

What bacteria have capsules

- mostly **gram -**
 - E. coli
 - K. pneumoniae
 - H. influenza
 - P. aeruginosa
 - Salmonella
 - gram +
 - B. megaterium (polypeptide, polysaccharide capsule)
 - Strep. pyogenes (hyaluronic acid capsule, M protein microcapsule)
 - Strep. pneumoniae
 - Strep. agalactiae (sialic acid capsule)
 - Strep. epidermidis
 - yeast
 - Crypt. neoformans
-

What artery gives off the right gastric artery?

- common hepatic artery

What happens with high extracellular potassium?

- excreted in kidneys

The candida overgrowth one with antibact/fung/or viral

- antibacterial (idk; choose bc those are the only 3 options)

Which nerve innervates the max 2nd premolar?

- middle superior alveolar nerve (max: incisors/canines- anterior superior a.n. molars- posterior superior a.n.)

Lots of occlusion questions about: TMJ pain causes and muscles causing the pain.

What nerve fiber type sends burning pain in a patient for 2 years?

FA pg.152

- C-fiber

What is specific for bacteria?

- penicillin

What amino acid is in bacterial cell walls - D or L alanine?

- D- alanine (L are in humans ex. L-DOPA)

What fungus causes meningitis?

- Cryptococcus neoformans (yeast spore inhalation; causes meningitis and pneumonia in AIDS)

What fungi infects the lungs to look like tuberculosis?

- Histoplasma capsulatum (yeast located in host macrophages)

What are bacteriophages NOT used for clinically

- classifying strains of staph (causes lysogenic diphtheria, transduction)

What medium are fungi grown on?

- Stabouraud agar (selective medium that grows fungi and inhibits bacteria)

What types of cancer are associated with obesity - i had no idea but the following are - but also bone and ovaries were options

- | | | | |
|---|------------------|--------------------------|-------------|
| Esophagus | Colon and rectum | Breast (after menopause) | Pancreas |
| Endometrium (lining of the uterus) | Kidney | Thyroid | Gallbladder |

What type of rxn does NOT produce pyruvate?

- reduction, oxidation, etc. - had this one down to 2

Adrenergic receptors for case study questions

What cervical nerve segment innervates the middle finger?

- dermatome - C7 (FA pg. 87; 8 pinky, 6 thumb)

What is calcium not needed for (ATP production, muscle contraction, neurotransmitter release or hormone release)?

- ATP production

How many roots and canals in a max 1st premolar?

- 2 roots, 2 canals

What tooth has a mesial crown concavity?

- max 1st premolar

What can you see from max 1 premolar that u cant on max 2nd premolar from lingual?

- buccal cusp can't be seen on the second as much bc height of buccal cusp are more equal as compared to the first PM
- can see two roots on 1st instead of only 1 on the second

What root of what tooth is most likely in max sinus?

- max 1st molar...palatal root

What ligament gets taut in full mouth opening causing the condyles to move forward?

- temporomandibular (lateral) ligament

What disease causes mild fever and nausea and sore throat in 24 hours?

- influenza (orthomyxovirus)

Why are chlamydia intracellular obligates?

- cannot make ATP so it must be in a host.

What does rickettsia cause?

- typhus (R prowazaki = typhus R. rickettsi = rocky mountain spotted fever)

Dna oncovirus → virus that causes cancer.

- human papilloma virus

What is TMJ cartilage embryologically?

- meckels, primary, secondary, 2 other answers that sounded even more right than those? i think meckel's

Rifampin is used with other medications to treat what?

- M. tuberculosis and Neisseria meningitidis

What is made from the cartilage of the 1st branchial arch?

- meckels cartilage → mandible

Which are the GUIDING cusps?

- non-functional (balancing) cusps "BULL"

What goes through incisive foramen?

- nasopalatine nerve

At what stage is embryo at implantation: gastrula, morula, blastocyst, trilaminar?

- blastocyst (week 1; order: morula – blastula – gastrula)

How does Strept. mutans genes regulate activity: transcription, translation, replication, post-translation?

- transcription

Lots of injection ques on nerve supply to the max and mand arches (pg 616 in firstaid)

The deep facial vein drains directly into

- facial vein (pterygoid plexus → deep facial vein → facial vein)

The sigmoid sinus drains directly into what?

- internal jugular vein

How does sulfa drugs work: cell wall permeability, cell membrane activity, translation or transcription?

- competitive inhibitors to the enzyme DHFA

-What is the upper compartment of the TMJ made of: mandibular fossa and superior surface of disk I believe...the whole ques was asking if the disk was part of the compartment or not basically, had the same ques but for the lower compartment as well → The disc divides each joint into two. The lower joint compartment formed by the mandible and the articular disc is involved in **rotational** movement—this is the initial movement of the jaw when the mouth opens. The upper joint compartment formed by the articular disk and the temporal bone is involved in **translational** movement—this is the secondary gliding motion of the jaw as it is opened widely.

A 10 year old TMJ has:

- dense fibrous CT

What is the difference between the lamina propria and submucosa:: muscularis mucosa, lamina propria has less regular CT, less specialized CT..

- lamina propria = loose CT & submucosa = dense irregular CT

The internal elastic lamina is located where?

- between vessel and intima (located outside of intima between intima and tunica media in blood vessels)

What is not present in an orthokeratinized layer: listed all the stratum?

- stratum lucidum

What is the composition of a bone salt? CaHPO_4 , $\text{Ca}_2(\text{PO})_4$, hydroxyapatite

- (tricalcium phosphate) calcium hydroxyapatite $3\text{Ca}_3(\text{PO}_4)_2 \times \text{Ca}(\text{OH})_2$

What is the primary protein secreted by odontoblasts?

- reelin

What is not found in the pulp? -osteoblasts, odontoblasts, cementoblasts, fibroblasts

- cementoblasts (located in the PDL)

Chlamydia needs to be in the cell because:

- does not have own energy sources, has DNA dependent RNA polymerase

Which fungus MOST likely causes meningitis?

- Cryptococcus

What forms the palate?

What innervates the branchiomuscles: none of the options were V, VII, IX, X so idk

-

What is the mutation in amelogenesis imperfect? Missense, nonsense, insertion of 9 aa, deletion of 9 aa

- missense

What is the best medium to grow fungi from a pathologic specimen?

- Sabourds

Which is most like the primary syphilis oral chancre lesion? herpangias, herpes 1, VZV

- herpes I

what is the most dorsal aspect of the brachial plexus?: cords, divisions, branches

branches

Woman has pain in the right middle finger taking off her ring, which innervation?: T1, T2 etc

- C7

What innervates the erector spinae muscles?

- dorsal (posterior) rami of spinal nerve

Where would you see the changes of cell degeneration? - nucleolus, nucleus, cytosol, cell membrane (THIS one was which do you see FIRST, I put cell membrane, because blebbing occurs first, before any nucleus stuff, but check to be sure)

Where do you find the most severe atherosclerosis?: pulmonary arteries, deep veins in the leg
- arteries (atherosclerosis happens in arteries not veins)

Which is most likely to cause a brain infarction?

Which organ is closest to the right kidney? - jejunum, colon, pancreas, stomach, spleen
- colon

Where does basal cell carcinoma most affect?-either upper face or hands
- upper face

Andrew Atisha

What parasympathetic nerve runs through the foramen lacerum?
- greater petrosal

What makes up the superior orbital fissure?
- greater + lesser wing of sphenoid

What is the shape of max canine from contact to cervical line?
- concave

Superficial temporal vein + maxillary vein?
- retromandibular vein

Know the other names for fluoroquinolones (DNA gyrase inhibitor)?
- ciprofloxacin, ofloxacin

What main artery supplies the nose?
- nasopalatine (decks say sphenopalatine)

What part of the maxillary artery is in the infratemporal fossa?
- 1st part (mandibular branch)

Cranial nerves with parasympathetic supply

What cleaning method is best if you want to keep your instruments knife edge sharp?
- dry heat

Etiology for Q fever?
- Coxiella burnetii

What nerve block do you use if you're only working on the mandibular incisors?
- mental nerve

Which one of these is not part of the circle of Willis?
- basilar (anterior/posterior communicating, anterior/middle/posterior cerebral a.)

