



MINI GT1 – INICET

Medsynapse by Dr. Nikita



A patient presents with episodes of flushing, diarrhea, abdominal cramping, and wheezing. His blood pressure and pulse rate are normal during these episodes. Physical exam is normal except for scattered telangiectasias. In order to diagnose this problem, a 24-h urine collection showed elevated levels of 5-HIAA (5- hydroxyindole acetic acid). The chemical responsible for this above syndrome is a derivative of which amino acid?

- A. Alanine
- B. Serine
- C. Tyrosine
- D. Tryptophan

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A 10 year old boy presented with abdominal pain, muscle weakness and fatigue. On investigations , serum lead levels were found increased in blood . Activity of which of the following enzyme in the liver is increased :

- A ALA synthase
- B ALA Dehydratase
- C PBG deaminase
- D Heme oxygenase

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If in a person total cholesterol =300 mg/dl , HDL, = 25 mg/dl and triglycerides = 150 mg/dl , what will be the LDL levels

- A 245
- B 125
- C 95
- D 55

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Friedewald equation

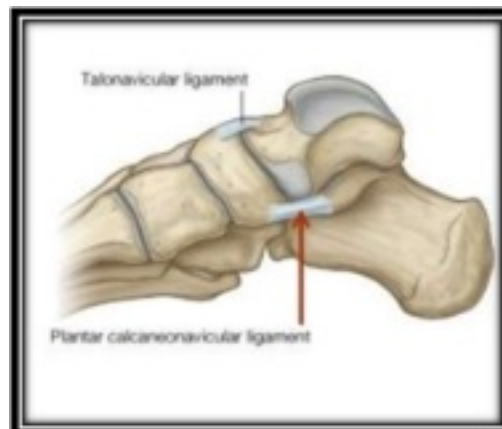
$$\text{VLDL-c} = \text{Triglycerides}/5$$

$$\text{LDL-c} = \text{Total cholesterol} - (\text{HDL-c} + \text{VLDL-c})$$

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The following joint is a type of

- A. Saddle Joint
- B. Hinge joint
- C. Ellipsoid Joint
- D. Ball and Socket



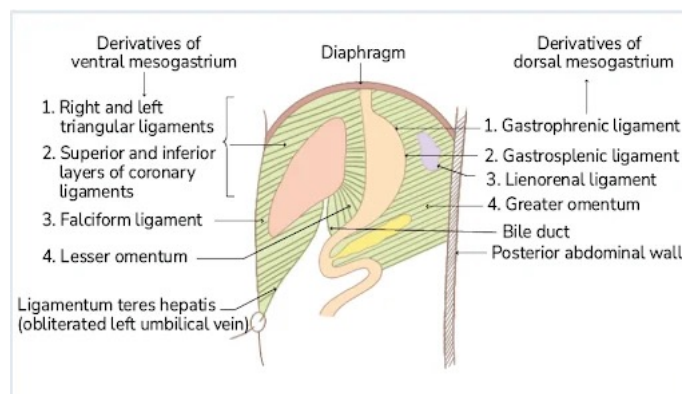
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All of the following tissues are derived from the dorsal mesentery EXCEPT:

- A. The splenorenal ligament
- B. The visceral peritoneum of the spleen
- C. The greater omentum
- D. The anterior border of the epiploic foramen

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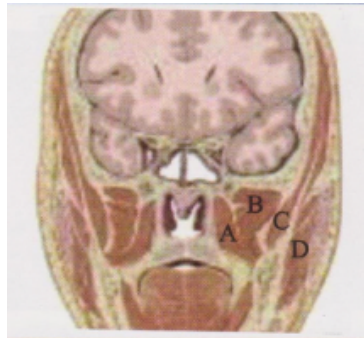


