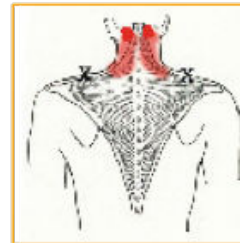
Explanatory Notes: This muscle was included here because it is one of the most common causes for neck pain and tension headache. *There can be Tender Points anywhere in the muscle which can be relieved by proper shortening of the involved fibers.*



Myofascial Tender Point and pain pattern. Medial Point 1



Treatment position 1

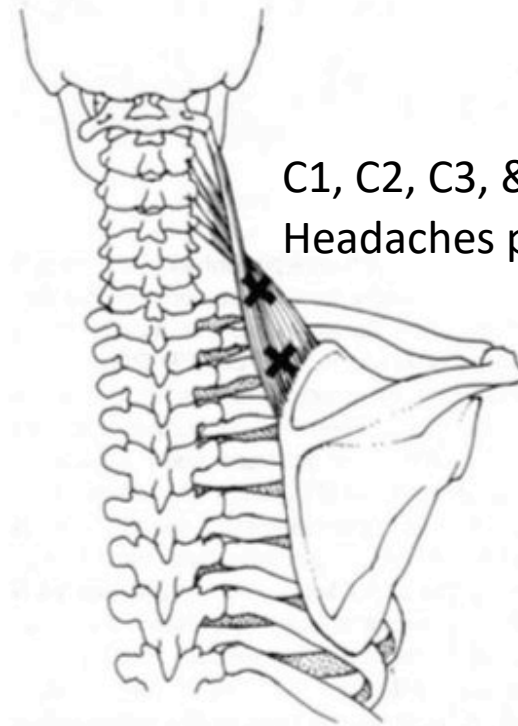
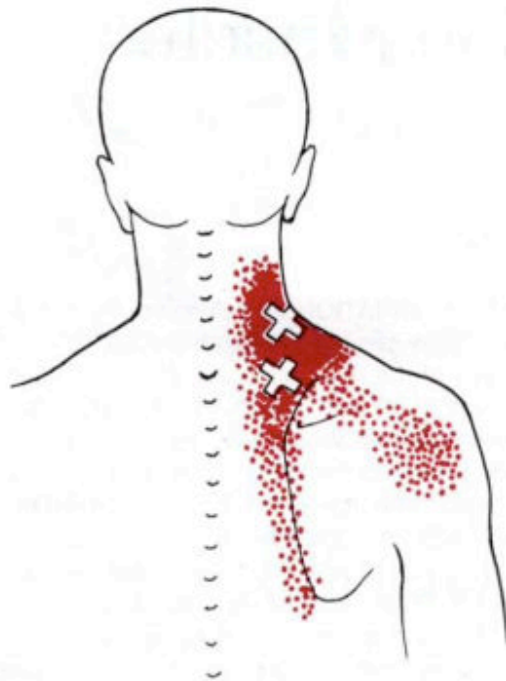


Myofascial Tender Point and pain pattern. Lateral Point 2



Treatment position 2

Levator Scapula



C1, C2, C3, & C4
Headaches primarily from C2!

Figure 19.1. Consolidated referred pain pattern for trigger point regions (Xs) of the right levator scapulae muscle. The essential pain pattern is *solid red*, and the spillover pattern is *stippled red*. The upper X locates TrPs in the midportion of the muscle (often over-

looked). The lower X locates the much more obvious trigger area tenderness commonly found near the region of the muscle's scapular attachment, which often is enthesopathy secondary to taut band tension associated with the TrPs.

LEVATOR SCAPULA

Location of Tender Point: In the levator scapula muscle usually at its attachment on the upper medial border of the scapula above the level of the spine of the scapula.

Anatomical Correlation: As stated.

Direction to Press on Tender Point: Press from superior medial to inferior and slightly lateral against the upper medial border of the scapula.

Treatment Position(s): With patient supine, abduct the shoulder and flex slightly. The degree of abduction and flexion is determined by monitoring the Tender Point as you move the arm into these positions to achieve a mobile point in both parameters of motion. With the patient's elbow flexed, apply a cephalad force through the shaft of the humerus to elevate the scapula. A significant force is needed to accomplish this. Sidebend the neck toward the Tender Point side.

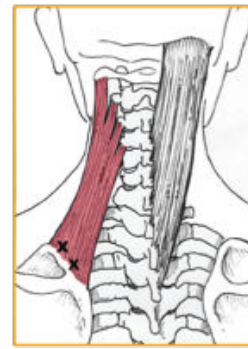
Frequency of Occurrence: Common.

Clinical Correlation(s): Pain from the mid-cervical area laterally across the medial superior 1/3 of the shoulder area.

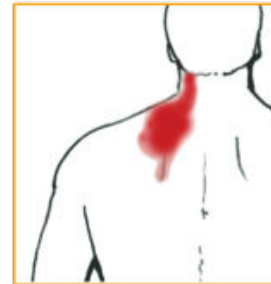
Associated Pain Referral Pattern: May be pain down posterior upper thorax, in the suboccipital area, and the posterior shoulder area.

Alternate Names/Nomenclatures: None.

Explanatory Notes: *Very common in people who spend long periods of time at a computer keyboard or similar activities.*



Levator scapula



Levator scapula pain pattern



Treatment position

Sternocleidomastoids

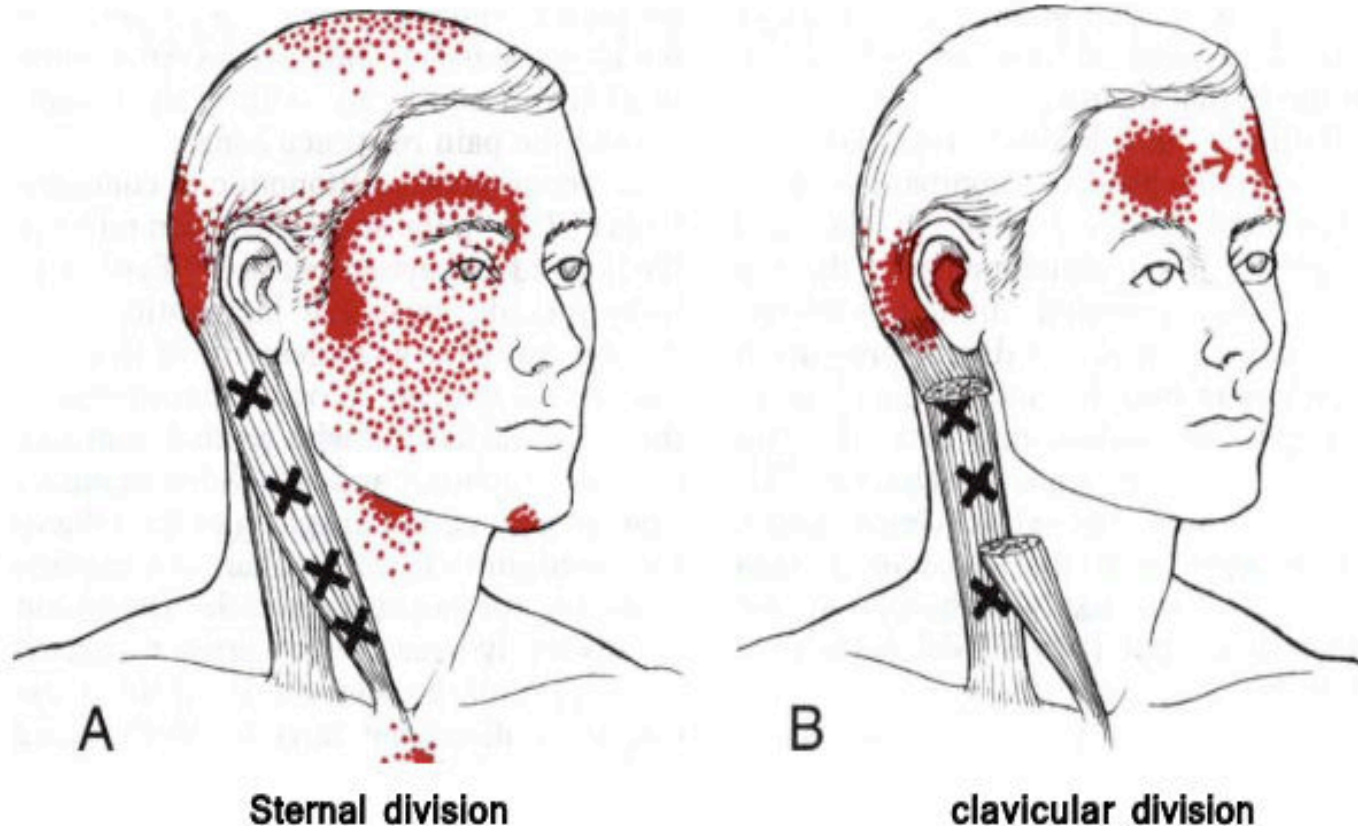


Figure 7.1. Referred pain patterns (*solid red* shows essential zones and *stippling* shows the spillover areas) with location of common trigger points (Xs) in the right sterno-

cleidomastoid muscle. A, the sternal (more anterior and more superficial) division. B, the clavicular (more posterior and deeper) division.

STERNOCLEIDOMASTOID (Jones addressed one Point as A 7 C)

Location of Tender Point:

- 1) Three cm. lateral to the medial end of the clavicle on the postero-superior surface — the attachment of the sternocleidomastoid muscle, A 7 C.
- 2) Anywhere in the body of the sternocleidomastoid muscle, both divisions.
- 3) See dry cough in the Explanatory Notes, below.

