Osteopathic Considerations for Sinus & Allergy

Juanita Brown, DO
Assistant Professor of Osteopathic Manipulative Medicine
LMU DeBusk College of Osteopathic Medicine
Harrogate, TN

LMU
DeBusk College *of* Osteopathic Medicine
LINCOLN MEMORIAL UNIVERSITY

VALUES | EDUCATION | SERVICE

Declarations & Acknowledgements

- Neither I, nor an immediate family member has any financial relationship with or interest in any commercial interest connected with this presentation

- Thanks to Daniel G. Williams, D.O. ,

  Indianapolis, Indiana

  for several of the slides used in this presentation.

Objectives

- .

1. Describe 3 major anatomical considerations used when formulating a basic osteopathic treatment plan.

2. Formulate an osteopathic treatment plan for a patient with sinus related dysfunction.

3. Demonstrate an osteopathic treatment plan for a patient with sinus related dysfunction.

Principles of Osteopathy

The body is a unit

Structure and function are inter-related

The body is capable of self healing and self regulation

Rational treatment is based on these principles

http://www.osteopathic.org/inside-aoa/about/leadership/Pages/tenets-of-osteopathic-medicine.aspx

Sinus and Allergy

- “All allergic manifestations have 3-fold etiology: heredity, the allergen, and the structural problem, which is the most fundamental because it lowers resistance and invites malfunction.
- While nothing can be done about heredity, resistance may be built up to the allergen or it may be avoided.
- The basic approach is through structure.”

http://www.aocoohns.org/wp-content/uploads/2014/09/44cea9bd7df26b7b4d0500410b5f4939.pdf

Fundamentals

Disease involves derangement in one or more of the following:

- Sympathetic Nervous System
- Parasympathetic Nervous System
- Lymphatic System
- Circulatory System
- Musculoskeletal System

Restriction tells you where the insult resides

Keep pictures of the normal living anatomy in your mind

Reflex Connections

- Arise in EENT tissue- impact/cause: asthma, cephalgia and vertigo
- Arising elsewhere impact EENT- cough and hoarseness produced by stimulation of pulmonary and pleural tissues (V/V ear wax- cough & dizziness)
- Increased secretion by stimulus starting in the lung or upper GI tract
- Cervical pathology, e.g. spondylosis, whiplash, disc disease or S.D. may stimulate the oculocervical reflex causing vertigo

Pottenger FM Symptoms of Visceral Disease, 7th ed.1953 P 239, -240 & 378

Anatomy

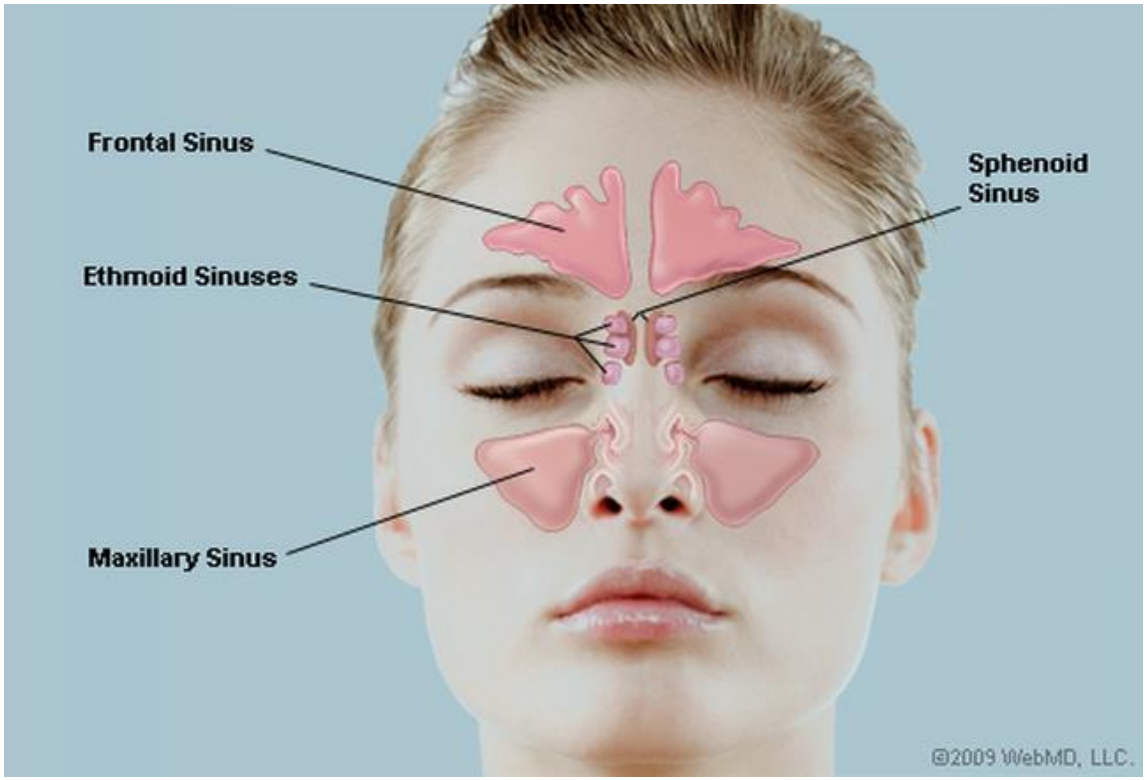
LMU

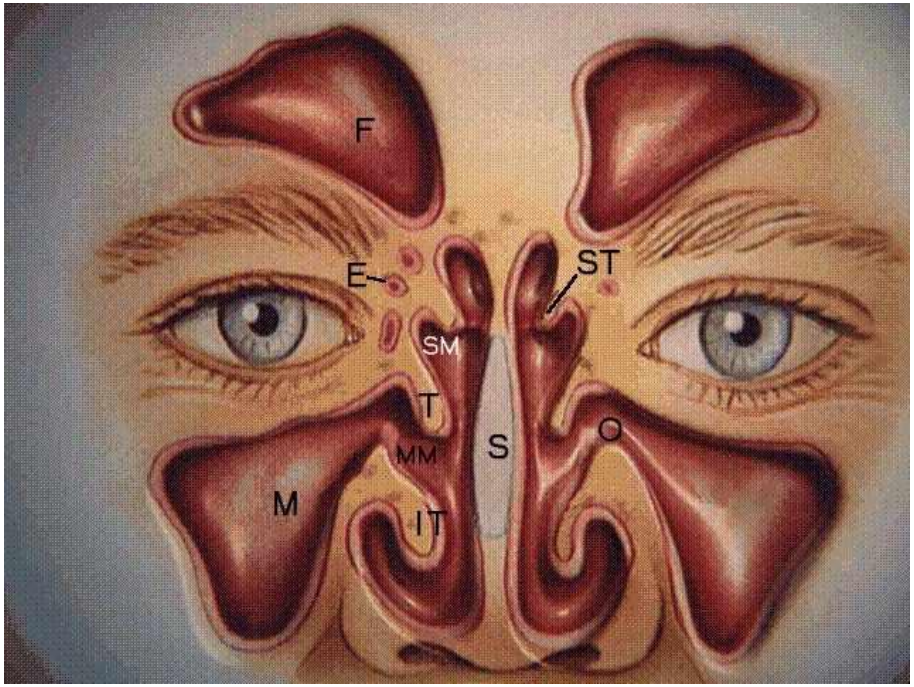
DeBusk College *of* Osteopathic Medicine