Which one of the thalamic nucleus receives pain and temp from the face?
- VPM

Know all the parts of the adrenal gland:
- z. glomerulosa (mineralcorticoids – aldosterone)
- z. fasciculata (glucocorticoids – cortisol)
- z. reticularis (androgens)
- adrenal medulla (catecholamines – epinephrine)

The foramen ovale is damaged, what does this cause?

- loss of sensation to anterior 2/3

(not loss of taste to anterior 2/3, this only happens if V3 cut at lingual n.)

Most numerous tastebud?

- filiform

(filiform are the most numerous papilla but have no tastebuds)

Where does the submandibular gland empty into?

- sublingual caruncle (papilla)

Peptidoglycan is made by D-glutamate and?

- L-alanine

How do bacteria's transfer the most DNA?

- conjugation with sex pilli

What is directly under the fibrous capsule in the TMJ?

- fibrocartilage or bone???????

What are the borders of the carotid triangle?

- superior omohyoid, SCM, posterior digastric

What muscle is supplied by the same nerve as the mylohyoid?

- V3; anterior belly of digastric

What structure creates an impression on the right lung?

- arch of the azygous vein

What muscle adducts the scapula?

- rhomboids

What drains the tip of the tongue?

- submental lymph nodes

What volume of air is left in the lungs after you forcefully exhale?

- residual volume

What gland does not contain intercalated ducts?

- sublingual (striated – salivary glands; striated/intercalated – submandibular, parotid; intercalated – pancreas)

Where did the thyroid gland originate from?

- foramen cecum on tongue

What comes from Rathke's Pouch?

- hypophysis (anterior pituitary)

What blood vessel supplies left and right atria?

- L / R circumflex arteries

What connects the portions of the small intestines to the abdominal wall?

- mesentery

What part of the stomach is the substance that promotes absorption of B12 released from?

- fundic (parietal cells)

What do the enteroendocrine cells of the small intestine promote?

- pancreatic and gall bladder activity

TMJ origin and insertion and all

Muscles of Mastication

Muscle	Origin	Insertion	Function
▪ masseter	maxilla zygomatic process (sup) + zygomatic arch (deep)	mandible angle (sup) + lateral ramus (deep)	elevation, retrusion, ipsilateral excursion
▪ temporalis	temporal fossa	medial coronoid + anterior ramus	elevation (ant/sup fibers), retrusion (post fiber)
▪ medial pterygoid	medial of lateral pterygoid palate	medial of mandibular angle	elevation, protrusion, contralateral excursion
▪ lateral pterygoid	lateral of lateral pterygoid palate	capsule, disk (sup) + anterior condylar neck (inf)	depression, protrusion, contralateral excursion

What uses muscarinic receptors?

- postganglionic parasympathetic nerves

What supplies myelin in the CNS?

- oligodendrocytes

What's the difference between the portal vein and regular veins?

- portal veins connect 2 sets of capillary beds without going through the heart

Where do osteoclasts come from?

- monocytes

What's the difference between juxtaglomerular nephrons and cortical nephrons?

- length of the thin portion of Henle; cortical is shorter

Main reason for lumps on breast?

- fibrocystic disease

What type of collagen predominates in the PDL and not in the bone or dentin?

- PDL = 1 + 3 or 1 + 2 Dentin = 1 Pulp = 1 + 3 or 1 + 2

Know what comes from the Dental papilla and what comes from the dental follicle?

- dental papilla → pulp + dentin - dental follicle → cementum + alveolar bone + PDL

Know that if you still have mamelons, you have some type of malocclusion?

- open bite

What are the following embryonically derived from?

- philtrum = frontal nasal process + medial nasal process
- lips = medial nasal process + maxillary process (upper lip)
- palate = primary palate (prolabium, premaxilla, medial palatal triangle) + lateral palatine process (palatal shelves)

Secondary structure of a protein is held together by?

- hydrogen bonds

What type of curve does myoglobin have?

- hyperbolic

If your body was having trouble absorbing choline what could happen?

- no choline = no fat breakdown (b/c choline is used in lecithin = bile component)

What type of mutation gives you the same amino acid?

- silent

If a cell's membrane potential is slowly reaching 0mV what can be the reason?

- Na/K ATP pump has stopped working

Adrenergic Receptors

	Alpha-1 (α_1)	Alpha-2 (α_2)	Beta-1 (β_1)	Beta-2 (β_2)
Stimulated:	NE, E	NE, E	E	E
Location:	smooth muscle (skin, GI)	presynaptic terminal, platelet, fat, GI	heart	skeleton, bronchial
Function:	vasoconstriction	inhibition, dilation	↑ HR, ↑ contraction	vasodilation, bronchodilation

What is true of smooth muscles?

- answer I put was that they are all electrically connected but not 100% just know the main facts about each muscle group

An increase in CO can cause what?
- decrease in PPO₂ (L shift)

(or decrease in oxygen content in blood?????)

What do you use to measure GFR and renal plasma flow?

- GFR = insulin or creatine phosphate
- renal plasma flow = PAH (paraaminohippuric acid)- secreted in urine

Ascorbic acid is used for what?

- hydroxylation of proline and lysine in collagen synthesis

First antibody to show up on scene?

- IgM

Some extra websites to quickly read!

<http://www.dent.ucla.edu/pic/members/immunology/immunology4.html>

<http://www.wikiradiography.com/page/Foramina+in+the+Skull>

Horners question

- superior cervical ganglia

Sternohyoid and sternothyroid innervated by what?

- ansa cervicalis

What innervates the shoulder area?

- C3-C4

Macrophages make

- IL-1 and TNF

Oral nerve supply (tons of tq)

(order = roots-trunks-divisions-cords-branches)

What describes bone and tooth fusion

- ankylosis

Ductus Arteriosus makes what.

- ligamentum arteriosum

What is most distal of brachial plexus

- branches

Collagen is composed of:

- 1/3 glycine

Epidemic typhus is caused by:

