



# 10

## Eyes

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### LEARNING OBJECTIVES

*After studying Chapter 10 in the textbook and completing this section of the workbook, students should be able to:*

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

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### TEXTBOOK REVIEW

#### Chapter 10 Eyes (pages 278–312)

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### CONTENT REVIEW QUESTIONS

#### Multiple Choice

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

1. Which of the following is relevant information for a history and examination of a child's eyes and vision?
  - a. immunization history
  - b. growth milestones
  - c. birth weight
  - d. academic performance
2. Prior to instilling a mydriatic eye drop, the examiner should:
  - a. assess the corneal reflex.
  - b. observe the eye with focused light tangentially.
  - c. assess intraocular pressure.
  - d. observe the eye for vascular changes.

3. Which physiologic change with aging explains why an elderly individual may be unaware of an infection or injury to an eye?
  - a. decreased corneal sensitivity
  - b. diminished tearing
  - c. reduced visual acuity
  - d. increased density of the lens
4. The examiner screens a 5-year-old child for nystagmus by:
  - a. assessing visual acuity.
  - b. inspecting the macula of the eye with an ophthalmoscope.
  - c. inspecting movement of the eyes to the six cardinal fields of gaze.
  - d. palpating the globe while the child holds eyelids closed.
5. Which of the following correctly describes the method to assess accommodation?
  - a. Shine a light into the pupil; note constriction.
  - b. Note constriction as gaze shifts from across the room to an object 6 inches away.
  - c. Note ocular movement as patient follows an object through the six cardinal fields.
  - d. Cover one eye of patient with card, then remove the card; note any deviation from a fixed gaze.
6. While testing visual acuity of an adult using a Snellen chart, the patient is able to read all of the letters on the 20/30 line and three letters of the 20/20 line with the right eye. How is this documented?
  - a. O.D. 20/30 +3
  - b. O.D. 20/20
  - c. O.S. 20/20 -4
  - d. O.U. 20/30 -3
7. Which of the following should be used to test for near vision?
  - a. Rosenbaum chart
  - b. Snellen "E" chart
  - c. confrontation test
  - d. cover-uncover test
8. In order to visualize the macula, the examiner should ask the patient to:
  - a. blink eye several times quickly.
  - b. lie in a supine position.
  - c. look directly into the light of the ophthalmoscope.
  - d. direct eye gaze on an object to the left, and then to the right.
9. Which of the following statements made by a parent should make the examiner suspicious of a visual problem in a baby? "My:
  - a. 2-week-old baby seems to see a toy in front of her, but she does not follow it when it moves."
  - b. 4-month-old daughter cannot seem to distinguish colors."
  - c. 1-month-old baby does not seem to be able to control his eye movements."
  - d. 3-month-old son does not seem to see things placed in front of him."
10. A 51-year-old patient tells the examiner, "My mother had glaucoma. What can I do to prevent myself from getting it?" Which of the following responses is most appropriate?
  - a. "It is prevented by avoiding chronic eye irritation."
  - b. "Limiting the exposure of ultraviolet light to the eye will prevent glaucoma."
  - c. "Since it is inherited, you will eventually get it, and there is nothing you can do to stop that."
  - d. "Although it can't be prevented, regular screening and testing assists in early detection."

