



# 11

## Ears, Nose, and Throat

---

### LEARNING OBJECTIVES

*After studying Chapter 11 in the textbook and completing this section of the workbook, students should be able to:*

1. Conduct a history related to the ears, nose, and throat.
2. Discuss examination techniques for the ears, nose, and throat.
3. Identify normal age and condition variations to the ears, nose, and throat.
4. Recognize findings that deviate from expected findings.
5. Relate symptoms or clinical findings to common pathologic conditions.

---

### TEXTBOOK REVIEW

**Chapter 11 Ears, Nose, and Throat (pages 313–355)**

---

### CONTENT REVIEW QUESTIONS

#### Multiple Choice

*Circle the correct answer for each of the following questions.*

1. When performing a Weber test, which of the following is considered a normal finding? The patient:
  - a. hears the tone equally in both ears.
  - b. hears the tone better in one ear than in the other.
  - c. hears sounds longer when conducted through air than when conducted through bone.
  - d. is able to detect tones of varying frequencies and pitches from a tuning fork.

2. Which of the following best explains why infants and toddlers are at greater risk for ear infections than are older children and adults?
  - a. poorly developed immune system
  - b. immature tympanic membrane
  - c. wider, shorter, and horizontal eustachian tube
  - d. excess deposition of bone cells along the ossicle
3. Which finding is most likely to suggest a foreign object in the nose of a young child? The:
  - a. mother states that the child plays with toys.
  - b. examiner notes a purulent discharge from the child's nose.
  - c. child has a foul-smelling odor from the nose.
  - d. child cries when lying down.
4. The examiner observes a blackish lesion on the top surface of the tongue of an adult patient. The patient indicates that his tongue is painful. Which question by the examiner would be helpful in explaining this finding?
  - a. "Have you been taking antibiotics lately?"
  - b. "Have you injured your tongue?"
  - c. "Have you been diagnosed with mouth cancer before?"
  - d. "When was the last time you brushed your teeth?"
5. Which of the following situations is an indication for transillumination? The:
  - a. patient complains of epistaxis.
  - b. patient has crepitus with jaw movement.
  - c. parotid gland is palpable and tender.
  - d. patient complains of pain over sinuses with palpation.
6. The examiner is examining the ears of a school-aged child who has a tympanostomy tube in the left ear. Which of the following is an expected finding for the tympanic membrane of this ear?
  - a. bulging without mobility
  - b. retracted with limited mobility
  - c. chalky white in appearance
  - d. amber-colored appearance
7. The examiner notes that a patient's tonsils are enlarged and touch the uvula. This is documented as:
  - a. 1+.
  - b. 2+.
  - c. 3+.
  - d. 4+.
8. A patient complains of dizziness and a "whirling" sensation. Which of the following questions by the examiner would be helpful in explaining this finding?
  - a. "When was the last time you went swimming?"
  - b. "Are you taking any medications?"
  - c. "Have you noticed any discharge coming from your ears?"
  - d. "Do you work or live in an environment where there is a lot of noise?"
9. An adult patient with a history of an upper respiratory infection complains of severe vertigo and hearing loss on one side. What examination technique should be used to evaluate equilibrium for suspected vestibular dysfunction?
  - a. Weber test
  - b. transillumination
  - c. Schwabach test
  - d. Romberg test

10. Which of the following statements made by a parent should raise the examiner's suspicion that the tympanic membrane of a young child has ruptured?
  - a. "She has some bloody, yellowish-looking stuff coming out of her ear."
  - b. "She has been crying all night, but feels better this morning."
  - c. "My child has had a fever and earache."
  - d. "My child's earwax is dark brown."
  
11. Which of the following statements made by a 72-year-old patient would indicate a normal process of aging?
  - a. "My tongue feels swollen."
  - b. "My tonsils are large and sore."
  - c. "Food does not taste the same as it used to."
  - d. "I have white and black spots under my tongue."
  
12. Which of the following behaviors, as described by a parent, may indicate that an infant or young child may have a hearing problem?
  - a. "My 4-month-old baby does not seem to respond to loud noises."
  - b. "My 5-month-old baby is babbling, but she is not yet saying any words."
  - c. "Sometimes my 3-year-old does not pay attention to me."
  - d. "When my 15-month-old baby is talking, I sometimes have a hard time understanding her."
  