LINCOLN MEMORIAL UNIVERSITY

VALUES | EDUCATION | SERVICE

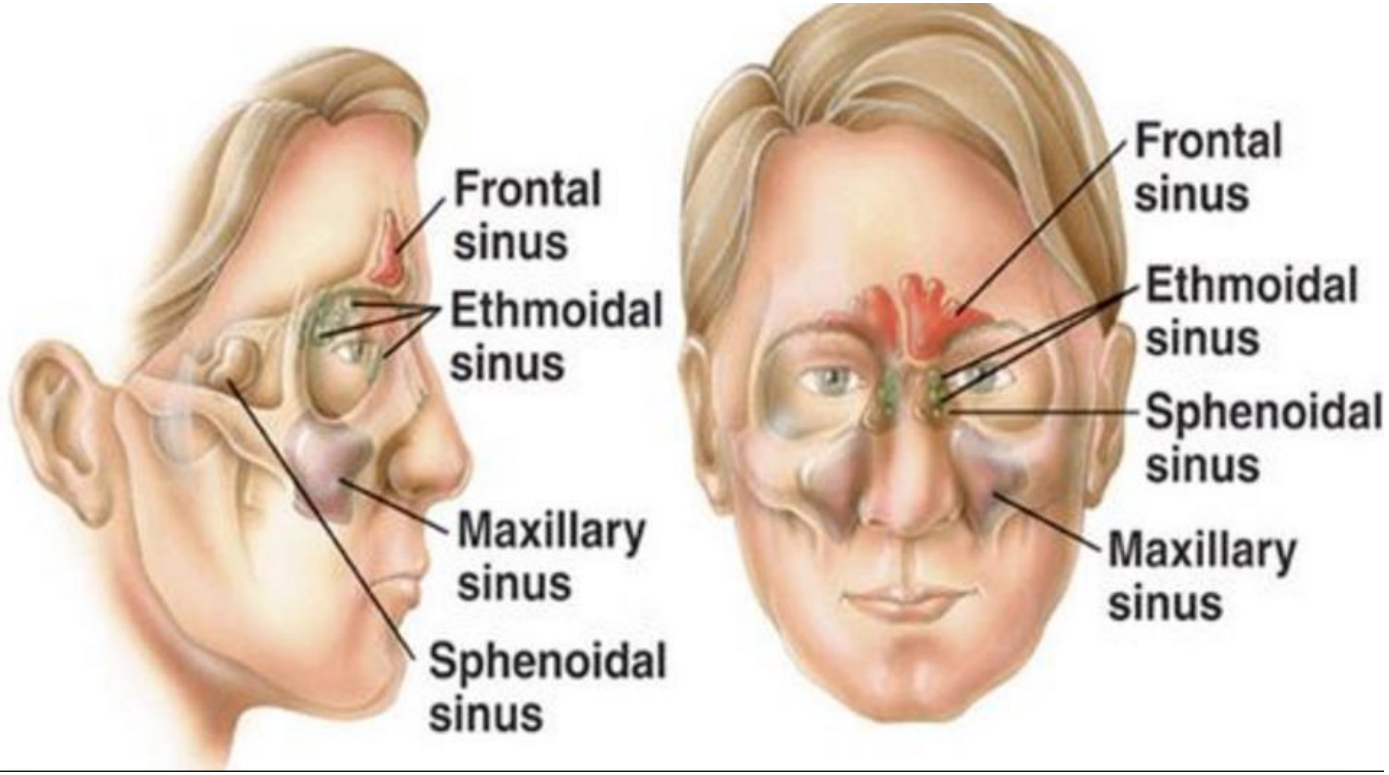
Facial Sinus Locations





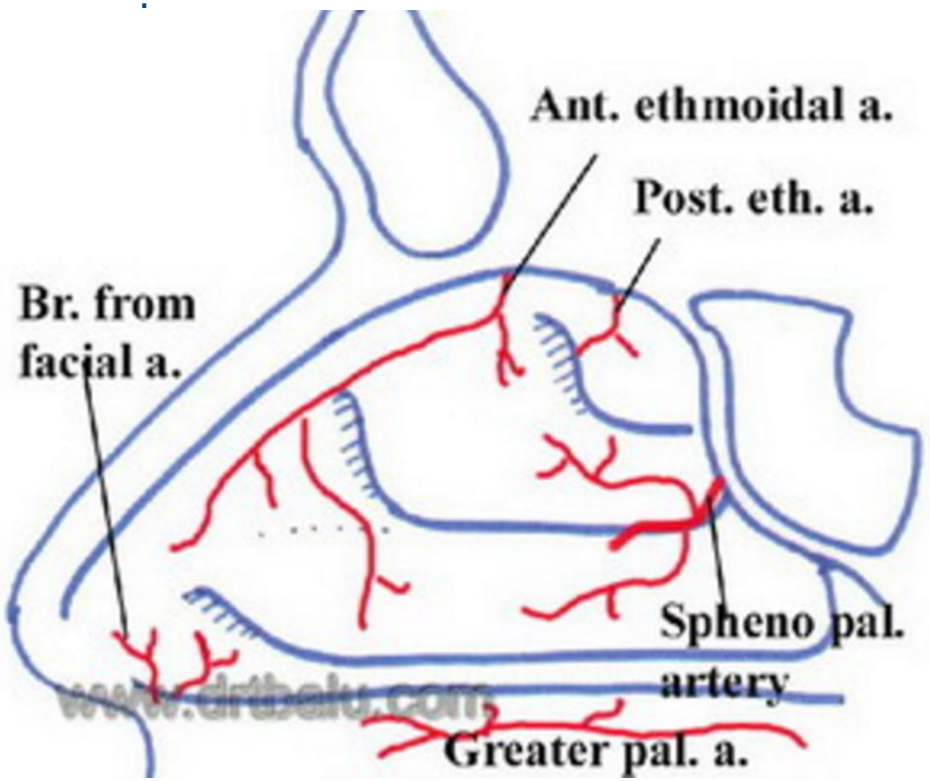
- **LEGEND: F - Frontal sinuses, E - Ethmoid sinuses, M - Maxillary sinuses, O - Maxillary sinus ostium, SS - Sphenoid sinus ST- Superior turbinate, T - Middle turbinate, IT- Inferior turbinate, SM- Superior meatus, MM- Middle meatus, SR - Sphenoethmoidal recess, S- Septum, ET - Eustachian tube orifice, A - Adenoids .** Courtesy of Astra Pharmaceuticals