11. Until 6 years of age, eyeballs are less spherical than those of adults, which accounts for why children have:
  - a. ciliary muscle weakness.
  - b. myopic acuity.
  - c. lens rigidity.
  - d. a lack of red reflex.
12. Which of the following is considered a routine part of a newborn examination?
  - a. assessing red reflex
  - b. assessing extraocular movements with six fields of gaze
  - c. fundoscopic examination
  - d. visual acuity
13. Which examination finding may be indicative of a retro-orbital tumor?
  - a. episcleritis
  - b. Argyll Robertson pupil
  - c. unilateral exophthalmos
  - d. retinitis pigmentosa
14. A patient tells the examiner, "I have a loss of vision in the outer half of each eye." Which of the following underlying problems should the examiner consider?
  - a. diabetes
  - b. pituitary tumor
  - c. glaucoma
  - d. cytomegalovirus (CMV) infection
15. Which of the following data is an applicable component to family history?
  - a. eye dominance
  - b. pupil size
  - c. retinoblastoma
  - d. sty
16. Mrs. Carter has vision that, at best, is 20/210. Mrs. Carter is considered:
  - a. legally blind.
  - b. mildly myopic.
  - c. moderately hyperopic.
  - d. unilaterally anisocoric.
17. Which of the following is the correct technique while performing an ophthalmoscopic examination? Examine the patient's right:
  - a. eye with your right eye, and the left eye with your left eye.
  - b. eye with your left eye, and the left eye with your right eye.
  - c. and left eyes with your dominant eye.
  - d. and left eyes with your nondominant eye.
18. Failure to elicit a red-reflex in a young child may indicate:
  - a. congenital glaucoma.
  - b. myosis.
  - c. retinopathy.
  - d. retinoblastoma.
19. An examiner is most likely to observe pseudostrabismus in which of the following groups?
  - a. older adults
  - b. Native American infants
  - c. pregnant women
  - d. Hispanics

20. A cobblestone appearance of the conjunctiva is most likely related to:
- subconjunctival hemorrhage.
  - allergic or infectious conjunctivitis.
  - lagophthalmos.
  - cytomegalovirus infection.

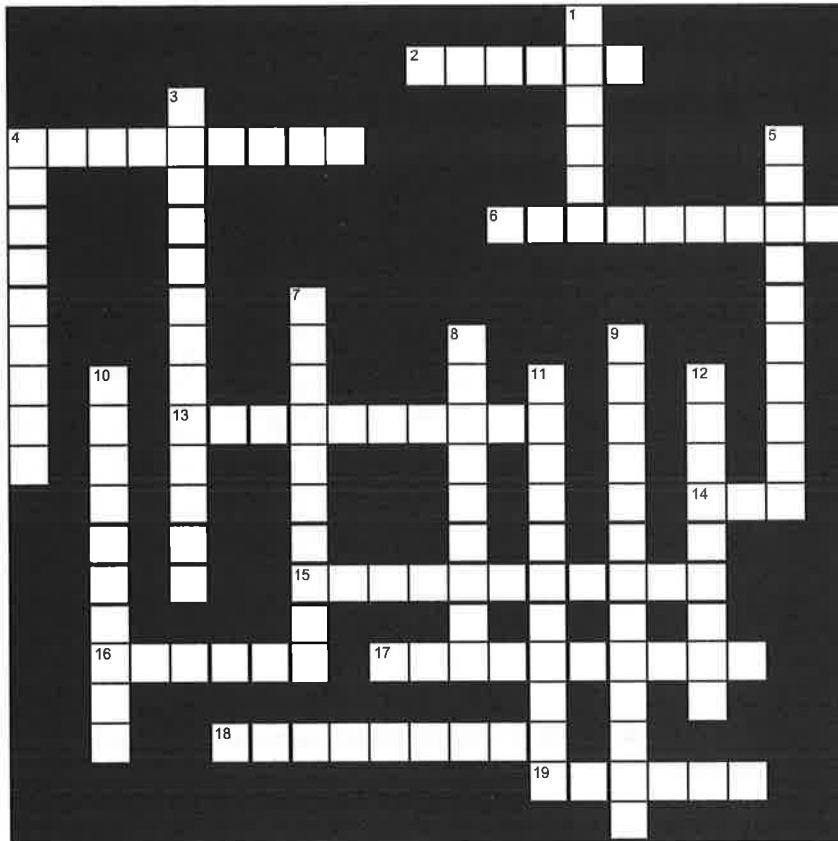
## Terminology Review

### Matching

Match each clinical finding with its corresponding associated factor.

