

# CNS Block

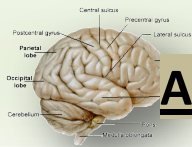
Revision Questions week 2&3



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## **Anatomy:**

### **1. The name of the basilar part of occipital bone that brainstem lies on it:**

- A. Clivus
- B. Velum
- C. pons
- D. Peduncle

Answer: A

### **2. Right middle peduncle contains fibers originate from**

- A. Left pontine nuclei
- B. Cochlear nuclei
- C. Right pontine nuclei
- D. lateral boundary of the 4th ventricle

Answer: A

### **3. Oculomotor (3rd) nerve emerge from:**

- A. Sulcus between pons & pyramid.
- B. The middle of ventrolateral aspect of pons
- C. Lateral aspect of interpeduncular fossa.

Answer: C

### **4. SENSORY DECUSSATION formed by:**

- A. Fibers that form the pyramid
- B. Medial Lemniscus
- C. Lateral Leniniscus
- D. crossed internal arcuate fibers

Answer: D

### **5. The name of the structure that divides the CAUDAL PART OF THE PONS into a Basis Pontis&Tegmentum is:**

- A. Trapezoid Body
- B. Solitary nucleus
- C. Nucleus Ambiguus
- D. Vestibular nuclei complex

Answer: A

### **6. Parkinson's disease results from:**

- A. Degeneration of trochlear nucleus
- B. Degeneration of Substantianigra or basal ganglia
- C. Degeneration of crus cerebri.

Answer: B

### **7. The fibers of which nerve passes anteriorly through the red nucleus to emerge on the medial side of the crus cerebri:**

- A. Trochlear nerve
- B. Hypoglossal nerve
- C. Oculomotor nerve

Answer: C

**8. In which level we can find Red nucleus:**

- A. Superior colliculus Level
- B. Inferior colliculus level
- C. LEVEL OF THE TRIGEMINAL NERVE
- D. CAUDAL PART OF THE PONS

Answer: A

**9. Descending fibers of raphe nuclei involved in:**

- A. mechanisms of sleep
- B. arousal and sleep-wake cycles
- C. modulation of Pain

Answer: C

**10. Special visceral efferent (SVE) fibers of GLOSSOPHARYNGEAL NERVE that supply stylopharyngeus muscle originate from:**

- A. inferior salivatory nucleus (ISN).
- B. nucleus ambiguus (NA).
- C. nucleus of solitary tract (NST).

Answer: B

**11. Patient came to the hospital complaining of difficulty of swallowing; Impairment of taste and sensation over the posterior one-third of the tongue. While examining him the doctor noticed absence of gag reflex. What's the most probably injured nerve?**

- A. Vagus nerve
- B. Hypoglossal nerve
- C. Glossopharyngeal nerve
- D. Trochlear nerve

Answer: C

**12. The main component of vegus nerve is:**

- A. Somatic sensory fibers
- B. Somatic motor fibers
- C. Preganglionic parasympathatic fibers
- D. Preganglionic sympathatic fibers

Answer: C

**13. Meningeal nerve that supplies the dura is branch of:**

- A. Glossopharyngeal nerve
- B. Vagus nerve
- C. Hypoglossal nerve

Answer: B

**14. Accessory Nerve is a ----- nerve and exit from the skull through**

- A. Sensory – jugular foramen
- B. Mixed – foramen magnum
- C. Motor – Jugular foramen.
- D. sensory - foramen magnum

Answer: C

**15. Difficulty in swallowing and speech and inability to shrug (raise) the shoulder are caused by lesion to which nerve:**

- A. Vagus nerve
- B. Hypoglossal nerve
- C. Accessory nerve

Answer: C

**16. The hypoglossal nucleus receives corticonuclear fibers from both cerebral hemispheres EXCEPT --- which receives contralateral supply only :**

- A. ansacervicalis
- B. Genioglossus
- C. Palatoglossus

Answer: B

**17. All of the muscles of the tongue receive motor innervation from hypoglossal nerve except the palatoglossus which is supplied by:**

- A. Accessory nerve
- B. Trigeminal nerve
- C. Vagus nerve

Answer: C

The Ear :

**1)in the EXTERNAL EAR Sensation is carried by :**

- A. great auricular
- B. auriculotemporal nerves
- C. Auricular branch of vagus
- D. A-B
- E. ALL

Answer: D

**2) Which of the following contains the auditory ossicles ?**

- A. a)external ear
- B. b)tympanic cavity
- C. c)Labyrinth

Answer: B " Middle ear "

**3) Auditory tube extends from which of the following ?**

- A. anterior wall downward, forward, and medially to the nasopharynx
- B. anterior wall downward, forward, and medially larynx
- C. anterior wall downward, forward, and laterally to the nasopharynx
- D. anterior wall upward, forward, and medially to the nasopharynx

