

PNS-Physiology

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Lecture 1

Physiology of Peripheral
Nerves

1. The rate of conduction of action potentials along a nerve will be increased by:

- a. Hypoxia.
- b. Local anesthetic.
- c. Mechanical pressure on the nerve fiber.
- d. Decreasing the diameter of the nerve
- e. Increased thickness of nerve fiber.

Ans: e

2. Regarding nerve conduction, which of the following is correct?

- A) Higher velocity in wide diameter than smaller diameter
- B) In current flow, the active transmission occurs from outer activated to inactivated
- C) In current flow, the active transmission occurs from inner activated to inactivated
- D) More velocity in myelinated nerves

Ans: d

3. True about chronaxie:

- A) It is a measure of excitability
- B) It is the minimum voltage required to stimulate a nerve
- C) It is the time required to reach action potential at threshold current
- D) It is independent of rheobase

Ans: a

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Lecture 2

Sympathetic Nervous
System

1. Sympathetic stimulation affects heart rate and the contraction of skeletal muscles. Which of the following is correct?

- A) Does not affect, decreases
- B) Decreases, decreases
- C) Decreases, increases
- D) Increases, increases
- E) Increases, decreases

Ans: d

2. Stimulation of the greater splanchnic nerve leads to which of the following effects?

- A) Increases gastrointestinal (GIT) motility
- B) Secretion of adrenaline and noradrenaline from the suprarenal medulla
- C) Decreases glucose level
- D) Increases secretion of saliva

Ans: b

3. One of the following is correct regarding sympathetic tone:

- A) Occurs as a result of stress
- B) Determines (lowers) heart rate arrest
- C) Controls arterial blood pressure
- D) Happens during sleep and rest

Ans: c

4. Generalized sympathetic stimulation causes:

- A) Increase in arterial blood pressure
- B) Increase in GIT motility
- C) Causes submandibular gland secretion
- D) Causes miosis

Ans: A

5. The parasympathetic ganglia include all of the following EXCEPT:

- A) Ciliary ganglion
- B) Celiac ganglion
- C) Otic ganglion
- D) Sphenopalatine ganglion

Ans: B



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Lecture 3

Parasympathetic Nervous
System

Corrected by:

Malaak Al Zaidaneeyen

Rouh Final

1. True about terminal ganglion :

- A. Only sympathetic
- B. only parasympathetic
- C. has long post-ganglionic neuron

Answer: B

2. Regulatory center of cardiorespiratory :

- A. pons
- B. thalamus
- C. medulla oblongata
- D. spinal cord

Answer : C

3. Regulatory center for sneezing , coughing , vomiting :

- A. medulla oblongata
- B. pons
- C. thalamus
- D. spinal cord

Answer : A

4. Parasympathetic innervation are :

- A. 1st , 3rd , 6th , 8th cranial & S2 , S3
- B. 10th , 9th , 7th , 3rd cranial & S2 , S3 , S4

Answer : B

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Lecture 3

Nabd + Wareed arch

1.The following process is brought about by activation of the parasympathetic nerve fibers?

- a- Micturition
- b- Sweating
- c- Ejaculation of semen
- d- Exophthalmos
- e- Increased blood pressure

Answer: A

2.Parasympathetic stimulation to the lungs causes:

- a. Vasoconstnction of bronchial vessels.
- b. Broncho—constriction.
- c. Widening of air passages.
- d. Decreases bronchial secretions.
- e. Decrease Work of breathing

Answer: B

3. Parasympathetic stimulation to heart causes:

- a- Decrease rate of SAN
- b- Increase coronary flow
- c- Decrease ventricular contractility
- d- Increase AVN conduction
- e- Increase Atrial contraction

Answer: A

4.A person goes to ophthalmologist. He has a problem of reading books because he is not able to contract his:

- a-Iris
- b-Suspensory ligament
- c-Pupil
- d-Ciliary muscles
- e-Retina

Answer: D

5. Stimulation of vagal nerves causes ?

- a. An increase in heart rate.
- b. Stimulation of intestinal peristalsis.
- c. Vasodilatation of salivary glands.
- d. Contraction of the splenic capsule
- e. Bronchoconstriction

Answer: E

اسئلة خارجية

1. The following structures are supplied by Parasympathetic except :

- a. constrictor pupillae muscle
- b. Skin
- c. coronary artery
- d. salivary gland
- e. lacrimal glands

Answer: B

2. All of the following nerves have collateral ganglia except:

- a. facial nerve
- b. The glosso-pharyngeal nerve
- c. The vagus nerve
- d. pelvic sacral nerve
- e. (c+d)

Answer: E

"فَالْيَوْمَ أَبْكِي عَلَى مَا فَاتَنِي أَسْفًا
وَهَلْ يُفِيدُ بُكَائِي حِينَ أَبْكِيهِ

وَاحْسَرَتَاهُ لِعُمْرٍ ضَاعَ أَكْثَرُهُ
"وَالْوَيْلُ إِنْ كَانَ بَاقِيهِ كَمَاضِيهِ

فلا تكون أيامكم يا أحبة أعدادًا متشابهات من غير هدف أو أثر

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Lecture 4

Vision

Corrected by:
Heba Al-Teahi

عشان هذه المحاضرة شوفوا اسئلة الهستو (1+2) و البيوكم (1+2)

1.Which description is TRUE of Cone cells but not of Rod cells?

- A. Contain flattened vesicles that are independent of plasma membrane
- B. Are highly responsive for low intensity light
- C. Comprise approximately 95% of the retina's photoreceptor cells
- D. Contain the visual pigment rhodopsin
- E. Are the cell type found in the fovea centralis

Answer :E



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Lecture 5

Hearing

Corrected by:

Malaak Al Zaidaneeyen

ROUH ARCH

1- Regarding Amplification of sound by the middle ear:

- A) Occurs because the ligaments connecting the bone usually flexible.
- B) Is caused by the fact that the tympanic membrane is larger in area than the oval window times 22.
- C) Ossicles as lever increase the normal sound times 17.
- D) Ossicles as lever increase the normal sound.

Answer: C

2- Which of the following represents the correct pathway leading to the perception of sound:

- A) tympanic membrane, Ossicles, endolymph, perilymph, haircell.
- B) tympanic membrane, Ossicles, perilymph, endolymph, haircell.
- C) Ossicles, tympanic membrane, endolymph, perilymph, haircell.
- D) ossicles, perilymph, tympanic membrane, endolymph, haircell.

Answer: B

WATEEN ARCH

3- Which of the following statement regarding the transmission of auditory information from the ear to cerebral cortex is correct?

The majority of neurons from the cochlear nuclei synapse in the contralateral superior olivary nucleus.

NABD + WAREED ARCH

4- The first structure to vibrate in response to sounds is:

- a- Auricle
- b- Malleus
- c- Organ of Corti
- d- Tympanic membrane
- e- Round window

Ans:d

5- The purpose of the middle ear ossicles is to vibrations:

- a- Lessen the intensity of
- b- Increase the amplitude of
- c- Change the wavelength of the incoming

Ans:b

6- Organ of Corti helps in-----?

- a- Balancing
- b- Maintaining equilibrium
- c- Hearing
- d- Formation of wax
- e- Defensive function

Ans:c

7- Auditory pathway includes all the followings EXCEPT:

- a- Superior olive
- b- Cochlear nucleus
- c- Primary auditory cortex
- d- Medial geniculate body
- e- Superior colliculus

Ans: e

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Lecture 5

8- The purpose of the auricle pinna is to ----- sound waves?

- a- Dampen
- b- Increase the intensity of
- c- Act as a collector of
- d- Vibrate in response to
- e- Impedance matching function

Ans:c

9- The stapes sends its vibration to the -----?