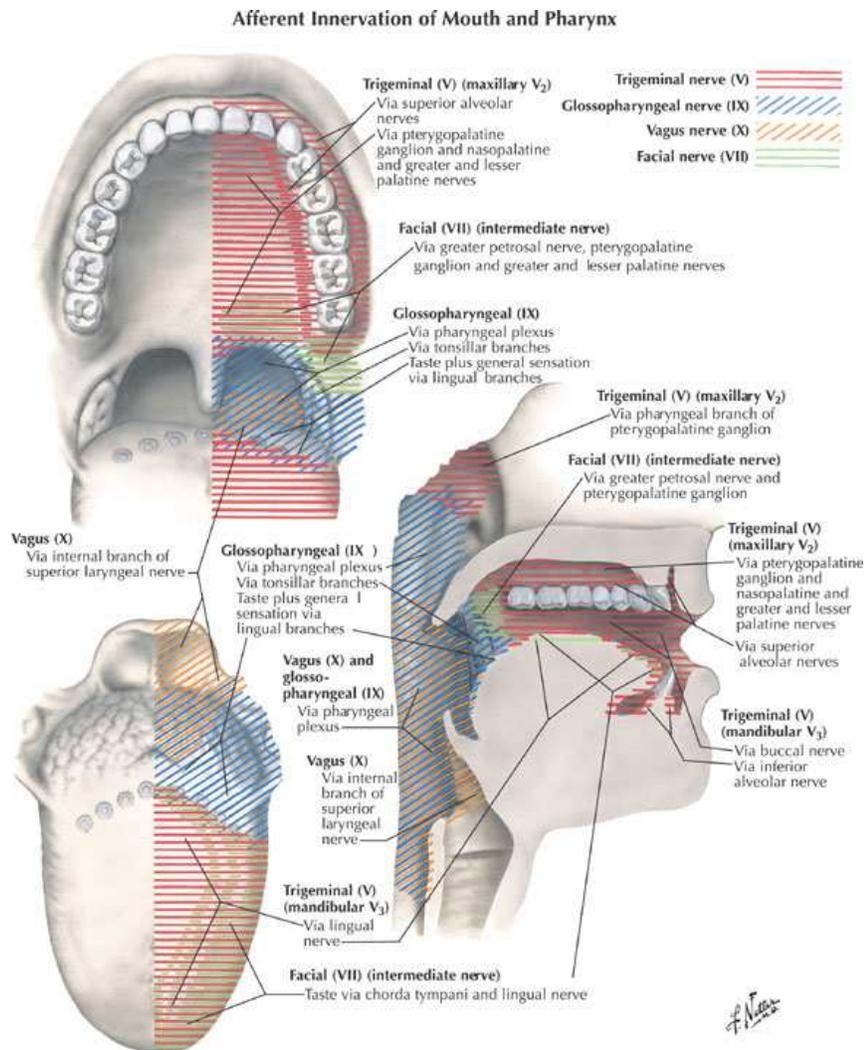
- Rickettsia prowzaki

Differentiate the papillary layer from the reticular layer of the dermis:

- papillary = thin cellular layer, dermal papilla and rete pegs
- reticular = thicker, fibrous, less cellular

Plummer-Vinson syndrome

- iron def anemia with atrophic glossitis, esophageal webs and dysphagia
- occurs in post-menopausal women



Histoplasma capsulatum

- located in macrophages and tuberculosis like

How is basal metabolic requirements measured?

- respiratory quotient

What is required for xaminations (ie. transamination, aminotrasferases)

- vitamin B6 (pyridoxine: pyridoxal phosphate, pyridoxamine phosphate)

Metabolic acidosis is seen with a rise in H⁺ and what other ion?

- K⁺

Ketogenic AA's

- lysine + leucine

What can affect renal GFR?

- adenosine (looking for vasodilators; choices were adenosine or histamine)

Mutation in odontogenesis imperfecta?

- missence

Alot of typical occlusion tq's, I didnt have any with posssets envelope

Money

What is Tm for DNA?

- melting temperature = 94-98C

Hexokinase and glucokinase, what are their functions?

- activates G6p and other deactivates it?? look up

A lot of collagen, proline, lysine. how is collagen formed. proline reacts with what to make what. know reactions for that.

Case studies on mouth, multiple tooth fractures, radioluciences in x-rays in certain areas, on multiple meds. Study various oral epitheliums eg. buccal, masticatory, lining, and nerves on pg. 616 of first aid.. ORTHOKERATINIZED know what that is

Know primary mandibular 1st molar; how many cusps? how many roots?

- mandibular 1st molar = unlike any other tooth (2 cusps, 3 roots)

Know anatomy for:

- maxillary 1st molar (inside out anatomy, grooves, oblique ridges)
- canines

Which bacteria doesn't have a capsule?

- M. tuberculosis or B. pertussis?

Which bacteria not part of normal flora of mouth?

- B. pertussis????

Differences in function of superior and inferior head of the lateral pterygoid.

- lateral pterygoid:	Origin	Insertion	Function
▪ Superior	infratemporal fossa roof	articular capsule and disk	retrusion, ipsilateral movements, pulls capsule down/forward
▪ Inferior	lateral side of lateral pterygoid plate	anterior condylar neck	opening, protrusion, contralateral movements

Temporalis fibers

- anterior / superior = elevation
- posterior = retrusion

Retrodiscal space on tmj (feel pain in TMJ)

▪ Retrodiscal Tissue

- posterior continuation of the vertical split of the posterior portion
- connective tissue is vascular and innervated = pain during anterior disc displacement due to condyle compressing articular surface of temporal bone
- auriculotemporal nerve (v3) = capsule and periphery disc pain

What attaches to condylar head and articular eminence?

- temporomandibular ligament?(capsule- connects condylar head, articular eminence, and disc)

What lies between med. pterygoid and hyoglossus?

Lumps near thyrocervical trunk containing sulfar granules can be.

- actinomyces infection

TMJ origins and insertions

You have a DNA strand with 30% A, 20% T, 40% C. How much C on opposite strand.

- 10 %

Myasthenia gravis is closely associated with what?

- thymoma (thyoma: tumor originating from the epithelial cells of the thymus)

Superior cervical ganglion does sympathetic ganglionic to what?

- thoracic spinal cord???
- supplies sympathetic innervations to the face
- adjacent to C2 & C3; postganglionic axon projects to target: (heart, head, neck) via "hitchhiking" on the carotid arteries
- fibers are postganglionic that synapsed with preganglionic sympathetic fibers (T1 to T4); these preganglionic sympathetic neurons are specifically located in the lateral horn of the spinal cord.

What is the origin of the adrenal medulla?

- neural crest cells

Which of the following is NOT a infrahyoid muscle?

- geniohyoid (Infrahyoid= omohyoid, sternohyoid, sternothyroid, thyrohyoid)
(Suprahyoid= diaphragic, mylohyoid, geniohyoid, stylohyoid)

Nerves for all Teeth (page 616 of first aid)

Which cancers metastasize to bone? pick 2 options (breast, lung, prostate)

What is a feature of skeletal muscle?

- multinucleated cells

Which area of body is infarct most likely? Which area most likely to have thrombus?

- deep leg thrombosis → LV infarct

What is the function of phospho glucotransferase in s. mutans?

- move sugars? create glucans dextrans??

Where is sperm stored?

- epididymis

What cells produce testosterone?

- leydig cells

Which is not corticotropic?

- tsh??? (corticotropic = ACTH, B endorphin)

For osteoporosis what treatment would you NOT use?

- cortisone (also estrogen is no longer used either)

The clavicle is not part of what?

- thoracic cage

Which tonsil has respiratory epithelium?

- pharyngeal tonsil (pseudostratified ciliated)

What are the functions of radicular fibers? How do they prevent teeth from being pulled out?

Clinical scenario with enlarged submandibular nodes.

- Wharton's duct is blocked

Clinical scenario were random lesions form in different spots in the mouth.

-

Oral Epithelium

- | | | |
|---------------|-----------------|--|
| ▪ Masticatory | keratinized | gingival, hard palate |
| ▪ Lining | non-keratinized | alveolar mucosa, buccal mucosa, floor of mouth, soft palate, ventral tongue, vestibular lips |
| ▪ Specialized | both | dorsal tongue |

What lymph node travels along the external jugular vein?

- superior cervical lymph nodes

What can be mistaken for tuberculosis?

- histoplasmosis

Capillary bed velocity is inversely related to branching???

Know celiac trunk

Medications in clinical scenario.

What is an increase in white blood cell count?

- thrombocytopenia + leukemia

What does tetracycline inhibit?

- protein synthesis

What is the most numerous taste bud?

- filiform

What is an intermediate of the urea cycle?

- arginine

Esophageal varices most likely can cause what?

- hematemesis

Type of zoo fungi species, how are dimorphic --> pseudohyphae and hyphae?

The ventral surface of tongue has what kind of epithelium?

- non-keratinized stratified squamous

What is the radiolucency above the maxillary 1st molar?

- maxillary sinus

-know insulin and diabetes, systemic effects, epinephrine causes what?

In ICP the mandibular canine contacts what tooth?

- M marginal ridge of the lateral + D marginal ridge of the canine

Where do red infarcts most likely occur?

- lungs (lungs, liver, s.intestine)

What is the function of IL-1?

- fever stimulates IL-2 and TNF(gamma)-released by monocytes

Where is carbamoyl phosphate formed ?

