

**GoldStandard FCPS:**

**Surgery & Allied**

**20th November 2019 Morning** 

**(Errors and omissions excepted)**

**Cram Statements**

 **membranous labyrinth,---->Contains organs of hearing and balance**

Inner ear, also called labyrinth of the ear, part of the ear that contains organs of the senses of hearing and equilibrium. The bony labyrinth, a cavity in the temporal bone, is divided into three sections: the vestibule, the semicircular canals, and the cochlea.

* **analgesic for post OP asthmatic patient---->Paracetamol**

Paracetamol and asthma. ... Paracetamol is generally recommended as one of the safer analgesics in both analgesic tolerant and intolerant asthmatics, without the fear of severe bronchospasm that aspirin and other non-steroidal anti-inflammatory drugs can induce in these patients.

* **in chronic fenal failure structure hypertrophied is ----> Parathyroid gland**

Secondary hyperparathyroidism occurs when the parathyroid glands become enlarged and release too much PTH, causing a high blood level of PTH. There are several reasons why this happens in patients with kidney disease

* **Hypertrophy and hyperplasia are seen in?---->Uterus in pregnancy**

Although uterine growth during the first few weeks of pregnancy is accomplished by increased numbers of smooth muscle cells (i.e. hyperplasia) and a smaller contribution from increased cell size (i.e. hypertrophy), the predominant growth of the uterus during pregnancy is by way of stretch‐induced myometrial hypertrophy

* **The center for vomiting is located in?---->Medulla**

by two distinct brain centres—the vomiting centre and the chemoreceptor trigger zone—both located in the medulla oblongata. The vomiting centre initiates and controls the act of emesis, which involves a series of contractions of the smooth muscles lining the digestive tract

* **drug commonly distributed in the ECF is?---->Mannitol**

 Mannitol is a naturally occurring substance that causes the body to lose water (diuresis) through osmosis. Mannitol promotes diuresis in kidneys by increasing the concentration of filtrates in the kidney and blocking reabsorption of water by kidney tubules.

* **short muscles of hand are supplied by?---->Ulnar nerve**

The short muscles of the little finger are the abductor digiti minimi, flexor digiti minimi brevis, and opponens digiti minimi are supplied by the ulnar nerve.

* **loss of flexion at elbow. Nerve damaged is?
---->Musculocutaneous**

Injuries to the musculocutaneous nerve are associated with weakness of arm flexion and sensory loss along the lateral forearm.The biceps brachii muscle receives its innervation from the C5 and C6 fibers of the musculocutaneous nerve. The brachialis muscle originates on the distal portion of the anterior humerus, and inserts on both the coronoid process and tuberosity of the ulna.

* **enzyme released in heart failure---->BNP**

When the left ventricle of the heart is having difficulty pumping sufficient amounts of blood to the body, the concentrations of BNP and NTproBNP produced can increase markedly.

* **in cubii fossa, nerve likely to damage----> Median nerve**

Inside the cubital fossa, the median nerve passes medial to the brachial artery.

* **Hx of travel, complaints of chills, confusion & Labs show deranged RFTs, and decreased Hb, WBC, platelets. Cause?---->Plasmodium Falciparum (best among options)**
* **Common symptoms of malaria include:shaking chills that can range from moderate to severe high fever.profuse sweating.headache.nausea abdominal pain.hemoglobin (decreased in 25% of patients, often profoundly in young children), platelet counts (thrombocytopenia in 50-68% of patients), and liver function (results abnormal in 50% of patients) In patients with suspected malaria, obtaining a history of recent or remote travel to an endemic area is critical**
* **Ovarian artery has increased chances of damage during exploratory laparotomy**
* **boy brought for circumcision bleeding profusely after circumcision. Best lab test?----> Increased APTT**

A prolonged aPTT result may indicate the following Congenital deficiencies of intrinsic system clotting factors such as factors VIII, IX, XI, and XII, including hemophilia A and hemophilia B (Christmas disease), two inherited bleeding disorders resulting from a deficiency in factors VIII and IX, respectively.

* **A S-year child presents with repeated episodes of epistaxis Blood show Hb 11, platelet normal. BT more than 24mins, APTT 26s. Caise?---->VWD**
* **bleeding time indicates platelets defect**
* **cause of congenital cyanotic heart disease?----> Tetralogy of fallot**

ToF is the most common cyanotic heart defect, but may not always become apparent immediately after birth.

* **tumor marker of ovarian tumor is?----> CA 125**

CA125, the glycoprotein defined by the antibody OC 125, is the most important clinical marker for the diagnosis, treatment and follow-up of epithelial ovarian cancer.

* **Calcitonin is released in malignancy of ?---->Thyroid**

 Calcitonin is a hormone that is produced and released by the C-cells of the thyroid gland

* **Indirect action of parathyroid hormone is?----> Intestinal Ca absorption**

Enhancing absorption of calcium from the small intestine: Facilitating calcium absorption from the small intestine would clearly serve to elevate blood levels of calcium. Parathyroid hormone stimulates this process, but indirectly by stimulating production of the active form of vitamin D in the kidney.