Anatomical Correlation: Sternocleidomastoid muscle and its attachments.

Direction to Press on Tender Point:

- 1) Press inferiorly and posteriorly on clavicle where muscle attaches.
- 2) Compress the SCM muscle between thumb and finger and squeeze.
- 3) Press posteriorly on the superior margin of the manubrium.

Treatment Position(s): With patient supine, flexion marked, sidebend toward markedly, rotate away.

Frequency of Occurrence: Very common.

Clinical Correlation(s): Clavicular division: relate mainly to spatial disorientation such as postural dizziness. Episodes may last from seconds to hours, and are induced by a sudden stretch or contraction of the muscle that has a Tender Point in it. Sternal division: excessive lacrimation, red conjunctiva, apparent "ptosis" (narrowing of the palpebral fissure), visual disturbances, including blurred vision and dimming of perceived light intensity, coryza, and maxillary sinus congestion. The dry cough Point is considered with tracheal Points that cause the same thing.

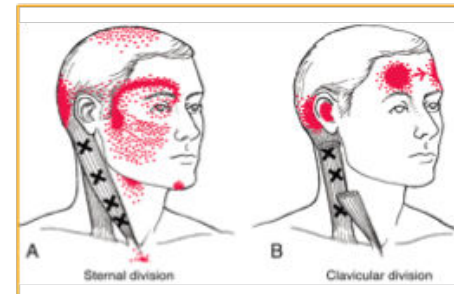
Associated Pain Referral Pattern: Clavicular division: pain in and posterior to the ear, and pain in the forehead. Sternal division: pain in TMJ, forehead, maxillary sinus, and throat area.

Alternate Names/Nomenclatures: None.

Explanatory Notes: The dry cough Point on the anterior superior manubrium is in the tendon part of the sternal division of the SCM muscle where it attaches. Other Points mentioned above are found in the anterior and posterior cervicals and listed under those headings.



Sternocleidomastoid



Sternocleidomastoid pain patterns



Treatment position

Suboccipital Muscles or Suboccipital Triangle

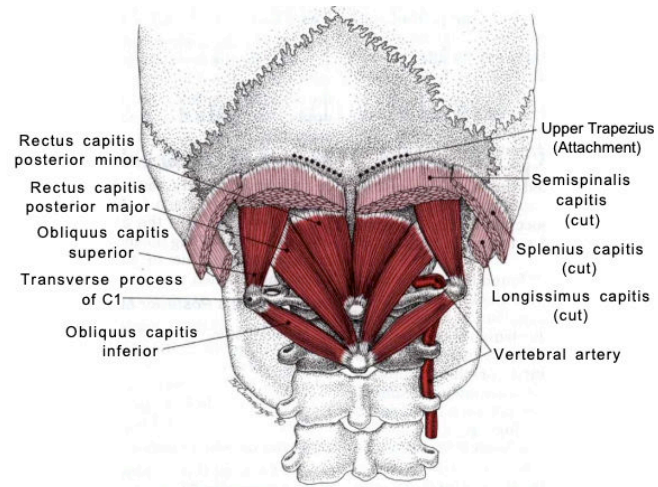


Figure 17.2. Attachments of the deep suboccipital muscles (*medium red*). The most lateral three of these four muscles define the suboccipital triangle. This triangle surrounds the transverse portion of the vertebral artery (*dark red*) and should be avoided when injecting

TrPs in the posterior neck muscles. The more superficial overlying muscles are *light red*. The *black dotted lines* indicate the location of attachment of the upper trapezius, which is the most superficial posterior neck muscle.

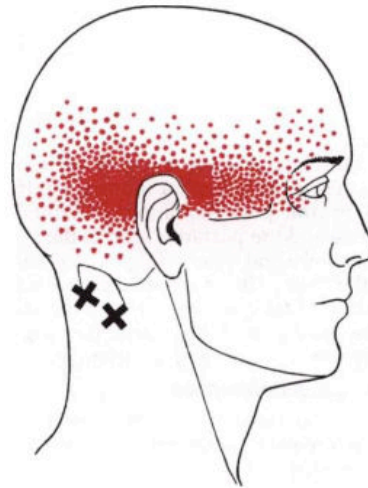
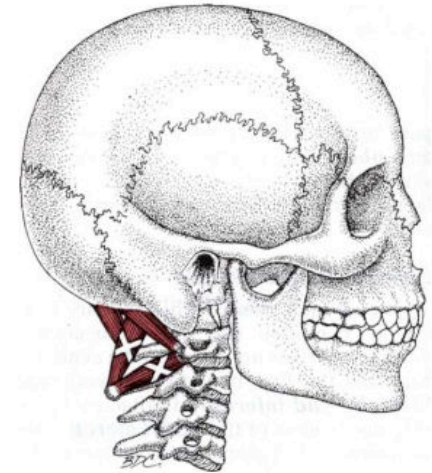


Figure 17.1. Referred pain pattern (*dark red*) of trigger points (Xs) in the right suboccipital muscles (*medium red*).



Rectus Capitis Lateralis- OA Stabilizer

LATERAL 1 C

Location of Tender Point: Lateral tip of the transverse process of 1C. The mastoid process and the 1C transverse process are approximated on the involved side.

Anatomical Correlation: Rectus capitis lateralis.

Direction to Press on Tender Point: Press from lateral to medial.

Treatment Position(s): With patient supine, sidebend toward the involved side. See Explanatory Note, below.

Frequency of Occurrence: Common to uncommon.

Clinical Correlation(s): Headache usually behind the eye.

Associated Pain Referral Pattern: Lateral head to behind the eye.

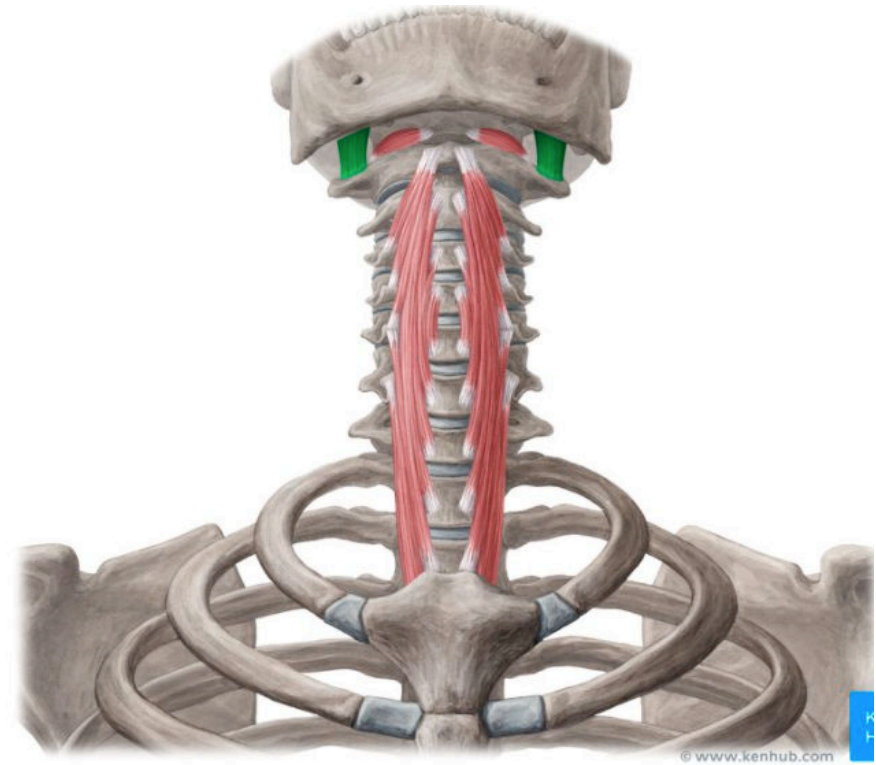
Alternate Names/Nomenclatures: None.

Explanatory Notes: When sidebending the neck, the nose should be kept in the midline of the body and the sidebending limited to the occipitoatlantal articulation. Sidebend the head toward the side of the approximation of the occipitoatlantal articulation, regardless of the location of the Tender Point.

Refer to diagram, page 10:
rectus capitis lateralis.

