

ANATOMY 2 MNEMONICS
<http://www.valuemd.com/anatomy2.php>

BRACHIAL PLEXUS:

- **Randy Travis Drinks Cold Beers.**
- **Robert Taylor Drinks Cold Beer.**
 - Roots, Trunks, Divisions, Cords, Branches

CRANIAL NERVES:

- **On Old Olympus Towering Tops, A Finn And German Viewed Some Hops**
 - I -Optic,
 - II -Olfactory,
 - III -Oculomotor,
 - IV -Trochlear,
 - V -Trigeminal,
 - VI -Abducens,
 - VII -Facial,
 - VIII-Acoustic (vestibulocochlear),
 - IX -Glossopharyngeal,
 - X -Vagus,
 - XI -Spinal accessory,
 - XII -Hypoglossal

Innervation of Extraocularmotor Muscles:

- **LR6 (SO4) 3**
 - **LR6**--Lateral rectus → VI abductens
 - **SO4**--Superior Oblique → IV Trochlear
 - **3**--The remaining 4 eyeball movers → III
- Some Say Marry Money, But My Brother Says Big Bras Matter More (what cranial nerve is Motor, Sensory, or Both)

BRANCHES OF FACIAL NERVE:

- **Ten Zebras Bought My Car**
- **To Zanzibar By Motor Car**
 - Temporal, Zygomatic, Buccal, Masseteric, Cervical

CERVICAL SPINAL NERVES:

- C3,4,5 -keeps the phrenic alive (innervation of phrenic nerve)
- C3,4,5 -keep the diaphragm alive (innervation of diaphragm)
- C5,6,7 -raise your arms to heaven (nerve roots of long thoracic nerve innervate serratus anterior)

LOCATION OF THORACIC DUCT:

- **The duck is between two geoses (duck = thoracic duct)**
 - 2 geoses = azyGOUS and esophaGOUS

ATTACHMENTS OF CHEST MUSCLES:

- **A lady between two majors.**
 - Pectoralis major attaches to lateral lip of bicipital groove.
 - Teres major attaches to medial lip of bicipital groove.
 - Latissimus dorsi attaches to the floor of bicipital groove.
 - The "lati" is between two "majors."

"Lateral is less, medial is more."

- Lateral pectoral nerves goes through pectoralis major while medial p.n. goes though both pec major and minor

INNERVATION OF PENIS:

- **Parasympathetic puts it up; sympathetic spurts it out**
 - "S2, 3, 4 keep the penis off the floor"
 - Innervation of the penis by branches of the pudental nerve, derived from spinal cord levels S2-4

AORTIC BRANCHES:

- **ABC'S**
 - Aortic arch gives off the **B**racheiocephalic trunk, the left **C**ommon Carotid, and the left **S**ubclavian artery

ORDER OF THINGS IN THIGH:

- "NAVEL"
 - Nerve, Artery, Vein, Empty space, Lymphatics

Pterygoid muscles: function of lateral vs. medial:

- "Look at how your jaw ends up when saying first syllable of '**L**ateral' or '**M**edial':"
- "**La**": your jaw is now **open**, so **L**ateral **opens** mouth.
- "**Me**": your jaw is still **closed**, so **m**edial **closes** the mandible.

Supine vs. prone body position"Supine is on your spine.

- Therefore, prone's the "other" one. ·
- Also, **prone** to suffocate in **prone** position.

Meckel's diverticulum details

- **2** inches long. **2** feet from end of ileum. **2** times more common in men. **2**% occurrence in population. **2** types of tissues may be present. · Note: "**di**-" means "**two**", so **diverticulum** is the thing with all the **twos**.

Perineal vs. peroneal

- Perineal is **in** between the legs. Peroneal is **on** the leg.

Anterior forearm muscles: superficial group

- There are five, like five digits of your hand. Place your thumb into your palm, then lay that hand palm down on your other arm, as shown in diagram. Your 4 fingers now show distribution: spells **PFPF** [pass/fail, pass/fail]: **P**ronator teres **F**lexor carpi radialis **P**almaris longus **F**lexor carpi ulnaris Your thumb below your 4 fingers shows the muscle which is deep to the other four: Flexor digitorum superficialis. _

Carpal tunnel syndrome causes ‘MEDIAN TRAP’:

- Myxoedema
- Edema premenstrually
- Diabetes Idiopathic
- Agromegaly
- Neoplasm
- Trauma
- Rheumatoid arthritis
- Amyloidosis
- Pregnancy ·

Mnemonic fits nicely since median nerve is trapped.

Lumbar plexus "I, I Get Laid On Fridays":

1. Iliohypogastric [L1]
2. Ilioinguinal [L1]
3. Genitofemoral [L1, L2]
4. Lateral femoral cutaneous [L2, L3]
5. Obturator [L2, L3, L4]
6. Femoral [L2, L3, L4]

Alternatively: "I twice Get Laid On Fridays". ·

Alternatively: "Interested In Getting Laid On Fridays?"