Answer: A

**4)Equaliz the pressure on both side of the ear drum is function of ?**

- A. middle ear
- B. external ear
- C. Labyrinth
- D. a-b

Answer: A

**5)The Roof of middle ear is formed by:**

- A. tegmen tympani
- B. tensor tympani muscle.
- C. auditory tube
- D. b-c

Answer: A\*choice "D" there are 2 canals at the upper part of the anterior wall

**6) The anterior wall is formed below by a thin plate of bone that separates tympanic cavity from the:**

- A. tegmen tympani
- B. internal carotid artery
- C. auditory tube
- D. the bulb of the internal jugular vein

Answer:B

**7)The lateral wall of middle ear Is largely formed by the tympanic membrane.the membrane is**

- A. facing downward, forward, & laterally and extremely sensitive to pain.
- B. anterior wall upward, forward, and medially to the nasopharynx
- C. facing downward, backward, & laterally and extremely sensitive to pain.

Answer: A

**8)Medial wall of middle ear formed by :**

- A. lateral wall of the inner ear
- B. medial wall of the inner ear
- C. lateral wall of the external ear

Answer: A

**9)Medial wall shows a rounded projection called ..... , Above and behind.....,Below and behind..... ?**

- A. Promontory, Fenestra Cochleae. Fenestra Vestibuli
- B. Promontory, Fenestra Vestibuli. Fenestra Vestibuli Cochleae
- C. a-b

Answer: B

**10)Greater Petrosal nerve Arises from :**

- A. stylomastoid foramen.
- B. Genuate Ganglion.
- C. a-b

Answer: B

**11)The utricle, saccule and semicircular ducts are concerned with :**

- A. sensitive to pain.
- B. Equilibrium

Answer: B

**12) regarding to Spiral organ of Corti which of following is true :**

- A. contains the sensory receptors for Hearing.
- B. sensitive to pain.
- C. contains the sensory receptors for Equilibrium

Answer: A

The Nose

**1. Floor of nasal cavity formed by ?**

- A. Palatine process of maxilla, anteriorly
- B. Palatine process of maxilla, posteriorly
- C. Horizontal plate of the palatine bone, posteriorly
- D. Horizontal plate of the palatine bone, ,anteriorly
- E. A-c
- F. B-d

Answer: E

**2.Roof of nasal cavity formed by all of the following except?**

- A. a)Frontal, and nasal bones, Anteriorly
- B. b)Cribriform plate of ethmoid, in the middle
- C. c)Body of sphenoid, posteriorly
- D. d)Cribriform plate of ethmoid, posteriorly

Answer: D

**3)Medial wall nasal cavity formed by all of the following except?**

- A. Vertical plate of ethmoid
- B. Septal cartilage
- C. Vomer.
- D. Body of sphenoid, posteriorly

Answer:D

**4.The space (fossa) above the superior concha is the**

- A. Superior meatus
- B. middlemeatus
- C. Sphenoethmoidal recess
- D. Inferior meatus

Answer: C

**5.Sphenoethmoidal recessreceives the opening**

- A. a) sphenoidal air sinus
- B. B) bulla ethmoidalis and hiatus semilunaris
- C. c) maxillary, frontal, & anterior, middle ethmoidal sinuses
- D. d) nasolacrimal duct
- E. e) posterior ethmoidal sinus

Answer: A

note: b,c=Middle meatus. D=Inferior meatus. E=Superior meatus

**6)RESPIRATORY MUCOSA has all the following function except ?**

- A. air is moistened by the secretion of numerous serous glands
- B. cleaned by the removal of the dust particles by the ciliary action
- C. air is warmed by a submucous venous plexus
- D. air is warmed by ciliary action

Answer: D

**7.which of the following is true Nerve supply of nasal :**

- A. The anterior part is supplied by Anterior Ethmoidal nerve.
- B. The posterior part is supplied by branches of the pterygopalatine ganglion
- C. The anterior part is supplied by posterior Ethmoidal nerve.
- D. A-b

Answer: D

**8.Olfactory pathway 2nd neurone is formed by:**

- A. Mitral cells of olfactory bulb
- B. Olfactory receptors
- C. A-b

Answer: A

**9.most common site for epistaxis is:**

- A. posterior part of nasal septum
- B. medial part of nasal septum
- C. anterior part of nasal septum
- D. inferior part of nasal septum
- E. \*c-d

Answer: E

\*note: area called **Little's area**

**1. Most of muscles of the eye are supplied by:**

- A. I
- B. VI
- C. IV
- D. III

Answer:D

NOTE: " EXCEPT TWO MUSCLE" 1)Inferior rectus BY "VI" 2)Superior oblique, BY "IV"

**2.Oculomotor nerve has two nuclei what are these :**

- A. Main oculomotor nucleus
- B. Edinger-Westphal nucleus
- C. Accessory nucleus
- D. All

Answer: D

note: Accessory nucleus "Edinger-Westphal nucleus"

**3)which of the following is responsible for consensual pupillary reflexes:**

- A. Corticonuclear
- B. Pretectal nucleus
- C. Spinothalamic

Answer:B

Note:**Corticonuclear** fibers for the accommodation reflex

**4)Oculomotor nerve lesionresults in all the following except :**

- A. Medial squint.
- B. Ptosis.
- C. Pupillary dilatation
- D. Diplopia.
- E. Loss of accommodation
- F. Impaired downward & inward movement of the eye ball

Answer:A

Nota: medial squint cause by lesion in nerve VI

**5)Trochlearnervelesionresults in all the following except?**

- A. Diplopia.
- B. Ptosis.
- C. eye deviates upward and slightly inward.