Another view

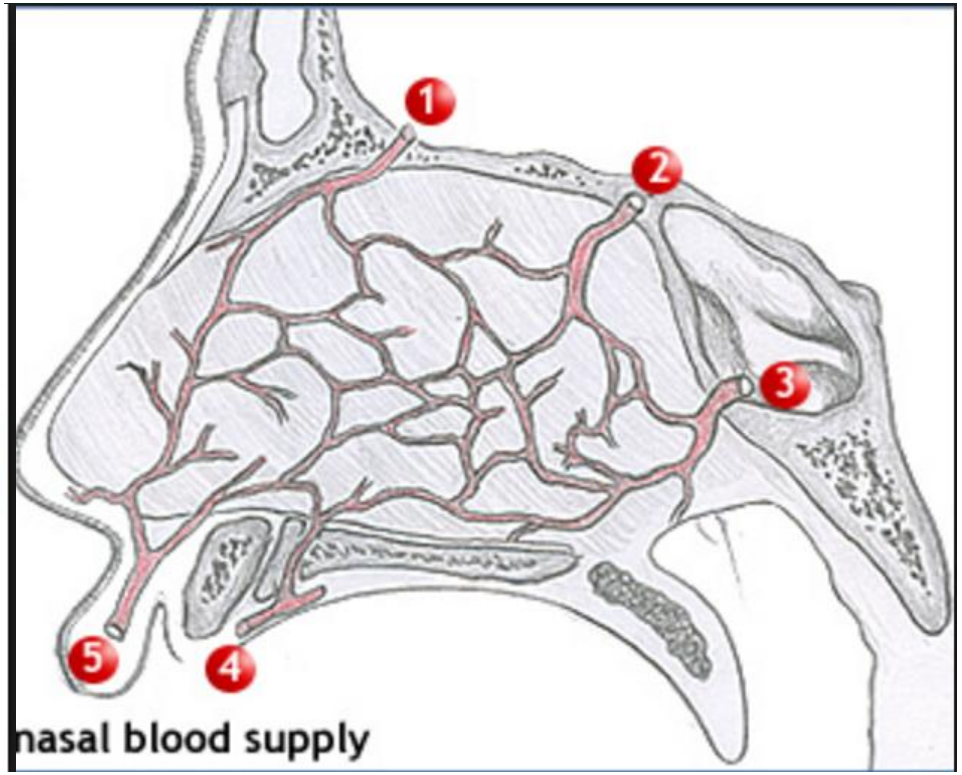


images of sinuses in head - Google Search

Arteries and veins both become dysfunctional



blood supply to sinuses images - Google Search



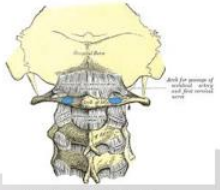
Chapman's Points

Organ	Anterior point	Posterior Point
Middle ear	Superior to medial clavicles	C1 Posterior rami

Let me tell you how bad my ear hurts!

Middle ear

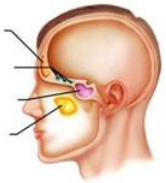
Superior to medial clavicle



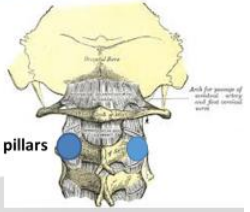
C1 posterior rami

Organ	Anterior point	Posterior Point
Sinuses	Inferior to medial clavicles	C2 Articular pillars

Why is that sore? It's my sinuses that hurt!