* **After hormonal/chemo therapy, the tumor size regresses by
---->Apoptosis**
* **The medial wall of ischiorectal fossa is formed by?----> External anal sphincter**

MEDIAL:
\* Levator ani
\* Sphincter ani externus muscle
\* anal fascia

* **fracture of pelvic bone in RTA… cause of shock is?----> Excessive blood loss**

- Hypovolemic shock is most often the result of blood loss after a major blood vessel bursts or from a serious injury. This is called hemorrhagic shock

* **diagnosed with DM. on his 1st visit to his physician, drug should he be started----> Biguanides and sulfonylureas**

It is often the first oral medicine prescribed for someone newly diagnosed with diabetes. It has the advantage of not causing low blood sugar. Metformin does not cause your pancreas to make insulin, but it helps your body use insulin better.

* **In 2nd trimester haematopoiesis in fetus occurs in?---->Liver**

In the first trimester, hematopoiesis can be found in the spleen, but in the late first trimester and throughout most of the second trimester and well into the third trimester, the major hematopoietic organ is the liver.

* **Anemia of pregnancy is due to?---->Increase plasma volume**

Although red blood cell (RBC) mass increases during pregnancy, plasma volume increases more, resulting in a relative anemia. This results in a physiologically lowered hemoglobin (Hb) level, hematocrit (Hct) value, and RBC count, but it has no effect on the mean corpuscular volume (MCV)

* **Sodium is actively absorbed from?----> Colon**

Absorption of water occurs by osmosis. Water diffuses in response to an osmotic gradient established by the absorption of electrolytes. Sodium is actively absorbed in the colon by sodium channels.

* **test is required to decide dialysis or transplant?---->Creatinine clearance**

 The preferred method for calculating GFR in advanced renal failure is the mean of urea and creatinine clearance (CC)

* **Type of Hypersensitivity in Hashimotos thyroiditis is?---->Type 4**
* **dyspnea on lying down, the structure likely to cause this dyspnea is?---->Retrosternal goiter**

st intrathoracic goiters result from extension of cervical thyroid goiters into the mediastinum and typically affect women. Although patients are usually asymptomatic, compression of the trachea or esophagus rarely causes symptoms such as dyspnea or dysphagia

* **Raised T3 and T4 and decrease TSH occur in?---->Primary hyperthyroidism**

Thyroid-stimulating hormone (TSH) produced by the pituitary will be decreased in hyperthyroidism. ... If the TSH levels are not low, then other tests must be run. For a patient to have hyperthyroidism, they must have high thyroid hormone levels

* **Cause of meningitis in neonates <28 days----> Streptococcus agalactiae (Group B Strep)**

The most common causes of neonatal meningitis in developing countries i.e PAK is bacterial infection of the blood, known as bacteremia (specifically group B streptococci (Streptococcus agalactiae), Escherichia coli, and Listeria monocytogenes).

* **commonest hospital-acquired organism causing infection is?----> Staph Aureus**

Staphylococcus aureus is the most common cause of nosocomial wound infections.

* **Organism which produces fluorescent pigments---->Pseudomonas**

The biosynthesis of a yellow-green, fluorescent, water-soluble pigment by Pseudomonas fluorescens occurred only when the bacteria were iron-deficient and was not directly influenced by the nature of the organic carbon source. The pigment formed a very stable Fe3+ complex and was purified in this form..Pseudomonas aeruginosa is notorious for its resistance to antibiotics and is, therefore, a particularly dangerous and dreaded pathogen. The bacterium is naturally resistant to many antibiotics due to the permeabiliity barrier afforded by its Gram-negative outer membrane.is resistant to p-lactam antibiotics?

* **Post-op wound causes greenish pus discharge. organism ---->Pseudomonas**
* **derived from 3rd pharyngeal arch?----> Stylopharyngeus**

The glossopharyngeal nerve contains branchial motor fibers to the stylopharyngeus muscle, which is derived from the third pharyngeal arch.

* **resting tremors and expressionless face?---->Substantia nigra**

 Parkinson disease is a slowly progressive disorder that affects movement, muscle control, and balance. Part of the disease process develops as cells are destroyed in certain parts of the brain stem, particularly the crescent-shaped cell mass known as the substantia nigra.

* **The primary oocytes complete their first meiotic division?---->Before ovulation**

The oocyte (eggs, ova, ovum) is arrested at an early stage of the first {{meiosis))(first meiotic) division as a primary oocyte (primordial follicle) within the ovary. Following puberty, during each menstrual cycle, pituitary gonadotrophin stimulates completion of meiosis 1 the day before ovulation.

* **sign of irreversible cell injury in cardiac cell?----> Contraction bands in cytoplasm**

Contraction band necrosis is a type of uncontrolled cell death (necrosis) unique to cardiac myocytes and thought to arise in reperfusion from hypercontraction, which results in sarcolemmal rupture. It is a characteristic histologic finding of a recent myocardial infarction (heart attack) that was partially reperfused.

* **Left coronary artery:---->Gives LCX that runs in Anterior interventricular groove**

The left anterior descending artery (LAD) is the largest coronary artery runs anterior to the interventricular septum in the anterior interventricular groove, extending from the base of the heart to the apex. The LAD gives two sets of branches; the artery divides (and is thus a very short vessel) into the anterior interventricular (left anterior descending artery) and the left circumflex artery.