Answer:B

Note:This person has difficulty in walking downstairs



**6)abducent nerve lesion results in ?**

- A. Medial squint.
- B. Ptosis.
- C. Pupillary dilatation
- D. lateral squint.

Answer: A

**7)Optic Tracts Mainly terminate in the (LGB), lateral geniculate bodies except some fibers terminate in**

- A. pretectal
- B. superior colliculus
- C. a-b

Answer: C

Note: III,IV, ophthalmic , maxillary pass laterally to cavernous sinus

**1.Mesencephalic receives :**

- A. proprioceptive fibers from muscles of mastication.
- B. b)touch fibers
- C. c)pain& temperature sensations
- D. d)proprioceptive from scalp

Answer: A

**2.which statement is true about TRIGEMINAL GANGLION it is :**

- A. dendrites carry sensations from the face
- B. axoncarry sensations from the face
- C. dendrites form the sensory root of trigeminal nerve.
- D. axons form the sensory root of trigeminal nerve

Answer: A

**3.TRIGEMINAL NERVE Divides into 3 divisionsexcept :**

- A. Ophthalmic
- B. Maxillary.
- C. Mandibular
- D. Temporal

Answer: D

**4)Regarding to TRIGEMINAL NERVE division which of the following is true ?**

- A. Axons of cells of motor nucleus join. Ophthalmic
- B. Axons of cells of motor nucleus join. Maxillary.
- C. Axons of cells of motor nucleus join. Mandibular
- D. Axons of cells of motor nucleus join. Mandibular Temporal

Answer: C

**5.OPHTHALMIC pass through?**

- A. superior orbital fissure
- B. Rotundum
- C. Oval

Answer: A

**6)MAXILLARY pass through?**

- A. superior orbital fissure
- B. Rotundum
- C. Oval

Answer: B

**7)MANDIBULAR pass through?**

- A. superior orbital fissure
- B. Rotundum
- C. Oval

Answer: C

**8)All the following are MANDIBULAR's sensory branch except ?**

- A. a)Lingual special sensations from anterior 2/3 the of tongue
- B. b)Auriculotemporal
- C. c)Buccal
- D. d)Inferior alveolar
- E. e)Lingual General sensations from anterior 2/3 the of tongue

Answer: A

**8)Which of the following supplies nasal cavity , eyeball**

- A. a)Frontal branch of ophthalmic
- B. b)Lacrimal branch of ophthalmic
- C. c)Nasociliary branch of ophthalmic

Answer:C

**9)All of the following sensory branch of MANDIBULAR except ?**

- A. Lingual
- B. Buccal
- C. Auriculotemporal
- D. Inferior alveolar
- E. Nasociliary

Answer:E

**10)ticdouloureux is deformity cause by Compression, degeneration or inflammation of the.....  
cranial nerve:**

- A. a)IV
- B. b)V
- C. c)VI
- D. d)VII

Answer: B

**11) FACIAL NERVE HAS Special visceral efferent supplying**

- A. A) muscles developed from the 1ST pharyngeal arch.
- B. B) muscles developed from the 2nd pharyngeal arch.
- C. C) secretory fibers to submandibular
- D. D) secretory fibers to LACRIMAL

Answer: B

**12) WHICH OF THE FOLLOWING Nerve carries preganglionic parasympathetic fibers to lacrimal, nasal & palatine glands.?**

- A. Greater petrosal nerve
- B. Chorda tympani
- C. Nerve to stapedius

Answer: A

**13) Bell's Palsy is deformity caused by Damage of ..... cranial nerve ?**

- A. a) V
- B. b) VI
- C. c) VII
- D. d) VIII

Answer: C

**1. \*FIRST ORDER NEURONES of AUDITORY PATHWAY locate in ?**

- A. cochlea
- B. Pons
- C. Midbrain
- D. Thalamus

Answer: A

b) 2<sup>nd</sup> order neurons, c) 3<sup>rd</sup> order neurons, d) 4<sup>th</sup> order neuron

**1. Both cochlear & vestibular nerves meet & emerge through ..... to cranial cavity:**

- A. a) stylomastoid foramen
- B. b) internal auditory meatus

Answer: B

**2. Vestibular & cochlear parts enter pons through**

- A. pontocerebellar
- B. cerebellopontine
- C. internal auditory meatus
- D. a-b

Answer: D

Same meaning

**3. SECOND ORDER NEURONES of AUDITORY PATHWAY locate in?**

- A. Cells of spiral ganglion in the cochlea
- B. b) Cells of inferior colliculus in mid brain
- C. c) Cells of dorsal & ventral cochlear nuclei in pons
- D. d) Cells of medial geniculate in thalamus