<i>Clinical Finding</i>	<i>Associated Factor</i>
21. _____ Adie pupil	a. Acute angle glaucoma
22. _____ Anisocoria	b. Congenital finding in 20% of normal population
23. _____ Argyll Robertson pupil	c. Diabetic neuropathy or alcoholism
24. _____ Mydriasis	d. Oculomotor nerve damage
25. _____ Eye deviated laterally, downward	e. Neurosyphilis or midbrain lesion
26. _____ Durban bodies	f. Lipid disorder
27. _____ Corneal arcus	g. Senile macular degeneration

**Crossword Puzzle**



**Across**

- 2. Drooping upper eyelid
- 4. Eyelid turned inward
- 6. Involuntary dysrhythmic movement of the eyes
- 13. Inequality of pupillary size
- 14. Reflex caused by light illuminating retina
- 15. Loss of definition of the optic disc
- 16. Also known as fovea
- 17. Defective vision in half of the visual field
- 18. Abnormal growth of conjunctiva that extends over the cornea from the limbus
- 19. Grid used to evaluate central vision

**Down**

- 1. Pupillary constriction
- 3. Test for estimating peripheral vision
- 4. Lower eyelid is turned away from the eye
- 5. White spots found on the iris and usually associated with mental retardation
- 7. Loss of accommodation
- 8. A sty caused by staphylococcal organisms
- 9. Eyes widely spaced apart
- 10. Both eyes do not focus on the same object simultaneously
- 11. Elevated plaque of cholesterol commonly found on the nasal portion of the lid
- 12. Pupillary dilation

**CONCEPTS APPLICATION**

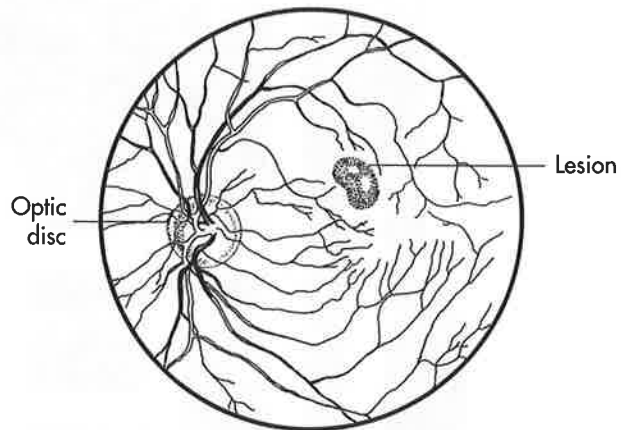
**Activity 1**

*Referring to the following illustration, describe the position of the lesion based on disc diameter.*

Location \_\_\_\_\_

Length \_\_\_\_\_

Width \_\_\_\_\_



**Activity 2**

*List the external eye structures in the order in which they should be examined. To the right of each structure, identify what specifically should be examined.*

<i>Structure</i>	<i>What Should Be Examined</i>
1.	
2.	
3.	
4.	
5.	
6.	
7.	

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## CASE STUDY

*Andy is a 32-year-old single white male who has insulin-dependent diabetes mellitus. His reason for seeking care is a vision problem. Listed below are data collected during an interview and examination.*

### Interview Data

Although Andy has been compliant, he has had poor control of his diabetes. He presents to the clinic with complaints of significant reduction in vision over the last couple of weeks. Andy tells the nurse, "I can't lose my vision because I won't be able to keep my job. If I can't see, I don't know how I will take care of my diabetes or how I will maintain my income."

### Examination Data

**General survey:** Anxious, well-nourished male.

**Eyes:** Snellen test O.S. 20/70, O.D. 20/70 +2, O.U. 20/60 +1; reduced peripheral vision. Normal extraocular movement and corneal light reflex. Eyelids and eyelashes symmetric. Conjunctiva clear bilaterally. Sclera is white; corneas clear. Lacrimal structures without tearing. Pupils are equal and round and react to light.

**Internal eye exam:** Retinal vessels hemorrhagic. New vessels present. Findings consistent with proliferative diabetic retinopathy.

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 examination, if any, should the nurse complete?
4. What problem or problems does this patient have?