Elbow: muscles that flex it:

- Three **B**'s **B**end the el**B**ow: **B**rachialis **B**iceps **B**rachioradialis

Cavernous sinus contents O TOM CAT:

- TOM are lateral wall components, in order from superior to inferior.
- CA are the components within the sinus, from medial to lateral. CA ends at the level of T from O TOM. · See diagram.
 - Oculomotor nerve (III)
 - Trochlear nerve (IV)
 - Ophthalmic nerve (V1)
 - Maxillary nerve (V2)
 - Carotid artery
 - Abducent nerve (VI)
- **T**: When written, connects to the T of OTOM. _

Bronchi: which one is more vertical"Inhale a **bite**, goes down the **right**":

- Inhaled objects more likely to lodge in right bronchus, since it is the one that is more vertical

Carotid sheath contents "I See 10 CC's in the IV":

- I See (I.C.) = Internal Carotid artery
- 10 = CN 10 (Vagus nerve)
- CC = Common Carotid artery

IV = Internal Jugular Vein

V3 innervated muscles "My A\$\$ Meets The Toilet":

- Mylohyoid
- Anterior digastric
- Muscles of Mastication
- Tensor veli palatini
- Tensor tympani

Inferior vena cava tributaries "I Like To Rise So High":

- Iliacs
 - Lumbar
 - Testicular
 - Renal
 - Suprarenal
 - Hepatic vein.
- (Think of the IVC wanting to rise high up to the heart.)

Spleen: dimensions, weight, surface anatomy "1,3,5,7,9,11":

- Spleen dimensions are 1 inch x 3 inches x 5 inches.
- Weight is 7 ounces.
- It underlies ribs 9 through 11.

Heart valve sequence "Try Pulling My Aorta":

- Tricuspid
- Pulmonary
- Mitral
- Aorta

Liver: side with ligamentum venosum/ caudate lobe vs. side with quadrate lobe/ ligamentum teres "VC goes with VC":

- The Venosum and Caudate is on same side as Vena Cava [posterior]. Therefore, quadrate and teres must be on anterior by default.
- See inferior-view diagram.

Cranial bones "PEST OF 6":

- Parietal
- Ethmoid
- Sphenoid

- Temporal
- Occipital
- Frontal

(The 6 just reminds that there's 6 of them to remember.)

Thyroid: isthmus location "Rings 2,3,4 make the isthmus floor":

- Isthmus overlies tracheal rings 2,3,4

Cervical plexus: arrangement of the important nerves "GLAST": (4 compass points: clockwise from north on the right side of neck):

- Great auricular
- Lesser occipital
- Accessory nerve pops out between L and S
- Supraclavicular
- Transverse cervical

Lumbar plexus roots "2 from 1, 2 from 2, 2 from 3":

- 2 nerves from 1 root: Iliioinguinal (L1), Iliohypogastric (L1).
- 2 nerves from 2 roots: Genitofemoral (L1,L2), Lateral Femoral (L2,L3).
- 2 nerves from 3 roots: Obturator (L2,L3,L4), Femoral (L2,L3,L4).

Joints in the midline "SC":

In medial line, below Second Cervical, joints are Secondary

- Cartilaginous and usually have a diSC.

Notes: secondary cartilaginous is also known as symphysis. The one that doesn't have a disc is xiphi-sternal.

Anterior forearm muscles: superficial group "Pimps F*ck Prostitutes For Fun":

- Pronator teres
- Flexor carpi radialis
- Palmaris longous
- Flexor carpi ulnaris
- Flexor digitorum superficialis

External carotid artery branches "Some Aggressive Lovers Find Odd Positions More Stimulating":

- Superior thyroid
- Ascending pharyngeal
- Lingual
- Facial
- Occiptal
- Posterior auricular
- Maxillary
- Superficial temporal

Axillary artery branches "Screw The Lawyer Save A Patient":

- Superior thoracic
- Thoracoacromioli
- Lateral thoracic
- Subscapular
- Anterior circumflex humeral
- Posterior circumflex humeral

Descending abdominal aorta branches from diaphragm to iliacs "Prostitutes Cause Sagging Swollen Red Testicles [in men] Living In Sin":

- Phrenic [inferior]
- Celiac
- Superior mesenteric
- Suprarenal [middle]
- Renal
- Testicular ["in men" only]
- Lumbar
- Inferior mesenteric
- Sacral

Inversion vs. eversion muscles in leg

Second letter rule for inversion/eversion:

- Eversion muscles:
 - pErineus longus
 - pErineus brevis
 - pErineus terius
- Inversion muscles:
 - tIbialis anterior
 - tIbialis posterior

External carotid artery branches "Sister Lucy's Powdered Face Often Attracts Silly Medicos":

- Before entering the parotid gland:
 - Superior thyroid
 - Lingual
 - Posterior auricular
 - Facial
 - Occipital
 - Ascending pharyngeal
- Ends as:
 - Superficial temporal and
 - Maxillary bifurcating in the in the parotid gland

Spermatic cord contents "3 arteries, 3 nerves, 3 other things":

3 arteries: testicular, ductus deferens, cremasteric.

3 nerves: genital branch of the genitofemoral, cremasteric, autonomic.

3 other things: ductus deferens, pampiniform plexus, lymphatics.

· Note some argument about this: Moore doesn't put in cremasteric nerve, Lumley puts in inguinal...

Fibula vs. tibia: which is the bigger one People talk of telling just a "little white lie", or a "little fib":

Therefore, the fibula is smaller.

· Alternatively: **TIB**ia is the **Thicker Inner Bone**.

· Alternatively: "Little lat FIB, big fat TIB".

Interossei muscles: actions of dorsal vs. palmar in hand "PAd and DAb":

The **Palmar Adduct** and the **Dorsal Abduct**.

· Use your **hand** to **dab** with a **pad**.

Thoracic duct: relation to azygous vein and esophagus "The duck between 2 geoses":

Thoracic **duct** (duck) is between 2 geoses, **azygous** and **esophagus**.