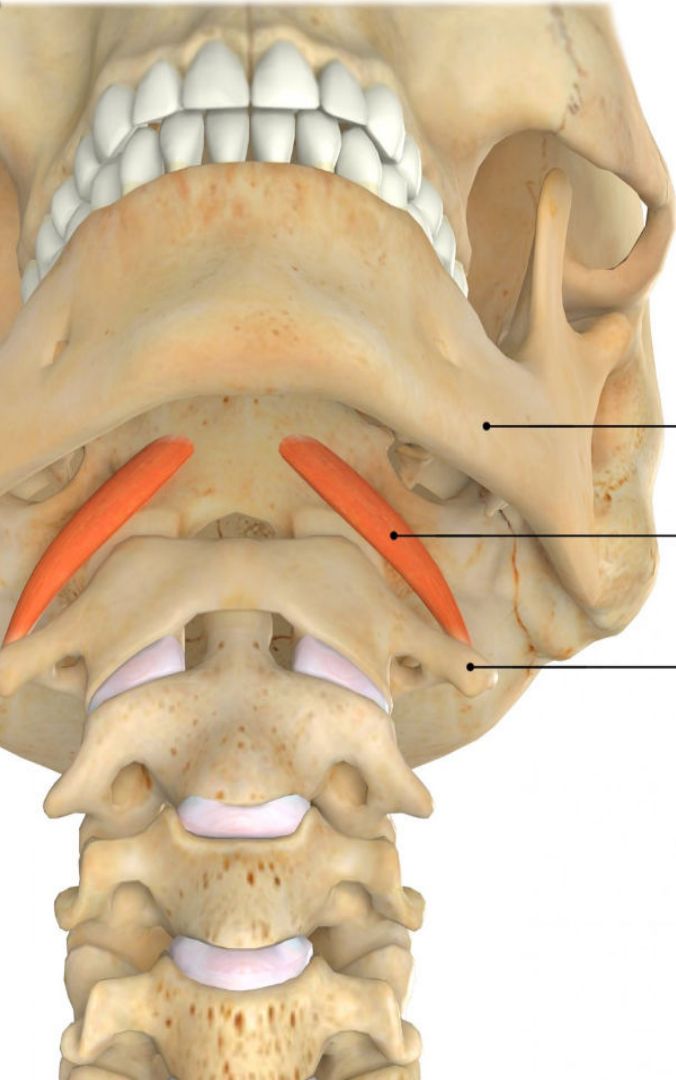


Treatment position



Rectus capitis lateralis muscle (Musculus rectus capitis lateralis)

Rectus Capitis Anterior



REHAB My Patient.com

Skull Exterior
Rectus Capitis Anterior
Atlas C1

Anterior 1C

A 1 C

Location of Tender Point: Posterior surface of *ascending ramus* of the mandible 1/2- to 3/4-inch above the mandible angle.

Anatomical Correlation: Probably rectus capitis anterior.

Direction to Press on Tender Point: Press from the posterior to anterior on *ramus* of the mandible.

Treatment Position(s): With patient supine, flexion or extension none, sidebend away slightly, rotate away markedly. Direct the motion of the treatment with pressure on top of the head.

Frequency of Occurrence: Common.

Clinical Correlation(s): Frontal or retro-orbital headache, neck pain, dysphagia, eustacian tube dysfunction. Can mimic TMJ pain.

Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.

Refer to diagram, page rectus capitis anterior.



Anterior 1 and 2 cervical treatment position

A 2 C

Location of Tender Point: Anterior surface of the tip of 2 C transverse process.

Anatomical Correlation: Rectus capiti muscles.

Direction to Press on Tender Point: Anterior to posterior.

Treatment Position(s): With patient supine, flexion, minimal, if any. Sidebend away, mild to moderate, rotate away markedly.

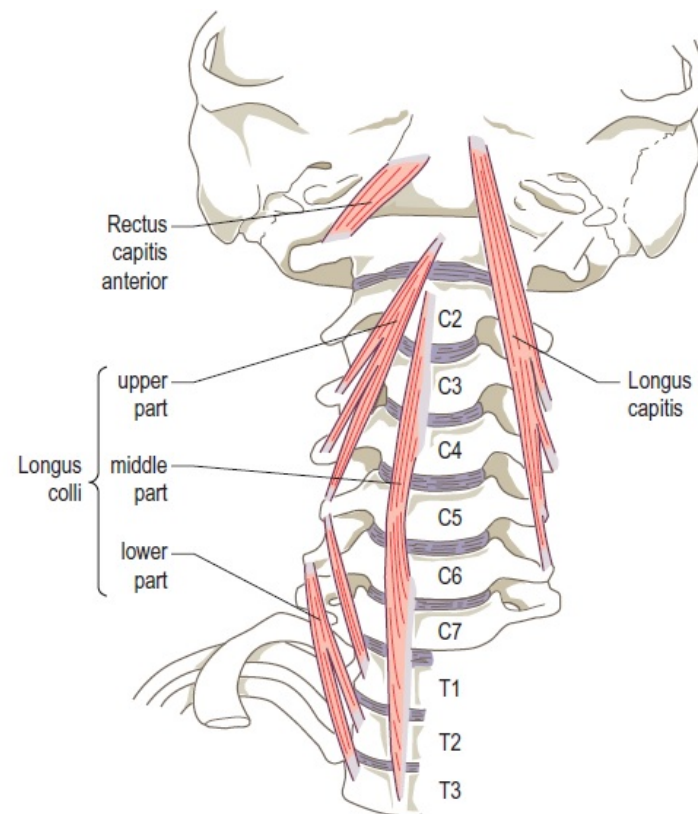
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Headache usually behind the eye.

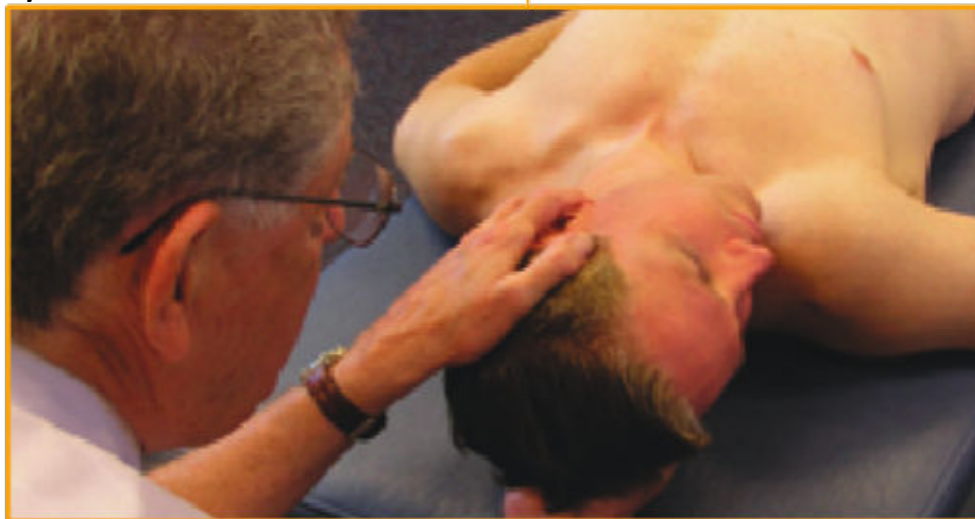
Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.

Explanatory Notes: See Case Histories #01 and #02 for lateral 1st cervical, anterior 1st cervical, and anterior 3rd cervical.



Suboccipital pain often to eye



A 3 C

Location of Tender Point: Anterior surface of the tip of 3 C transverse process.

Anatomical Correlation: Probably longus capitis muscle.

Direction to Press on Tender Point: Anterior to posterior on the anterior surface of the transverse process of the 3rd cervical vertebra. Palpate deeply against the vertebral body.

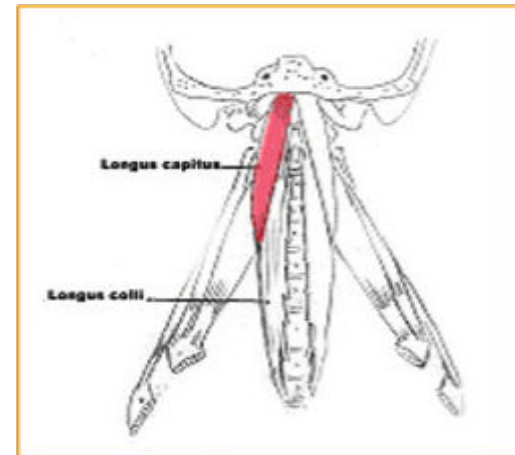
Treatment Position(s): With patient supine, flexion moderate to marked, sidebend toward, usually mild to moderate. Rotate away, mild to moderate.

Frequency of Occurrence: Common.

Clinical Correlation(s): Suboccipital headache.

Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.



Longus capitis muscle



Treatment position

P 1 C INION

Location of Tender Point: On the medial border of the main muscle mass of the neck, 2cm below the inion (posterior occipital protuberance).

Anatomical Correlation: Obliquus capitis inferior.

Direction to Press on Tender Point: Press from posterior to anterior.

Treatment Position(s): With patient supine, upper cervical flexion, marked, sidebend toward slightly, rotate away slightly.

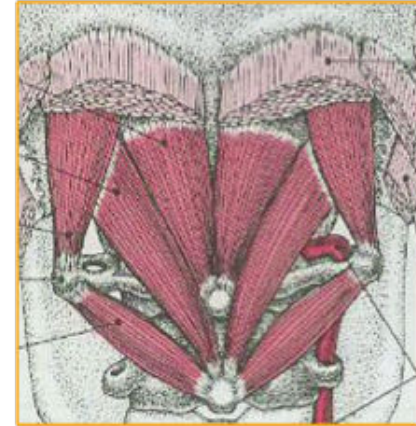
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Ipsilateral pain in lateral area of the head to behind the eye.

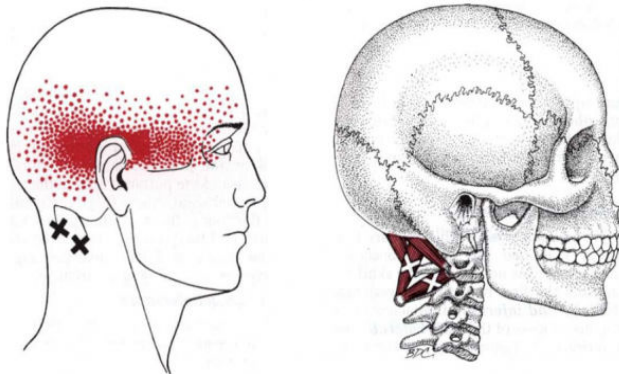
Associated Pain Referral Pattern: Same.