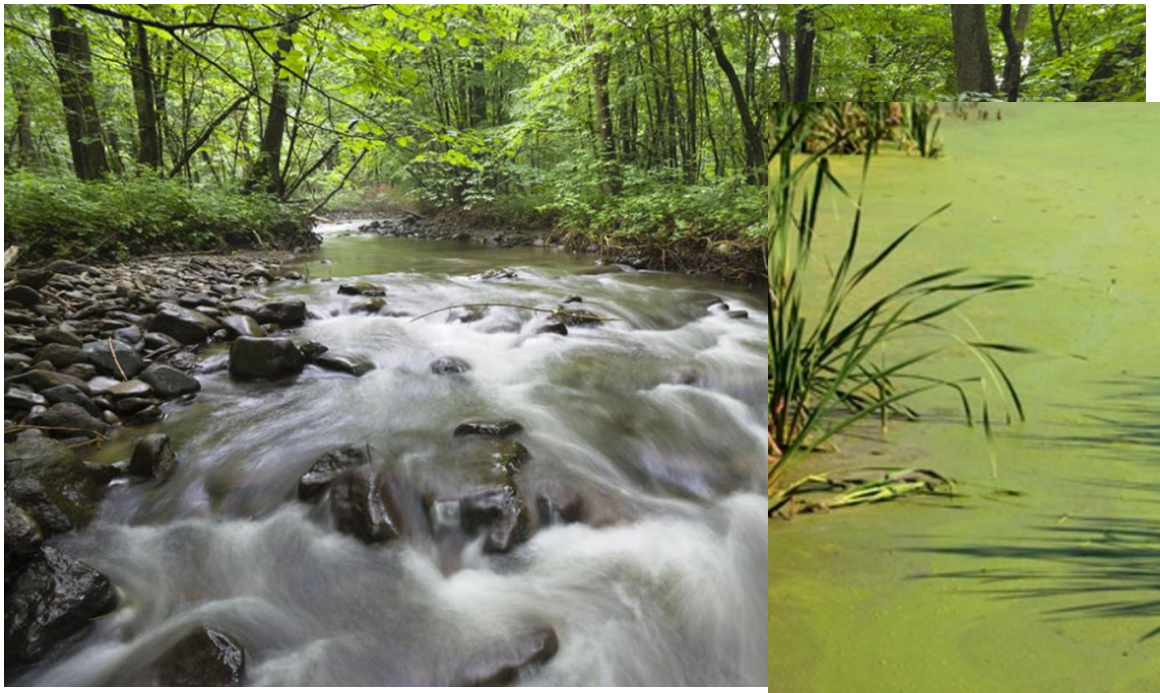


Inferior to medial clavicles



C2 articular pillars

Cranial Motion



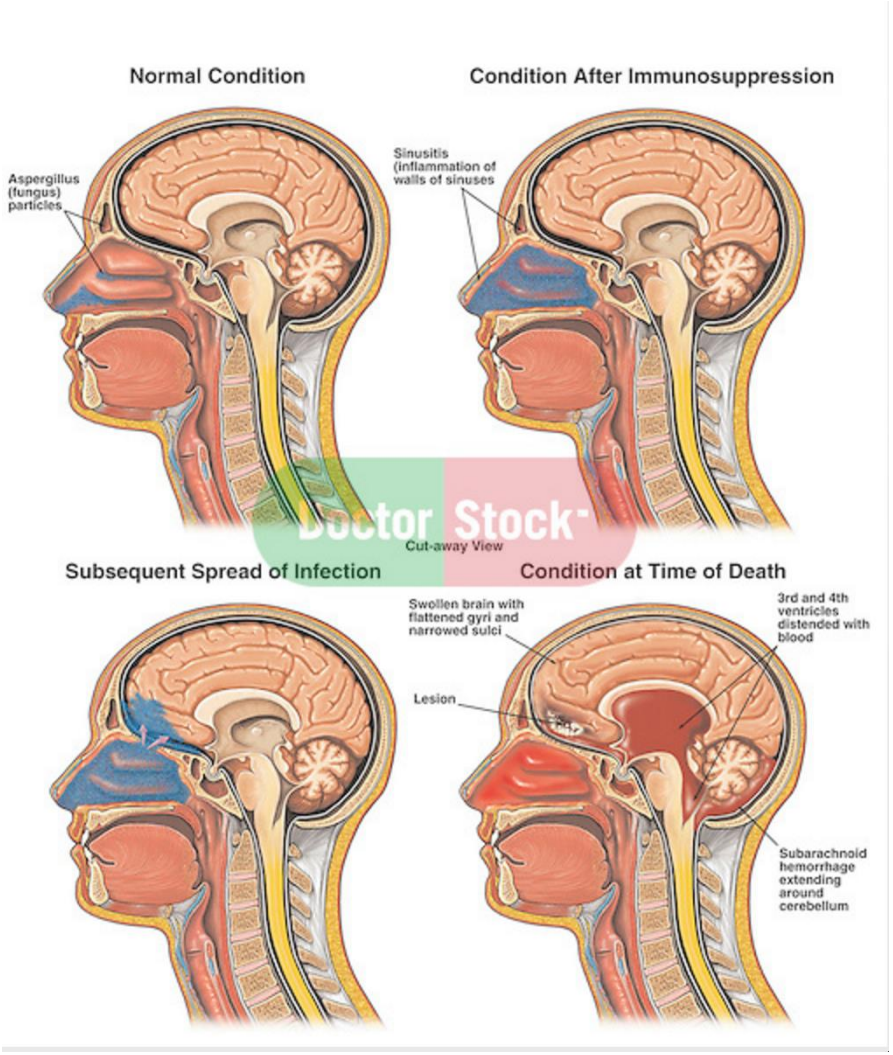
flowing river images free - Google Search

stagnant pond images - Google Search

Untreated

Spread of Sinus Infection into the Brain, Resulting in Brain Edema and Hemorrhage