Lumbricals action Lumbrical action is to hold a pea, that is to flex the metacarpophalangeal joint and extend the interphalangeal joints. When look at hand in this position, can see this makes an "L" shape, since **L** is for **Lumbrical**.

Pectoral nerves: path of lateral vs. medial "Lateral Less, Medial More":

Lateral pectoral nerve only goes through Pectoralis major, but

Medial pectoral nerve goes though both Pectoralis major and minor.

Intrinsic muscles of hand (palmar surface) "A OF A OF A":

· Thenar, lateral to medial:

Abductor pollicis longus

Opponens pollicis

Flexor pollicis brevis

Adductor pollicis.

· Hypothenar, lateral to medial:

Opponens digiti minimi

Flexor digiti minimi

Abductor digiti minimi

Diaphragm innervation "3, 4, 5 keeps the diaphragm alive":

Diaphragm innervation is cervical roots **3, 4, and 5**.

Femoral triangle: arrangement of contents NAVEL:

· From lateral hip towards medial **navel**:

Nerve (directly behind sheath)

Artery (within sheath)

Vein (within sheath)

Empty space (between vein and lymph)

Lymphatics (with deep inguinal node)

· Nerve/Artery/Vein are all called Femoral.

Lingual nerve course

The Lingual nerve

Took a curve

Around the Hyoglossus.

"Well I'll be f*#ked!"

Said Wharton's Duct,

"The bastard's gone and crossed us!"

External carotid artery branches

"Some Anatomists Like F*#king, Others Prefer S & M":

Superior thyroid

Ascending pharyngeal

Lingual

Facial

Occipital

Posterior auricular

Superficial temporal

Maxillary

· Alternatively: **As She Lay Flat, Oscar's Passion Slowly Mounted**".

Abdominal muscles

"Spare **TIRE** around their abdomen":

Transversus abdominis

Internal abdominal oblique

Rectus abdominis

External abdominal oblique

Bicipital groove: attachments of muscles near it

"The **lady** between **two majors**":

Teres **major** attaches to medial lip of groove.

Pectoralis **major** to lateral lip of groove.

Latissimus (Lady) is on floor of groove, between the 2 majors.

Carpal bones

"Some Lovers Try Positions That They Can't Handle":

· Proximal row then distal row, both lateral-to-medial:

Scaphoid

Lunate

Triquetrum

Pisiform

Trapezium

Trapezoid

Capate

Hamate

· Alternatively: "**Scared Lovers...**"

· Alternatively: "Senior Lecturers...".

Bronchi: which is more vertical "Right on Red":

Many places allow making a **right** hand turn at a **red** light, if you first come to a complete **stop**.

A child swallowing a **red** penny is more likely to get it **stopped** down the **right** bronchus, since it is more vertical.

L4 landmark: 2 items "B4U" [before you]:

-Bifurcation of aorta

-L4

-Umbilicus

Retroperitoneal structures list

SAD PUCKER:

-Suprarenal glands

-Aorta & IVC

-Duodenum (half)

-Pancreas

-Ureters

-Colon (ascending & descending)

-Kidneys

-Esophagus (anterior & left covered)

-Rectum

Superior mediastinum: contents

PVT Left BATTLE:

-Phrenic nerve

-Vagus nerve

-Thoracic duct

-**Left** recurrent laryngeal nerve (not the right)

-Brachiocephalic veins

-Aortic arch (and its 3 branches)

-Thymus

-Trachea

-Lymph nodes

-Esophagus

Retroperitoneal organs (major)

"AC/DC Rocker Kids Party Down":

Ascending Colon

Descending Colon

Rectum

Kidneys

Pancreas

Duodenum

Bell's palsy: symptoms

BELL'S Palsy:

Blink reflex abnormal

Earache

Lacrimation [deficient, excess]

Loss of taste

Sudden onset

Palsy of VII nerve muscles

· All symptoms are unilateral.

Liver inferior markings showing right/left lobe vs. vascular divisions There's a Hepatic "**H**" on inferior of liver. One vertical stick of the H is the dividing line for anatomical right/left lobe and the other vertical stick is the divider for vascular halves. Stick that divides the liver into vascular halves is the one with vena cava impression (since vena cava carries blood, it's fortunate that it's the divider for blood halves).

Extraocular muscles cranial nerve innervation "LR6SO4 rest 3":

Lateral Rectus is 6th

Superior Oblique is 4th

rest are all 3rd cranial nerve

Femoral hernia: epidemiology

FEMoral hernias are more common in **FEM**ales.

Obturator canal: relations of structures "Who's flying in the top of Obturator canal?"

Obviously Not A Vein!":

Obturator

Nerve

Artery

Vein

Thoracoacromial artery branches ABCD:

Acromial

Breast (pectoral)

Clavicular

Deltoid

Diaphragm apertures: spinal levels "Come Enter the Abdomen:

Vena Cava [8]

Esophagus [10]

Aorta [12]

Cubital fossa contents

"**My Bottoms Turned Red**":

· From medial to lateral:

Median nerve
Brachial artery
Tendon of biceps
Radial nerve

Thyroids: relative sizes

Thyroid looks like a bra (see picture).
Breasts are bigger in women, so thyroid bigger in women.
Pregnant women have biggest breasts of all, so they have the biggest thyroids.

- **Navicular contacts 3 of 5 cuneiform bones**

"Navicular is like the Navigator logo":
There are 3 things coming off each.
· See diagram.
Therefore, cuboid has to contact 2 of the 5.