13. An infant born weighing less than 1500 grams is at risk for:
  - a. otosclerosis.
  - b. hearing loss.
  - c. cleft lip and palate.
  - d. choanal atresia.
  
14. While examining the ear of a 6-week-old infant, the examiner observes a tympanic membrane lacking conical appearance and with a diffuse light reflex. These findings:
  - a. suggest a congenital abnormality.
  - b. suggest a ruptured tympanic membrane.
  - c. are classic findings for otitis media in the neonate.
  - d. are normal.
  
15. Chronic sniffing, nasal congestion, nosebleeds, mucosal scabs, and septum perforation are signs of:
  - a. chronic allergies.
  - b. cocaine abuse.
  - c. fungal infection.
  - d. turbinate hypertrophy.

### Terminology Review

Fill in the blanks in the following statements, selecting the appropriate terms from the word choice box.

**Word Choice Box**

Darwin tubercle   Epstein's pearls   Nylen Barany   Koplik's spots   malocclusion

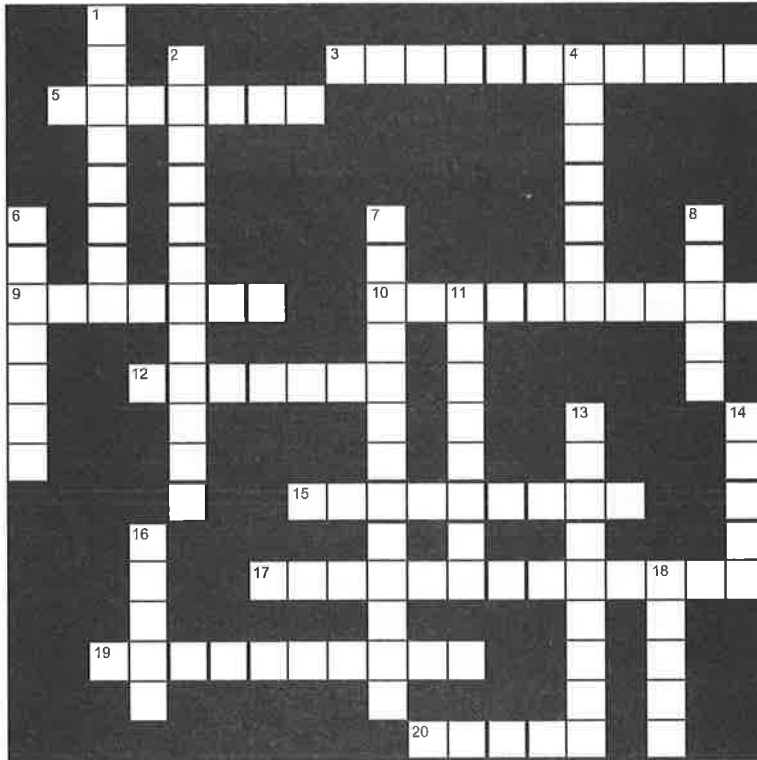
16. The examination for vestibular function disorder is the \_\_\_\_\_ test.
17. White specks with a red base found on the buccal mucosa opposite the first and second molars are known as \_\_\_\_\_ and may occur in a child with a fever or with rubeola.
18. A \_\_\_\_\_ appears as a blunt point projecting up from the upper part of the helix of the ear.
19. Improper position of the teeth is referred to as \_\_\_\_\_.
20. On the roof of the mouth of an infant, \_\_\_\_\_ appear as small whitish masses and are considered a normal finding.

### Matching

Match each clinical finding with its corresponding associated factors.