- mitochondria? know the reaction for that

What facial muscles develop from the 2nd brachial arch?

-

Mass movement in the colon caused by food entering what?

- cecum (colon) (peristalsis is caused by chyme entering cecum through ileocecal valve)

What mineralized tissue forms from the dental follicle

- cementum (alveolar bone also)

What's the surrounding tissue of these lesions in random parts of the mouth?

During canine guidance if it runs by distal or mesial marginal ridge. where contacts are made

DNA transformation and how it relates to tumor growth or initial DNA synthesis

-2 TQs on posselt's envelope of motion.. one was protrusion=most anterior point second was maximum opening = most inferior point

-list of various cartilages/bones asked which are the most similar in organic material i went with cementum and bone .. other choices had enamel dentin etc.

-a lot of occlusion questions. lat excursion what cusp passes through what embrasure

Gluconeogenesis

Interleukin Functions

Dental Anatomy

- canines (max vs man)...general feature. one has concavity on distal, one has straight from mesial
- max 1st molar down. how many roots, canals, depression, etc.

Gennaro

Which canine has a concave surface?

- mesial of max canine

The upper median lip is innervated by

- infraorbital nerve

The TMJ of a 10 year old has what? (can't remember if it was the disc or the bone)

- fibrocartilage but dense CT was an option (articular eminence, glenoid fossa, condyle = dense fibrocartilage)

You are doing an injection into the maxillary molar and patient comes in the next day with a hematoma? What did you hit?

- pterygoid plexus

A patient has elevated level of PSA and acid phosphatase, what is this caused by?

- carcinoma of prostate

Hypertension is the most common cause of what?

- LV hypertrophy

What is not in the carotid triangle?

- submandibular gland

What does 8M of urea do to DNA?

- disrupt hydrophobic bonds

Patient has a periapical lesion with a border of epithelium.

- cyst (cyst → abscess; abscess are infected w/ pus and lines by collagen; cyst lined with epithelium)

Patient has fever, weakness, weight loss, something with gums, and high levels of WBCs especially lymphocytes.

- chronic lymphoid leukemia

Piriform Recess

- recess on either side of the laryngeal orifice; bounded medially by aryepiglottic fold, laterally by thyroid cartilage
- recurrent laryngeal and interal laryngeal nerve are deep to mucus membrane
- common place for rood to become trapped ex.) fish bone - involved in speech

Posterior hard palate is innervated by

- greater palatine nerve

Which is most likely going to lead to GI cancer?

- villous adenoma

What part of lateral pterygoid muscle protrudes the mandible?

- inferior lateral pterygoid

Tetracycline targets

- protein synthesis

Ripamycin targets

- RNA synthesis

Pain in teeth is perceived by

- odontoblast processes (on cd) or hydrodynamic

Patient has acidosis what else will he have

- hyperkalemia

Development of 2 crowns from one tooth bud is

- germination

What muscle is used for circumduction (circling) of arm

- deltoid
- axilla = tres minor innervations
- pectoralis major, subscapularis, coracobrachialis, biceps brachii, supraspinatus, deltoid, latissimus dorsi, teres major and minor, infraspinatus, long head of triceps.

What is not absorbed in the jejunum

- water

Stomach: alcohol, some short-chain fatty acids.

Duodenum: vitamins A and B1, iron, calcium, glycerol, fatty acids, monoglycerides, amino acids, mono/di-saccharides

Jejunum: glucose, galactose, amino acids, glycerol and fatty acids, nonoglycerides, diglycerides, dipeptides, Cu, K, Zn, Ca, Cl, Mg, Ph, Vitamins D, E, K, B, C, alcohol

Ileum: disaccharides, sodium, potassium, chloride, calcium, magnesium, phosphorus, iodine, Vitamins C, D, E, K, B1, B2, B6, B12, and most of the water.

Colon: sodium, potassium, water, acids, gases, some short-chain fatty acids metabolized from plant fibers and undigested starch, and vitamins synthesized by bacteria (biotin and Vitamin K).

Most abundant taste bud

- filiform

Primary teeth compared to permanent teeth are

- bulbous and constricted

When does organogenesis occur

- weeks 3-8 weeks

How does ATP cross the inner mitochondrial matrix membrane?

- carrier mediated (secondary active???)

Necrosis with soap and calcification

- enzymatic fat

How to treat heat sensitive products

- ethylene oxide

Most abundant antibody in saliva?

- sIgA (or just normal IgA?)

Most common anemia

- iron deficiency

Where is phosphoenol something kinase found (Phosphoenolpyruvate carboxykinase ????)

- liver (muscles was a choice)

Urea cycle gets its nitrogen directly from; choices were carbonyl phosphate, aspartic acid, glutamic acid

- aspartic acid

The round ligament attached to the liver was what in the fetus

- ductus venosus or umbilical vein

Radiograph of the lateral of side of orbit, on the opposite side of damage, has a single irregular radiolucent line what is it?

- suture (but might be fracture)

Lots of embryo

Urea cycle (few questions)

Fatty Acid Synthesis and Catabolism

Jake Ma

Thenar Muscles

- thumb muscles and innervations

Plummer Vinson Syndrome

- long term iron deficiency anemia

Gardners Syndrome

- colorectal polyps → can lead to colon cancer

Sjogren Syndrome

- autoimmune disease that attacks tear and saliva glands – can cause XEROSTOMIA

Know the composition of Collagen

- proline and glycine?... its mostly proline or hydroxy proline

GUMMA is a result of syphilis infection

- NOT from alcoholism

Histoplasmosis

- resembles TB

Rickettsia

- causes typhus and is transferred via insects

Muscularis mucosa is usually only found in the

- esophagus

Achalasia

- disorder of the ESOPHAGUS

When going from max opening to max protrusion, the condyle moves

- POSTERIORLY (i think)

NSAIDS (aspirin) inhibits

- cyclooxygenase

Difference between cyclooxygenase-1 and cyclooxygenase-2

- pain and the other should be for coagulation, but i forgot which one is for which

Know what's made from neural crest cells (there were a few of these) ..

- cells with their bodies in the PNS... (neural TUBE cells = bodies in the CNS)

How does Strep mutans use glucosyltransferase to convert sucrose to dextrans and levans for plaque accumulation?

Pyridoxal phosphate is a cofactor for

- transamination

What uses biotin as a cofactor?

-

How does the angle classification of occlusion of older people tend to change

- class 1 → class 3

Pyruvate can be formed from all the following except (transamination, reduction, and other types of reactions)

-

Alpha 1 adrenergic

- vasoconstriction in postgang sympathetic

Alpha 2 adrenergic

- PREgang sympathetic that inhibits the release of norepinephrine and insulin from beta cells of pancreas

Beta 1 adrenergic

- increase cardiac output and renin release from kidney

Beta 2 adrenergic

- sympathetic effects on smooth muscle and skeletal muscle

Nicotinic cholinergic

- ALL preganglionic synapses and at the neuromuscular junction

Muscarinic cholinergic

- post ganglionic parasymp fibers

Tori looks like histologically

Proteins secreted by ameloblast

-

Proteins secreted by odontoblast

-

Parasympathetic cranial nerves and their ganglions (CN 3,7,9,10) .. also know their pathways and which foramen

Position and locations of the NON-FUNCTIONAL cusps; know the positioning of ALL cusps, and not just the functional ones

KNOW THE INNERVATION OF THE TEETH WELL

KNOW TMJ WELL (muscles, ligaments, whats connected to what, etc etc)

Know the histological characteristics of each tissue in the oral cavity (gingiva, hard palate, soft palate, tongue, floor of the mouth, attached gingiva vs sulcus gingiva, etc etc) --> there was A LOT of this on my test

What cranial nerves innervate branchiomeric musculature?

What innervates the biceps brachii?