- **Kidney hilums at transpyloric plane [L1] L-1 goes through hilum of only 1 kidney, and it's the Left one.**

Radial nerve: muscles supplied (simplified) "BEST muscles":

Brachioradialis
Extensors
Supinator
Triceps

Superior orbital fissure: structures passing through "Lazy French Tarts Lie Naked In Anticipation Of Sex":

Lacrimal nerve
Frontal nerve
Trochlear nerve
Lateral nerve
Nasociliary nerve
Internal nerve
Abducens nerve
Ophthalmic veins
Sympathetic nerves

Cranial bones "Fraternity Parties Occasionally Teach Spam Etiquette": · The first two letters of each bone: **F**rontal **P**arietal **O**ccipital **T**emporal **S**phenoid **E**thmoid

Internal iliac artery: posterior branch PILS: Posterior branch Iliolumbar Lateral sacral Superior gluteal

Foramen ovale contents OVALE: Otic ganglion (just inferior) V3 cranial nerve Accessory meningeal artery Lesser petrosal nerve Emissary veins

Anatomical planes: coronal, horizontal, sagittal

Coronal: A classic painting/stained glass window of a saint/angel has a **corona** radiating around the person's head. The plane of the glass/page is cutting their head in the coronal plane. **Horizontal:** Someone coming over the **horizon** has their abdomen cut in the horizontal plane. **Sagittal:** the remaining one by default. _

Brachial plexus branches "My Aunt Raped My Uncle": · From lateral to medial:
Musculocutaneous **A**xillary **R**adial **M**edian **U**lnar

Tibia vs. fibula: which is lateral The Fibu**LA** is **LA**teral.

Superior orbital fissure: structures passing through "Lonely Fat Teenage Virgins Rarely Like Swallowing And Never Ingest": **L**acrimal nerve **F**rontal nerve **T**rochlear nerve **V**ein: ophthalmic **R**ing: tendinous · From the ring, arises: **L**ateral rectus **S**uperior division III **A**bducent nerve **N**asociliary nerve **I**nferior division III

Brachial plexus: branches of posterior cord STAR: **S**ubscapular [upper and lower] **T**horacodorsal **A**xillary **R**adial

Dermatome C6 location

Stick **arm out like crucifixion** stance. Curl your **thumb** and forefinger into an "OK" symbol while keeping your other fingers straight. Your hand should now look like a **6** shape. So C6 dermatome is your **thumb** and top of **arm** (reason for crucifix stance). · See diagram. _

Heart valves

"**Toilet Paper My A\$\$**": · From right to left: **T**ricuspid **P**ulmonic **M**itral **A**ortic

Median nerve: hand muscles innervated "The LOAF muscles":

Lumbricals 1 and 2

Opponens pollicis

Abductor pollicis brevis

Flexor pollicis brevis

· Alternatively: **LLOAF**, with 2 L's, to recall there's 2 lumbricals.

· To remember that these are the **Median** nerve muscles, think "**Meat LOAF**".

Interossei muscles: number of palmar vs. dorsals "3 on the P, 4 on the Dor":

There are **3** **P**almar, and **4** **D**orsal interossei.

Carpal bones: trapezium vs. trapezoid location · Since there's two T's in carpal bone mnemonic sentences, need to know which T is where:

Trapezi**U**M is by the th**U**M**B**, Trapezi**O**ID is in**S**IDE.

· Alternatively, Trapezi**U**M is by the th**U**M**B**, Trapez**O**ID is by its **S**IDE.

Sperm pathway through male reproductive tract SEVEN UP:

Seminiferous tubules
Epididymis
Vas deferens
Ejaculatory duct
Nothing
Urethra
Penis

Ureter to ovarian/testicular artery relation "Water under the bridge":

The **ureters** (which carry water), are **posterior** to the ovarian/testicular artery.

· Clinically important, since a common surgical error is to cut ureter instead of ovarian artery when removing uterus.

Soleus vs. gastrocnemius muscle function "Stand on your Soles. Explosive gas":

You **stand** on soles of your shoes, so **Soleus** is for posture.

Gasoline is explosive, so **Gastrocnemius** is for **explosive** movement.

Serratus anterior: innervation and action "C5-6-7 raise your arms up to heaven":

Long thoracic nerve roots (567) innervate Serratus anterior.

· Test C567 roots clinically by ability to raise arm past 90 degrees.

Wrist: radial side vs. ulnar side Make a fist with your thumb up in the air and say "Rad!".

Your thumb is now pointing to your **Radius**.

· Note: 'Rad!' was a late 80's catchphrase, short for 'Radical'. Things that were good were called 'Rad'.

Medial malleolus:

order of tendons, artery, nerve behind it "Tom, Dick, And Nervous Harry":

· From anterior to posterior:

Tibialis

Digitorum

Artery

Nerve

Hallicus

· Full names for these are: Tibialis Posterior, Flexor Digitorum Longus, Posterior Tibial Artery, Posterior Tibial Nerve, Flexor Hallicus Longus.

· Alternatively: "**Tom, Dick AND Harry**".

· Alternatively: "**Tom, Dick And Not Harry**".

Hip posterior dislocation: most likely arrangement for one "Hitting the brake pedal before the accident":

You are sitting, so hip is **flexed**, and **adducted** and **medially rotated** so can move your foot away from the gas pedal over to the brake pedal.

· Note: car accidents are

Diaphragm apertures "3 holes, each with 3 things going through it":

Aortic hiatus: aorta, thoracic duct, azygous vein.

Esophageal hiatus: esophagus, vagal trunks, left gastric vessels.

Caval foramen: inferior vena cava, right phrenic nerve, lymph nodes.