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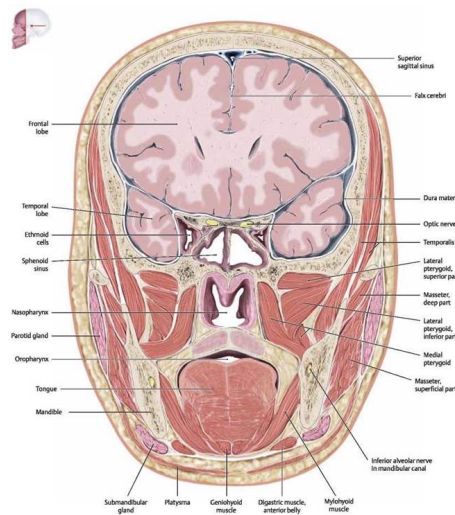


Which of the following marked muscles is responsible for opening of the jaw?

A
B
C
D



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All of the following pairs are correct for nuclei of hypothalamus except:

- A. Ventero medial: Hunger
- B. Supra-optic: Water conservation
- C. Posterior nucleus: Shivering centre
- D. Supra-chiasmatic: Circadian rhythm

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Hyponatremia has no effect on the RMP (resting membrane potential) because

- A The cell membrane is impermeable to Na^+ at rest
- B ECF Na^+ concentration is high
- C Intracellular K^+ concentration is high
- D Equilibrium potential for Na^+ is +60 mV.

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The pleural pressure of a normal 56 year old woman is approximately -5 cm of water during resting conditions before inspiration (i.e. at functional residual capacity). What is the pleural pressure during inspiration?

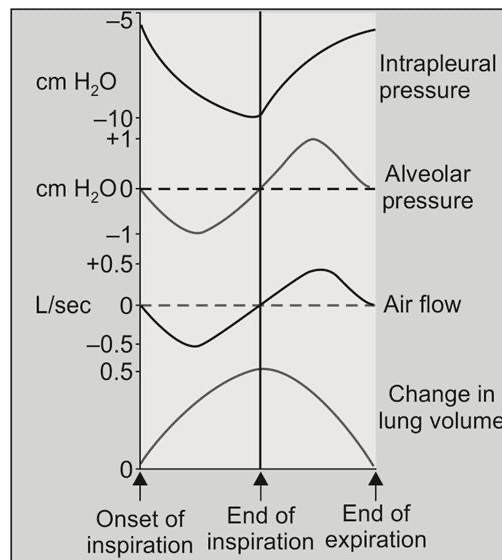
A+1cm of water

B+4cm of water

C-3cm of water

D-7 cm of water

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A 36 year female patient came with running nose, fever, myalgia and headache from last 7 days. She comes to fever clinic with difficulty in breathing and cough, her SpO₂ is 88%, Temp 101 F, PR- 120bpm and normal BP. Investigations of patient revealed RTPCR confirmed COVID 19 Infection, chest X ray and CT scan findings also confirmed the same features of infection. He was started on Remdesivir IV and the drug acts by following mechanism?

- A. Neuraminidase inhibition
- B. RNA dependent RNA polymerase inhibition
- C. Protease inhibition
- D. Importin channel inhibition

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DOC for chronic Hepatitis B in a pregnant female is:

- A. Lamivudine
- B. Entecavir
- C. Adefovir
- D. Telbivudine

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A topical retinoid recently introduced for the treatment of psoriasis is:

- A adapalene
- B Tazarotene
- C Alitretinoin
- D Bexarotene

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Which of the following drugs cause heterochromia iridis

- A Latanoprost
- B Prednisolone
- C Timolol
- D Olopatadine

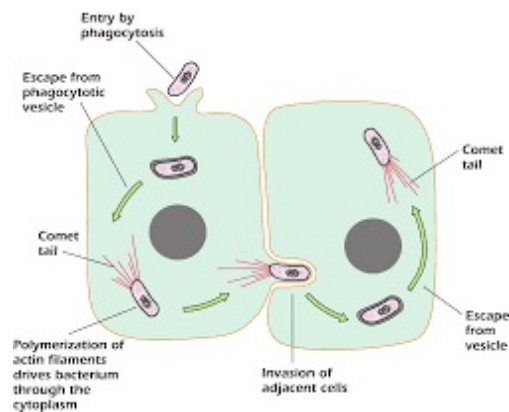
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Movement of *Listeria monocytogenes* inside of host cells is caused by:

- A. Inducing host cell actin polymerization
- B. The formation of pili (fimbriae) on the listeriae surface
- C. Pseudopod formation
- D. The motion of listeriae flagella

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Valley fever or desert rheumatism is

A histoplasmosis

B blastomycosis

C Coccidioidomycosis

D aspergillosis

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Reassortment is typically seen in:

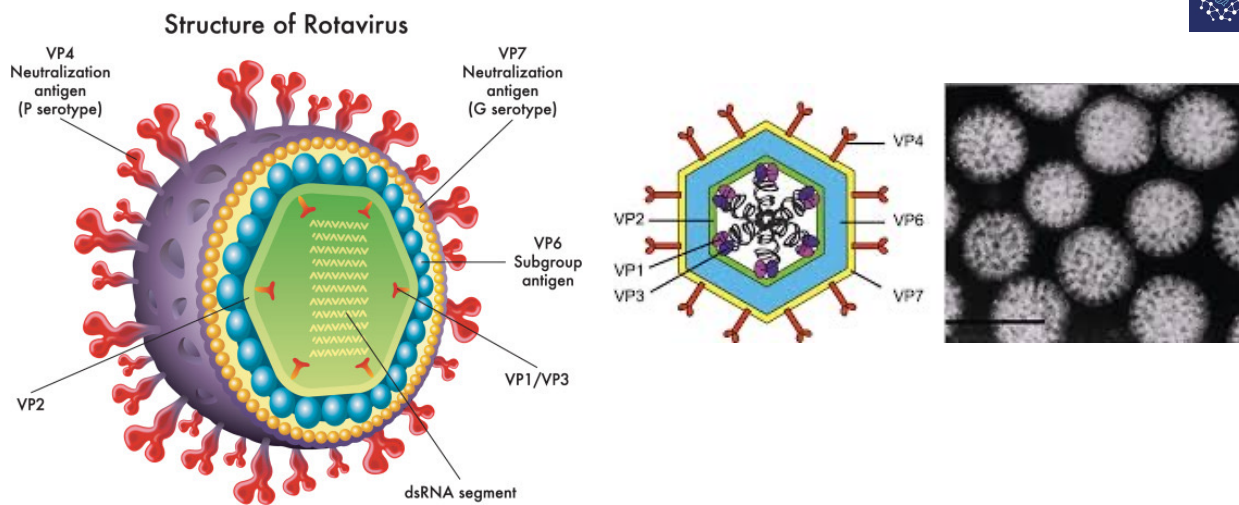
A Herpes

B Hepadna

C Rotavirus

D Astrovirus

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Which is true for endotoxins?

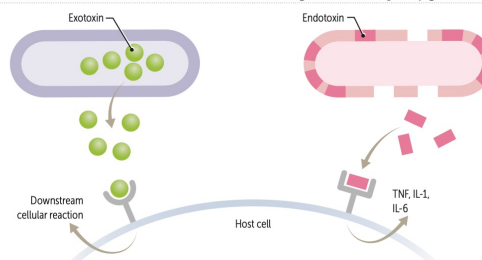
- A Highly antigenic
- B Found only in Gram-negative bacteria
- C Usually binds to specific cellular receptors
- D Highly toxic and fatal in microgram quantities

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Main features of exotoxins and endotoxins