Alternate Names/Nomenclatures: None.

Explanatory Notes: Many times a headache due to musculoskeletal problems can have a vascular component that closely mimics the migraine headache pattern.



Deep suboccipital muscles
Obliquus capitis inferior



P 1 C (Regular)

Location of Tender Point: On the occiput lateral to the main posterior cervical muscle mass 1½-inches from the midline.

Anatomical Correlation: Rectus capitis posterior major and minor and obliquus capitis superior.

Direction to Press on Tender Point: Press posterior to anterior directing the force slightly cephalad.

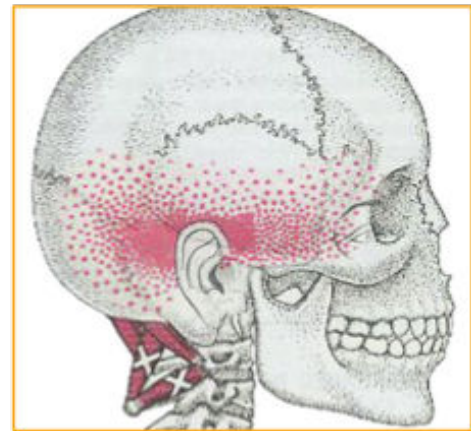
Treatment Position(s): With patient supine, extension at the level of 1C. Lift the head to flex the lower cervicals allowing marked extension of 1C on the occiput. To accomplish this, the heel of your hand must be on the posterior parietal bones. Sidebend away slightly, rotate away slightly.

Frequency of Occurrence: Common.

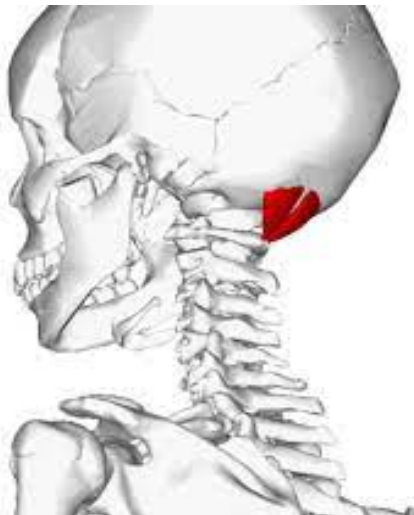
Clinical Correlation(s): Headache on the ipsilateral side of the head and behind the eye.

Associated Pain Referral Pattern: Same.

Alternate Names/Nomenclatures: None.



Suboccipital muscles pain pattern



P 2 C (Regular)

Location of Tender Point: Press from posterior to anterior and also inferiorly on the superior edge of the spinous process of 2 C.

Anatomical Correlation: Rectus capitis posterior major and minor and obliquus capitis superior.

Direction to Press on Tender Point: Press posterior to anterior directing the force slightly medial.

Treatment Position(s): With patient supine, extension at the level of 2 C, lift head to flex the lower cervicals allowing marked extension of C 2 on 1 C. To accomplish this, the heel of your hand must be on the posterior parietal bones. Sidebend away slightly, rotate away slightly.

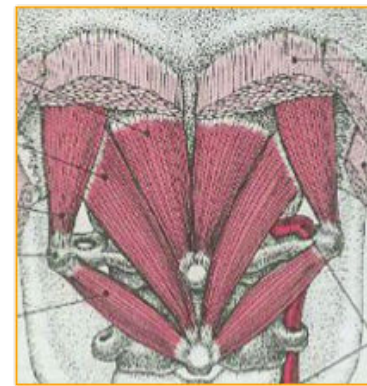
Frequency of Occurrence: Common.

Clinical Correlation(s): Headache on the ipsilateral side of the head and behind the eye. Instruct your patient to tell you if this position causes any sense of anxiety or dizziness. *If this occurs, take patient out of the position immediately.*

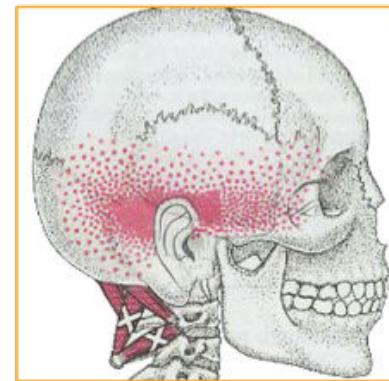
Associated Pain Referral Pattern: Same.

Alternate Names/Nomenclatures: None.

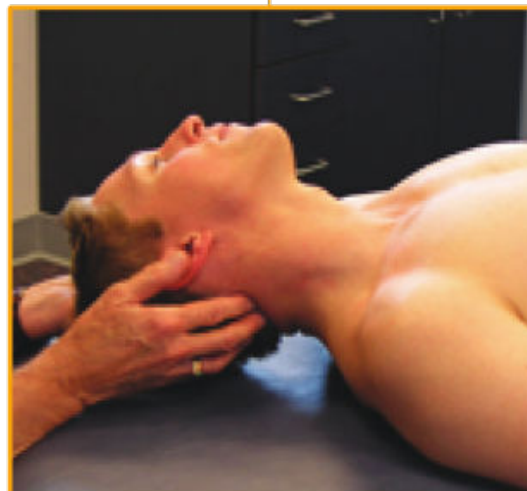
Explanatory Notes: None.



Deep suboccipital muscles



Suboccipital muscles pain pattern



P 3 C

Location of Tender Point: On the inferior surface of the spinous process of 2 C. It may also be on the posterior tip of the transverse process of 3 C.

Anatomical Correlation: Muscle not yet identified, probably scalenes.

Direction to Press on Tender Point: Press posterior to anterior on the inferior surface of 2 C spinous process and direct the force superiorly against the inferior edge of the 2 C spinous process.

Treatment Position(s): With patient supine, flexion moderate, sidebend away or toward as indicated. Rotate away.

Frequency of Occurrence: Common.

Clinical Correlation(s): Headache in the suboccipital area.

Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



SPLЕНИUS CAPITIS AND POSTERIOR 4C

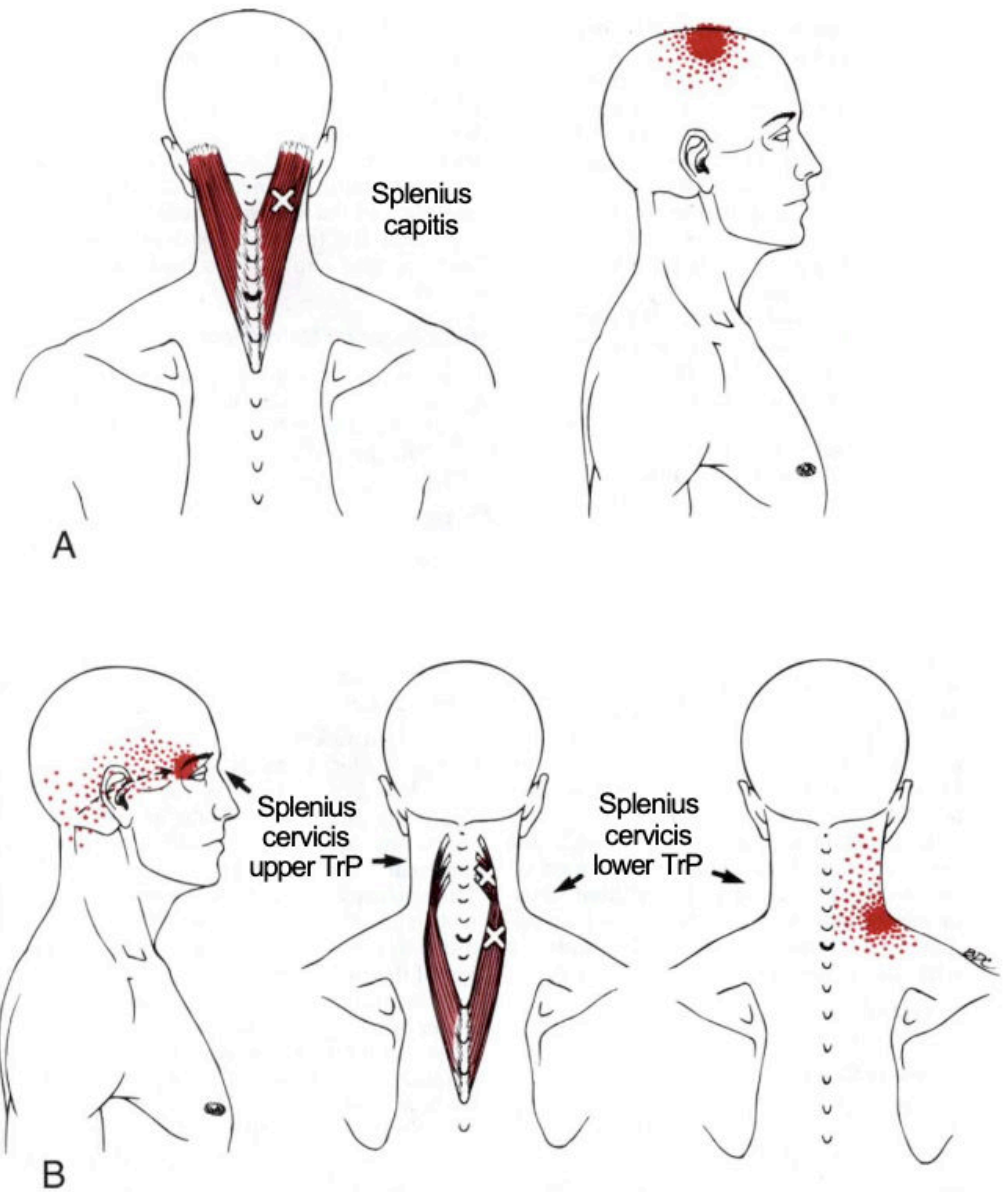


Figure 15.1. Trigger points (Xs) and referred pain patterns (dark red) for the right splenius capitis and splenius cervicis muscles (medium red). **A**, an unusually craniad location of a splenius capitis trigger point, which, near the level of C₆, is just caudad to the exposed vertebral artery. **B**, pressure applied to the tender region of the craniad musculotendinous junctions of the splenius cervicis muscle refers pain to the orbit

(pain figure on the left). The black dash line and arrow indicate that the pain seems to shoot through the inside of the head to the back of the eye. Splenius cervicis central trigger points (located mid-muscle) refer pain to the angle of the neck (figure on the right). The lower X in the middle figure locates this splenius cervicis trigger point region,

P 4 C

Location of Tender Point: On the spinous process of 3 C in the depression below the spinous process of 2 C. Forward bend the head to find this point. Also found on the posterior tip of the transverse process of 4 C.