Buttock quadrant safest for needle insertion "Shut up and butt out":

The **Upper Outer** quadrant of the **Buttock** safely avoids hitting sciatic nerve.

Superior thyroid artery branches "May I Softly Squeeze Charlie's Girl?":

Muscular

Infrahyoid

Superior laryngeal

Sternomastoid

Cricothyroid

Glandular

Deep tendon reflexes: root supply "1,2,3,4,5,6,7,8":

S1-2: ankle

L3-4: knee

C5-6: biceps, supinator

C7-8: triceps

Vertebrae: recognizing a thoracic from lumbar Examine vertebral body shape:

Thoracic is **heart-shaped** body since your **heart** is in your **thorax**.

Lumbar is **kidney-bean** shaped since **kidneys** are in **lumbar** area.

· See diagram.

- **Cubital fossa contents MBBR:**

· From medial to lateral:

Median nerve

Brachial artery

Biceps tendon

Radial nerve

Ear: bones of inner ear Take a Hammer: Malleus

Hit an Indian Elephant: Incus

It puts its foot in a stirrup: Stapes

· Describes the shape, and relative position (from out to in) of the inner ear bones.

· Alternatively: "**Mailing Includes Stamps**".

- **Popliteal fossa: muscles arrangement** The two Semi's go together, Semimembranosus and Semitendinosus.

The Membranosus is **Medial** and since the two semis go together, Semitendinosus is also medial.

Therefore, Biceps Femoris has to be lateral.

Of the semi's, to remember which one is superficial: the **Tendonosus** is on **Top**.

CN VII innervated muscles (branchial arch 2 derivatives)

"Imagine someone making the **facial** expression to say '**PSS...**' ":

Facial expression muscles

Posterior belly of digastric

Stapedius

Stylohyoid

Carpal bones

"**Scottish Lads Take Prostitutes To The Caledonian Hotel**":

· Proximal row, then distal row:

Scaphoid

Lunate

Triquetrium

Pisiform

Trapezium

Trapezoid

Capate

Hamate

· Alternatively: "**Students Like Taking Prostitutes To The Carelton Hotel**".

Bronchopulmonary segments of the left lung "Astute Anatomists Share Inside Secrets About Lungs":

Apicoposterior (S1+2)

Anterior (S3)

Superior (S4)

Inferior (S5)

Superior (S6)

Anteromedial basal (S7+8)

Lateral basal (S9)

Biceps brachii muscle: origins

"You walk **shorter** to a street **corner**. You ride **longer** on a **superhighway**.":

· **Short** head originates from **coracoid** process.

· **Long** head originates from the **supraglenoid** cavity.

Extrinsic muscles of tongue [for pro soccer fans] "Paris St. Germain's Hour":

Palatoglossus

Styloglossus

Genioglossus

Hyoglossus

· PSG is a French soccer team (foreign), hence extrinsic comes to mind.

Anteflexed vs. anteverted: what bodypart each describes "Anteflexed and Anteverted both bend toward Anterior".

· The "V" words go together: Verted is for the cerVix (therefore flexed must be uterus).

Lung lobe numbers: right vs. left Tricuspid heart valve and **tri**-lobed lung both on the right side.

Bicuspid and **bi**-lobed lung both on the left side.

Axillary artery branches "Send The Lord to Say A Prayer":

· From proximal to distal:

Superior thoracic

Thoracacromial

Lateral thoracic

Subscapular

Anterior circumflex humeral

Posterior circumflex humeral

Foramen spinosum: location on base of skull Foramen **spinosum** is adjacent to the **spine** of sphenoid.

Tonsils: The three types "PPL (people) have tonsils":

Pharyngeal

Palatine

Lingual

Palmaris longus: location, relative to wrist nerves "The **Palmaris** between **two Palmars**":

Palmaris longus is between the **Palmar** cutaneous branch of Ulnar nerve and **Palmar** cutaneous branch of Median nerve.

Hyoid bone: muscle attachments "Christ, He Didn't Screw Girls Much. That's Obvious, Stupid":

· The first sentence is for 6 muscles attaching superiorly, the second sentence is for 3 muscles attaching inferiorly.

· Both sentences are in order from lateral to medial:

Constrictor (middle)

Hyoglossus

Digastric

Stylohyoid

Geniohyoid

Mylohyoid

Thyrohyoid

Omohyoid

Sternohyoid

Lung lobes: segments of right middle lobe "ML=ML":

Segments of Middle Lobe are Medial & Lateral.

Female pelvic organs' blood supply "3 organs, each get 2 blood supplies":

Uterus: uterine, vaginal.

Rectum: middle rectal, inferior rectal [inferior rectal is the end of pudendal].

Bladder: superior vesical, inferior vesical.

Face muscles: large muscle groups' cranial innervation Mandibular nerve:
Mastication.

Facial nerve: **Facial** expression.

Femoral triangle: arrangement of nerve, artery, vein VAN:

· From medial to lateral:

Vein

Artery

Nerve

· Nerve/Artery/Vein are all called Femoral.

Cranial bones "Old Pygmies From Thailand Eat Skulls":

Occipital

Parietal

Frontal

Temporal

Ethmoid

Sphenoid

· Note: 'skull-eating pygmies' helps remind that mnemonic is for the skull.

· Alternatively: "**O**ld **P**eople **F**rom **T**exas **E**at **S**piders".

· Alternatively: "**P**rostitutes **O**ffer **F**ree **S**ex **T**o **E**veryone".