- musculocutaneous (3 heads of triceps brachii = radial nerve)

Comparing Primary Max central to Permanent Max central - my guess was primary had a longer root to crown ratio....

greatest CEJ height on a mand 1st molar, medial third, middle third, distal third, all the same

Case study on a tumor causing radiolucency apical to the max 1st molar, was of epithelial origin and diffuse i think, patient had elevated levels of acid phosphatase (not sure if that even mattered)

- prostate cancer primary

What is not derived from neural crest cells... helps a lot if you know that melanocytes, adrenal medulla, and facial cartilage is. not sure what right answer was

There is a case study where this depressed chick is taking antidepressant medication, lots of stuff is wrong with her but when they ask what causes the pain in her mouth, i put burning mouth syndrome

Know what gardner's syndrome is

- familial colorectal polyposis

Know what Plummer-Vinson syndrome is

- triad of dysphagia (esophageal webs), glossitis, iron deficiency anemia; in post menopausal women

Know what sjorden syndrome is

- autoimmune against exocrine glands (tears, saliva)

What kind of agonist is involved in fixing asthma?

- beta2 adrenergic

Where does superior thyroid branch off of?

- external carotid artery

What triangle does the facial artery go through?

- submandibular or parotid???

Ligamentum artery is a landmark for what?

- left recurrent laryngeal (aka left inferior laryngeal nerve)

Know what adducts/abducts the larynx

- cricothyroid = lengthens, stretches
- posterior cricoarytenoid = abducts
- lateral cricoarytenoid = adducts
- transverse arytenoid = adducts

Know the histology of a tori.

- vital lamella with a fibrocartilage surface, but other choices included hematopoietic cavities
- * bone covered periosteum w/ layer of thin epithelium, w/ minimal rete pegs

How is lamina propria different from submucosa?

- lamina propria = mucus membrane right below epithelium, has loose CT, capillaries and central lacteal

What cartilaginous bone arises from the first brachial arch?

- Meckel's cartilage

Which gland in the mouth is pure mucous?

- palatine glands

Know like what kind of mucous/serous that parasympathetics and sympathetics stimulate.

- parasympathetic = serous
- sympathetic = mucus

What embryological structures make up the roof of the mouth?

- primary palate (2 median nasal process)
- secondary palate (2 maxillary processes, lateral palatine process)

What is mode of action for sulfa drugs?

- inhibit dihydropteroate synthase (DHPS)

adding extracellular K^+ near a free nerve ending whose resting potential is -70mv will do what?

- depolarize $1-5\text{mv}$

Know when immediate side shift/bennet movement occurs?

- working side condyle

What causes epidemic typhus?

- Rickettsia prowazekii

Arbovirus has what mode of transmission?

- insect vector

NADPH for biosynthesis comes from what pathway?

- pentose phosphate pathway

What is not a pathway for making pyruvate, choices were like oxidation, transamination

Innervations responsible for wrist extension is?

- radial nerve

Case study with a lady with thenar problems, forearm thenar.... i assumed that was the wrist for some reason, ends up that its intrinsic muscles of the thumb. What innervates the thumb?

- median nerve

The lady with the thumb problem above, I guess kept on doing hygienist stuff even though both her thumbs didn't work, know what ethical principle she was violating.

- nonmaleficence

Tricuspid valve is broken, where is the backflow going?

- right ventricle → right atrium

What artery supplies the SA node?

- right coronary artery

Flow of materials to the liver portal vein

- portal vein → sinusoids → central vein → hepatic vein → inferior vena cava

Patient is missing teeth on the bottom (bottom edentulous?) something something, due to the fact the patient has no teeth there are skeletal effects to the mandible, what is not a possible outcome of the skeletal changes?

- have a more prominent chin

What stage of infection of a patient's infection is the dentist/staff most likely to be infected?

- prodromal stage

When you wipe down your office and kill only some of the bacteria, you are....

- disinfecting

What is the primary sensory relay station of the brain?

- thalamus

What is not a symptom of down syndrome trisomy 21?

- DO HAVE: simian crease, macroglossia, mental retardation, epicanthal folds, low ears set

When can a teratogen cause gross malformations?

- 2 months (3-8 weeks)

How can penicillin kill the target without hurting the host cells?

- prevents cross linking or transpeptidation (cell wall synthesis)

TMJ cartilage (small chance it may have said TMJ capsule) is what/made from what?

- secondary cartilage

Life cycle of a primary tooth? had a combination of 3 things eruption absorption exfoliation,

When extracting a maxillary tooth which is the most likely to breach the maxillary sinus?

- 1.) max 1st molar palatal
- 2.) max 2nd molar MB

What is the highest cusp of a primary mandibular 1st molar?

- MB

When primary molars are replaced by their succedaneous teeth, what is the combined size difference of the permanent teeth?

- 2-4 mm smaller

What is not contained in the adult pulp?

- cementoblast

When the pulp get older what happen to it?

- less cellular, more fibrous

When extracting a tooth, due to its root shape, what is the easiest tooth to rotate?

- max central

What is closely associated to actin and binds calcium to cause muscle contraction in smooth muscle?

- troponin

HIV attacks macrophages and T helper cells because that have what

- CD4+

How does AZT work against HIV?

- inhibits reverse transcriptase enzymes

Angle classification question, something about growth and development... What is the most common class angle change in dentition as people get older maybe?

- class 1 → class 3

What part of a virus allows us to create a vaccine?

- viral proteins

What is the modern prevention of whooping cough in children?

- killed vaccine

What fungus causes athlete's foot?

- Trichophyton

An emboli leading to a cerebrovascular event comes from where?

- thrombosis of the heart

When a person has gout what kind of crystals build up in the joints?

- uric acid; second to cellular DNA turnovers – purines (A,G) need to be metabolize to get uricemia

What is an appropriate way to sterilize heat sensitive materials?

- ethylene oxide gas

In order to get hepatitis B you must get what?

- hepatitis B

What teeth are in a straight line?

- mandibular posteriors (2nd premolar - 1st molar - 2nd molar)

How is resting metabolic rate measured, might have been BMR, I think the right answer is by measuring heat from the person, cant remember if that was a choice “BMR and RMR are measured by gas analysis through either direct or indirect [calorimetry](#),” according to wiki,

another stupid question, why is chlamydia an obligate intracellular parasite, → i think the right answer is they have the inability to for high energy phosphate bonds. “**It appears that the basis of the obligate intracellular parasitism is due to a lack of ATP-generating ability and the need to obtain ATP from the host cell.**” according to some random website.

J's TQ

What does a tori look like histological?

- layers of dense cortical bone covered periosteum and an overlying layer of thin epithelium with minimal rete pegs

Know the thenar muscles (thumb) and what innervated it?

- median nerve

Plummer Vinson Syndrome

- long term iron deficiency anemia, dysphagia (esophageal webs), glossitis

Gardners Syndrome

- colorectal polyps; can lead to colon cancer

Sjogern Syndrome

- autoimmune disease that attacks tear and saliva glands
- triad: xerostomia (dry mouth), keratoconjunctivitis sicca (dry eyes), presence of another autoimmune disorder

What is the composition of Collagen?

- proline and glycine?.. its mostly proline or hydroxy proline? Im not sure so check that again, but there were a few questions on this **Glycine= 1/3, proline= 17%, also there is lysine**
- b. X or Y can be proline or hydroxy proline

What can causes a gumma?

- tertiary syphilis infection (not alcholoism)

Histoplamosis capsulatum resembles what?

- tuberculosis

Rickettsia causes typhus and is transmitted via what?

- insects

The occlusion questions were very indirect.. They asked about the position and locations of the NON-FUNCTIONAL cusps a lot.. so try to know the positioning of ALL cusps, and not just the functional ones

Muscularis mucosa is only found where?

- esophagus

What is achalasia?