- a- Incus
- b- Tympanic membrane
- c- Oval window
- d- Round window
- e- Malleus

Ans:c

10- Sounds are detected by ----- receptors:

- a- Chemo
- b- Thermo
- c- Mechano
- d- Photo
- e- Nociceptor

Ans:c

11- Regarding the physiology of the hearing which of the following is NOT CORRECT?

- a. Sound is produced as series of alternating compression and rarefaction of the surrounding air.
- b. The frequency of the peaks per a time determines the pitch.
- c. The maximum changes in air pressure determines the amplitude of the wave.
- d. The distance between the wave peaks is much larger than the most object we deal with so sound waves can go around most objects.
- e. Human ear is sensitive from 10-1000HZ

Ans:e

«أَصَادِقُ نَفْسِ الْمَرْءِ مِنْ قَبْلِ جِسْمِهِ
وَأَعْرِفُهَا فِي فِعْلِهِ وَالتَّكَلُّمِ
وَأَحْلُمُ عَنْ خَلِيٍّ وَأَعْلَمُ أَنَّهُ
مَتَى أَجْزَاهُ جَلَمًا عَلَى الْجَهْلِ يَنْدَمُ
وَإِنْ بَدَّلَ الْإِنْسَانُ لِي جُودَ عَابِسٍ
جَزَيْتُ بِجُودِ الثَّارِكِ الْمُتَبَسِّمِ».
الْمُتَنَبِّي.

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Lecture 6

Vestibular apparatus

Corrected by:
Heba Al- Teahi

1. Stimulation of the crista ampullaris results in ?

- a. Deafness
- b. Loud sounds
- c. Feeling of rotatory motion
- d. A sense of body position

Answer: c

2. Which one of the following statements is CORRECT:

- a-Macula utriculi is the auditory organ of the inner ear
- b-The tectorial membrane is made of protein and calcium carbonate
- c-The inner and outer hair cells enclose the tunnel of Corti
- d-The bony labyrinth includes the membranous labyrinth and the perilymph
- e-Each inner ear has 3 crista ampullaris to sense linear acceleration movement of head

Answer: d

3. Which of the following regarding Crista ampullaris is WRONG:

- a-Sensory organ of rotation
- b-Contains type I and type II sensory hair cells
- c-The hair cells have several kinocilia of graded height
- e-Is bathed in endolymph
- d-Its Cupula devoid of calcium carbonate

Answer: c

4. Which of the following cells in the inner ear are involved in detecting movements of the head?

- a-Hair cells in Maculae
- b-Outer pillar cells
- c-Inner pillar cells
- d-Cells of Hensen
- e-Hair cells in organ of Corti

Answer: a

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Lecture 7

Neurophysiology of smell
and taste

Corrected by:
Heba Al-Teahi

1. The gustatory cortex is located within the - lobe?

- a. Temporal
- b. Parietal
- c. Occipital
- d. Frontal
- e. Limbic

Answer: d

2. Among the followings, which can least likely undergo adaptation?

- a. Thermoreceptors
- b. Mechanoreceptors
- c. Photoreceptors
- d. Pain receptors
- e. Taste receptor

Answer: d

3-Which of the following matched pairs regarding olfaction and taste is NOT CORRECT?

- a. Lateral olfactory area - incus
- b. Lateral olfactory area - Limbic system
- c. Taste - Limbic system
- d. Olfactory receptor protein - Olfactory cilia
- e. Medial olfactory area - insula

Answer: e

4. Helping to sharpen the contrast between different odorants?

Granule cells

5. All of the following can Causes anosmia ,except?

- A)Nasal infection
- B)paranasal sinus infection
- C)olfactory grove meningiomas
- D)trauma
- E) Vagus reflex

Answer:E



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Lecture 8

Central regulation of
viscera

Corrected by:
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1- All of the following are associated with hypothalamus EXCEPT ?

Habenula

2- Disease caused by the damage of ventral medial nucleus?

Obesity/hyperphagia