* **Left gastric vein drain directly into the?---->portal vein**
* **The left gastric vein runs to the left along the lesser curvature, receiving the esophageal veins below the esophageal hiatus in the diaphragm. It usually drains directly into the portal vein at the superior border of the pancreas**
* **RCA after giving Rt marginal artery, supplies---->AV node**

The right coronary artery supplies blood to the right ventricle, the right atrium, and the SA (sinoatrial) and AV (atrioventricular) nodes, which regulate the heart rhythm. The right coronary artery divides into smaller branches, including the right posterior descending artery and the acute marginal artery.

* **Karyotype of a True hermaphrodite is?---->46 XX/XY**

About 60% of true hermaphrodites have a 46,XX karyotype, and the remainder are characterized by various forms of mosaicism, 46,XX/46,XY. ... The diagnosis of true hermaphroditism should be considered in any patient typically combining ambiguous genitalia, one or no palpable gonad, and 46,XX karyotype.

**a part of portal venous system?---->Superior rectal vein**

The upper part of the external plexus is drained by the superior rectal vein which forms the commencement of the inferior mesenteric vein, a tributary of the portal vein. The middle part of the external plexus is drained by the middle rectal vein which joins the internal iliac vein.

* **tumor of head of pancreas will compress?----> CBD**

The neoplasm, in the head of the pancreas, can compress the common bile duct causing an extra hepatic obstruction.

* **Blood supply to the upper 1/3 of the esophagus is from?----> Inferior thyroid artery**

Esophageal branches of inferior thyroid artery (top third)
Esophageal branches of thoracic part of aorta (middle third)
Esophageal branches of left gastric artery (bottom third)

Ovarian cancer first metastasizes to?---->
Ovarian carcinoma metastasizes either by direct extension from the ovarian/fallopian tumor to neighboring organs (bladder/colon) or when cancer cells detach from the primary tumor.

* **What is the CSF specific gravity?---->1.005 to 1.009**

 Specific gravity: 1.006 to 1.008.

* **Iliolumbar artery is branch---->Internal iliac**

The iliolumbar artery (latin: arteria iliolumbalis) is a branch of the posterior trunk of the internal iliac artery. ... The lumbar branch of the iliolumbar artery runs posteriorly and supplies the psoas major and quadratus lumborum muscles.

Left shift of the oxygen dissociation curve occurs in?
----> Left shift of the curve is a sign of hemoglobin's increased affinity for oxygen (e.g. at the lungs).

* **mutation associated with adenocarcinoma of colon is?----> K-RAS**

Approximately 30-50% of colorectal tumors are known to have a mutated (abnormal) KRAS gene, indicating that up to 50% of patients with colorectal cancer (CRC) might respond to anti-epidermal growth factor receptor (EGFR) antibody therapy.

 Pulmonary valve opens when the pressure in right ventricle exceeds?---->8mmHg

* **right ventricular pressure of 8mmhg is required to open pulmonary valve**
* **boy is presented withchills and severe headache hepatosplenomegaly. organism was identified with Giemsa stain. organism is?----> P. Falciparum**
* **Common symptoms of malaria include:shaking chills that can range from moderate to severe high fever.profuse sweating.headache.nausea abdominal pain.hemoglobin (decreased in 25% of patients, often profoundly in young children), platelet counts (thrombocytopenia in 50-68% of patients), and liver function (results abnormal in 50% of patients) In patients with suspected malaria, obtaining a history of recent or remote travel to an endemic area is critical**
* **Chronic Hypervitaminosis A leads to?----> Hepatomegaly**

Chronic, moderately high doses of vitamin A (generally over 1 to 8 years) can lead to portal hypertension with ascites and esophageal varices,

* **Epiploic appendages are present on?---->Sigmoid colon**

Composed of adipose tissue and blood vessels, the appendages typically have a length of 0.5–5 cm. Those located near the sigmoid colon

* **in foot drop, nerves is most likely injured?---->Common Peroneal**

Most commonly, foot drop is caused by an injury to the peroneal nerve. The peroneal nerve is a branch of the sciatic nerve that wraps from the back of the knee to the front of the shin.

* **bleeding from the left ear and the pupil of the left eye is dilated. cranial nerve is damaged?---->Oculomotor**

The oculomotor nerve (the third cranial nerve; CN III) has three main motor functions: Innervation to the pupil and lens (autonomic, parasympathetic) Innervation to the upper eyelid (somatic) Innervation of the eye muscles that allow for visual tracking and gaze fixation (somatic

* **gland shows many acini lined with pseudostratified columnar epithelium, embedded in stroma with smooth muscle. gland is ---->Prostate gland**

**prostate gland is composed of secretory epithelium arranged in glandular acini within a fibromuscular stroma composed primarily of smooth muscle. ... In an interactive manner, each of these epithelial and stromal components is likely involved in the genesis and evolution of benign prostatic hyperplasia (BPH)**

* **During hysterectomy, ureter can be damaged at ---->At pelvic brim**

The most notable sites of ureteric injury are: At the pelvic brim as the infundibulo-pelvic ligament is being divided (in 30 percent of cases)

* **The roof of anterior horn of lateral ventricle is formed by?----> Body of corpus callosum**

Its roof is formed by the most anterior part of the trunk of the corpus callosum, while the floor is formed by the head of the caudate nucleus. A small part of the floor near the midline is formed by the upper surface of the rostrum of the corpus callosum.