| Doctor Stock



Physiology

LMU

DeBusk College *of* Osteopathic Medicine

LINCOLN MEMORIAL UNIVERSITY

VALUES | EDUCATION | SERVICE

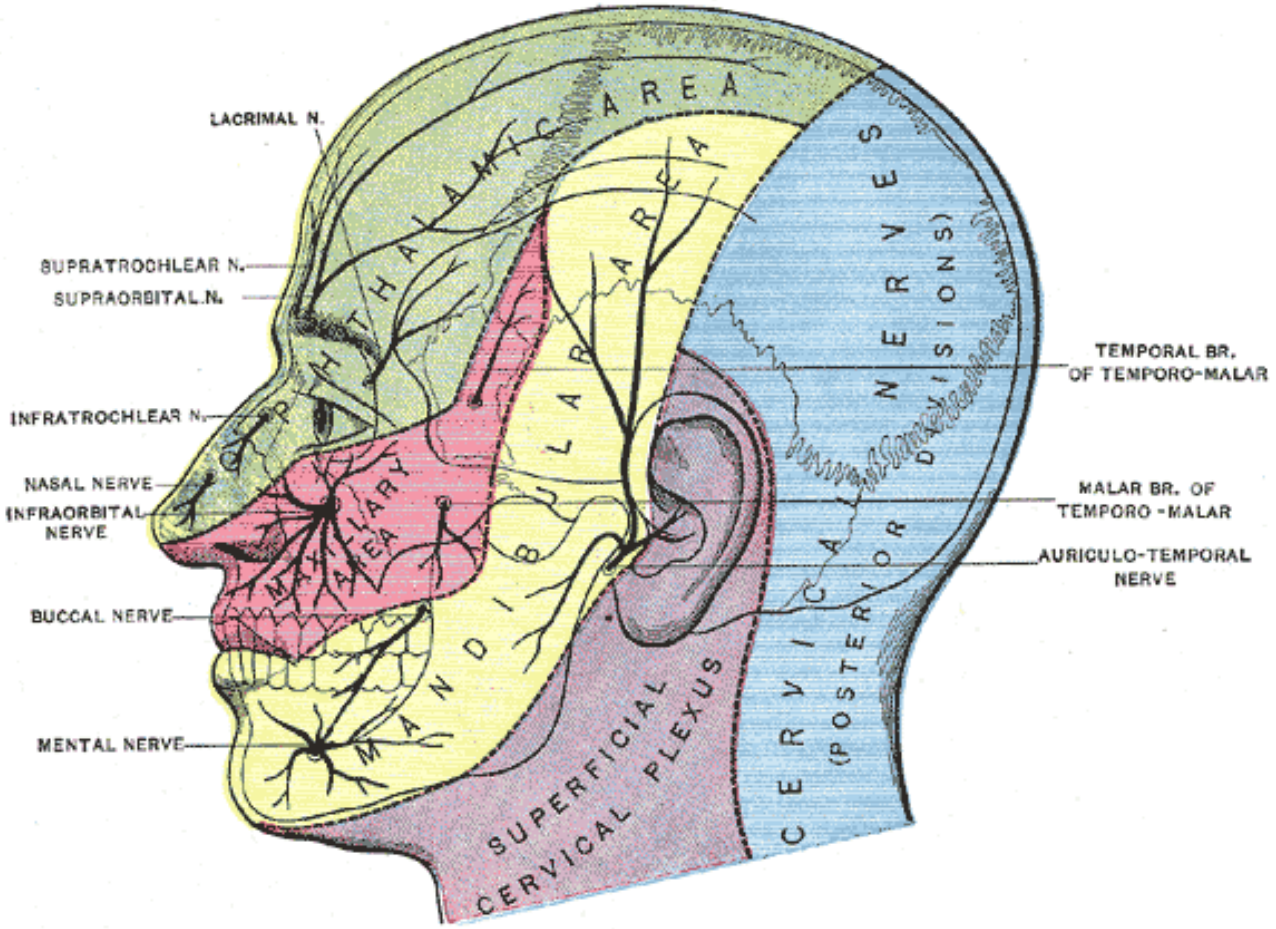


Image from Pinterest

Sympathetic Tone in Sinus Disorders

Sympathetic preganglionic nerve fibers arise from the upper thoracic spinal cord, traverse white rami communicans, then, ascend the cervical sympathetic chain and synapse in the superior cervical sympathetic ganglion.

Increased sympathetic influence in the sinus causes vasoconstriction via co-transmitters: noradrenaline & neuropeptide Y

Patency fluctuates q4-6h in alternating nostrils

Thickened mucous from increased goblet cells & decreased ciliated columnar cells

https://www.dartmouth.edu/~humananatomy/part_8/chapter_52.html
also Allergy 4th ed. 2012

https://www.dartmouth.edu/~humananatomy/part_8/chapter_52.html

Parasympathetic Tone

Parasympathetic preganglionic nerve fibers to the nose leave the brain with the facial nerve, (CN 7),pass along the greater petrosal nerve and the nerve of the pterygoid canal to reach the pterygopalatine ganglion, where they synapse.

Parasympathetic innervation in the sinuses causes vasodilation, increasing and thinning secretions

Nasal congestion; however, may be more related to withdrawal of sympathetic stimulation rather than overactive parasympathetic input

http://www.aocoohns.org/wp-content/uploads/2014/09/44cea9bd7df26b7b4d0500410b5f4939.pdf

Alterations in Lymphatic Drainage

Congestion in the vasculature leads to

Lymphatic congestion that leads to:

Lower immunity

Inflammation

Accumulation of particulates

http://www.aocoohns.org/wp-content/uploads/2014/09/44cea9bd7df26b7b4d0500410b5f4939.pdf

Alterations in Circulatory Flow

Passive congestion is common in sinus disorders

Vascular supply and venous and lymphatic drainage fluids pass through the anterior neck fascia into the supraclavicular fossa before returning to the chest

80-90% of the venous flow from the head exits the skull via the jugular foramen

Passive congestion in fascial, cervical, and upper thoracic tissues impedes venous return from the head

Treatment

How Osteopathic Principles Can Be Incorporated in Practice.

LMU

DeBusk College *of* Osteopathic Medicine

LINCOLN MEMORIAL UNIVERSITY

VALUES | EDUCATION | SERVICE

By Modification of Sympathetic Tone

Thoracic Paraspinal Inhibition: Rib Raising

Helps to normalize sympathetic tone

Reduces facilitation

Helps with drainage of the head and neck

Kimberly Manual

Other Ways To Modify Sympathetic Tone

Cervical Articulation: Correcting Somatic Dysfunction

Special Attention to C2

Helps to normalize sympathetic tone and facilitates drainage of the head/sinuses

Modification of Parasympathetic Tone

Both help normalize parasympathetic tone

OA Decompression:

Also known by some as “Killer Fingers”

Releases posterior cervical fascia

Sphenopalatine ganglion release:

Encourages more normal cellular ratio between goblet cells and ciliated columnar epithelial cells (<goblet & > epithelial cells)

Helps facilitate drainage from the head (> production of thin secretions)

Numerous Osteopathic Manipulative Medicine Texts

Modification of Lymphatic Flow

Thoracic Inlet Release:

Normalizes sympathetic tone

Helps release anterior cervical fascia

Improves circulation to and from the head

Procedures

LMU

DeBusk College *of* Osteopathic Medicine

LINCOLN MEMORIAL UNIVERSITY

VALUES | EDUCATION | SERVICE

Basic Procedures

OA Decompression

Thoracic Inlet Release

Thoracic Paraspinal Inhibition (Rib Raising)

First Rib Mobilization

Lymphatic Drainage

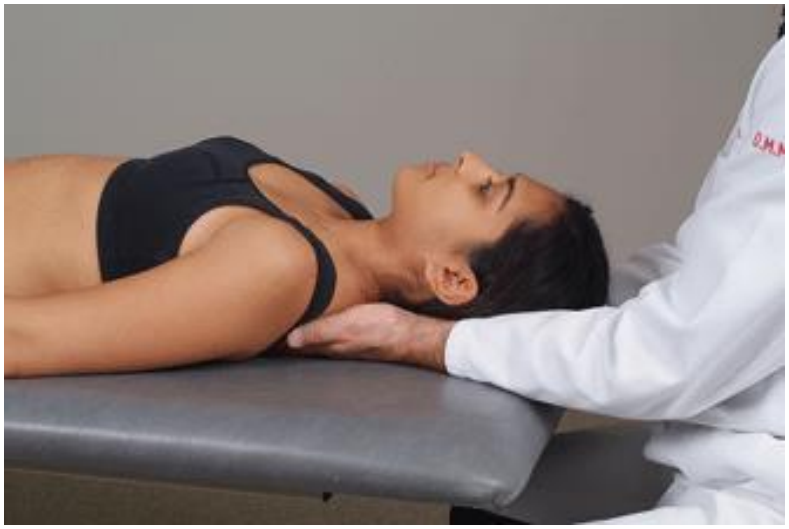
Cervical Articulation

Pterygopalatine Ganglion

Atlanto-occipital release

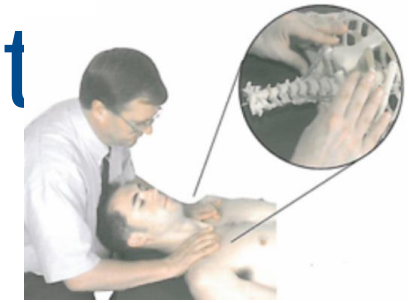
image of back of head - Google Search

Thoracic Outlet Release
Rib Raising



Nicholas & Nicholas

BLT of the Thoracic Out



- GOAL: Find the point of ease in three planes
- Hold the top of the scapula with the thumbs and each clavicle with your fingers.
- Rotation around the A/P axis (move shoulders up and down)
- Rotation around the vertical axis (steering wheel motion)
- Rotation around the transverse axis (twist the shoulders forward and backward)
- Balance in all three planes simultaneously and hold until tissues soften

