

PNS-Physiology

Archive

Lecture 3

Hearing

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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: D

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

Ans: e

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

Athar ARCH

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

1. Inferior colliculus neurons synapse in the cochlear nuclei of the brain stem
2. Neurons with cell bodies in the spiral ganglion of Corti synapse in the inferior colliculus
3. The majority of neurons from the cochlear nuclei synapse in the contralateral superior olivary nucleus
4. There is no crossing over of information between the right and left auditory pathways in the brain stem
5. Trapezoid neurons synapse in the cochlear nuclei of the brain stem

Ans:3

The function of the round window can best be described by which statement?

1. It provides the connection point for the stapes
2. It serves to damp out low frequency sounds such as your own voice
3. It transmits the frequency information into the cochlea from the tympanic membrane
4. It serves as the pressure relief valve for the cochlea
5. It transmits amplitude information into the cochlea from the tympanic membrane

Ans:4