Answer: C

note: a) 1<sup>st</sup> order neurons, b) 3<sup>rd</sup> order neurons, d) 4<sup>th</sup> order neuron

**4. Cochlear nuclei belong to:**

- A. special somatic afferent column
- B. general somatic afferent column
- C. special visceral afferent column
- D. special visceral afferent column

Answer: A

**5. VESTIBULAR PATHWAY, FIRST ORDER NEURONES is Cells of Vestibular ganglion located in :**

- A. pontocerebellar
- B. cerebellopontine
- C. internal auditory meatus
- D. a-b

Answer: C

**6. SECOND ORDER NEURONES: Cells of Superior, Lateral, Medial & Inferior Vestibular Nuclei located in:**

- A. medulla
- B. Pons
- C. Midbrain
- D. d) thalamus
- E. e) a-b

Answer: E

**7. Vestibular nuclei belong to:**

- A. a) special somatic afferent column
- B. b) general somatic afferent column
- C. c) special visceral afferent column
- D. d) special visceral afferent column

Answer: A

**8. The vestibular nuclei are connected to the oculomotor nuclei through:**

- A. The lateral lemniscus
- B. The lateral vestibulospinal tract
- C. The medial longitudinal fasciculus
- D. The vestibular nerve

Answer: C

## Summary of Cranial nerves

<b>Cranial Nerve</b>		<b>General Function</b>	<b>Cranial Exit Opening</b>
<b>I</b>	<b>Olfactory</b>	<b>Sense of Smell</b>	<b>Cribriform Plate of the Ethmoid</b>
<b>II</b>	<b>Optic</b>	<b>Sight</b>	<b>Optic Foramen</b>
<b>III</b>	<b>Oculomotor</b>	<b>Eye Movement</b>	<b>Superior Orbital Fissure</b>
<b>IV</b>	<b>Trochlear</b>	<b>Eye Movement</b>	<b>Superior Orbital Fissure</b>
<b>V</b>	<b>Trigeminal</b>	<b>Face: sensory, motor</b>	<b>Superior Orbital Fissure</b>
<b>VI</b>	<b>Abducens</b>	<b>Eye Movement</b>	<b>Superior Orbital Fissure</b>
<b>VII</b>	<b>Facial</b>	<b>Face: expression, and sensory</b>	<b>Stylomastoid Foramen</b>
<b>VIII</b>	<b>Vestibulocochlear</b>	<b>Hearing and Balance</b>	<b>Internal Acoustic Meatus</b>
<b>IX</b>	<b>Glossopharyngeal</b>	<b>Tongue and Throat - motor and sensory</b>	<b>Jugular Foramen</b>
<b>X</b>	<b>Vagus</b>	<b>Parasympathetic</b>	<b>Jugular Foramen</b>
<b>XI</b>	<b>Accessory</b>	<b>Head, neck, shoulder - movement &amp; swallowing</b>	<b>Jugular Foramen</b>
<b>XII</b>	<b>Hypoglossal</b>	<b>Speech, Chewing and Swallowing</b>	<b>Hypoglossal Canal</b>



## **Biochemistry :**

### **1. Main lipid component of myeline is:**

- A. Cerebrosides
- B. Gangliosides
- C. Sphingomyelin

Answer: A

### **2. Deficiency in beta Hexosaminidase A results in:**

- A. A.niemann-pick disease
- B. Gausher disease
- C. Taysaches disease
- D. Sphingomyelin

Answer: C

### **3.Gausher disease results from deficiency of which ONE of the following enzymes:**

- A. Beta hexosaminidase A
- B. Beta glucosidase
- C. Sphigomylinase

Answer: B

### **4. Sphingomyelinase deficiency results in:**

- A. A.niemann-pick disease
- B. Causher disease
- C. Taysaches disease

Answer: A

### **5.Which ONE of the following can't be reduced in the body:**

- A. Retinol
- B. Retinoic acid
- C. Retinal

Answer: B

### **6.All trans retinal converted to 11cis retinal by:**

- A. Presence of light
- B. Presence of enzymes

Answer: B



## Pathology :

### 1.Pathogenesis of MS is thought to be caused by:

- A. T cell-mediated delayed type hypersensitivity
- B. Type 1 hypersensitivity
- C. Antibody mediated immunity

Answer: A

### 2.Which of the following is responsible for initiating the process of axonal injury :

- A. Toxic effects of lymphocytes, macrophages, and their secreted molecules
- B. Antibody secreted by affected cells.

Answer: A

### 3.Astrocytic proliferation and gliosis become prominent in which phase:

- A. Active plaques
- B. Inactive plaques

Answer: B

### 1.Negri bodies in rabies is an example for ..... ?

- A. Red Nucleus
- B. Dystrophic neuritis
- C. intracellular inclusions
- D. a-c

Answer: C

Note: all above Markers of Neuronal Injury in **Cell Bodies**

### 2)Injured axons undergo swelling called...1..... ,can be highlighted by...2.....or...3.....for \*axonally transported proteins such as APP.cell body enlargement rounding ,peripheral displacement of the nucleus and dispersion of Nissl substance called 4.....