	Exotoxins	Endotoxins
SOURCE	Certain species of gram ⊕ and gram ⊖ bacteria	Outer cell membrane of most gram ⊖ bacteria
SECRETED FROM CELL	Yes	No
CHEMISTRY	Polypeptide	Lipid A component of LPS (structural part of bacteria; released when lysed)
LOCATION OF GENES	Plasmid or bacteriophage	Bacterial chromosome
TOXICITY	High (fatal dose on the order of 1 μg)	Low (fatal dose on the order of hundreds of micrograms)
CLINICAL EFFECTS	Various effects (see following pages)	Fever, shock (hypotension), DIC
MODE OF ACTION	Various modes (see following pages)	Induces TNF, IL-1, and IL-6
ANTIGENICITY	Induces high-titer antibodies called antitoxins	Poorly antigenic
VACCINES	Toxoids used as vaccines	No toxoids formed and no vaccine available
HEAT STABILITY	Destroyed rapidly at 60°C (except staphylococcal enterotoxin and <i>E coli</i> heat-stable toxin, and <i>B cereus</i> emetic toxin)	Stable at 100°C for 1 hr
TYPICAL DISEASES	Tetanus, botulism, diphtheria, cholera	Meningococccemia; sepsis by gram ⊖ rods



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Which of the following complement components is chemoattractant :

- AC3a
- BC4a
- CC5a
- DC3b

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All are true about FFP except

A Frozen within 8 hours of collection of whole blood

B 240 ml plasma in one unit

C Can be stored for 5 years

D Minimal loss of labile coagulation factors

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For programmed cell death and autophagy, which is pro apoptotic genes?

A BCL2

B. BAX

C. BCL-XL

D. BIM

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Which of the following variables is measured on the ordinal scale:

A Type of anemia

B Severity of anemia

C Hemoglobin level

D Serum ferritin level

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Resource persons for training of ASHA

A Medical officer & ANM

B Medical officer & Anganwadi worker

C ANM and anganwadi worker

D Medical officer

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All the following provide evidence of faecal pollution except:

- A Faecal streptococci
- B. Coliform
- C Cl. tetani
- D. Enteropathogenic virus

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One of the methods of health communication where 4 to 8 persons who are qualified to talk about the topic and discuss a given problem or topic in front of a large group or audience in sequence. This method is called as

- A Symposium
- B. Panel discussion
- C. Workshop
- D. Seminar

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A young adult came with casualty with history of some substance abuse. His pulse was 110 beats per minute, respiratory rate 30/min, blood gas analysis revealed metabolic acidosis, hypocalcemia and electrolyte imbalance. Blood urea – 100 mg/dl, creatinine – 3.4 mg/dl. Urine analysis showed calcium oxalate crystals. He improved on gastric lavage, ethanol, sodium bicarbonate, calcium gluconate and 4-methyl pyrazole. What is the substance he consumed?

- A Ethylene glycol
- B Methyl alcohol
- C Formaldehyde
- D Paraldehyde

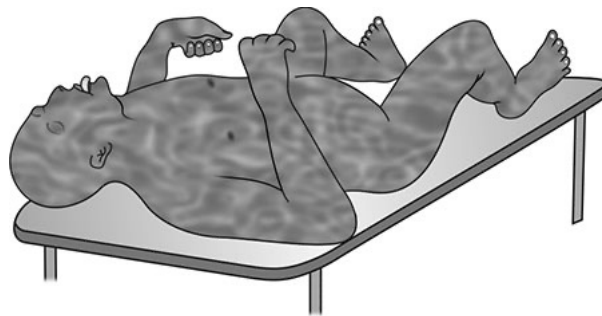
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Pugilistic attitude is due to

- A Cadaveric spasm
- B Rigor mortis
- C Coagulation of protein
- D All of the above

