

# Ophthalmic Procedures in the Office and Clinic

## **NURSING CONTACT HOURS**

Upon submission of the post-test, the registration fee, and achievement of a passing score of 80% or higher, 8.5 nursing contact hours will be awarded to participants. These contact hours may be used toward recertification for the Certified Registered Nurse in Ophthalmology (CRNO) designation.

Nursing contact hours are provided by the American Society of Ophthalmic Registered Nurses (ASORN). ASORN is accredited as a provider and approver of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation, and is provider approved by the California Board of Registered Nursing CEP #11901.

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## **SUBMITTING THE POST-TEST**

The post-test is included in Appendix C of this publication. Please make copies of the post-test as needed. The post-test is also available on the ASORN Web site at [www.asorn.org](http://www.asorn.org), and you may request it from the ASORN office 415.561.8513.

The appropriate credits will be awarded for successful completion of the activity. Successful completion is defined as a score of 80% or higher. Participants who do not achieve a minimum score of 80% or higher may retake the test within 30 days. An additional processing fee of \$10 is applicable.

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# Ophthalmic Procedures in the Office and Clinic Registration, Post-Test, and Evaluation Form

To receive continuing education credits for this activity, read the entire book, complete the post-test and evaluation form, and submit them with your payment of \$75 (ASORN members and affiliates) or \$85 (nonmembers) to: ASORN, P.O. Box 193030, San Francisco, CA 94119; or fax them to 415.561.8531.

Continuing education credits will be awarded to individuals who achieve a score of 80% or higher. Participants who do not achieve a minimum score of 80% or higher may retake the test within 30 days. An additional processing fee of \$10 is applicable.

Upon successful completion of this test, I would like (choose one):

- Nursing Contact Hours
- JCAHPO CECs

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## Ophthalmic Procedures in the Office and Clinic Post-Test

Test Response: Circle the most appropriate response for each test question below:

1. Amsler Grid testing is performed to evaluate:
  - a. Peripheral vision
  - b. Central vision
  - c. Color vision
  - d. Distance vision
2. Amsler Grid is an excellent tool for self-examination of central vision to determine early signs of:
  - a. Nevi
  - b. Myopia
  - c. Maculopathy
  - d. Conjunctivitis
3. If an ERROR reading is obtained when attempting autorefraction you should ***first***:
  - a. Turn off the machine and try again in 10 minutes
  - b. Instill artificial tears
  - c. Resort to retinoscopy
  - d. Reposition and/or refocus and try again
4. Which of the following surgical procedures previously performed on the eye is ***least*** likely to have an affect on measuring the axial length with A-scan?
  - a. Blepharoplasty
  - b. LASIK
  - c. Scleral buckle
  - d. Retinal with silicone oil
5. When compared with A-scan ultrasonography to measure axial eye length, partial coherence interferometry differs because it is done :
  - a. Without anesthetic (non-contact)
  - b. With patient in supine position
  - c. Without reference to patient history
  - d. With a portable hand held instrument
6. Eyelid biopsies in adults are most commonly done with which anesthesia?
  - a. Topical
  - b. Local infiltration
  - c. General
  - d. Conscious sedation

7. A common ophthalmic use of botulinum toxin type A is for the treatment of:
  - a. Dry eye
  - b. Amblyopia or lazy eye
  - c. Ptosis
  - d. Blepharospasm
  
8. The Brightness Acuity Test (BAT) measures which type of vision in glare?
  - a. Functional
  - b. Near
  - c. Color
  - d. Stereo
  
9. A chalazion is an inflammatory lump in which gland?
  - a. Meibomian
  - b. Moll
  - c. Zeis
  - d. Lacrimal
  
10. For calcific band keratopathy, EDTA chelation is used in addition to superficial keratectomy because it:
  - a. Chemically binds with calcium to assist with its removal
  - b. Chemically dissolves the calcium so it can be washed away
  - c. Mechanically polishes the corneal surface
  - d. Prevents corneal scarring
  
11. Which of the following tests is most commonly used to diagnose color deficiency?
  - a. Ishihara plates
  - b. Amsler grid
  - c. Visual field
  - d. Contrast sensitivity
  
12. The Heidelberg Retinal Tomograph (HRT II) is useful in analyzing the:
  - a. Optic nerve head
  - b. Central visual field
  - c. Peripheral visual field
  - d. Macula
  
13. When removing someone else's contact lens you should:
  - a. Slide a soft lens down to the inferior sclera and gently pinch between thumb and index finger
  - b. Slide a rigid lens down to the inferior sclera before attempting to dislodge it
  - c. Instruct the patient to wash their hands and dry them thoroughly
  - d. Use a suction cup to remove a soft contact lens

14. Instructions for the care and handling of soft contact lenses include:
  - a. Using alcohol based hand sanitizer before handling the lens
  - b. Pinching the lens off the cornea with the thumb and index finger to remove it
  - c. Checking the vision in each eye separately before attempting to remove the lens
  - d. Vigorously rubbing the lens with cleaner to loosen debris before rinsing with saline
  
15. A method commonly used to collect material to identify microorganisms in an infected cornea is corneal:
  - a. Needle biopsy
  - b. Scraping
  - c. Tissue culture
  - d. Chelation
  
16. Fluorescein stains areas of epithelial cells that are:
  - a. Missing
  - b. Replicating
  - c. Devitalized
  - d. Photosensitized
  
17. Corneal topography records a computerized topographical map of the cornea used to:
  - a. Diagnose corneal endothelial dystrophy
  - b. Track changes in corneal clarity
  - c. Identify the degree and axis of astigmatism
  - d. Determine the presence of abnormal scotoma and metamorphopsia.
  