Psoas major: innervation If you hit **L2, 3, 4**

Psoas gets **sore!**

Ansa cervicalis nerves "GHost THought SOmeone STupid SHot Irene":

Geniohyoid

Thyrohyoid

Superior Omohyoid

Sternothyroid

Sternohyoid

Inferior omohyoid

Leg: anterior muscles of leg "Tom's Hairy ANd Dirty Penis":

T: Tibialis anterior

H: extensor **H**ollicis longus

AN: anterior tibial **A**rtery & deep fibular **N**erve

D: extensor **D**igitorum longus

P: **P**eroneus tertius [aka fibularis tertius]

Eye rotation by oblique muscles "I Love S&M":

Inferior oblique: **L**ateral eye rotation.

Superior oblique: **Medial** eye rotation.

Inversion vs. eversion direction in the foot Little **INtroVER**ted boys **roll their feet in** when talking to girls.

Also, can just watch which way the sole of the foot goes: does it face in or out?

· See diagram.

Bowel components

"**Dow Jones Industrial Average Closing Stock Report**": · From proximal to distal:

Duodenum Jejunum Ileum Appendix Colon Sigmoid Rectum · Alternatively: to include the cecum, "**Dow Jones Industrial Climbing Average Closing Stock Report**".

Ulnar nerve to ulnar artery and radial nerve to radial artery relations

Think "peripheral nerves": The ulnar nerve is "ulnar" to the ulnar artery. Radial nerve is "radial" to the radial artery.

Carpal bones

"**Her C#nt's Too Tight So Lubricate The Penis**": · Anticlockwise: **H**amate **C**apitate
Trapezoid **T**rapezium **S**caphoid **L**unate **T**riquetral **P**isiform

Oblique muscles: direction of externals vs. internals

"Hands in your pockets": When put hands in your pockets, fingers now lie on top of external obliques and fingers point their direction of fibers: down and towards midline. · Note: "oblique" tells that must be going at an angle. · Internal obliques are at right angles to external.

Murphy's point organ [for Irish]"Murphy was an Irishman (and Murphy is a classic Irish surname), and Ireland=green": Green organ in body is gallbladder, so Murphy's point is the gall bladder.

Duodenum: lengths of parts"Counting **1 to 4** but staggered": **1st part: 2 inches 2nd part: 3 inches 3rd part: 4 inches 4th part: 1 inch**

Elbow: which side has common flexor originFM (as in FM Radio): **Flexor Medial**, so Common Flexor Origin is on the medial side.

Carpal bones

"**She Licks Toms Prick; Her Cu*t's Too Tight**": **S**caphoid **L**unate **T**riquetrum **P**isiform
Hamate **C**apitate **T**rapezoid **T**rapezium

Supination vs. pronation: which is more powerfulScrews were designed to be tightened well by majority of people. "Righty tighty": to tighten screws you turn to the right. Majority of people are right-handed. Turning right-hand to the right is supination.

Median and ulnar nerves: common featuresEach supply 1/2 of flexor digitorum profundus. Each supplies 2 lumbricals. Each has a palmar cutaneous nerve that pops off

prematurely. Each supplies an eminence group of muscles [ulnar: hypothenar. median: thenar]. Each enters forearm through two heads [ulnar: heads of flexor carpi ulnaris. median: heads of pronator teres]. Each has no branches in upper arm. Each makes two fingers claw when cut at wrist. Each supplies a palmaris [median: palmaris longus. ulnar: palmaris brevis].

Bowel components "Dublin Sisters Ceramic Red Colored Jewelry Apparently Illegal":

· 2-4 letters of each component:

Duodenum

Sigmoid

Cecum

Rectum

Colon

Jejunum

Appendix

Ileum

Thoracic duct: which half of upper body does it drain Know drains all of lower body, but was it the right or the left part of the upper body?

Answer: its **L**ymph from the **L**eft of the upper body.

Mediastinum: posterior mediastinum structures

There are 4 birds:

The esopha**GOOSE** (esophagus)

The va**GOOSE** nerve

The azy**GOOSE** vein

The thoracic **DUCK** (duct)

Maxillary artery branches

"DAM I AM Piss Drunk But Stupid Drunk I Prefer, Must Phone Alcoholics

Anonymous":

Deep auricular

Anterior tympanic

Middle meningeal

Inferior alveolar

Accessory meningeal

Masseteric

Pterygoid

Deep temporal

Buccal

Sphenopalatine

Descending palatine

Infraorbital

Posterior superior alveolar

Middle superior alveolar

Pharyngeal

Anterior superior alveolar
Artery of the pterygoid canal

Ulna bone: quick recognition in oral exam The Ulnar bone has a "U" at the end where it goes over the trochlea.

- **Vetebrae subtypes "Certain Doctors Luv Saddling Coeds":**

· From superior to inferior:

Cervical

Dorsal

Lumbar

Sacrum

Coccyx

External carotid artery branches StApLE OPIS:

Superior thyroid

Ascending pharyngeal

Lingual

External maxillary (facial)

Occipital

Posterior auricular

Internal maxillary

Superficial temporal

Carpal bones "The boat sailed to the moon with 3 pEas in a rOw, at the wheel was Captain Hook":

· Carpal bones in order of occurrence:

Boat is scaphoid. Moon is lunate. 3 is triquetrum. Peas is pisiform (stressing the E sound for trapezium). Row is trapezoid (stressing the O for trapezoid). Captain is capitate. Hook is hamate (hamate has the hook).