Anatomical Correlation: Multifidus.

Direction to Press on Tender Point: Press posterior to anterior.

Treatment Position(s): With patient supine, suspend the head in slight extension over the end of the table. With the heel of your hand over the posterior parietal bones, lift patient's head anteriorly on a line through the chin to accentuate extension at the 4 C level. Sidebend away, rotate away.

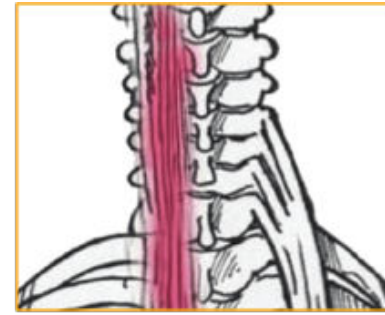
Frequency of Occurrence: Common.

Clinical Correlation(s): Pain in posterior neck and suboccipital area. This pathology is often overlooked in whiplash injuries.

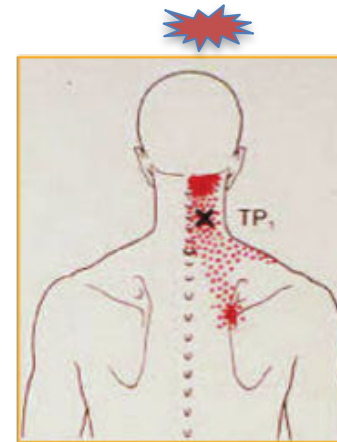
Associated Pain Referral Pattern: Same and cervico-dorsal pain.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Multifidus



Mid-cervical multifidus pain pattern



POSTERIOR LATERAL COLUMN OF THE VERTEBRA

Location of Tender Point: On the posterior surface of the articular columns of the neck, just lateral to the spinous processes.

Anatomical Correlation: Semispinalis capitis.

Direction to Press on Tender Point: Press posterior to anterior.

Treatment Position(s): With patient supine, extension to the level of the Tender Point, rotate away, sidebend toward, slightly.

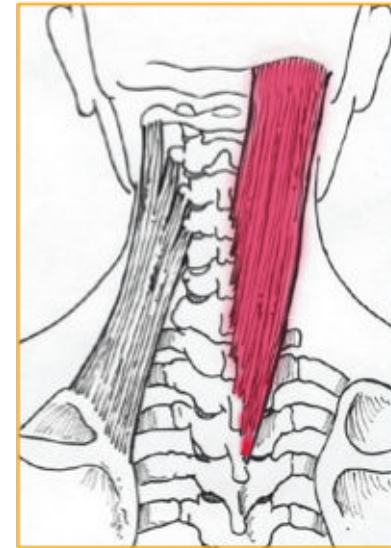
Frequency of Occurrence: Common to uncommon.

Clinical Correlation(s): Neck pain and headache.

Associated Pain Referral Pattern: Lateral head and temporal area.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Semispinalis capitis

Treat T4 as well!



Posterior neck pain

A 5 C and A 6 C

Location of Tender Point: Anterior surface of the tip of 5 C or C 6 transverse process.

Anatomical Correlation: Longus colli muscle.

Direction to Press on Tender Point: Press from anterior to posterior.

Treatment Position(s): With patient supine, flexion moderate to marked, sidebend away, rotate away.

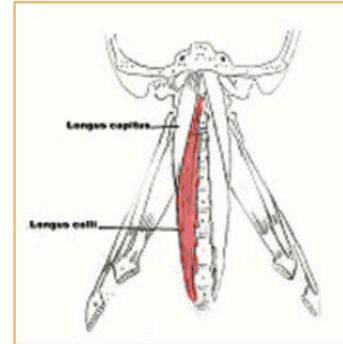
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Posterior neck pain.

Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.

Explanatory Notes: A 7 C Sternocleidomastoid. Jones called the clavicular attachment of the SCM muscle A C 7.



Longus colli

Can use MET or articulatory OMT to segment toward barrier

For A7C treat sternal SCLM

A 7 C: Jones called the clavicular portion of the sternocleidomastoid attachment to the clavicle an Anterior 7th Cervical. See SCM on page 9, Chapter 1.



Anterior C4 and 5 treatment position

TEMPORAL BONE AND COUNTERSTRAIN CRANIAL OMM

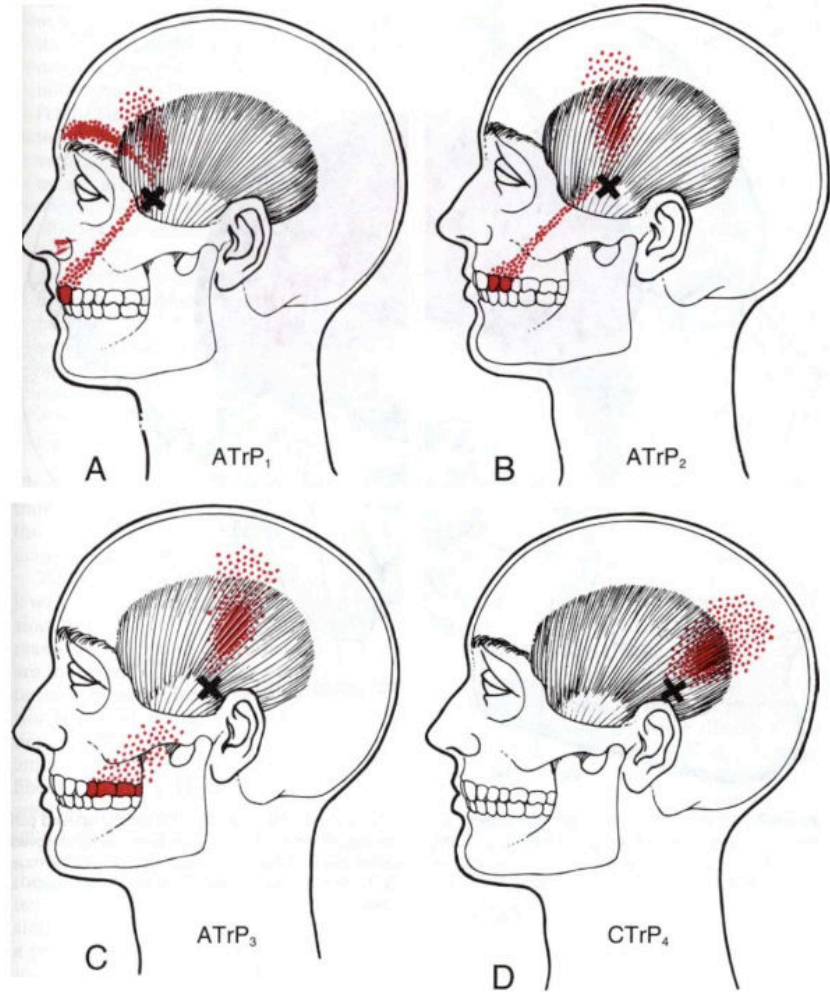


Figure 9.1. Patterns of pain and tenderness referred from trigger points (Xs) in the left temporalis muscle (essential zone *solid red*, spillover zone *stippled*). Three of the trigger points are attachment trigger points (*ATrPs*) which occur at a musculotendinous junction. One is a central trigger point (*CTrP*) which

occurs in the midfiber region of the muscle. A, anterior "spokes" represent referred pain arising from ATrP, in the anterior fibers of the muscle. B and C, middle "spokes" represent referred pain and tenderness arising from ATrP, and ATrP. D, posterior supra-auricular "spoke" is referred from CTrP.

OCCIPITO-MASTOID

Location of Tender Point: Over the occipito-mastoid suture on a small vertical ridge of bone 3cm posterior and cephalad from the tip of the mastoid process.

Direction to Press on Tender Point: Place a palpating finger on the tip of the mastoid process. Allow finger to slide posterior and cephalad along bottom of mastoid until small vertical ridge is felt. Push in a medial direction.

Treatment Position(s):

Hand Hold – With patient supine, place your palms flat on the sides of the head with ring finger and small finger around undersurface of mastoid processes.