 A 33wk pregnant woman presents with vaginal bleeding, low Hb, low Pit, increased bilirubin, AST normal, APTT & PT increased. What is the most likely dx?----> DIC

PT is prolonged in 50–75% of patients with DIC, and in 25–50% it is normal or shortened [7]. Activated partial thromboplastin time (APTT) is prolonged in 50–60% of patients with DIC, but a normal or shortened APTT may also be seen

* **women of arterial disease has pulsatile mass is abdomen is noted.Site of origin is? ---->T12-L2 (chose level <L4)**
* **The abdominal aorta is a continuation of the thoracic aorta beginning at the level of the T12 vertebrae. It is approximately 13cm long and ends at the level of the L4 vertebra. At this level, the aorta terminates by bifurcating into the right and left common iliac arteries that supply the lower body.**
* **Which of the following is a branch of internal iliac that remains in the true pelvis?---->Middle rectal**

The middle rectal artery usually arises with the inferior vesical artery, a branch of the internal iliac artery. It is distributed to the rectum, anastomosing with the inferior vesical artery, superior rectal artery, and inferior rectal artery.In males, the middle rectal artery may give off branches to the prostate and the seminal vesicles, while in females it gives off branches to the vagina.

* **The GIT epithelium regenerates itself after how much time?----> 2-7 days**

. The intestine is the most highly regenerative organ in the human body, regenerating its lining, called the epithelium, every five to seven days.

* **Most common acquired deficiency causing thrombosis is?---->Antiphospholipid antibody syndrome**

The antiphospholipid syndrome is a relatively common acquired cause of venous thrombosis. Up to 20% of cases of deep vein thrombosis, with and without pulmonary embolism, may be associated with antiphospholipid antibodies

* **test is performed in disease person and person is positive then the test is?---->True positive**

A true positive test result is one that detects the condition when the condition is present.

* **FRC is sum of?---->Expiratory reserve volume plus residual volume**

It is the amount of air remaining in the lungs at the end of a normal exhalation. It is calculated by adding together residual and expiratory reserve volumes. The normal value is about 1800 – 2200 mL. FRC = RV+ERV.

* **During difficult delivery,muscle likely to get paralyzed?
---->Levator anii**

Levator ani muscles receive innervations from both sacral efferent and pudendal nerves (2,3) which gets injured during difficult delivery. The S2–S4 sacral nerves innervate the pelvic or superior surface of these muscles, while branches of the pudendal nerve innervate the perineal or inferior surface.

* **Side effect of Chlorpromazine?---->Dystonia**

**Side effects include: Extrapyramidal reactions (e.g., Parkinson-like symptoms, dystonia, akathisia, tardive dyskinesia), drowsiness, dizziness, skin reactions or rash, dry mouth, orthostatic hypotension, amenorrhea, galactorrhea, weight gain.**

* **After trauma to mandible, lower teeth
and chin sensation are lost Which nerve is compromised?
---->Inferior alveolar nerve**
* **inferior alveolar nerve (IAN) is the third branch of the trigeminal nerve and it controls sensation of the lower teeth, lips, chin, and cheek**
* **Superior radioulnar joint is an
example of?
---->Pivot**

The proximal radioulnar articulation (superior radioulnar joint) is a synovial pivot joint between the circumference of the head of the radius and the ring formed by the radial notch of the ulna and the annular ligament.

* **A shopkeeper suddenly collapsed with thin and thready pulse. O/E his BP was 80/40, cold clammy skin and gives Hx of sudden crushing chest pain before collapse. Diagnosis?---->Massive Pulmonary Embolism**

Severe cases of PE can lead to collapse, abnormally low blood pressure, and ... In massive and submassive PE, dysfunction of the right side of the heart

* **Anterior 2/3rd of tongue fibres carrying taste sensations are?---->Special Visceral Afferent**

**Special visceral afferent fibers (SVA) are the afferent fibers that develop in association with the gastrointestinal tract. They carry the special senses of smell (olfaction) and taste (gustation). ... The facial nerve receives taste from the anterior two-thirds of the tongue; the glossopharyngeal from the posterior third.**

* **Kaplan- Meier curve are used for?---->Survival of patients**

The Kaplan-Meier estimator is used to estimate the survival function. ... If the sample size is large enough, the curve should approach the true survival function for the population under investigation. It usually compared two groups in a study (like a group that got treatment A vs a group that got treatment B)

* **HIV positive patient is complaining of headache neck stiffness and fungal migingitis is suspected. Organism?---->Cryptococcus neoformans**

Cryptococcus neoformans is an encapsulated yeast that remains an important pathogen, particularly among patients with the human immunodeficiency virus (HIV). A rare disease prior to the HIV epidemic, Cryptococcus is now among the leading causes of meningitis

* **Nerve passing through petrous of temporal bone is?---->Facial nerve**

The seventh cranial nerve (the facial nerve) emerges from the lateral medulla ventral to the vestibulocochlear nerve at the level of the trapezoid body. The two nerves are associated closely with the petrous temporal bone and enter the internal auditory meatus together.

* **Length of thoracic duct?---->45cm**

The typical length of this duct in an adult averages between 38 and 45cm, while the diameter is about 5 to 7 mm.

* **A Pt had a C-section complains of lumber pain/anuria. Structure damaged?---->Ureter**

. Ureter injury associated with a lumbar spine procedure

* **Axillary nerve is most commonly damage in?----> Shoulder joint dislocation**

It passes with the posterior circumflex humeral vessels through the quadrilateral space from the anterior to posterior aspect of the shoulder. ... Whilst all nerves of the brachial plexus are at risk of injury during glenohumeral dislocation, the most commonly injured is the axillary nerve.