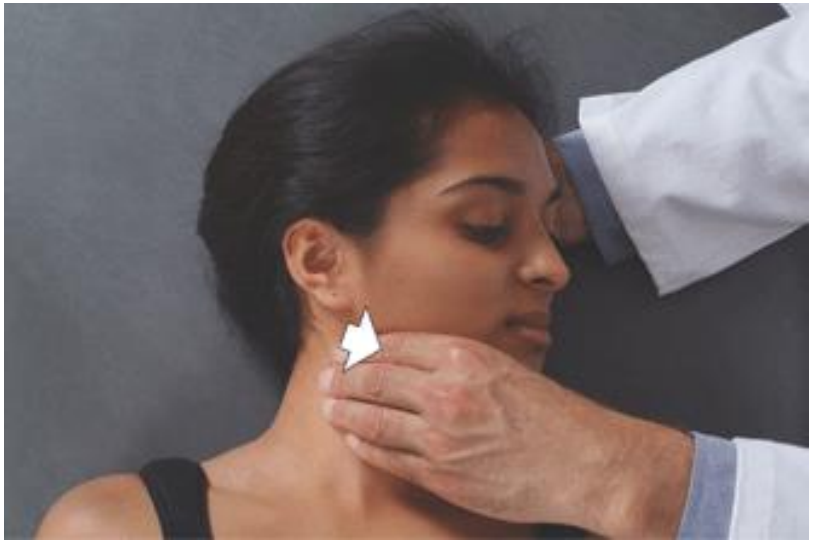
Rib Raising

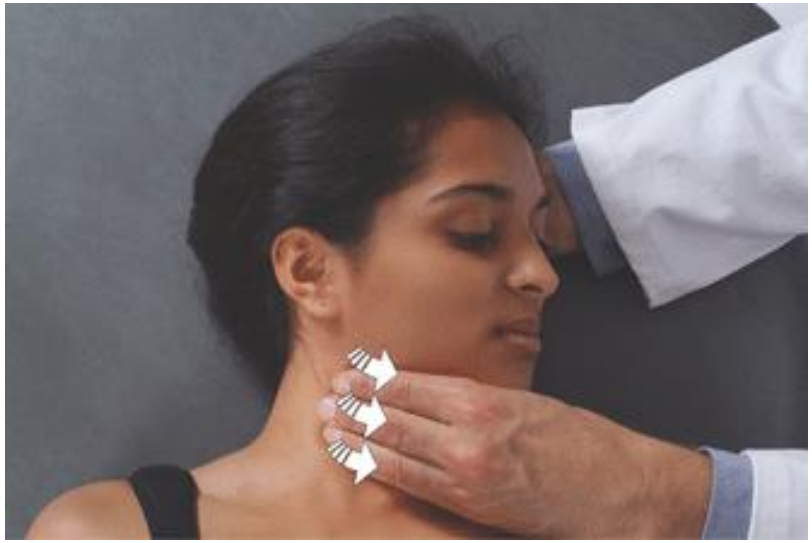


Thanks to Cooperative staff nurse

Thanks to Cooperative staff nurse

Lymphatic Drainage





Nicholas & Nicholas

Starting position at the head for lymph drainage