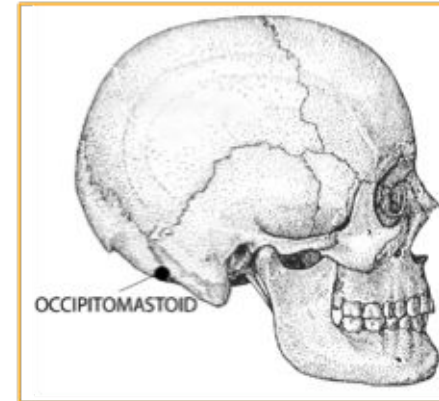
Technique – Apply a mild to moderate compression with both palms. Then twist one side in a counter-clockwise or clockwise direction around a transverse axis, as if to unscrew a jar cap. Apply counter rotation to the opposite side. Twist both ways to check for direction of greatest ease and patient preference and hold in that direction.

Frequency of Occurrence: Common.

Clinical Correlation(s):

- 1) Frontal headache
- 2) Pain behind the eye
- 3) Periorbital pain
- 4) Ear ache
- 5) Tinnitus
- 6) Vertigo

Explanatory Notes: Check for asymmetrical flexion extension of the temporal bone.



Occipito-mastoid Tender Point



Treatment position

SPHENO-BASILAR

Location of Tender Point: On the occiput, medial to the lambdoidal suture.

Anatomical Correlation: Spheno-Basilar synchondrosis.

Direction to Press on Tender Point: Palpate the posterior occipital protuberance then move 3cm obliquely cephalad and lateral (about 2 o'clock and 10 o'clock). Feel for small depressions in the occiput bilaterally. Push anteriorly.

Treatment Position(s):

Hand Hold – With patient supine, caudal hand cups the occipitosquama area. Place cephalic hand over the frontal bone with thumb and long finger contacting the greater wings of the sphenoid.

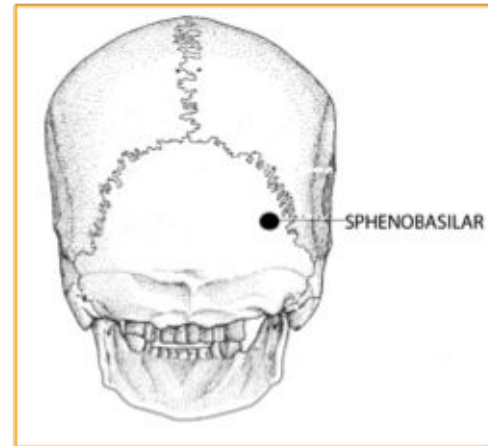
Technique – Rotate frontal bone sphenoid complex in a clockwise or counter-clockwise direction and counter-rotate the occiput around an A-P axis to produce torsion through the spheno-basilar synchondrosis. Rotate both ways to check for direction of greatest ease and patient preference. *Hold first in the direction of greatest ease, then gently reverse to hold in the position that was initially more guarded.*

Frequency of Occurrence: Very common.

Clinical Correlation(s):

- 1) Nasal obstruction
- 2) Sinus headaches
- 3) Coccyx pain
- 4) General headaches
- 5) Cervical tension

Explanatory Notes: Using same vault hold by the clinician facilitates spheno-basilar flexion and, when held for 90 seconds, it assists in unwinding the spinal dura



Spheno-basilar Tender Point



Treatment position

POSTERIOR OCCIPUT

Location of tender point:

On occiput 4cm straight lateral from the posterior occipital protuberance(POP) in a small depression.

Anatomical Correlation:

Occipito mastoid suture

Direction to press on TP:

Place palpating fingers on POP. Slide fingers laterally 4 cm. Feel for small depression and press anterior.

Treatment position:

Patient supine.

Hand hold: Place both thumbs in front of the mastoid processes and let the occiput lay on your laced fingers.

Technique:

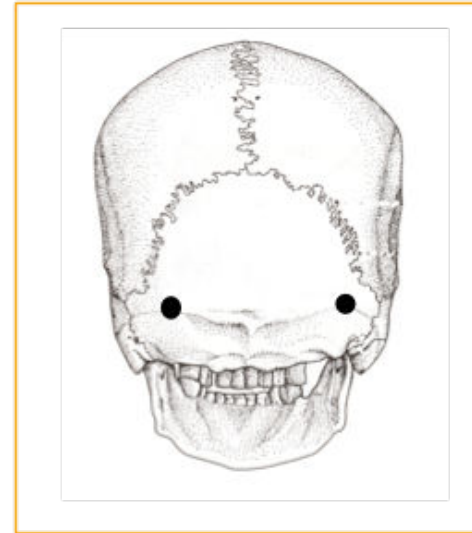
Gently squeeze with your thenar eminences as the fingers push up on the occiput.

Objective:

1. Decompress the occipitomastoid suture.
2. Drain lateral sinuses.

Clinical Correlations:

1. Occipital headaches
2. Lumbar pain
3. Tight hip flexors



INFRA ORBITAL

Location of tender point:

Over the infraorbital notches.

Anatomical Correlation:

Maxilloethmoid articulation.

Direction to press on tender point:

3cm lateral to nose slide your finger back and forth to find infraorbital notches.

Treatment position:

Patient supine.

Hand hold: Interlace fingers like a tent. Lay palms over the maxilla and zygomatic bone.

Technique:

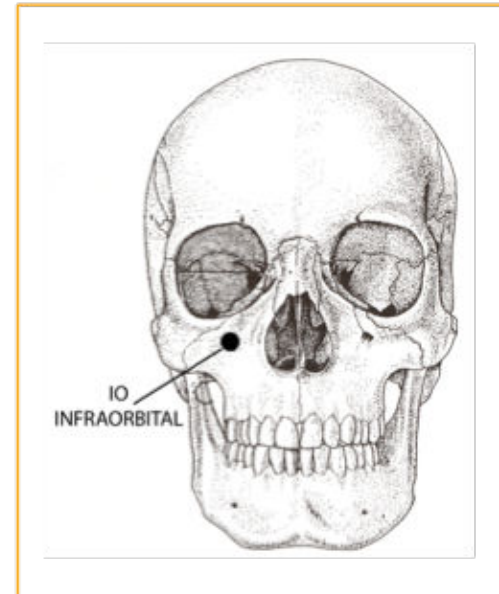
Allow your hands to sink down in posterior, medial and superior direction. Use only the weight of your hands.

Objective:

Decompress the maxilloethmoid articulation.
Drain maxillary sinuses.

Clinical Correlations:

1. Maxillary sinus congestion and pressure
2. Periorbital pain
3. Overstressed, a good general relaxation technique
4. Hypertonic shoulder rotator muscles
5. Hypertonic cervical flexors



BILATERAL COMPRESSION

Location of tender point:

None

Anatomical Correlation:

Cranial vascular system

Treatment position:

Both hands cover the sides of the cranium. The thenar eminence over the parietal bones, hypothenar eminence contacts the anterior occiput, ring fingers cover the mastoid processes and palms cover the temporal squama. Angle your hands so that the web of your palms should be behind the ears.

Technique:

Patient supine.

Handhold: Compress palms medially, should feel good to the patient. Recommended finishing technique following a cranial session.

Objective:

1. Improve vascular circulation
2. Relief of vascular congestion throughout cranium
3. Assists drainage of venous sinuses
4. General relaxation

Clinical Correlations:

1. Generalized headache

“CV4 SCS”



SUPRA ORBITAL

Location of tender point:

Over the supra orbital notch in the medial third of the eyebrow.

Anatomical Correlation:

Frontal-nasal suture

Direction to press on TP:

Approach from underneath the medial third of eyebrow. Slide your finger back and forth until you feel the supra orbital notch.

Treatment position:

Patient supine.

Hand hold: Lay cephalic forearm or hand on frontal bone. Caudal hand: pinch nasal bone between thumb and index finger.

Treatment:

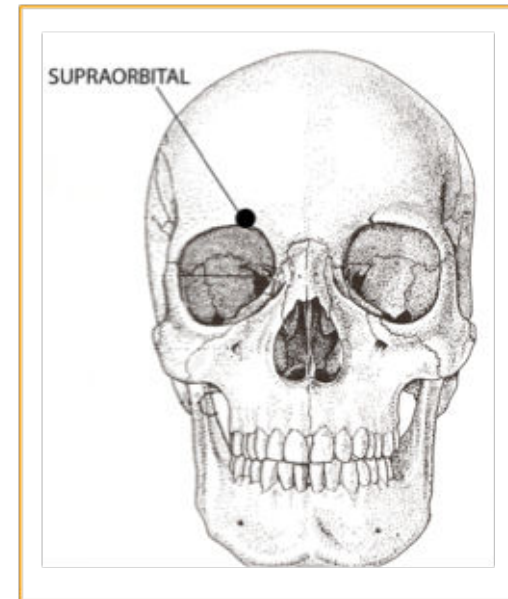
Traction frontal bone in a cephalad direction and simultaneously pull nasal bone caudal. Will need to check various diagonals of pull to find direction of greatest ease.

Objective:

Improve mobility at frontal nasal suture.

Clinical Correlations:

1. Frontal sinus drainage
2. Frontal sinus HA's
3. Periorbital pain
4. Hypertonic anterior tibialis
5. Inversion ankle sprains



Cranial Osteopathy and TMJ Headaches:

Time in my workshop is limited for TMJ OMT, here are just a few examples-

Brief common problems and treatment are presented in the workshop.