* **A 30 years’ man came to the outpatient department because he had suddenly developed double vision. O/E it was found that his right eye, when at rest, was turned medially. The most likely anatomical structures involved are?----> Lateral rectus and Abducent nerve**

Sixth nerve palsy, or abducens nerve palsy, is a disorder associated with dysfunction of cranial nerve VI (the abducens nerve), which is responsible for causing contraction of the lateral rectus muscle to abduct (i.e., turn out) the eye

* **jejunum is distinguished from ileum on basis of?---->More arterial arcade in mesentery**

The vasa recta of the jejunum are long and few, compared to the ileum where they are numerous and short.

* **pt of weight loss, palpitations with normal urea, Hyponatremia, hyperkalemia. Diagnosis?----> Addison’s disease**

Aldosterone helps control blood pressure by managing the balance of potassium and sodium in your body. Cortisol works in conjunction with adrenaline and noradrenaline to help regulate your reaction to stress. Cortisol also helps regulate your metabolism, sugar levels, and blood pressure.

* **drug causes fetal kidney damage in utero?----> Captopril**

Angiotensin-converting enzyme (ACE) inhibitors have been widely used to control hypertension, but their use during gestation may result in fetal death, intra-uterine growth retardation, oligoamnium sequence, hypotension, acute renal failure.use of drugs that act on the renin angiotensin system (RAS) during the second and third trimesters increases fetal and neonatal morbidity and death

* **Secondary bone ossification centre in adult ---->Epiphysis**

A secondary ossification center is the area of ossification that appears after the primary ossification center has already appeared – most of which appear during the postnatal and adolescent years. Most bones have more than one secondary ossification center. In long bones, the secondary centers appear in the epiphyses.

* **Alleles are?---->Non identical genes at same locus**

An allele is a variant form of a gene. Some genes have a variety of different forms, which are located at the same position, or genetic locus, on a chromosome.

* **presented with jaundice and generalized itching. Direct Bilirubin 12 mg, SGPT 73U/L, Alkaline Phosphate 2400 IU/L 500IU/L. The most likely cause is?
----> Extra hepatic Cholestasis**

**ALP is most useful in diagnosing cholestatic liver diseases. Bile duct obstruction results in increased synthesis of ALP by bile duct epithelial cells and release of ALP into the serum. Alkaline phosphatase may be increased even if only a few small bile ducts are obstructed, and serum bilirubin is normal. In extrahepatic cholestatisis ALP>other enzymes.Serum alkaline phosphatase is also evaluated 3 times more than the upper normal limit in cholestasis, while normal or mild elevation in transaminases (ALT/AST) is a pure form of cholestatic jaundice**

* **During reperfusion, free radicals are released by?----> Neutrophils**

Neutrophils feature prominently in this inflammatory component of postischemic injury. Ischemia–reperfusion prompts a release of oxygen free radicals, cytokines and other proinflammatory mediators that activate both the neutrophils and the coronary vascular endothelium.

* **indication for passive immunity?---->A patient with acquired immune deficiency**

Passive immunity is the transfer of active humoral immunity of ready-made antibodies. ... Passive immunization is used when there is a high risk of infection and insufficient time for the body to develop its own immune response, or to reduce the symptoms of ongoing or immunosuppressive diseases.

In Hypovolemic shock, the decrease glomerular filtration is due to?---->a.     Decrease arterial blood

**Glomerular filtration rate (GFR) is the volume of fluid filtered from the kidney's glomerular capillaries into Bowman's capsule per unit time. ... Patients with a mean arterial blood pressure below 80 mm Hg will have decreased renal blood flow, GFR, and urine output.**

* **muscle extending from femur having role in stability of knee joint?----> Vastus lateralis**

The specific task of the vastus lateralis muscle is to extend the lower leg and allow the body to rise up from a squatting position. On the upper end, the muscle attaches to the femur; on the lower end it attaches to the patella, or kneecap. Taken together, the muscles of the legs allow strength and stability.

* **ECG revels S1, Q3, T3 pattern. Next investigation----> Gallium scan**

EKG of pulmonary embolism so we'll gallium scan

* **Increased intake of protein is accompanied by increased intake of?----> Riboflavin**

 Free riboflavin is naturally present in foods along with protein-bound FMN and FAD.

* **Neurovascular bundle is present in chest wall between?----> Internal and innermost layer**

The neurovascular bundle, located in the costal groove in the undersurface of each rib, between the internal intercostal muscle and innermost intercostal muscle, supplies much of the innervation and vascular supply to the thoracic wall.