Clinical Finding	Associated Factors
21. _____ Labyrinthitis	a. Dry mouth, systemic disease
22. _____ Meniere's disease	b. Fever, headache, nasal discharge
23. _____ Sinusitis	c. Vertigo, nystagmus
24. _____ Tonsillitis	d. Ear fullness, tinnitus
25. _____ Xerostomia	e. Dysphagia, fever, fetid breath

**Crossword Puzzle**



**Across**

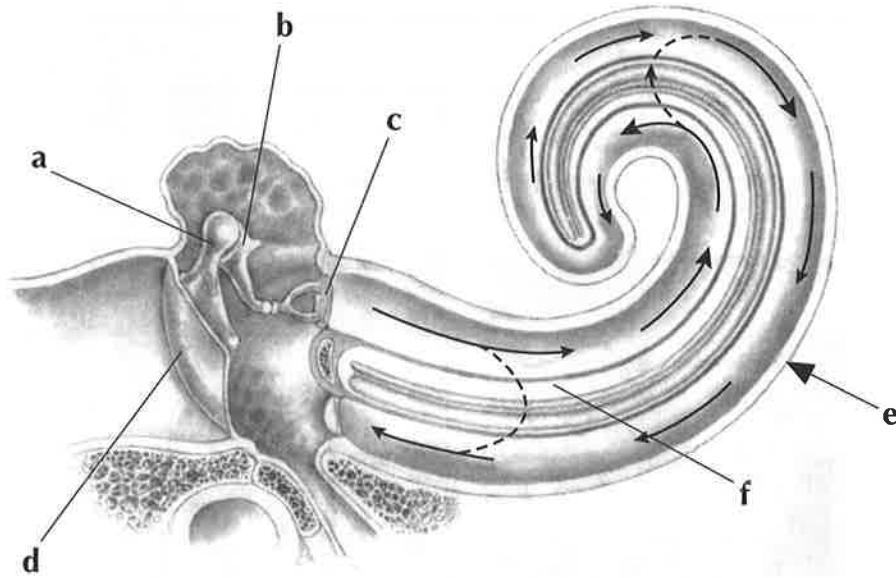
- 3. Bilateral sensorineural hearing loss associated with aging
- 5. Dizziness
- 9. Used to screen for equilibrium
- 10. Located between the mouth and nasopharynx
- 12. Spots that appear on buccal mucosa; ectopic sebaceous glands
- 15. Dry, cracked lips
- 17. "Swimmer's ear"
- 19. Dry mouth
- 20. Bony protuberance on lingual surface of mandible

**Down**

- 1. Attaches tongue to floor of mouth
- 2. Ossification that results in fixation of stapes
- 4. Coiled structure in inner ear
- 6. Earwax
- 7. Epithelial growth migrating through tympanic membrane
- 8. Projecting shell-like structure on the side of the head; auricle
- 11. Malleus, incus, and stapes
- 13. Nosebleed
- 14. Suspended from the posterior margin of the soft palate
- 16. Tests lateralization of sound
- 18. Compares bone conduction with air conduction of sound

### Anatomy Review

On the illustration below, identify the structures of the middle ear by writing the correct term in the corresponding lettered answer space. Use each term once.



cochlea  
cochlear duct  
incus

malleus  
stapes  
tympanic membrane

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

---

## CASE STUDY

*Trudy is a 5-year-old Native American girl who was brought to the clinic by her mother. Listed below are data collected by the examiner during an interview and examination.*

### Interview Data

The mother tells the examiner, "Trudy has been complaining of ear pain. She has been very hot and crying frequently." She adds, "I wanted to bring Trudy to the clinic yesterday, but my grandmother told me I shouldn't." Trudy's mother continues, telling the examiner, "Trudy has been treated many times for this problem over the last several years by the medicine man. Last night I saw drainage from Trudy's ears. Grandmother told me this was a sign that the illness was being chased from the body. I did not know what it was, but I felt scared." The mother indicates that Trudy knows English, but that the girl has never really talked very much.

### Examination Data

**General survey:** Small-for-age 5-year-old girl; quiet, flat affect. Does not look at the examiner; does not interact with the mother or the examiner.

**External ear exam:** Typical position of ears bilaterally. Left ear pinna red. Dried bloody drainage noted on left external ear and in left external canal. Cries when left ear is touched. Right ear unremarkable.

**Internal canal and tympanic membrane:** Dried drainage noted in the left ear canal. TM perforated. Right ear unremarkable.

**Hearing examination:** Whisper test in right ear = 80%; Whisper test in left ear = 0%. Weber test: hears tuning fork in right ear.

1. What data deviate from normal findings, suggesting a need for further investigation?
2. What additional questions could the examiner ask to clarify symptoms?
3. What additional physical examination, if any, should the examiner complete?
4. What primary problems does the patient have?