- lack of neuronal control of esophagus; causes increase in tension = trouble getting things down “nutcracker esophagus”

KNOW THE INNERVATION OF THE TEETH WELL

KNOW TMJ WELL (muscles, ligaments, whats connected to what, etc etc)

When going from max opening to max protrusion, the condyle moves POSTERIORLY (i think) **can anyone confirm that this answer is correct? I THOUGHT IT WAS THE CONDYLE IS IN ITS MOST ANTERIOR POSITION SO ANTERIORLY. ANYBODY KNOW?????**

NSAIDS (aspirin) inhibits what pathway?

- cyclooxygenase
- COX-1 = platelets / inflammation - COX-2 = pain

Know whats made from neural crest cells?

- CREST = cells with their bodies in the PNS ex.) adrenal medulla, melanocytes, odontoblasts
- TUBE = cells give rise to cells with their bodies in the CNS

Know the major protein secreted by ameloblast AND odontoblast

- ameloblast = amelogenin, enamelin
- odontoblast = type I collagen, reelin

Know the histological characteristics of each tissue in the oral cavity (gingiva, hard palate, soft palate, tongue, floor of the mouth, attached gingiva vs sulcus gingiva, etc etc) --> there was A LOT of this on my test

Know about how Strep mutans uses glucotransferase

- converts sucrose → dextrans (from glucose) and levans (from fructose) for plaque accumulation

What vitamin is a cofactor for transamination?

- pyroxidal phosphate (B6)

What uses biotin as a cofactor?

- carboxylases (pyruvate carboxylase, acetyl-CoA carboxylase, methylcrotonyl-CoA carboxylase, propionyl-CoA carboxylase)

How does the angle classification occlusion of older people tend to change?

- class I → class III

Pyruvate can be formed from all the following except ..the answer choices were transamination, reduction, and other types of reactions – I didnt know the answer to this ***I'm going with reduction. Couldn't find a reason not to..Thoughts?? See page 18. Fates of Pyruvate**

What are the fates of pyruvate?

- oxidation reduction, transamination, carboxylation

Know the differences between all the receptors

- α 1 adrenergic – vasoconstriction in postgang sympathetic
- α 2 adrenergic – PREgang sympathetic that inhibits the release of norepinephrine and insulin from beta cells of pancreas
- β 1 adrenergic – increase cardiac output and renin release from kidney
- β 2 adrenergic – sympathetic effects on smooth muscle and skeletal muscle

- nicotinic cholinergic – ALL preganglionic synapses and at the neuromuscular junction: EXCITATORY ONLY
- muscarinic cholinergic – post ganglionic parasymp fibers: EXCITATORY and INHIBITORY

Adrenergic receptors are?

- post sympathetic

Know the parasympathetic cranial nerves and their ganglions (CN 3,7,9,10) .. also know their pathways and which foramen they pass through

- CN 3 (superior orbital fissure):
- CN 7 (internal acoustic meatus + stylomastoid foramen):
- CN 9 (jugular foramen)
- CN 10 (jugular foramen)

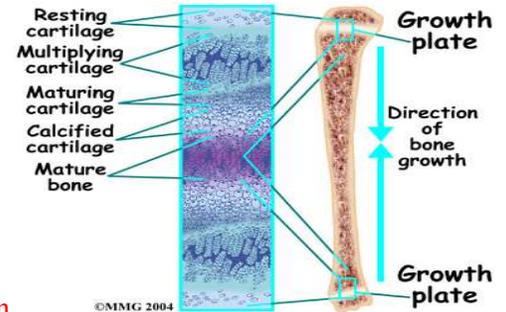
ganglion = ciliary
ganglion = pterygopalatine (greater petrosal)
submandibular (corda tympani)
ganglion = otic (lesser petrosal)
ganglion = small terminal

1.

Elena's BQs

Bone formation/layers from epiphyseal plate to diaphyseal? ossification,calcification process..I think I recall vaguely doing a Lehrer CD question similar to it.

- a. **Mnemonic- "Real People Have Career Options"**



- b. **Zones - Resting, Proliferative, Hypertrophic, Calcification, Ossification**

Breast cancer appearance
- orange peel skin

Ethics- had a Q about seeing an abused child, what do you do?
- call authorities to report

Got the bacterial cell membrane L-alanine question
- suppose to be D alanine

Parietal cells in are where?
- fundic stomach (makes HCl, Intrinsic Factor)

What connects colon & intestines to the posterior wall?
- mesentery

What myelinates CNS?
- oligodendrocytes

Know what dental follicle vs papilla make! I remembered it as **DP=dentin, pulp**
c. **Dental follicle - cementum, PDL, and alveolar bone**

Retromandibular vein made from
- superficial temporal + maxillary vein

Something about what is the difference bw mouth and other epithelium? That it can be **ortho or parakeratinized**
d. remember ortho --> anucleate cells
e. para --> some nucleate some anucleate

What makes one of the pharyngeal folds?
- palatopharyngeal (or palatoglossa)

DVT normally go where?
- lungs

Eophageal varices is due to what?

- cirrhosis of liver (portal hypertension)

What is the most common taste bud?

- filiform

What do you use to keep instruments sharp?

- ethylene oxide (for heat labile instruments)

1st brachial arch is innervated by what?

- CN5 (1 = 5 2 = 7 3 = 9 4 + 6 = 10)

Case scenarios were very hard and there were 8!!!! The first was a gunshot one. 2 gunshots, one from above and behind ear.. what bone was frax—temporal. The second bullet went through T7? It asked which part of the lung it went thru—superior, middle inferior R lung. ANYONE KNOW? I think inferior? ANYBODY CONFIRM THIS??**yes i'ts inferior!

Case scenario with a kid that has habits of drinking soda a lot. Had worn enamel on #8&9..from

- erosion

Strawberry tongue is a symptom of what?

- scarlet fever

Just more info --> It is also seen in Kawasaki disease and toxic shock syndrome

Know what innervates the area under the true vocal cords?

- inferior laryngeal nerve (recurrent laryngeal)

Penicillin's MOA—something about beta lactam rings, it was the only good option:

- inhibits peptidoglycan cross-linking by blocking transpeptidase during the last stage of cell wall synthesis

What innervates the triceps muscle?

- radial nerve

PSA + MSA innervate premolars and molars (DB root on max 1st molar is PSA MB root on max 1st is MSA)

What are the causes of edema?

- ↑ capillary pressure, ↓ plasma colloid osmotic pressure, ↑ interstitial osmotic pressure

Cementum of two teeth fused is what?

- concrescence

What foramen are in the sphenoid bone?

- rotondum, ovale, spinosum (ROS)

What does V2 pass through?

- rotondum

What does V3 pass through?

- ovale

What does the middle meningeal pass through?

- spinosum

Know superior orbital fissure is where?

- between the greater and lesser wings of sphenoid

Carotid sinus regulates what?

- blood pressure changes

KNOW THE UREA CYCLE! (had a bunch on this) Intermediate step

- arginine is final step before forming urea

- ornithine is an intermediate step

- aspartate donates the nitrogen

Endogenous infection

- actinomyces

What is used for DNA?

- southern blot

Gag reflex

- afferent (CN9) efferent (10)

Vertebral Artery runs through what?

- foramen magnum

The tip of tongue

- drains into submental lymph node

What tooth is the easiest to extract?

- maxillary central

What innervates the upper lip?

- infraorbital nerve

Anesthesia for max 1st molar (#3) -----> what caused hematoma?

- needle went into pterygoid plexus

What primary molar with the greatest labiolingual dimension?

- maxillary 2nd molar

What nerve innervates thumb muscles?

- median nerve

In urea cycle where do the Nitrogens come from?

- ammonia and aspartate

Measles and mumps are a part of what family?

- paramyxovirus

Whats not in carotid triangle?

- superficial temporal artery

Antibody defending mucosal surfaces?

- sIgA

Anterior cerebral artery supplies blood to which lobes?