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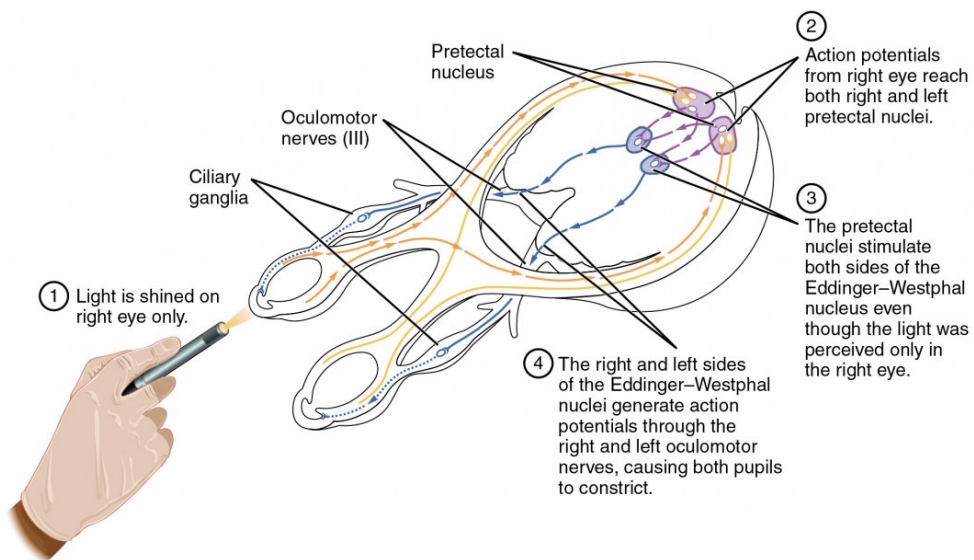
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Which of the following is true regarding cortical blindness

- A Direct and Consensual reflex absent in both eyes.
- B Direct and Consensual reflex present in both eyes.
- C Direct reflex present and Consensual reflex absent on affected side.
- D Direct reflex present and consensual reflex absent on normal side.

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Which of the following is not a typical feature of Meniere's disease?

A Sensorineural deafness

B Vertigo

C Pulsatile tinnitus

D Fluctuating deafness

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During cardiopulmonary resuscitation, external cardiac compression is given over-

- A Upper third of sternum
- B Mid third of sternum
- C lower one third of sternum
- D Precordium overall

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Dapsone syndrome in hansen therapy is seen after

- A 1st week of therapy
- B 2 weeks
- C 48 hours
- D 5 weeks

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Children with conduct disorders in childhood later on develop which personality disorder in adulthood?

- A Antisocial PD
- B Borderline PD
- C Avoidant PD
- D Narcissistic PD

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Air bronchogram is seen in:

- A Lung abscess
- B Lung cavity
- C Pneumothorax
- D Consolidation

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A 7 year old child had acute viral illness, followed by sudden appearance of non-palpable petechiae and purpura on the body. There was mild splenomegaly but no hepatomegaly. On investigations, Platelet count was 80000/mm³. CRP and TLC were elevated. Presence of which among the following rules out ITP as the likely cause?

- A Non-palpable lesions
- B Elevation of CRP
- C Age of the child
- D Presence of splenomegaly

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Bleeding symptoms:

- Absent in 40% of cases, especially in younger and with platelets $> 50 \times 10^9/L$
- Mucocutaneous bleeding, as widespread petechiae or ecchymosis, gum bleeding, or blood blisters in mouth
- Menorrhagia in women
- Major bleeding as intracranial hemorrhage, more frequent in elderly with co-morbidities and/or platelets $< 30 \times 10^9/L$ [7]

Absence of:

- Constitutional symptoms, as significant weight loss, bone pain, or night sweats
- Hepatosplenomegaly
- Lymphadenopathy
- Stigmata of congenital disorders

Exclusion of underlying diseases:

- HCV, HIV, *H. pylori*, CMV, or VZV infections
- Liver disease
- Myelodysplastic syndromes
- Lymphoproliferative disorders
- Autoimmune diseases, as systemic erythematosus lupus, antiphospholipid syndrome or Evans syndrome
- Drug-induced, as acetaminophen or amiodarone (for a more detailed list of drugs, see Mahévas et al. [3])

Abbreviations. TPO: thrombopoietin; HCV: hepatitis C virus; HIV: human immunodeficiency virus; *H. pylori*: Helicobacter pylori; CMV: cytomegalovirus; VZV: varicella-zoster virus.