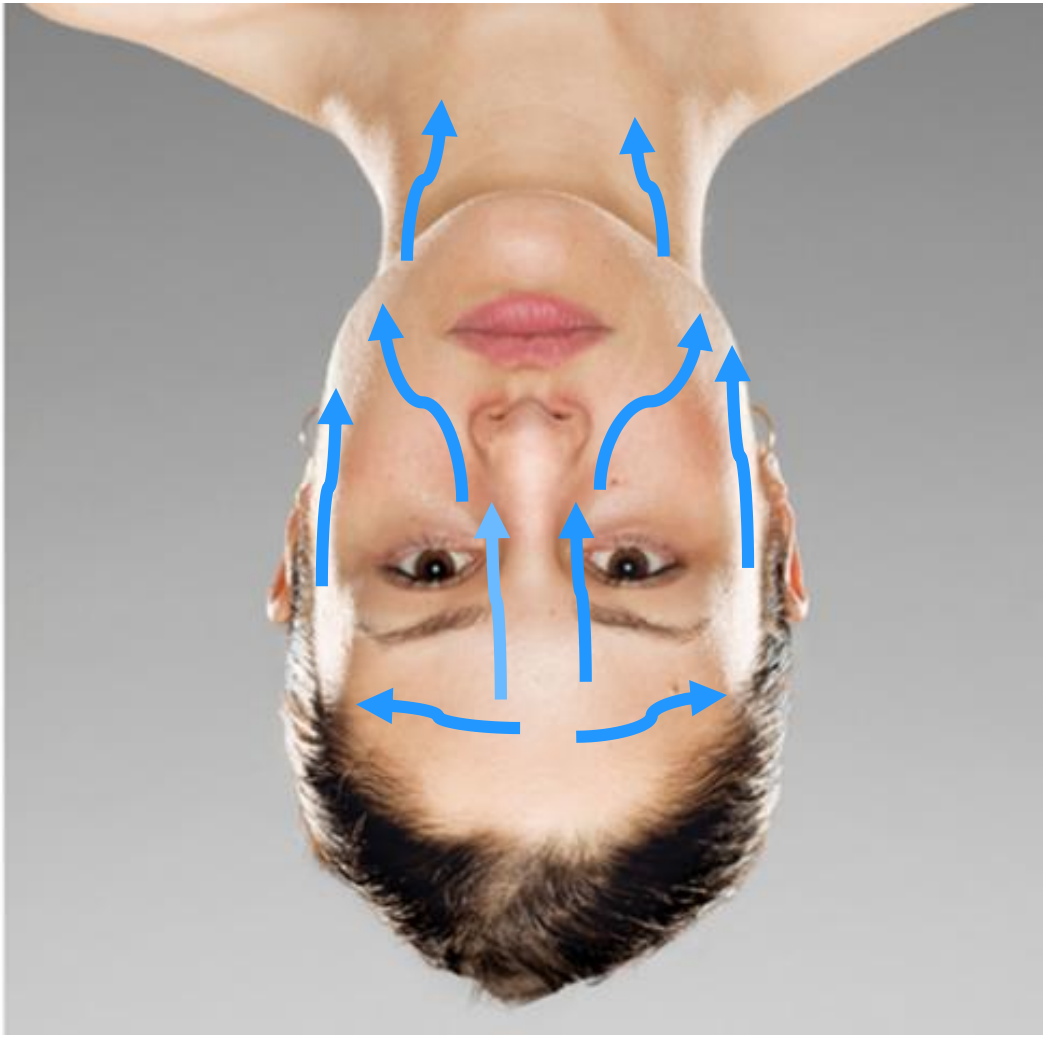


image of faces - Google Search

Freeing the nasal bones

image of faces - Google Search

Freeing the nasal bones

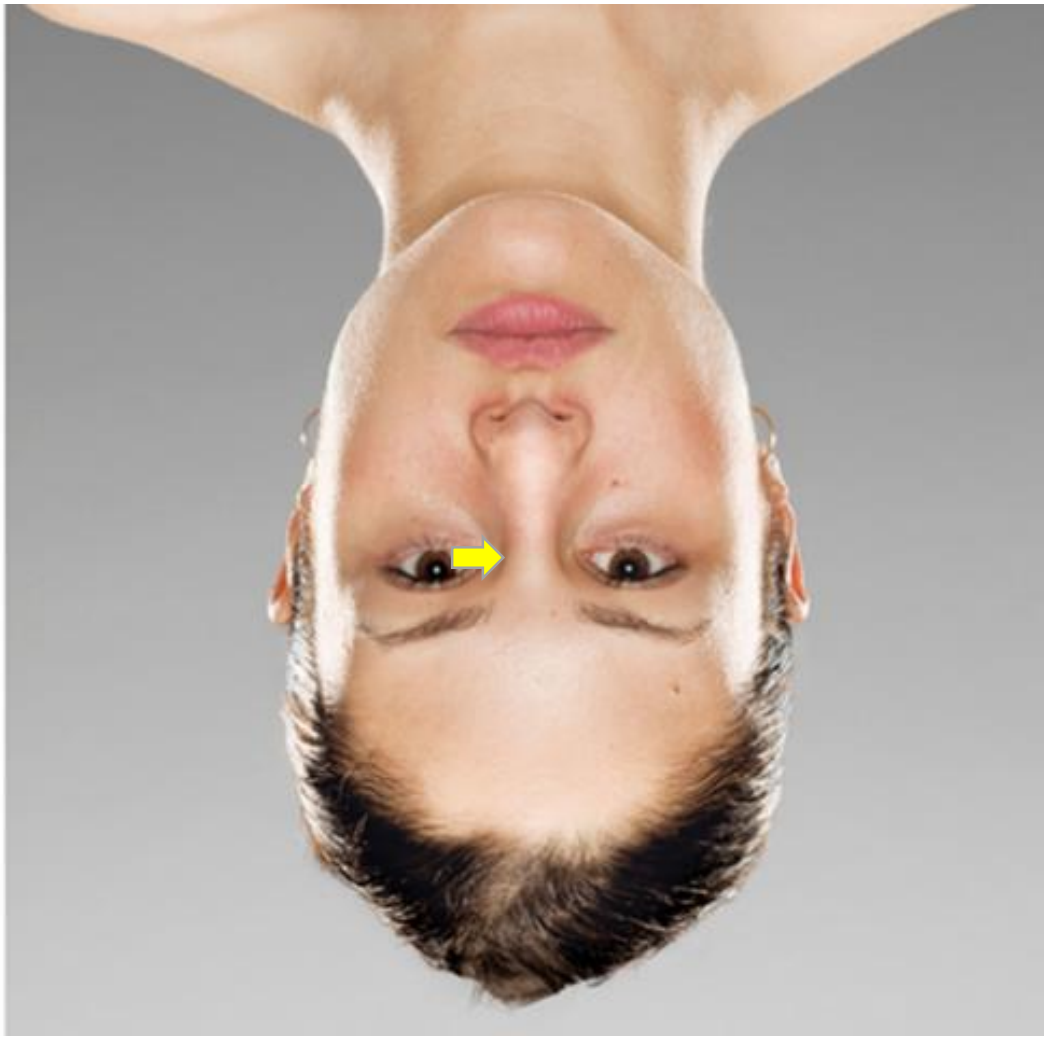
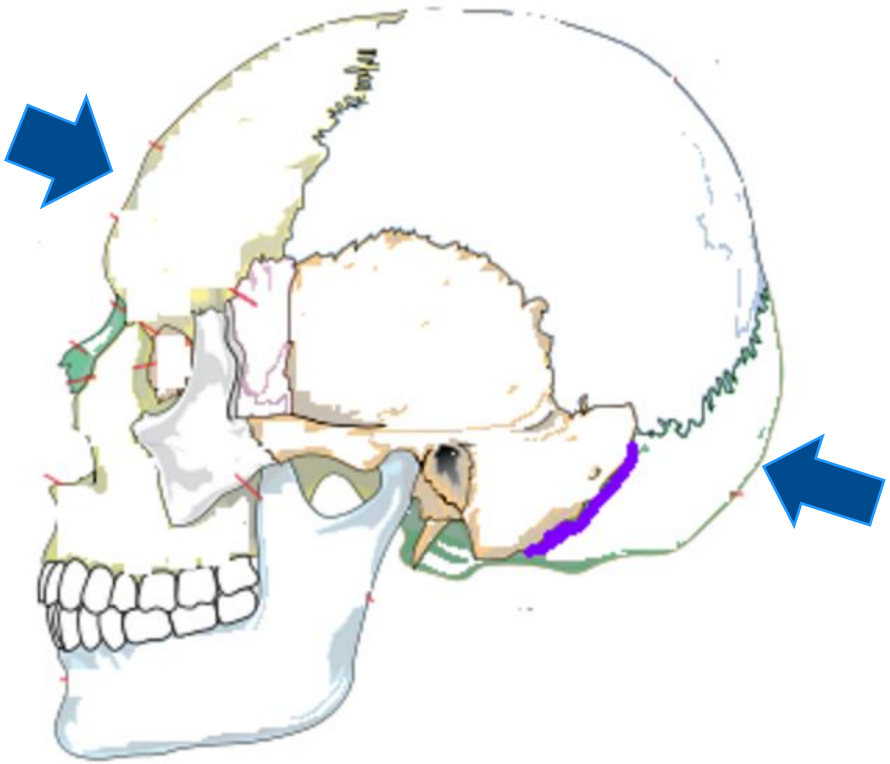