- frontal and parietal

What causes Typhus?

- rickettsii

How do we determine GFR?

- insulin (or creatinine)

Pain ascends through which tract?

- spinothalamic

Vagus supplies innervation to what?

- ascending colon

Which is not an organelle?

- lipid body

ML cusp of max first molar moves through what in mediotrusive?

- facial groove ...in laterotrusive it goes thru Lingual groove

Drinking a lot of water (or beer, true story) will cause what?

- ↓ ADH

Conversion of pyruvate to acetyl coA is what type of rxn?

- oxidative

How many canals in max 2nd premolar?

- 1

Testlet: **scleroderma (more common in females!) was answer i believe?? SLE wasn't an option :(**

WIKI: involves cutaneous manifestations that mainly affect the hands, arms, and **face**. It was previously called **CREST** syndrome in reference to the following complications: **Calcinosis** (dystrophic calcification), **Raynaud's phenomenon** (**VASCULAR** discoloration in fingers and toes), **Esophageal dysfunction**, **Sclerodactyly**(thickening/tightness of finger and toes skin) and **Telangiectasias** (small dilated blood vessels near the surface of the skin). Additionally, **pulmonary arterial hypertension** may occur in up to one-third of patients and is the most serious complication for this form of scleroderma.

What causes goiter and enlargement of the neck? **Hyperplasia?** or hypertrophy

Obese child in your chair, it is your duty to speak to the parent about his eating habits. This is due to what? **Beneficence? i think that is good answer?**

ANYBODY KNOW THIS ANSWER?:You bite on something hard. What muscle makes you open your mouth quickly?? I would guess polysynaptic reflex...Don't know answer choices though **it's the mechanical receptors in the PDL**

right laterotrusive movement which muscle is the dominant muscle: **left pterygoid -- is this right???? i thought it would be right lateral.....anyone confirm this? Left lateral pterygoid, pushing it to the right**

First aid page 648, to move left lateral you would use the right lateral pterygoid muscle. This is why when there is a lesion to a single pterygoid when the patient tries to protrude/open the mandible deviates to the side of the lesion.

UF

Methotrexate

- S phase

Amphotericin B

- antifungal

Which blocks RNA pol from binding to DNA?

- rifampin

Fumarate – kind of rxn?

- hydration

VPM vs. VPL

- VPM is thalamic nucleus for pain and temp of FACE
- VPL is thalamic nucleus for pain and temp of BODY

Sensations from left face and teeth are interpreted where?

- right parietal lobe

Cut infundibulum...

- ADH10

Glomerulosa - salt - aldosterone

Fasciculata - sweet - cortisol

Reticulata - sex - sex hormones (DHEA et al)

Adrenal medulla

- you can live without the adrenal medulla

Face comes from what branchial arch?

- 1

Bacterial vaccines – pertussis, diphteria, - Tdap is what kind of vaccine?

- killed

C difficile = a good ATB for anaerobes, enteric = may lead to what?

- pseudomembraneous colitis

Lung cancer is found where?

- bronchiolar wall

Skin infection – chronic?

- long filamentous rods

Beriberi thiamin deficiency is what enzyme?

- vitamin B1

Vitamin D activated where?

- kidneys

Which of the following teeth is abnormally placed in mouth?

- maxillary lateral

Fusion is what?

- 2 buds combine; share dentin

Mesiodens is what?

- supernumerary tooth located between the maxillary central incisors

Amino acids are what?

- hydrophobic

Glycan

- D-alanine

Uric acid is caused by what?

- purine degradation of Adenine and Guanine

- gout = birefringent crystals in membranes

Pain, sensory afferent:

- trigeminal (semilunar ganglion)

Myasthenia Gravis

- autoimmune attack of Ach receptors (neuromotor) peripherally.

What impression are on the right lung?

- zygous vein (Left = aorta)

Bullet being shot from head (back of head to ear) hits what bone?

- temporal bone

Which cytokine does vasodilation?

- C5a

- Which fibers of the temporalis: posterior fibers

- Temporalis: anterior fibers closes

What ligament prevents TMJ from going laterally?

- collateral fibers

All of these are examples to describe TMJ except?

- load bearing joint

What amino acid used to taste umami?

- glutamate

Pagets:

- cotton wool appearance

Mallory bodies are caused by what?

- cirrhosis

What allows u to keep producing acetyl CoA?

- fatty acid synthesis

Rickettsia causes an infection in the.

- endothelium

Epstein Barr virus causes what?

- mono and burkitts lymphoma

Paramyxoviruses causes what?

- measles and mumps

What muscle makes up the medial wall of the axillary triangle?

- serratus anterior

- Condyle; break the condyle; heals endochondral ossification; the mandible is intramembranous;

In secondary wound healing process: after 3 days what would u expect to see?

- ulceration

Where would u find the highest osmolarity in the kidney?

- collecting duct, loop of henle, etc

What supplies voluntary contraction of the esophagus?

-

A patient tongue deviated to the right, what nerve is affected?

- right hypoglossal nerve

Which one is the best description of the vagus function?

- controls the heart

Where does the thoracic duct lie?
- posterior mediastinum

If you have a premolar has a bad infection, what lymph node would it spread to?
- submandibular → deep cervical

If you have an infection mandibular incisors, where does it go?
- submental

Mental nerve supplies what?
- chin and lip

If you want to numb the mandibular lateral incisor?
- mental nerve

What supplies the maxillary first molar?
- distal = posterior superior alveolar
- mesial = middle superior alveolar

- maxillary premolar? Anesthesia on the palatal; Greater palatine

Inferior parathyroid glands are derived from which arch?
- 3rd

- Patient on nitrous; what can they suffer from? Respiratory Acidosis (from decreased respiration = hoarding of CO₂ gas in their body...)

- If the patient is having acidosis? Sodium Cl (give base)

- Alkalosis? Ammonium chloride (give acid)

- A person sits in your office and has an asthma attack; what can be having them? Hyperventilating; treat later; what could there be? Alkalotic (since they blew off too much CO₂)

This patient has a bunch of things going on and want to improve oral health but all the patient cares about is aesthetics? What should you do?
- autonomy

What are the boundaries of the carotid triangle?
- posterior digastric, omohyoid, SCM

What protrudes the hyoid bone?
- genioglossus

- Vocal folds: what contracts it? What relaxes it?
- contracts = posterior arytenoid
- relaxes = cricothyroid

What supplies the cricothyroid?
- external branch of the superior laryngeal nerve

What part of the coronary artery supplies the right atrium?
- right coronary artery

Facial vein is derived from what?
- internal jugular

What are the terminal branches of the external carotid Artery?
- maxillary and superficial temporal a.

Which artery does both arches?

- facial artery

What supplies the parasympathetic innervations to the submandibular?

- facial

Each of these are increased by sympathetic innervation except.

- gastric motility

1) Bronchogenic carcinoma: wall or epithelium of bronchial tree

Most common finding in breast cancer

- orange peel appearance

Primary (baby) mandibular first molar has what?

- 4cusps, 2 roots

Canine have what proximal contacts?

- distal = middle 1/3

- mesial = junction (max) incisal 1/3 (man)

A little fat boy who eat candy and drinks soda, teeth erosion, hypertension has what?

- type 2 diabetes

Sjogrens is caused by what?

- autoimmune disease that attacks exocrine glands that produce tears and saliva; xerostoma, keratoconjunctivitis results

Pt shot twice. 2 bullet would 1st in the right head about ear exits where SCM attaches (temporal bone), 2nd enters btw the 7th and 8th ribs on right side and exits by 8th rib lateral to vertebra. It said pt had blood on pleura. Is it due to arch of aorta? Idk I thought it was descending at that point.

- inferior lung

Patient who has pain under tongue and inflammation when eats or thinks of food. Immediate thoughts were an obstruction of the sub mand gland. They asked if there was pus which cell would you see what cell?