* **Hemiballismus result when damage occurs to which area of the brain?---->subthalamic nucleus**

**Hemiballismus or hemiballism in its unilateral form is a very rare movement disorder. It is a type of chorea caused in most cases by a decrease in activity of the subthalamic nucleus of the basal ganglia, resulting in the appearance of flailing, ballistic, undesired movements of the limbs.**

* **Pt works in demolition of old buildings, has pulmonary disease due to---->Asbestosis**

Asbestosis is a chronic disease characterized by scarring in the lungs, which leads to long-term breathing complications. ... Asbestosis is a type of pulmonary fibrosis, a condition in which the lung tissue becomes scarred over time

* **Gall bladder pain is referred to tip of shoulder via?---->phrenic nerve**

*Pain arising from structures supplied by the phrenic nerve is often "referred" to other somatic regions served by spinal nerves C3-C5. For example, a subphrenic abscess beneath the right diaphragm might cause a patient to feel pain in the right shoulder. Source: wikepedia*

* **Nerve supply of rectus abdominis is?----> Subcostal only**

The subcostal nerve supplies the transversus abdominis, rectus abdominis, and the pyramidalis, along with some fibers to the peritoneum

* **In Anterior inferior iliac spine fracture, pelvic avulsion is done
----> Rectus femoris**

Anterior Inferior Iliac Spine Avulsion (AIIS) typically occurs due to eccentric contraction of the rectus femoris is the origin of the direct head of the rectus femoris

* **Therapeutic dose of drug is decided on?----> Potency**

In the field of pharmacology, potency is a measure of drug activity expressed in terms of the amount required to produce an effect of given intensity.

* **Epidural Hemorrhageis due to ---->Middle meningeal artery**

Epidural hematoma is when bleeding occurs between the tough outer membrane covering the brain (dura mater) and the skull. ... The cause is typically head injury that results in a break of the temporal bone and bleeding from the middle meningeal artery.

* **Pt with severe haemorrhage have?---->Tachycardia, hypotension, low CVP**

 Hemorrhagic shock is hypovolemic shock from blood loss. ... Tachycardia and hypotension can be seen along with decreased urinary output. ... Patients can have increased BUN and serum creatinine as a result of prerenal

* **Reverse T3 present in age of---->fetus**

Serum reverse T3 (rT3) levels during fetal life are higher than those measured during extrauterine life;

* **ECG shows prolonged PR interval with no missed beats. Diagnosis?----> First degree heart block**
* **First-degree atrioventricular (AV) block, or first-degree heart block, is defined as prolongation of the PR interval on an electrocardiogram (ECG) to more than 200 msec. ...**
* **Right testicular vein drain into?---->IVC**

The right gonadal vein (GV=testicular vein in men, ovarian vein in women) usually drains into the inferior vena cava (IVC) while the left gonadal vein drains into the left renal vein (RV)

* **The femoral sheath of the femoral vessels is formed by the? ----> Fascia transversalis and the fascia lliaca**

The three walls of the femoral sheath include: The posterior wall is formed by the iliaca fascia, along with a narrow ribbon of pectineus muscle fascia. The anterior wall is formed by the transversalis fascia and partially the fascia lata. The lacunar ligament forms the medial wall.

* **Nerve stimulation is more difficult to create action potential in?----> Hypokalemia**

Serum hypokalemia causes hyperpolarization of the RMP (the RMP becomes more negative) due to the altered K+ gradient. As a result, a greater than normal stimulus is required for depolarization of the membrane in order to initiate an action potential (the cells become less excitable).

* **participate in circle of Willis?----> Posterior communicating artery**

The anterior communicating, anterior cerebral, internal carotid, posterior communicating, posterior cerebral, and basilar arteries are all part of the circle of Willis

* **Injury to sacral segments of spinal cord cause?----> Autonomous bladder causing continuous dribbling**

 Sacral cord injury If the bladder cannot contract, a condition called detrusor areflexia is present, which also leads to the storage of large urine volumes and can be accompanied by overflow incontinence.

* **Nerve conducting one sensation modality at a time is----> Labelled Line Principle**

The receptive field of a sensory neuron is the particular part of the body surface in which a stimulus will trigger the firing of that neuron. ... The specificity of nerve fibers for transmitting only one modality of sensation is called the labeled line principle

* **ligament that has both intra as well as extra pelvic extension?---->Round ligament of uterus**

The round ligament is a remnant of the embryonic gubernaculum. It originates at the uterine horns (the points at which the fallopian tubes enter the uterus), and attaches to the labia majora, passing through the inguinal canal

* **Regarding S1---->Longer than S2**

The intensity of the first sound is greater than the second. In a normal heart S1 is louder than S2 in the apex, and S2 is louder than S1 in the base.

* **complicated diabetic pts have ----> Angiopathy and neuropathy**

High blood sugar can cause diabetic neuropathy, which damages the nerves that send signals from your hands and feet. Diabetic neuropathy can cause numbness or tingling in your fingers, toes, hands, and feet. Another symptom is a burning, sharp, or aching pain (diabetic nerve pain)

* **immediate effect of Insulin?---->Potassium entry into the cell**

Insulin shifts potassium into cells by stimulating the activity of Na+-H+ antiporter on cell membrane, promoting the entry of sodium into cells, which leads to activation of the Na+-K+ ATPase, causing an electrogenic influx of potassium. IV insulin leads to a dose-dependent decline in serum potassium levels

* **M bands cells are produced by?----> Plasma cells**
* **In obstructive jaundice, there is increased clotting time due to?----> Prothrombin deficiency**

 The bleeding tendency in cases of obstructive jaundice and biliary fistula is due to a prothrombin deficiency.

* **A boy inhaled peanut, lodged in?---->Rt lower bronchus**

The right lower lobe of the lung is the most common site of recurrent pneumonia in foreign body aspiration. This is due to the fact that the anatomy of the right main bronchus is wider and steeper than that of the left main bronchus, allowing objects to enter more easily than the left side.