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Which of the following is false about cluster headache?

A Central pacemaker neurons in the hypothalamus are involved in pathology

B Associated with bilateral photophobia and phonophobia

C Periodicity is core feature, at least one of the daily attacks of pain recurs at about the same hour each day

D Associated with ipsilateral symptoms of cranial parasympathetic autonomic activation.

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TABLE 2. CRITERIA FOR DIAGNOSING CLUSTER HEADACHE	
Patient must have at least 5 attacks fulfilling all 4 following criteria:	
1. Location: Unilateral orbital, supraorbital, or temporal pain, characterized as severe or very severe Duration: lasting 15-180 minutes (when untreated)	
2. Associated symptoms: Either 1 or both of the following: a. At least 1 of the following symptoms ipsilateral to the headache i. Lacrimation or conjunctival injection ii. Rhinorrhea or nasal congestion iii. Edema of the eyelid iv. Forehead and facial sweating v. Ptosis or Miosis b. A sense of agitation or restlessness	
3. Frequency: Attacks occur between 1 every other day and 8 per day	
4. Headache attack not able to be better accounted for by another ICHD-3 diagnosis	
Data from The International Classification of Headache Disorders, third edition ¹	

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Which of the following is the correct statement regarding findings in JVP

A Cannon wave: Complete heart block

B Slow y descent: Tricuspid regurgitation

C Giant c wave: Tricuspid stenosis

D Increased JVP with prominent pulsations: SVC obstruction

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Which manifestation is more common in limited systemic sclerosis as compared with diffuse Ssc?

- A Skin involvement
- B Pulmonary fibrosis
- C pulmonary artery HT
- D oesophageal dysmotility

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<i>Feature</i>	<i>Limited cutaneous</i>	<i>Diffuse cutaneous</i>
Skin fibrosis	Areas distal to the elbows and knees; may affect the face	Areas proximal or distal to the elbows and knees; may affect the face
Typical form of lung involvement	Pulmonary arterial hypertension	Interstitial lung disease
Characteristic visceral organ involvement	Severe gastroesophageal reflux disease and Raynaud phenomenon	Scleroderma renal crisis
Physical examination findings	Telangiectasia, calcinosis cutis, sclerodactyly, digital ischemic complications	Tendon friction rubs, pigment changes

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All of the following statements about diabetic ketoacidosis are true EXCEPT:

- A DKA is commoner in type 1
- B Anion gap increases
- C Serum pH < 7.4
- D Serum bicarbonate in DKA is > 15 meq/L

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	Mild DKA	Moderate DKA	Severe DKA
Plasma glucose (mg/dl)	>250	>250	>250
Arterial pH	7.25-7.30	7.00-7.24	<7.00
Serum bicarbonate	15-18	10-<15	<10
Urine ketones	Positive	Positive	Positive
Serum ketones	Positive	Positive	Positive
Sensorium	Alert	Alert/drowsy	Stupor/coma

DKA: Diabetic ketoacidosis

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Type 7 Gilbert hernia is:

- A Direct inguinal hernia
- B Indirect inguinal hernia
- C Femoral hernia
- D Umbilical hernia

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TYPE	DESCRIPTION
1	Small (<1.5 cm) , Indirect
2	Medium (1.5 - 4 cm), Indirect
3	Large (> 4 cm), Indirect
4	Entire Floor Defect (Posterior wall), Direct
5	Diverticular Type, Direct
6	Pantaloon / Double Hernia
7	Femoral Hernia

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Device which has been shown in the figure is used for which condition ?