- neutrophils

Rickettsia is what?

- obligate intracellular parasite, GM -, non-motile, non-spore forming

What layer does rickettsia affect?

- endothelium

What is deep to hyoglossus?

- lingual nerve

What supplies the sublingual gland?

- sublingual artery

What is deep in triangle?

- hyoglossus

What causes gag reflex?

- glossopharyngeal (afferent), vagus (efferent)

What runs with glossopharyngeal nerve?

- stylopharyngeous muscle

What is the anterior arch of tonsil?

- palatoglossal muscle

Post arch of tonsil

- palatopharyngeus muscle

Know that the Ig has two part Fc and Fab?

- Fab is the variable part

Congo red stain.. could not for the life of me remember what it stained
cytoplasm - erythrocyte - cellulose- beta amyloid protein (amyloidosis!)

Do eukaryotes have cell wall?

- yes; cellulose (plants), fungi (chitin)

Albuterol is a type of what?

- beta-2 agonist (emergency asthma tx with nebulizer)

What pierces thyrohyoid membrane?

- internal superior laryngeal nerve and artery

Sensory to larynx is provided by what?

- recurrent laryngeal (inferior laryngeal)

Diploic veins are found where?

- calvarium; to drian the DIPOLE of the skull

The tip of tongue drains where?

- submental lymph nodes

The philtrum is composed of what?

- medial nasal process + frontal nasal process

The palate is composed of what?

- palatine process (maxilla) + horizontal palate (palatine bone)

What provides innervation to TMJ?

- auricotemporal n. + massenteric n. (V3)

Carotid sinus is what type of receptor?

- baroreceptor

The facial veins drains into what?

- internal jugular vein

The internal and external jugular vein are separated by what?

- SCM

What does the maxillary and temporal veins drain into?

- external jugular vein

Axillary sheath

- axillary artery, vein, and roots of brachial plexus

Triceps are innervated by what nerve

- radial nerve

The azygous vein makes an indentation on what?

- R lung

Where does glycolysis occur?

- cytosol

What is the rate limiting step of glycolysis?

- phosphofructokinase

Right and left gonadal veins drain where?

- R= inferior vena cava
- L= L renal vein

What is the difference between competitive vs non competitive?

- Competitive = $\uparrow K_m$, V_{max} stays the same
 - Non-competitive = $V_{max} \downarrow$, K_m stays the same
-

Patient has a tooth abscess which cells most likely to be there?

- neutrophils

An older patient is more likely to have a pulp with:

- more collagen

The circulation of the pulp resembles: cranial circulation, lung circulation, heart circulation, I don't know what the other choices where and I have no clue what the answer is

What occurs in Raynouds phenomenon?

- finger tips turn white due to temperature changes and peripheral constriction of small arteries

TMJ is a synovial joint (TRUE); TMJ is a load bearing joint (FALSE)

Primary canines have mesial and distal contacts at the same level (FALSE); same is true for the mandibular (FALSE)

If you are treating a patient with a handpiece or doing dental work which virus infection would you most likely transfer to the patients eye:

- herpes

Syphilis is caused by what?

- Treponema pallidum spirochete; GM - motile

Isocitrate dehydrogenase gives you what?

- alpha ketogluterate

You don't need which of the following for cholesterol synthesis:

- oxygen

What does the TMJ ligament attach to?

- zygomatic arch (to neck of mandible)

Where does the temporalis muscle attach to?

- coronoid process

Which foramen transfers presynaptic parasympathetic fibers?

- foramen ovale = V2 maxillary of trigeminal

Common cause of infective endocarditis:

- α hemolytic strep

Koplic spots is caused by what?

- rubeola (measles)

Travelers diarrhea is caused by what?

- E.coli

Tay Sachs disease known as

- GM2 gangliosidosis or hexaminidase A deficiency
- cherry red spots on retina during visual examination

If you have a fistula on #29 and doing root canal and file breaks what do you do?

- inform you patient and keep going

What space does the infection from above question go to?

- submandibular or sublingual????

Reed-stenberg cells are present in what?

- hodgkins lymphoma; slowly progressive in order of lymph drainage

If patient shot in the back of the head and comes out the front which bones least likely injured:

- temporal and zygomatic

Germination is what?

- development of 2 crowns from 1 tooth bud share a single root and root canal

Fusion is what?

- fusion of 2 unique tooth buds. same dentin,

Concrescence is what?

- cementum to cementum

15 year old with high blood glucose

- type I diabetes (or they just fat and lazy w/ type 2)

Cells in pancreas that directly regulate serum glucose:

- β cells = insulin
-

What muscle abducts the vocal fold?

- posterior cricoarytenoid

What part of the brachial plexus is most distal?

- branches

What nerve innervates the erector spinae?

- dorsal (posterior) of spine

Ligamentum arteriosum is key landmark when finding what nerve?

- L. recurrent laryngeal nerve

Blood to the SA node is from which coronary artery?

- right (AV = R. coronary artery)

Where does the glycerol come from for FA synthesis? Glucose??? Pyruvate??? Acetyl CoA???

Ibuprofen main benefits – cox1 or cox2?

depends on “benefits” - Cox 2 is just the “pain”, whereas Cox 1 is the inflammatory process itself. what are we trying to stop?

Which fungus causes pulmonary granulomatous situation similar to TB?

- histoplasmosis capsulatum

Where is secretin released?

- duodenum

ADH is MADE where?

- supraoptic of hypothalamus

Which would NOT contribute to kidney stones? List included - Diabetes Insipidus, Hyperparathyroid, Ureter constriction, Decrease in Glomerular filtration?

Old man – what would be most likely cause of difficulty urinating?

- begin prostate metaplasia

Prostate cancer most often metastasizes to where?

- bone

Facial vein may drain where?

- pterygoid plexus

Facial artery might pass through which triangle?

- submandibular triangle

Tongue deviates to a certain side, which nerve is damaged?

- CN XII (same side)

Surgical extraction – which tooth most likely to involve antrum?

- max 1st molar (antrum = max sinus)

Space between two teeth is called what?

- diastema

What is the most abundant protein in enamel?

- amelogenin

What is the most mineralized/hardest dentin?

- peritubular

Which lymphatic organ has both afferent and efferent vessels?

- lymph node

What is the EFFERENT n. to epiglottis?

-

Maxillary lateral incisors have what?

- lingualgingival groove

If your instruments are heat sensitive, what do you use to sterilize?

- ethylene oxide

Dry sterilize vs autoclave is for which?

- dry = preserve cutting edges

Which nerve innervates biceps?

- musculocutaneous nerve

Symptoms of flu vs EBV

Which fungus causes athlete's foot (tinea pedis)?

- trichophyton

Which amino acid is in Gram + cell walls?

- D-alanine

Most common amino acid in collagen?

- 1/3 glycine..... proline/hydroxyproline

What protrudes the hyoid?

- geniohyoid

Which vaccine has a live attenuated virus?

- measles, polio, rotavirus, smallpox, tuberculosis, yellow fever, varicella-zoster
- Inactivated = influenza, rabies, hepatitis A, polio (salk)

Spory n. to middle finger when taking off a ring?

- C7

this lady's hand, thenar muscles is innervated by what?

- median nerve

What is not in seminiferous tubules:

- leydig cells

Type 1 diabetes does *not* involve what?

- splenomegaly or gangrene

About a boy -- year after his knee fracture (what stage is bone at now?)

- reparative

About a lady -- 5 years after hip fracture (what stage is bone at now?)

- remodeling

What needs a carrier protein?

- glycine (or lidocaine, methanol , albumin)

emphysema - what's not common? **Hyperventilation, respiratory alkalosis, hypoxia, increased chest width**

What part of TMJ is most sensitive to pain?

- disc, surface of disc, synovial epithelium, articular surface of condyle

What runs between palatoglossus and palatopharyngeous?

- palatine tonsils