- 1-spheroids
- 2-silver stain
- 3\_ immunohistochemistry
- 4-central chromatolysis

note:\*amyloid precursor protein.

### 3)which of the following can detect the axonal lesions in 2-3 hours after the injury?

- A. hematoxyline
- B. eosin
- C. BAPP
- D. A-B

Answer: C

NOTE: BAPP "Beta Amyloid Precursor Protein"

Tumor	Grade -type	Effect	Feature
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**4)regarding to Vasogenic edema, which statement is not true:**

- A. blood-brain barrier disrupted
- B. fluid move freely to the extracellular
- C. increase in intracellular fluid
- D. can be localized orGeneralized

Answer: C

Note: choice "c" answer for Cytotoxic edema due to neuronal & glial membrane injury

**5)Which statement isnot true regarding to \*Fibrillary astrocyte?**

- A. Cytoplasm shrinks in size
- B. Rosenthal Fibers appear
- C. Cellular processes become more tightly interwoven.
- D. ramifying processes

Answer: D

Note:1)\*in long-standing gliosis 2)Gemistocytic astrocyte

**6.InPeripheral Nerve injury, Axonal degeneration is associated with secondary myelin loss process sometimes referred to as .....**

- A. a)spheroids
- B. b)centralchromatolysis
- C. c) Wallerian degeneration

Answer: C

## Gliomas has three types

1. Astrocytoma
2. Oligodendroglioma
3. Ependymoma:

**A- Astrocytoma**



<b>Pilocytic Astrocytoma</b>	Benign	Children and young adults at infratentorial "cerebellum"	1-Often cystic with a mural nodule in the wall of the cyst. 2-Pilocytic processes that are GFAP positive 3- Rosenthal fibers 4- hyaline granular bodies 5- Necrosis and mitoses are typically absent
<b>FibrillaryAstrocytoma:II Diffuse astrocytoma</b>	Low-grade malignancy	4th to 6th decade (supratentorial) "cerebral hemisphere"	1-Static but at some point they progress mean survival of more than 5 years 2-Moderate cellularity 3-Variable nuclear pleomorphism
<b>FibrillaryAstrocytoma:III Anaplastic astrocytoma</b>	High-grade malignancy	4th to 6th decade (supratentorial) "cerebral hemisphere"	1-More cellular 2-Greater nuclear pleomorphism 3-Mitosis 4-There is no necrosis or vascular or endothelial cell proliferation
<b>FibrillaryAstrocytoma:IV Glioblastoma</b>	The most malignant	4th to 6th decade (supratentorial) "cerebral hemisphere"	1-With treatment, mean survival of 8-10 months 2-Pseudopalisading necrosis. 3- AND/OR <ul style="list-style-type: none"> <li>- Vascular proliferation</li> <li>- Edema and vascular leak</li> <li>- Endothelial cell proliferation</li> </ul>

- **Secondary** glioblastomas: share **p53** mutations
- **primary** glioblastomas are characterized by amplification **EGFR** gene.

<sup>1</sup> GFAP stain: is useful for determining whether a tumor is of glial origin.

### Oligodendroglioma:

Tumor	Type -grade	Effect	Feature
<b>B-Oligodendroglioma:</b>	Has II and * III.	4th & 5th decades Cerebral hemispheres	1-loss of heterozygosity for chromosomes 1p and 19q. 2- round nuclei 3- cytoplasmic halo. 4- Blood vessels in the background are thin 5- Blood vessels can form interlacing pattern "chicken wire appearance" 6- These cells have egg-fried appearance

**\*grade III has these features:**

1- more mitosis , 2- pleomorphism, 3- necrosis, 4- vascular cell proliferation (not like astrocytomas grade III)

### Ependymoma:

Tumor	Type -grade	Effect	Feature
<b>C)Ependymoma</b>	*Has II and III.	#Occurs in the first two decades of life, and adult	1-rise next to the ependyma-lined ventricular system 2-round or elongated structures "rosettes, canals"  3- <sup>1</sup> perivascular pseudo-rosettes.

**\*grade II & III has these features:**

1-increased cell density 2-high mitotic rates , 3-necrosis and less evident ependymal differentiation.

**#Effect:**

A- in adults, the spinal cord is their most common location.

B- first two decades occur near the fourth ventricle.

<sup>1</sup>There are true and pseudo (false) rosettes: true rosettes have lumen while a pseudo rosette doesn't have or it form perivascular pseudo-rosettes which is more common.