Coelic trunk: branches Left Hand Side (LHS):

Left gastric artery

Hepatic artery

Splenic artery

Penis: spinal level innervation "S2, 3, 4 keep the penis off the floor":

· Alternatively: "S2, 3, 4 make a mess on the floor".

Penis innervated by pudendal nerve branches, derived from spinal cord levels S2-4.

Thoracic cage: relations to the important venous structures Behind the sternoclavicular joints: the brachiocephalic veins begin.

Behind the 1st costal cartilage on the right the superior vena cava begins.

Behind the 2nd costal cartilage on the right the azygos vein ends.

Behind the 3rd costal cartilage on the right the superior vena cava ends.

Lacrimal nerve course "Lacrimal's story of 8 L's":

Lacrimal nerve runs on **L**ateral wall of orbit above **L**ateral rectus, then **L**ets communicating branch join in, then supplies **L**acrimal gland, then **L**eaves it and supplies **L**ateral upper eye **L**id!

Saphenous veins: path of great vs. small at malleolus "MAGdelaine has varicose veins" [The saphenous veins are important for varicose veins]:

Medial malleolus, **A**nterior to malleolus, and **G**reat saphenous go together.

Then the opposites of these go together: **S**mall saphenous is **p**osterior to the **l**ateral malleolus.

Leino- definition "Leino" rhymes with "**spleen-o**":

Therefore leino- means something to do with the spleen.

Spermatic cord contents "Piles Don't Contribute To A Good Sex Life":

Pampiniform plexus

Ductus deferens

Cremasteric artery

Testicular artery

Artery of the ductus deferens

Genital branch of the genitofemoral nerve

Sympathetic nerve fibers

Lymphatic vessels

Brachial plexus organization "The Castrated Dog Turns Rabid":

· From lateral to medial:

Terminal branches

Cords

Divisions

Trunks

Roots

Lordosis vs. kyphosis Lordosis: Lumbar.

KYphosis is **HY** up on the spine.

Carpal bones "Happy Cat Tom Took Pie To Little Sister":

Hamate

Capitate

Trapezoid

Trapezium

Pisiform

Triquetral

Lunate

Scaphoid

Plantarflexion vs. dorsiflexion Plantar flexion occurs when you squish a **Plant** with your foot.

Autonomics to the gut "The **PARA**sympathetics follow a rule of **TWO**" [pair = two]:

· The vagus does the top, the sacral splanchnics the outflow tract.

"The sympathetics follow a rule of threes":

· Greater, lesser, least splanchnic nerves go to the celiac, superior and inferior mesenteric ganglion.

Adductor magnus innervation "AM SO!":

Adductor Magnus innervated by Sciatic and Obturator.

Carpal tunnel syndrome: causes TRAMP:

Trauma (occupational)

Rheumatoid arthritis

Acromegaly

Myxoedema

Pregnancy

· Alternatively: **ARMPIT** to include Idiopathic.

Musculocutaneous nerve: muscles innervated BBC (British Broadcasting Corporation):

Biceps brachii

Brachioradialis

Coracobrachialis

Descending abdominal aorta: seven divisions "Sometimes Intestines Get Really Stretched Causing Leakage":

Suprenals [paired]

Inferior mesenteric

Gonadal [paired]

Renals [paired]

Superior mesenteric

Celiac

Lumbar [paired]

Menisci attachments in knee "Each meniscus has something attached to it":

The medial meniscus has the medial collateral ligament.

The lateral meniscus is attached to the popliteal muscle.

Carpel bones "So Long To Pinky, Here Comes The Thumb":

· Proximal row, lateral-to-medial, then distal row, medial-to-medial:

Scaphoid

Lunate

Triquetrium

Pisiform
Hamate
Capate
Trapezoid
Trapezium

Cruciate ligaments: insertions PAMS APPLES:

Posterior [passes] Anterior [inserts] Medially.
Anterior [passes] Posteriorly [inserts] Laterally.

Sperm: path through male reproductive system "My boyfriend's name is STEVE":

Seminiferous Tubules
Epididymis
Vas deferens
Ejaculatory duct

Femoral artery deep branches "Put My Leg Down Please":

Profundus femoris (deep femoral artery)
Medial circumflex femoral artery
Lateral circumflex femoral artery
Descending genicular arteries
Perforating arteries

Lower limb peripheral nerve injuries "Drop into a DEEP PIT and shuffle your way out":

Foot **Drop** results from **Dorsiflexors** and **Evertors** paralysis, due to common **Peroneal** nerve lesion.

Plantarflexion and **Inversion** impairment due to **Tibial** nerve lesion, results in a **shuffling** gait.

Supination vs. pronation "SOUPination": Supination is to turn your arm palm up, as if you are holding a bowl of **soup**.

"**POUR**-nation": Pronation is to turn your arm with the palm down, as if you are **pouring** out whatever is your bowl.

· Alternatively, **Pronation donation: Pronation** is palm facing downward, as if making a **donation**.

Subclavian artery branches "Very Tired Individuals Sip Strong Coffee Served Daily":

Vertebral artery
Thyrocervical trunk
---Inferior thyroid
---Superficial cervical
---Suprascapular
Costocervical
---Superior intercostal
---Deep cervical

Scalp: nerve supply GLASS:

Greater occipital/ Greater auricular

Lesser occipital

Auriculotemporal

Supratrochlear

Supraorbital

Tibia: muscles of pes anserinus (the muscles attached to tibia's medial side) "A Girl between Two Sargeants":

Gracilis is **between**

Sartorius and

Semitendinosus

Rib costal groove: order of intercostal blood vessels and nerve VAN:

· From superior to inferior:

Vein

Artery

Nerve

Internal pudendal branches "I Pee Pee But Don't Dump!":

Inferior rectal

Posterior scrotal (or labial)

Perineal

Bulb

Deep artery

Dorsal artery

Spinal cord: length in vertebral column SCULL:

Spinal Cord Until L2 (LL).