image of faces - Google Search

Anterior / posterior compression



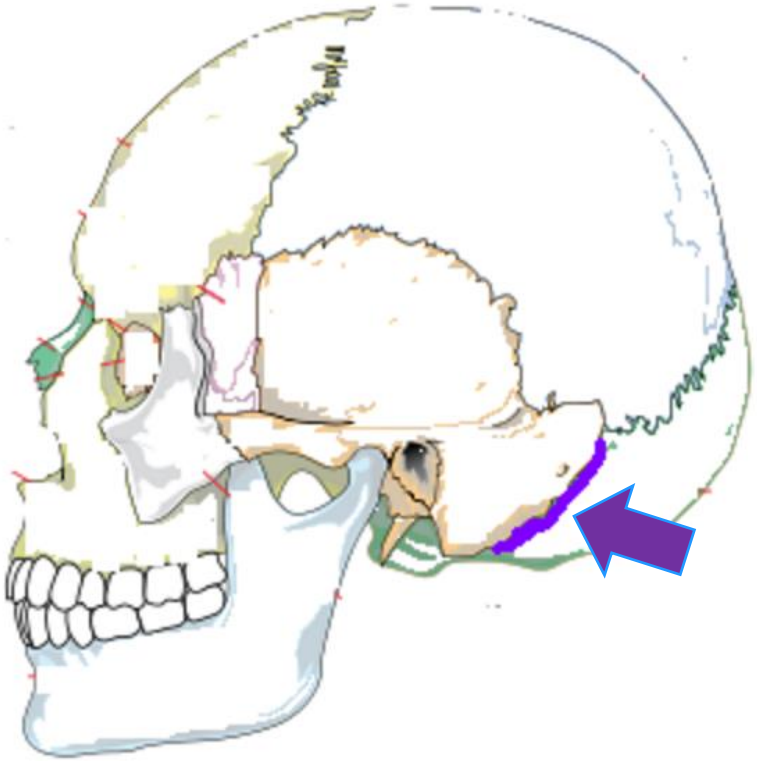
occipitomastoid suture - Google Search

Add compression slowly and remove it slowly

Anterior/Posterior Compression

image of faces - Google Search

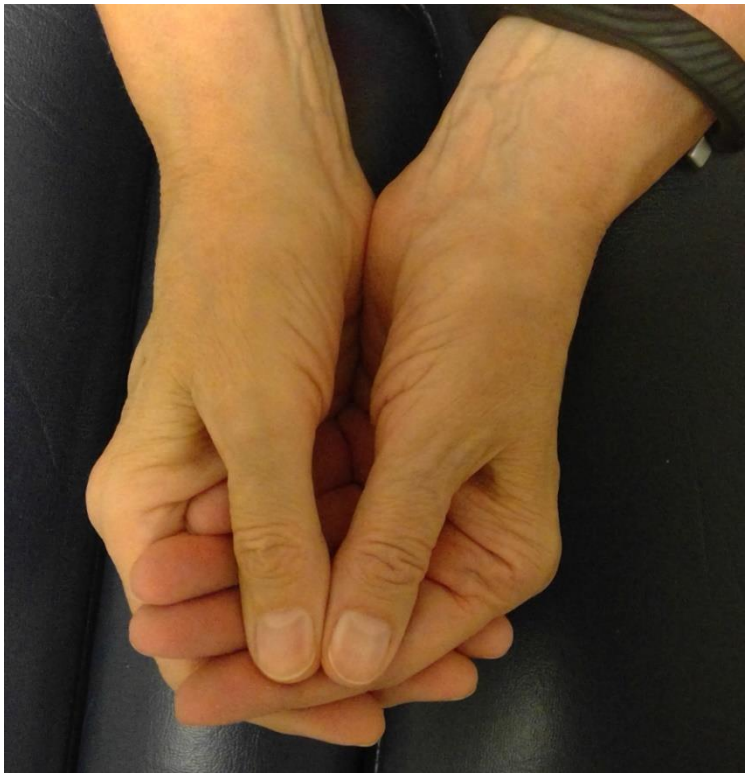
Locate the Occipitomastoid Suture



occipitomastoid suture - Google Search

Compression of the 4th ventricle- Thumbs on the occiput behind the suture

Hand position for CV 4



Easiest to have patient lift head and set it down on your hands

Follow the head in and resist it moving out for 3 minutes

Billing and Coding

Bill the appropriate E & M code

Add the -25 Modifier

Then bill by the number of regions

98925-98929

Must have documentation of somatic dysfunction

ICD-10 M99.00 – M99.09

https://www.osteopathic.org/inside-aoa/events/omed/omedpresentations/Documents/2014%20OMED%20Presentations/practice-management-feely.pdf

Billing and Coding

98925 – 1-2 regions

98926 – 3-4 regions

98927 – 5-6 regions

98928 – 7-8 regions

98929 – 9-10 regions

Billing and Coding

How many regions can you code here?

Thoracic Paraspinal Inhibition
Cervical Articulation
OA Decompression
Thoracic Inlet Release
Rib Raising
Pterygopalatine Ganglion

Billing and Coding

5

OA Decompression

Pterygopalatine Ganglion

Cervical Articulation

Thoracic Paraspinal Inhibition

Thoracic Inlet Release

Rib Raising

Head

Cervical

Thoracic

Upper Extremity

Ribs

Billing and Coding

For a patient with allergies or sinusitis:

Bill appropriate office visit code (E&M)

Document the presence of somatic dysfunction in the areas you are treating

Document your treatment of those areas and bill the appropriate procedure code

Procedure note: OMT- indication SD multiple regions

With consent and utilizing appropriate patient positioning, the dysfunctional areas identified during physical examination today were treated using physician applied osteopathic philosophy and technique(s), appropriate to each body region and tissue condition. The procedure(s) were tolerated well and instructions for home care are given. The body will continue to make changes for several days. He/she is instructed to call with any problems and will return if the problem recurs or does not fully resolve. Techniques utilized included:

The Journal of the American Osteopathic Association, August 2009, Vol. 109, 409-413.