## 2- Meningioma

Tumor	Type -grade	Effect	Feature
<b>Meningioma</b>	#Has II and III.	adults meningothelial cell of the arachnoid	1- Well demarcated 2- Attached to the dura 3- Whorled pattern of cell growth 4- psammomabodies

**Main subtypes:**

1. Syncytial (cell borders is not clear)
2. Fibroblastic (spindle cell legion)
3. Transitional (both Syncytial and Fibroblastic)

# Atypical meningiomas (grade II)

#Anaplastic (malignant) meningiomas (grade III)

meningiomas are easily separable from underlying brain, some tumors infiltrate the brain

## 3-Medulloblastoma “Primitive tumor”

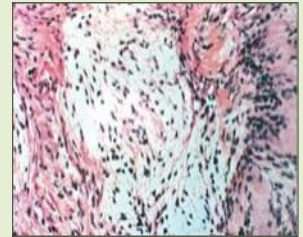
Tumor	Type -grade	Effect	Feature
<b>Medulloblastoma</b>	Grade IV	Children and exclusively in the cerebellum	1-tumor is often largely undifferentiated 2-exquisitely radiosensitive 3- 5 years survival rate may be as high as 75% 4-Extremely cellular 5-sheets of anaplastic ("small blue") cells 6-Small, with little cytoplasm 7-hyperchromatic nuclei 8- mitoses are abundant.

## 4)- Schwannoma \*called acoustic schwannoma."

Tumor	Type -grade	Effect
Schwannoma	Benign	<p><u>1-</u> encountered within the cranial vault in the cerebellopontine angle, where they are attached to the <b>vestibular branch of the eighth nerve</b></p> <p>* Cause :tinnitus and hearing loss</p>

### Features

- 1- schwannomas are associated with mutations in the **NF2** gene
- 2- Cellular Antoni A pattern , and less cellular Antoni B
- 3- Nuclear-free zones of processes that **lip** between the regions of nuclear palisading are termed **Verocay** bodies (pseudopalisade)



## 5)- Neurofibroma

### Feature

- 1- These arise sporadically or in association with type 1-neurofibromatosis "**NF1**", rarely malignant
- 2- Patient may die from the tumor and may because of the pressure of the tumor on the chest.
- 3- plexiform neurofibroma, mostly arising in individuals with NF1, potential malignancy

#### Examples:

- 1 (cutaneous neurofibroma) or in
- 2- peripheral nerve (solitary neurofibroma)



# Pharmacology :

## 1. What is the receptor mechanism of ACH on CNS ?

- A. Excitatory .
- B. b. Inhibitory .
- C. c. Both a and b .
- D. d. no mechanism .

Answer: C

## 2. Patient came to ER with anaphylactic shock , what is the best drug to save his life ?

- A. Norepinephrine .
- B. Epinephrine
- C. Acetylcholine .
- D. non of them .

Answer: B

Ps: its life saving b/c it's a vasoconstriction and bronchodilator and work immediately .

- [Anaphylactic shock](#) > [Cardiac arrest](#) > [Hypotension](#) > [Spasm](#) .

## 3.in case of increasing of NE in the CNS it will cause one of the following :

- A. Depression .
- B. Mania
- C. both A&B
- D. Nothing

Answer: B

## 4.in case of decreasing of NE in the CNS it will cause one of the following :

- A. Depression .
- B. B . Mania
- C. both A&B
- D. Nothing

Answer: A

## 5.All the following drug are causing depression except :

- A. Dopamine .
- B. Methyldopa .
- C. Reserpine .
- D. Clonidine .

Answer: APs: MR.C تذكر تسوي احباط

**6. Which drug of the following that increasing NE ?**

- A. Methyldopa .                      B. Amphetamine
- C. Lidocaine.                         D. A&B are correct

Answer: B

**7. Serotonin (5HT) plays an important role in the range of brain including which one of the following :**

- A. Pain perception .                      B. Mood control .
- C. Regulation of sleep .                      D. All are correct .

Answer: D

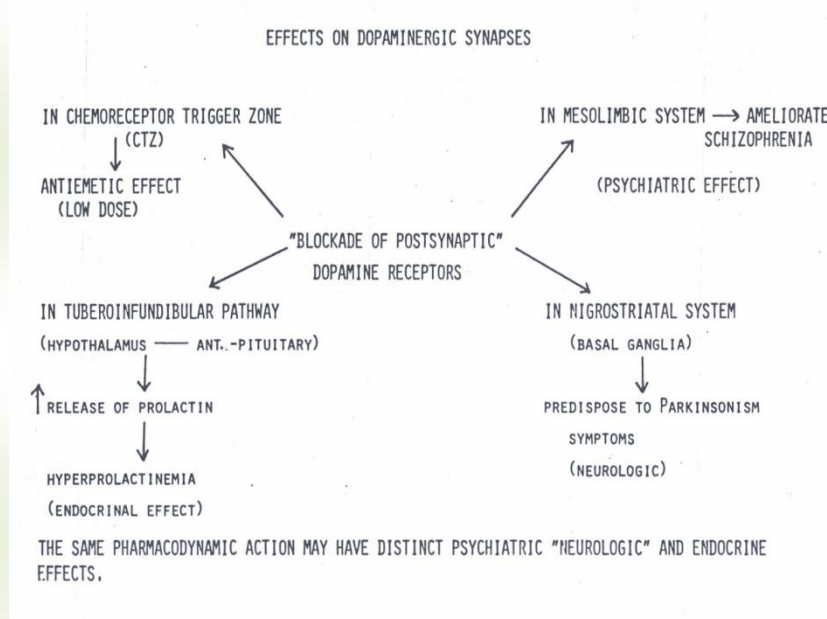
PS: علاقة طردية مع المزاج و النوم ، اذا زاد يزيد النوم و يضبط المزاج و العكس

**8. the percentage of Serotonin in the brain is :**

- A. less than 2% of total body
- B . More than 2% of total body
- C. Between 25-50% of total body
- D. less than 25% of total body .