Erector spinae muscles: order Spinalis is on the **spine** (most medial).

Iliocostalis is on the **ribs** (most lateral).

And it's a **Long (Longissimus)** way between the spine and the ribs!

Portal-systemic anastomoses: main 2 places that retroperitoneals connect into systemic RetroPeritoneals hook up with **Renal** and **Paravertebral** veins.

Carpum and tarsum "SCIT":

(Artum) Superior Carpum

(Artum) Inferior Tarsum

Brachial artery: recurrent and collateral branches "I Am Pretty Sexy"

Inferior ulnar collateral artery goes with Anterior ulnar recurrent artery.

Posterior ulnar recurrent artery goes with Superior ulnar collateral artery.

· Alternatively: "I Am Pretty Smart".

Orbit: bones of medial wall "My Little Eye Sits in the orbit":

Maxilla (frontal process)

Lacrimal

Ethmoid

Sphenoid (body)

Facial nerve branches "Two Zombies Buggered My Cat":

· From superior to inferior:

Temporal branch

Zygomatic branch

Buccal branch

Mandibular branch

Cervical branch

· Alternatively: "Two Zulus Bit My Cat".

· Alternatively: "Two Zebras Bit My Coccyx".

· Alternatively: "To Zanzibar By Motor Car".

· Alternatively: "Tall Zulus Bear Many Children".

Cartilage derivatives of 1st pharyngeal arch (mandibular) "I'M A Super Sexy Guy"

(or Girl):

Incus

Malleus

Anterior ligament of malleus

Spine of sphenoid

Sphenomandibular ligament

Genial tubercle of mandible

Facial nerve: branches after Stylomastoid foramen "Ten Zulus Buggered My Cat (Painfully)":

· From superior to inferior:

Temporal branch

Zygomatic branch

Buccal branch

Mandibular branch

Cervical branch

(Posterior auricular nerve)

· Alternatively: "PAssing Through Zanzibar By Motor Car" (PA for Posterior Auricular).

-
Sperm pathway through male reproductive tract "STaRT DEEP--VD!":

· Sperm duct system progression, from smallest to largest:

ST: Seminiferous Tubules

RT: Rete Testes

DE: Ductus Efferentes

EP: Epididymis
VD: Vas Deferens

Superior orbital fissure: structures passing through "Live Free To See Absolutely No Insult":

Lacrimal nerve
Frontal nerve
Trochlear nerve
Superior branch of oculomotor nerve
Abducent nerve
Nasociliary nerve
Inferior branch of oculomotor nerve

Vertebrae: number of facets a typical thoracic has Typical Thoracic has **Ten** facets.

External carotid artery branches "So Long For Acting Old Parenting Means Stability":

Superior thyroid
Lingual
Facial
Ascending pharyngeal
Occipital
Posterior auricular
Maxillary
Superficial temporal

Horner's syndrome components "HORNY PAM"

· **Horner's is:**

Ptosis
Anhidrosis
Miosis

Superior mediastinum contents "BATS & TENT":

Brachiocephalic veins
Arch of aorta
Thymus
Superior vena cava
Trachea
Esophagus
Nerves (vagus & phrenic)
Thoracic duct

Scrotum layers "Some Days Eddie Can Irritate People Very Thouroughly":

Skin
Dartos layer
External spermatic fascia

Cremaster muscle
Internal spermatic fascia
Parietal tunica vaginalis
Visceral tunica vaginalis
Tunica albuginea

External carotid artery branches "Sally Ate Lots Of Fresh Produce March Through September":

Superior thyroid
Ascending laryngeal
Lingual
Occipital (O before F is an extremely common variation)
Facial
Posterior auricular
Maxillary
Transverse facial
Superficial temporal

Cubital fossa contents "Really Need Booze To Be At My Nicest":

· From lateral to medial:
Radial Nerve
Biceps Tendon
Brachial Artery
Median Nerve

-
Cricoarytenoids: abductor vs. adductor When aliens **abduct** you, they **Probe** you.
Posterior cricoarytenoids **abduct**. Lateral therefore is adduct by default.

Extensor expansion location in the hand The eXtensor eXpansion is on the proXimal phalynX.

Carpal bone having the hook The Hamate has the Hook.

External carotid artery branches "She Lay Flaccid As Olaf's Penis Slipped In":

· From caudal to cephalad:
Superior thyroid
Lingual
Facial
Ascending pharyngeal
Occipital
Posterior auricular
Superficial temporal
(Internal) maxillary

Brachial artery is medial to biceps tendon "BAMBI":

Brachial Artery is Medial to Biceps In elbow.

Ossification ages "Every Potential Anatomist Should Know When"

· When they ossify, in order of increasing year:

Elbow: 16 years

Pelvis, Ankle: 17 years

Shoulder, Knee: 18 years

Wrist: 19 years

Carpal bones (multangular names) "Never Lower Tillie's Pants. Mother May Come Home.":

Navicular

Lunate

Triquetrum

Pisiform

greater Multangular (trapezium)

lesser Multangular (trapezoid)

Capitate

Hamate

V3: sensory branches "Buccaneers Are Inferior Linguists":

-**Buccal**

-**Auriculotemporal**

-**Inferior** alveolar

-**Lingual**