* **In Chronic pancreatitis, steatorrhea occurs due to deficiency in?
---->Lipase**

Steatorrhea occurs when less than 10% of the exocrine pancreas is functional. ... Pancreatic enzymes replacement consists of lipase to prevent fat and other pancreatic enzymes malabsorption.

* **Is not a tumor suppressor gene---->BCL2**

Bcl-2 is widely believed to be an apoptosis suppressor gene. Overexpression of the protein in cancer cells may block or delay onset of apoptosis, by selecting and maintaining long-living cells and arresting cells in the G0 phase of the cell cycle.

* **Alcohol detoxification is done
by?
---->Peroxisome**

Some types of peroxisomes, such as those in liver cells, detoxify alcohol and other harmful compounds by transferring hydrogen from the poisons to molecules of oxygen (a process termed oxidation). ... In order to carry out their activities, peroxisomes use significant amounts of oxygen.

* **Number of umbilical arteries in
fetus?
---->2**

Typically, an umbilical cord has two arteries and one vein

* **common cause of congenital hypothyroidism?
----> Maternal iodide deficiency**

Around the world, the most common cause of congenital hypothyroidism is iodine deficiency

* **A child is born with cataract, mother is infected by----> Rubella**

Maternal infection with rubella in the first trimester is an important cause of congenital cataract. Any injury affecting the foetus following maternal rubella infection in the phase of organogenesis results in congenital defects collectively termed as congenital rubella syndrome (CRS).

* **Loss of inversion of foot. Muscle paralyzed?---->Tibialis anterior and Tibialis posterior**

Abduction and adduction refer to movements of the anterior part of foot about a vertical axis. The tibialis posterior and anterior muscles invert the foot.

* **A boy with right testes in scrotum and left undescended. ---->Neoplasia**

 Men with undescended testicles are about 3 times more likely to develop testicular cancer than men whose testicles descend at birth or shortly after.

* **increase the potency of local anaesthesia ---->1:20000 epinephrine**

The addition of epinephrine 5 micrograms/ml (1:200 000) as a vasoconstrictor to local anaesthetic solutions slows systemic absorption and prolongs the anaesthetic effect. In dental surgery, in which small volumes are injected,

* **analgesic with bronchodilator effect?
---->Ketamine**

Ketamine acts as a bronchodilator probably by two different mechanisms – firstly, via a central effect inducing catecholamine release, thereby stimulating β2 adrenergic receptors, resulting in bronchodilation, and secondly, via inhibition of vagal pathways to produce an anticholinergic effect acting directly on bronchial smooth muscl

* **formed from ventral and dorsal primordium?
----> Pancreas**

. The ventral and dorsal pancreatic buds (or pancreatic diverticula) are outgrowths of the duodenum during human embryogenesis. They join together to form the adult pancreas.

* **cells is involved in acute inflammatory process and also has myeloperoxidases and other enzymes?----> Neutrophils b Monocytes**

Neutrophils are the most numerous type of white blood cell in the blood, and their job is to immediately respond to inflammation and kill bacteria by phagocytosis, which is the process by which a cell engulfs, destroys and digests another cell, bacteria or cellular debris.

* **A3 years old baby inhaled something CXR confirmed foreign body lodged in left lower bronchus.diagnosis?---->Situs inverses**

Situs inversus (also called situs transversus or oppositus) is a congenital condition in which the major visceral organs are reversed or mirrored from their normal positions. The normal arrangement of internal organs is known as situs solitus while situs inversus is generally the mirror image of situs solitus.

* **Regarding Cauda equina:----> Anterior and posterior roots of spinal cord from L1-L5**

The cauda equina is a group of nerves and nerve roots stemming from the distal end of the spinal cord, typically levels L1-L5 and contains axons of nerves that give both motor and sensory innervation to the legs, bladder, anus, and perineum.

* **The most common feature of Pulmonary embolism:----> Clinically silent**

Although between 60% and 80% of pulmonary emboli are clinically silent

* **Huntington Disease in mother, father is normal. Pattern of disease transmission to children is?----> autosomal dominant pattern**

This condition is inherited in an autosomal dominant pattern, which means one copy of the altered gene in each cell is sufficient to cause the disorder. An affected person usually inherits the altered gene from one affected parent

* **Neurons present in the sensory nerve body of spinal ganglia?---->Pseudo unipolar**

. All pseudounipolar neurons are sensory neurons. The ones found in the dorsal root ganglia, and majority of those in cranial nerve sensory ganglia carry information about touch, vibration, proprioception, pain and temperature

* **A Child having Meckel’s diverticulum presents with bleeding per rectum. This is most likely due to?----> Ectopic gastric tissue**
* **Complications arising from Meckel's diverticulum include gastrointestinal bleeding, intussusception, intestinal obstruction, abdominal pain, and incarcerated hernia . The main cause of bleeding is the acid secreted from the ectopic mucosa, leading to ulceration of the adjacent ileal mucosa.**
* **professionalism of a doctor?----> Polite and good bedside manners**

Smiling and appropriate touch also lets patients know they matter.” A healthcare provider's bedside manner encompasses their medical knowledge, personality, and ability to understand the patient and communicate their concern for them.