Answer: A

PS: one of the reasons of the obsessive compulsive disorders is low level of Serotonin .



- Agonist treat the Parkinsonism disease and cause the symptoms of Schizophrenia ( when the Nausea and Vomiting shows up that's mean the patient response )

\*Decrease the Prolactin .

Antagonist . اللي بالصورة طريقة عمل الـ

**Q/ What are the CNS diseases that linked to ACH derangement ?**

- A. Alzheimer's disease .
- B. Parkinson's disease
- C. A&B are correct .
- D. Schizophrenia .

Answer: C

Ps: when the ACH is high in brain will predispose to Parkinson's , and when the cholinergic receptor are damaged will lead to Alzheimer's.

Glutamic Acid	GABA
Excitatory neurotransmitter	Inhibitory neurotransmitter
When its in high level will predispose to Epilepsy	When its in low level its associated with Epilepsy

Prolactin : يمنع و يقلل الحمل لدى النساء

Parkinson's disease : Dopamine Agonist is given



# **Physiology :**

## **Stretch reflex (6)**

### **1- The annulospiral is receptor for :**

- A. nuclear chain fiber
- B. nuclear bag fiber
- C. a&b
- D. all fiber in the body

Answer: C

### **2- The cause of Dynamic stretch reflex is :**

- A. rapid stretch of a muscle
- B. normal stretch of a muscle
- C. less rapid stretch of a muscle
- D. non of them

Answer: A

### **3-muscle spindle act to maintain muscle length against ..... ?**

- A. - rupture ..

Answer: A

### **4- Muscle can contract by :**

- A. alpha motor neuron only
- B. gamma motor neuron only
- C. alpha & gamma motor neuron
- D. non of them

Answer:C.

### **5- What is happen , when the gamma motor neuron discharge to muscle is low :**

- A. hypertonic
- B. hypotonic
- C. b&d
- D. flaccidity

Answer :C.



**6- what is the main function of The Golgi tendon reflex :**

- A. increase contraction of muscle
- B. Protect muscle from rupture
- C. support the muscle
- D. non of them

Answer:B.

**Pain (7)**

**1-the Mild pain cause :**

- A. decrease heart rate
- B. increase heart rate
- C. normal heart rate
- D. parasympathetic changes

Answer:B.

**2- what is the mainly site for fast pain :**

- A. skin
- B. tissue
- C. visceral
- D. muscle

Answer:A.

**3- The neurotransmitter for slow pain is :**

- A. glutamate
- B. acetylcholine
- C. substance P
- D. serotonin

Answer:C.

**5- all of them are represent " referred pain " except**

- A. visceral pain
- B. deep pain
- C. cutaneous

Answer:C..

**6- Pain from the ureter is referred to :**

- A. - Shoulder
- B. - arm
- C. - umbilical
- D. – testicles

Answer:D

**Brain stem (8)**

**1-The inferior colliculus is special sense for :**

- A. hear
- B. smell
- C. Vision
- D. Taste

Answer A

**2- All of these fibers of cranial nerve nuclei are originating from brain stem except :**

- A. Optic
- B. vagus
- C. Olfactory
- D. a&c

Answer: D

**3- All of these cranial nerve responsible for extra ocular muscle except :**

- A. Trochlear
- B. abducens
- C. oculomotor
- D. facial

Answer: D

**4- Which of the following " brain stem function test "Tested the sleep , consciousness . Alertness :**

- A. reticular formation test
- B. corticospinal test
- C. brain stem reflexes test
- D. respiratory center test

Answer: A

## Sleep (9)

### 1- The Alpha waves is :

- A. 8-13 Hz
- B. Greater than 13 Hz
- C. 3.5-7.5 Hz
- D. 3 Hz or less

Answer: A

### 2- The alpha waves most marked in :

- A. occipital area
- B. parieto-occipital area
- C. frontal area
- D. temporal area

Answer: B

### 3- Which of the following waves are augmented by drugs :

- A. alpha
- B. theta
- C. beta
- D. delta

Answer: C

### 4- Which of the following waves are seen in deep sleep :

- A. alpha
- B. beta
- C. delta
- D. theta

Answer: C

### 5- The EEG of Slow-wave sleep is :

- A. theta
- B. delta
- C. beta
- D. a&b

Answer: D

**6- Which on of these neurotransmitter are enhancing sleep and synthesized by the pineal gland :**

- A. melatonin
- B. serotonin
- C. adenosine
- D. non of them

Answer: A

**7- Which on of these sentences are true about Rapid eye movement sleep :**

- A. If dreams occur they are not remembered
- B. 75% of sleep time
- C. Active dreaming, remembered later.\*
- D. b&c