TMJ Troublemakers

- Muscles of Mastication (CN VII-facial):
 - Temporalis m
 - Masseter m
 - Lateral Pterygoid m
 - Medial Pterygoid m
- Also:
 - Sternocleidomastoid (SCM) m (CN XI-spinal accessory)
 - Omohyoid & Digastric mm
 - Suboccipital mm
 - Occipital-Mastoid Suture Compression



TEMPORAL BONE SOMATIC DYSFUNCTION, MYOFACIAL PAIN & COUNTERSTRAIN CRANIAL OMM

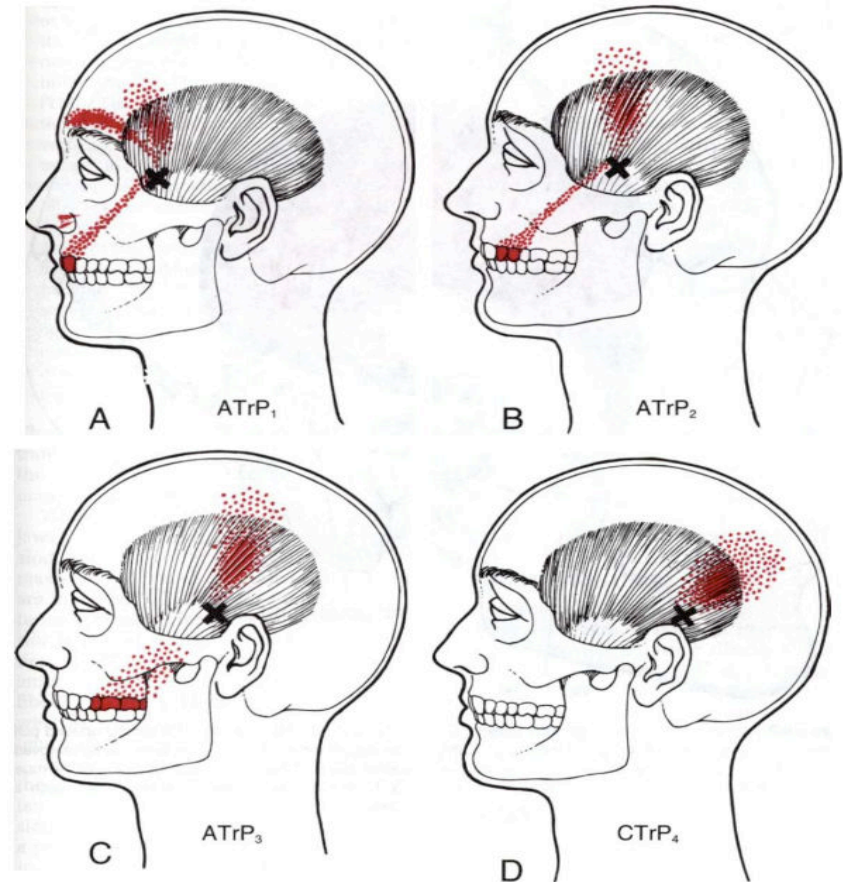


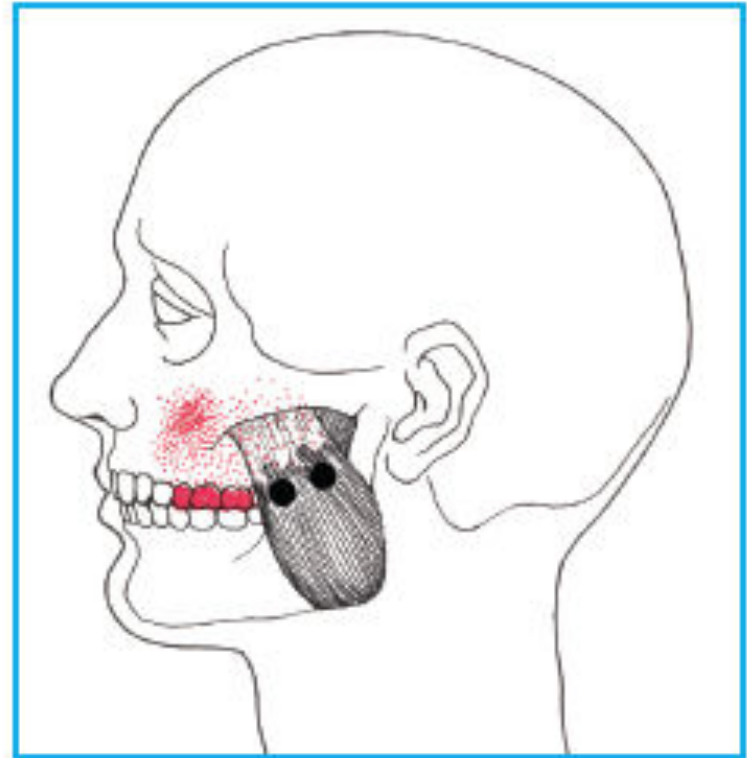
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occurs in the midfiber region of the muscle. A, anterior "spokes" represent referred pain arising from ATrP₁ in the anterior fibers of the muscle. B and C, middle "spokes" represent referred pain and tenderness arising from ATrP₂ and ATrP₃. D, posterior supra-auricular "spoke" is referred from CTrP₄.

Masseter (MAS)

Location of Tender Point

- Superficial and deep fibers of the masseter muscle.
- Press posteriorly toward anterior border of the ascending ramus of mandible



Masseter muscle

LP LATERAL PTERYGOID

Location of Tender Point:

- 1) 1cm anterior to the neck of the condyle. Push medial and posterior.
- 2) Lower edge of the greater wing of sphenoid.

Anatomical Correlation: Lateral pterygoid muscle.

Direction to Press on Tender Point:

Tender Point 1, press medial and slightly posterior.
Tender Point 2, press medially.

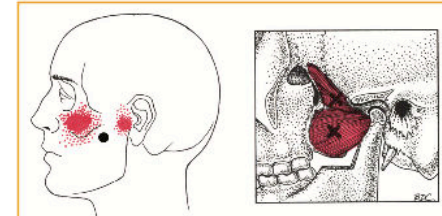
Treatment Position(s): With patient supine, push their open jaw 2cm laterally away from the Tender Point side deviating mandible to the opposite side. Apply stabilizing force with forearm of the motion hand.

Frequency of Occurrence: Very common.

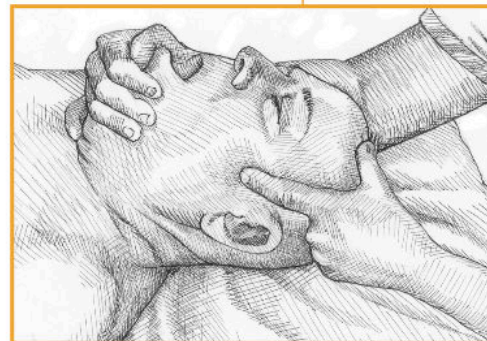
Clinical Correlation(s):

- 1) Pain with chewing
- 2) Click in TMJ
- 3) Dyskinesia with mouth opening

Alternate Names/Nomenclatures: TMJ and maxilla.



Lateral pterygoid



Treatment position

Medial Pterygoid (MPT)