* **An accessory cervical rib arising from transverse process of cervical vertebrae may cause damage to?---->T1**

A cervical rib in humans is an extra rib which arises from the seventh cervical vertebra. Their presence is a congenital abnormality located above the normal first rib. ... Failure of this process results in a variably elongated transverse process or complete rib that can be anteriorly fused with the T1 first rib below.

* **in caput medusae. veins are innvolved---->Paraumbilical and epigastric veins**

The superficial epigastric vein drains to the femoral vein which ultimately drains into the inferior vena cava directly through the external iliac and common iliac vein, thereby bypassing the liver. Dilation of this particular portacaval anastomosis results in what is referred to as caput medusae.

* **Most common lobe involved in prostate carcinoma is?---->Posterior**

Adenocarcinoma of the prostate typically begins in the posterior lobe.

* **Upper outer quadrant breast tumor lymph will drain into?---->Pectoral**

 pectoral nodes, at the inferior border of the pectoralis minor, drain most of the breast.

* **Platelets are transfused at room temperature?---->To optimize their function**

Platelets, unlike red blood cells and plasma, are stored at room temperature because platelets transfused after refrigeration at 4 degrees C are rapidly cleared from the circulation.

* **During cell division, the chromosome is arranged at the equatorial plate in---->Metaphase**

Metaphase proceeds prophase and is marked by the movement of chromosomes towards the equator of cell mediated by kinetochore microtubules of spindle fibres. Alignment of chromosomes on the equatorial plane of the spindle, the metaphase plate, marks the end of metaphase.

* **Accessary right hepatic artery arises from?----> Superior mesenteric artery**

Accessory right hepatic arteries arise from the superior mesenteric artery and run in the portacaval space to supply a portion of the right lobe of the liver.

* **pt with dysphagia to liquid, biopsy reveal normal histology. Cause is?---->Neuromuscular incoordination**
* **CSF differ from plasma in?---->Dec pH**

The CSF has a composition identical to that of the brain ECF but this is different from plasma. The major differences from plasma are: The pCO2 is higher (50 mmHg) resulting in a lower CSF pH

* **pairing of reflex?
---->Biceps - C5, C6**

Biceps reflex is a reflex test that examines the function of the C5 reflex arc and the C6 reflex arc.

* **Function of Geniohyoid is?---->Elevate hyoid or depress mandible**

Geniohyoid pulls the hyoid bone anterosuperiorly, shortening the floor of the mouth and widening the pharynx during swallowing.

* **artery behind sternum?
---->ascending aorta>Int. thoracic artery**

The internal thoracic artery arises from the subclavian artery near its origin. It travels downward on the inside of the ribcage, approximately a centimeter from the sides of the sternum,

* **vertebra in newborn---->C shaped vertebral column**

 C-shaped vertebral column that may be referred to as a 'primary curvature', .

* **An old patient after abdominal surgery develops abdominal distention. O/E he was pale and BP low and tachycardiac. Mist likely cause of shock is?---->Hypovolemic shock**
* **The first changes in vital signs seen in hypovolemic shock include an increase in diastolic blood pressure with narrowed pulse pressure. As volume status continues to decrease, systolic blood pressure drops resulting into tachychardia**

* **unable to extend the thumb and metacarpopharyngeal joints as well as the abduction of thumb. There was no loss of sensations. Nerve involved is?----> Radial nerve**

Wrist drop, in which the wrist and the fingers cannot extend at the metacarpophalangeal joints. The wrist remains partially flexed due to an opposing action of flexor muscles of the forearm.

* **Coarctation of aorta is ---->Constriction just after subclavian artery**

**Coarctation of the aorta (CoA) is typically a discrete narrowing of the thoracic aorta just distal to the left subclavian artery. However, the constriction may be proximal to the left subclavian artery or rarely in the abdominal aorta. In some cases, coarctation presents as a long segment or a tubular hypoplasia**

* **After renal transplant, patient presents with renal failure. What is theJikely cause?
---->Acute cellular rejection**

Acute cellular rejection, also called acute T-cell–mediated rejection (TCMR), presents in the transplant recipient with acute kidney injury and decreased urine output, and may be accompanied by proteinuria.

* **tympanic membrane?---->Forms the lateral part of tympanic cavity**

Facing the outer ear, the lateral wall (or membranous wall), is formed mainly by the tympanic membrane, partly by the ring of bone into which this membrane is inserted.

* **bloody nipple discharge without any palpable mass. What is the most probable diagnosis?----> Intraductal papilloma**

An intraductal papilloma can cause breast enlargement, lumps, and nipple discharge. Some people might also experience pain or discomfort in their breast. An intraductal papilloma typically presents as one larger lump near your nipple or as multiple smaller lumps farther from your nipple.

* **Pigment and neuronal layer of retina are kept in approximation by?----> Glycosaminoglycan**

Glycoproteins and proteoglycans associated with hyaluronan. ... Hyaluronan-binding motifs on these cells provides the structural link between the neural retina and the RPE

* **Glomerular artery form by?---->Afferent arteriole**

 The afferent arterioles branch from the renal artery, which supplies blood to the kidneys. The afferent arterioles later diverge into the capillaries of the glomerulus

* **Pain through free nerve ends is transmit by?---->Spinothalamic tract**

– free nerve endings (carried in the lateral spinothalamic tract) ... lies in the ventral part of the lateral funiculus and transmit pain and temperature.

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