- A Deep Venous Thrombosis
- B Varicose Vein
- C Hypothermia
- D Cellulitis

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True about hypospadias:

- A Associated with chordee
- B 50% associated with undescended testis
- C Due to failure of fusion of posterior wall of urethra
- D Circumcision done immediately

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The occurrence of hyperthyroidism following administration of supplemental iodine to subject with endemic iodine deficiency goiter is known as:

- A Jod-Basedow effect
- B Wolff-Chaikoff effect
- C Thyrotoxicosis factitia
- D De-Quervains thyroiditis

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Risk factor for carcinoma breast are all except

- A Nulliparity
- B OCP
- C BRCA-1 mutation
- D Estrogen

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TABLE 1.
Factors Affecting Breast Cancer Risk

Major Risk Factors	Minor Risk Factors	Protective Factors
Being female	Early menarche (before age 12 yr)	Breastfeeding
Increase age	Late menopause (after 55 yr)	Exercise 3 times per week
Family history of breast cancer	Nulliparity	First childbirth before age 30 yr
Diagnosis of atypical hyperplasia or LCIS	First childbirth after age 30 yr	
BRCA1 or BRCA2 gene mutation	Estrogen replacement therapy (?)	
	Daily alcohol intake (>1 drink)	
	Dietary fat (?)	

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Functional bracing is now the gold standard in nonoperative management of which fractures?



- A Fracture shaft humerus
- B Fracture of both bones of the forearm
- C Fracture shaft tibia
- D Fracture shaft femur

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A neonate is found to have microcephaly, IUGR and multiple blueberry muffin lesions on the skin. CT brain showed calcification around the ventricles. Which among the following will be the best sample for isolation of organism?

- A Blood
- B Urine
- C Sputum
- D Biopsy from skin lesions

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All the following are components of APGAR score except?

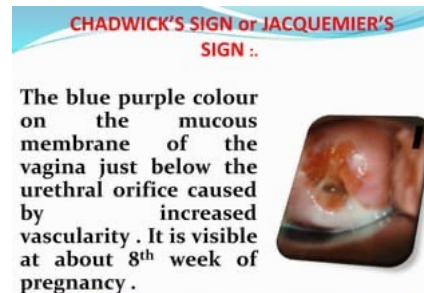
- A Muscle tone
- B Colour of the body
- C Heart rate
- D Respiratory rate

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Chadwick sign is seen in:

- A Cervix
- B Vagina
- C uterus
- D Ovary



Medsynapse by Dr. Nikita



A female presents with 8 weeks amenorrhea with pain left lower abdomen. On USG, there was thick endometrium with mass in lateral adnexa. Most probable diagnosis:

- A Ectopic pregnancy
- B Torsion of dermoid cyst
- C Tubo-ovarian mass
- D Hydrosalpinx

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A female of 36 weeks gestation presents with hypertension, blurring of vision and headache. Her blood pressure reading was 180/120 mm Hg and 174/110 mm Hg after 20 minutes. How will you manage the patient?

A Admit the patient and observe

B Admit the patient, start antihypertensive and continue pregnancy till term.

C Admit the patient, start antihypertensive, mg SO₄ and terminate the pregnancy

D Admit oral antihypertensives and follow up in outpatient department

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Parameters	Mild	Severe
Clinical parameters		
Systolic blood pressure (mmHg)	140-160	≥160
Diastolic blood pressure (mmHg)	90-110	≥110
Headache	Absent	Present
Visual disturbances	Absent	Present
Epigastric pain	Absent	Present
Laboratory parameters		
Urinary output	>500 ml/24 h	≤500 ml/24 h
Urinary protein	<5 g/24 h	≥5 g/24 h
Urinary dipstick	1+/2+	3+/4+

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A Male with azoospermia. On examination size of testis normal FSH normal testosterone normal. Most probable cause is:

- A undescended testis**
- B Klinefelter's syndrome**
- C Kallmann's syndrome**
- D Vas obstruction**

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A young nulliparous woman has 3rd degree uterovaginal prolapsed without any cystocele or rectocele. There is no stress incontinence. Uterocervical length is 3 inches. All other symptoms are normal. The best treatment plan for her will be :

- A Observation and reassurance till child bearing is over**
- B Shirodkar's vaginal repair**
- C Shrodkar's abdominal sling**
- D Fothergill's operation**

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