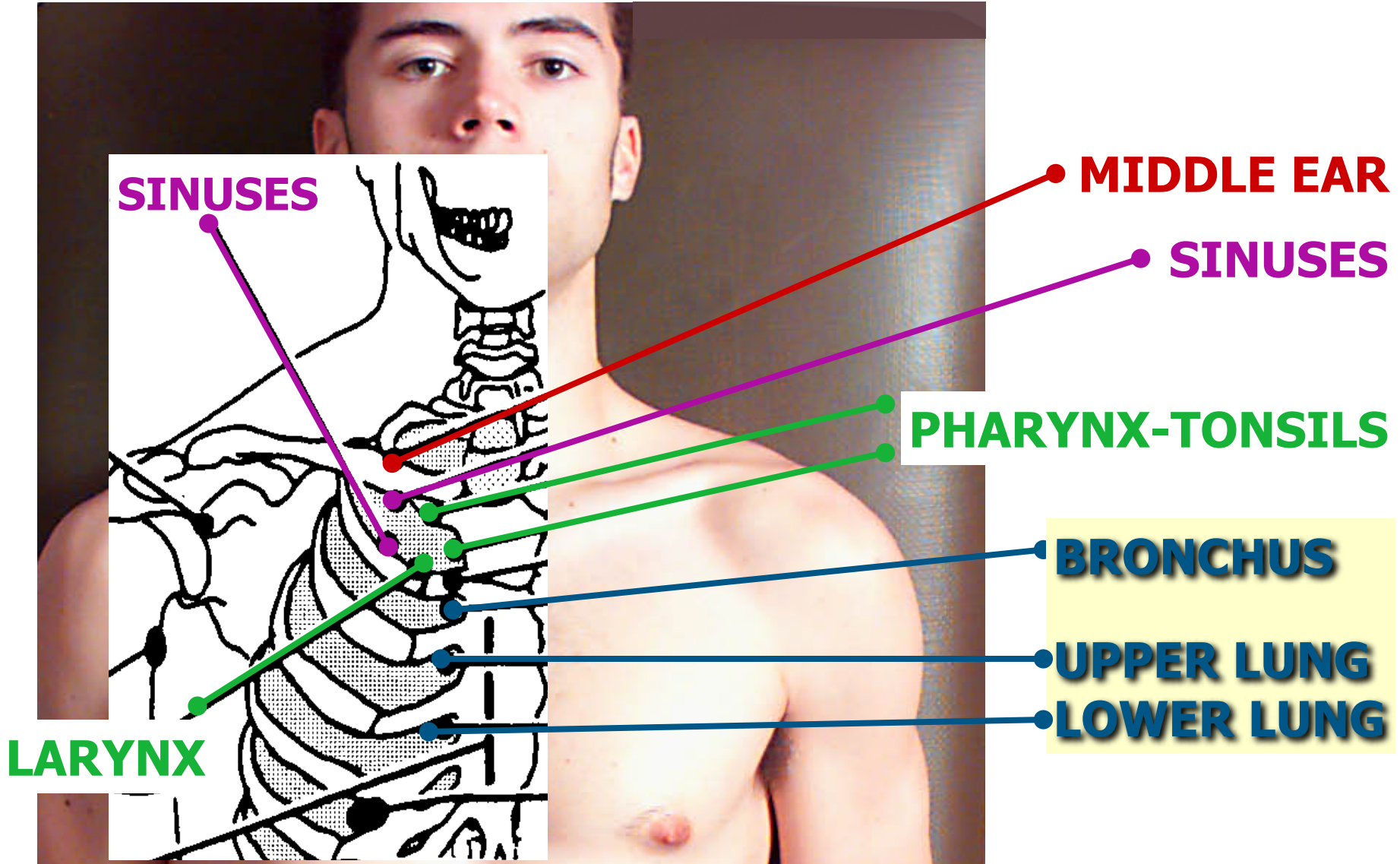
Treatment Position– Pt.
supine

- Push slightly open jaw laterally away from TP side
- Apply stabilizing force on opposite side of forehead w/ forearm

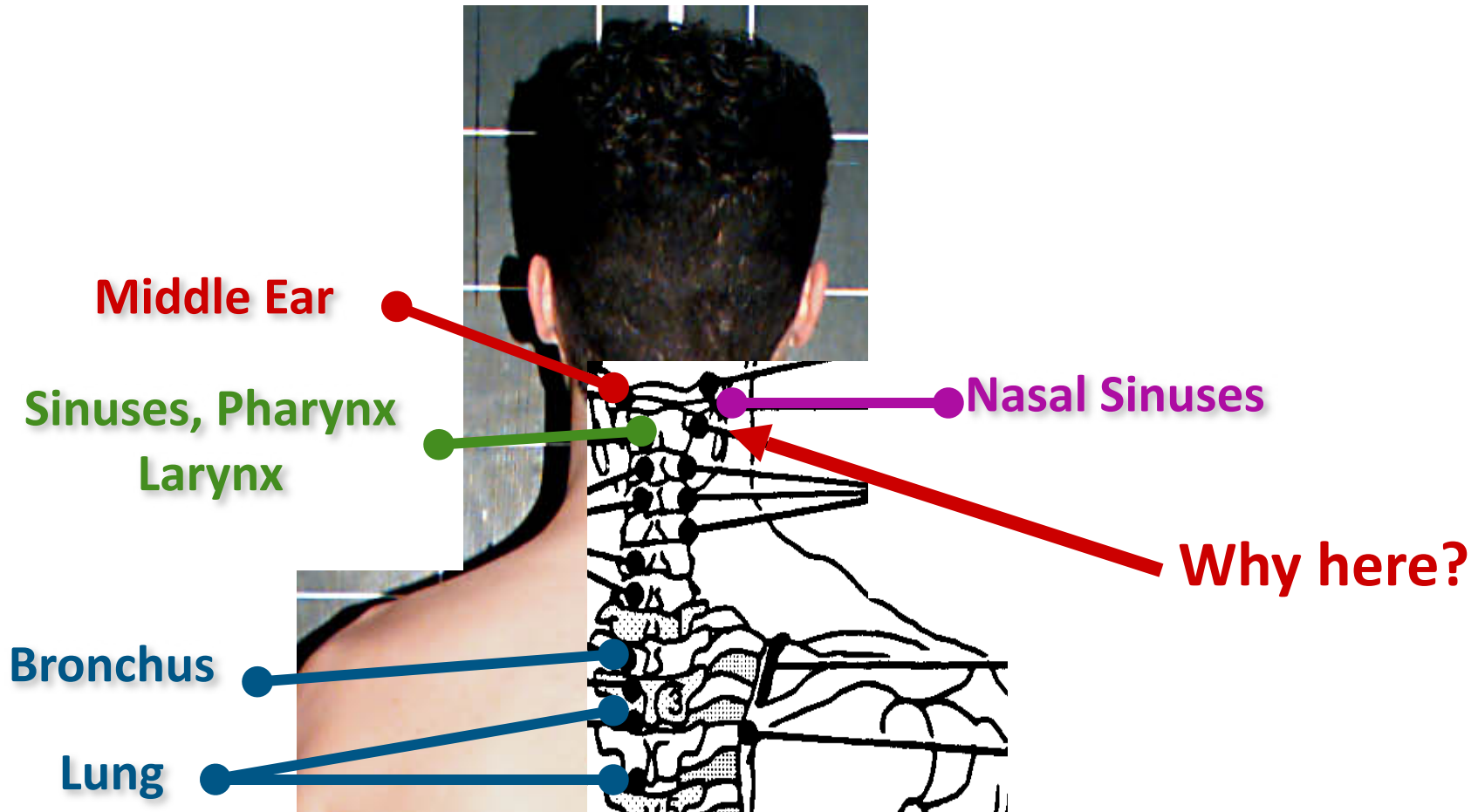


Treatment position

Chapman's Reflexes: EENT-Respiratory

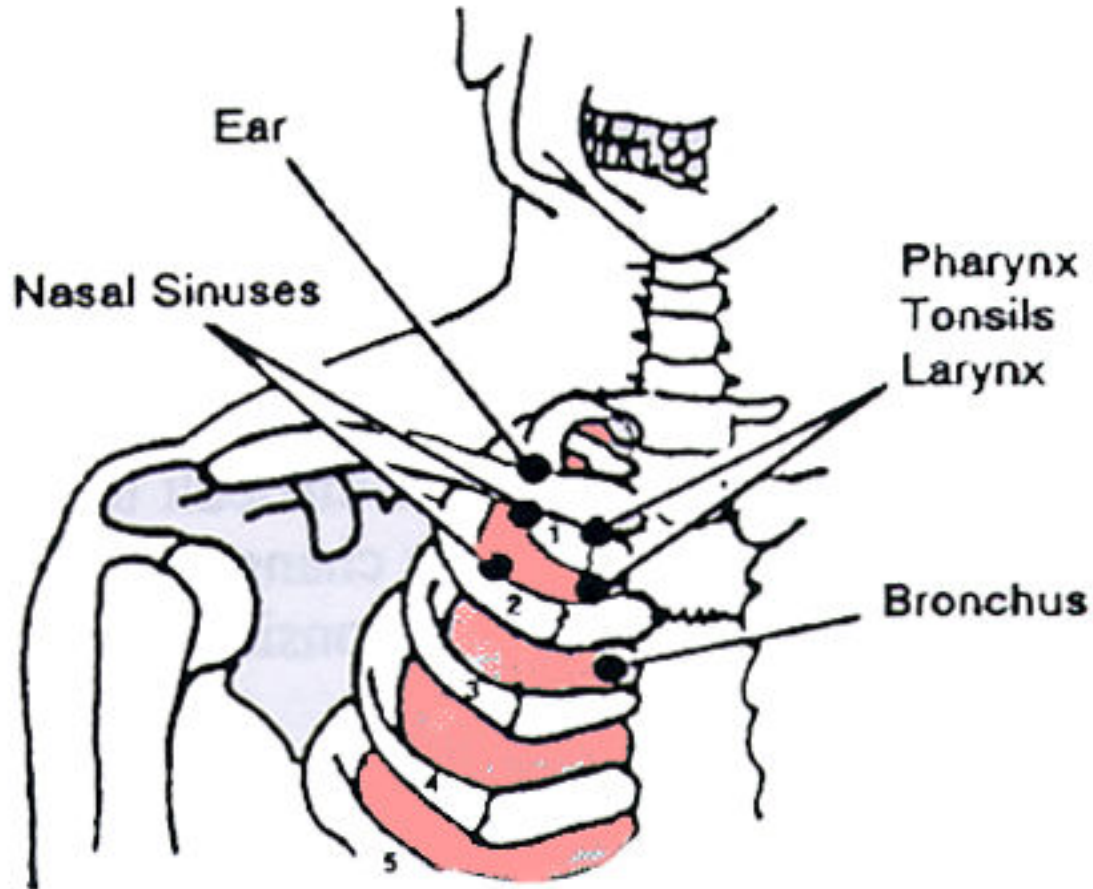


Posterior EENT – Respiratory Points



Chapman's reflexes: **Upper Respiratory Tract**

URI HEADACHE



In conclusion:

- Taking a close history, *observing* the patient's pain pattern complaint, using indirect or careful direct OMT and considering the Five Osteopathic Heath Care Models are all part of an Osteopathic Approach and treatment plan for head and neck pain related headaches..



References

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Used with permission
- *The Trigger Point Manual* (Vol. I-II),
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- THANKS to Michael Kuchera, DO,
FAAO for Chapman's Reflex
contributions

Thank you very much!

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- Any Questions?