Answer: C

سؤال من الأخ : سعود الصفيان

**\* Alpha wave blocker means you will wakeup (you'll be aroused) which means the wave will become :**

- A. theta
- B. delta
- C. beta

Answer: C

**Consciousness (10)**

**1- If a person has ( high fever associated with malaria ) that is mean ?**

- A. normal consciousness
- B. clouded consciousness
- C. sleep
- D. coma

Answer: B

**2- Which parts of Reticular Formation responsible for secretion serotonin :**

- A. lateral reticular formation
- B. raphe nuclei
- C. b&d
- D. median reticular formation

Answer: C

**5- Which of the following nucleus is responsible for maintain the awake state :**

- A. tuberomammillary nucleus
- B. intralaminar nuclei
- C. anteroventral nucleus
- D. anterodorsal nucleus

Answer: A

**6- What is the area that essential for wakefulness ?**

- A. upper pons and midbrain
- B. Bulboreticular excitatory
- C. lower pons and midbrain
- D. a&b

Answer: D

**# Protanomaly means:**

- A. weakness in red color vision
- B. weakness in blue color vision is called
- C. no green cones system
- D. no red cones system

Answer: A

**# Tritanopia means:**

- A. person see only long & short wave length
- B. No blue cones system
- C. weakness in green color vision
- D. no red cones system

Answer: B

**# In the outer segment of rods and cones there are:**

- A. Na channels
- B. 3 types of rhodopsin
- C. Numerous mitochondria
- D. Na-K pump

Answer: A

**#Cones have:**

- A. High convergence
- B. low convergence

Answer: B

**# Which ONE of the following substances keeps the Na channels open at dark:**

- A. Cyclic guanosine monophosphate c-GMP
- B. 5- guanosine monophosphate 5 –GMP

Answer: A

**# Conformational change of photopigment in photopic vision will result in formation of ..... which eventually will lead to:**

- A. 11-cisretinal- closure of NA channels
- B. metarhodopsin II - closure of NA channels
- C. metarhodopsin II - opening of NA channels
- D. 11-cisretinal- opening of NA channels

Answer: B

**# The rapid dark adaptation is done by:**

- A. Cones
- B. Rods
- C. Horizontal cells

Answer: A

**# Scotopic vision has:**

- A. low sensitivity to light
- B. great sensitivity to light
- C. high visual acuity

Answer: B

**# RIGHT optic tract include:**

- A. temporal fibers of the left eye.
- B. Nasal fibers of the right eye
- C. temporal field of right eye
- D. temporal field of left eye

Answer: D

**# Focusing at near object will increase the anterior surface curvature of lens by:**

- A. ciliary muscles relaxation
- B. ciliary muscles contraction
- C. increase the tense of zonule

Answer: C

**# Important structure for accommodation is:**

- A. superior colliculus
- B. pretectal nucleus

Answer: A

**# Destroy of pretectal nucleus in Argyll Robertson pupil will result in:**

- A. light reflex is lost & accommodation reflex remains
- B. light reflex remains & accommodation reflex is lost.
- C. Both light and accommodation reflexes lost.

Answer: A

**# Fila olfactoria inter olfactory bulb synapse with mitral cells end on:**

- A. Ipsilateral cortex
- B. Contralateral cortex

Answer: A

**# Taste fibres from the three cranial nerves (VII, IX, X) end in:**

- A. Trigeminal nucleus
- B. Nucleus ambiguus
- C. Nucleus of tractus solitarius

Answer: C

**# Sour taste buds present on which portion of the tongue :**

- A. back of tongue
- B. tongue margin
- C. tongue tip

Answer: B

**# Blood vessels to supply retina present in:**

- A. Choroids
- B. Sclera
- C. Cornea

Answer: A

**# 1/3 refractive power of eye is done by:**

- A. cornea
- B. Iris
- C. Pupil
- D. Lens

Answer: D

**# Depression in macula lutea which has only cones is called:**

- A. OPTIC DISC
- B. humourVitreous
- C. FOVEA CENTRALIS

Answer: C

**# Correction of hyperopia is done by:**

- A. Biconcave lens
- B. Biconvex lens

Answer:

**# Which of the following cases is correct by :**

- A. cylindrical lens:
- B. Hypermetropia
- C. Presbyopia
- D. Myopia
- E. Astigmatism

Answer:D

:

If you have questions you want to add please send to: [Revisiontest432@gmail.com](mailto:Revisiontest432@gmail.com)

**Good luck**

**Team leaders :  
Khalid alosaimi & Lulu alobaid**

**Remember this**, Success has been and continues to be defined.. as getting up one more time than you have been knocked down ! 😊