18. Disinfection of equipment in an ophthalmic office or clinic is usually accomplished by:
  - a. Hydrogen peroxide, alcohol wipes, bleach, soap, and water
  - b. Dusting and spraying with germicidal solution
  - c. Placing in a steam autoclave
  - d. Using disposable equipment
  
19. The number of corneal endothelial cells is finite and acts as an indicator of corneal:
  - a. Thinning
  - b. Scarring
  - c. Health
  - d. Sensation
  
20. The method of epilation of eyelashes with the most temporary results is removal by:
  - a. Forceps
  - b. Cryodestruction
  - c. Electrolysis or cautery
  - d. Argon laser

21. The disadvantage of epilation of cilia with forceps is that:
- It is costly
  - Re-growth of cilia is inevitable
  - It requires local anesthesia
  - It is invasive
22. When performing the Hirschberg Test, how many degrees of deviation does each millimeter of reflex decentration represent?
- 2 mm
  - 7mm
  - 10 mm
  - 15 mm
23. The external exam includes assessment of the patient's:
- Retina and optic nerve
  - Refraction and keratometry
  - Visual function and visual fields
  - Ocular adnexa and pupils
24. Exophthalmometry is the measurement of the:
- Horizontal deviation of the eyes in exotropia.
  - Horizontal deviation of the eyes in exophoria.
  - Depression of the orbit after enucleation.
  - Forward protrusion of the eyes.
25. Conjunctival cultures are usually obtained by passing a swab along the exposed surface of the:
- Nasal bulbar conjunctiva
  - Temporal bulbar conjunctiva
  - Superior palpebral conjunctiva
  - Inferior palpebral conjunctiva
26. For adults, eye drops should usually be placed:
- Directly on the cornea
  - At the medial canthus
  - In the lower cul-de-sac
  - In the upper cul-de-sac
27. After an ocular chemical injury the eye should be irrigated until the pH has returned to:
- Greater than seven
  - Less than seven
  - Seven
  - The pH is not relevant

28. The purpose of a cleansing eye irrigation is to remove:
- Mascara and eyeliner.
  - Mucous and exudates.
  - Bacteria and microorganisms.
  - Embedded corneal and conjunctival foreign bodies.
29. A pressure eye patch can be used to:
- Seal a wound leak in the presence of ruptured globe
  - Decrease lid swelling
  - Immobilize a corneal foreign body
  - Protect the cornea if eyelids are absent
30. An ocularist should check a prosthesis for scratches, pits, and sharp edges and polish it:
- Twice yearly
  - Every two years
  - Every five years
  - Yearly
31. When applying tape to secure an eye shield in place, the tape should:
- Cover the entire shield to keep it secure
  - Be in strips long enough to secure beneath the patient's jaw
  - Be positioned diagonally from the brow to the cheek
  - Be positioned horizontally from the nose to the ear
32. Cold eyelid compresses:
- Should be filled with large ice cubes
  - Should be left on the eye for 30 minutes at a time
  - Dilate blood vessels in the orbital region to minimize postoperative edema
  - Decrease edema and discomfort
33. Warm eyelid compresses:
- Increase the blood supply and number of leukocytes to the affected areas
  - Constrict the blood vessels in the presence of an inflammatory response or infection
  - Are used to treat an allergic response
  - Should be heated in the microwave
34. Upper eyelid eversion causes the greatest exposure to what mucous membrane?
- Linguae mucosa
  - Tunica mucosa
  - Antrum mucosa
  - Palpebral conjunctiva

35. With a lid hygiene regimen, blepharitis usually improves within:
- 3-4 days
  - 3-4 weeks
  - 3-4 months
  - Will never improve without the addition of antibiotics
36. Daily suture line inspection is done to:
- Check for signs and symptoms of infection.
  - Check that sutures are unbroken.
  - Make sure eyelids are not drooping.
  - Check that eyelashes are not turning in.
37. When escorting a visually impaired person from the waiting room to the exam room the escort should:
- Scan the environment for potential hazards to avoid
  - Grab the person's arm and steer them in the appropriate direction
  - Let the person feel for an open or closed door
  - Avoid verbal directions
38. The most common side effect from the injection of fluorescein dye is:
- Cardiac arrest
  - Cronchospasm
  - Nausea
  - Anaphylaxis
39. Which of the following is a part of the chief ocular complaint?
- History of drug abuse
  - Image distortion with one or both eyes
  - Use of herbals or over the counter medication
  - A family member has macular degeneration
40. A hypoglycemic episode may occur as a result of:
- Increased exercise
  - Decreased exercise
  - Decreased diabetes medication
  - Increased food intake
41. Which of the following statements is true?
- ICG is used to visualize choroidal vessels.
  - ICG causes no allergic reactions.
  - There is no iodine in ICG.
  - ICG stands for "Intra-choroidal Green".

42. Of the following, endophthalmitis is most likely to occur after:
- Blepharoplasty
  - Dacryocystorhinostomy
  - Cataract surgery
  - Extraocular muscle surgery
43. Mechanical superficial keratectomy is usually performed for the following condition:
- Cataract
  - Eyelid lesion
  - Retinal detachment
  - Corneal epithelial lesion
44. Which of the following procedures provides an objective, quantitative measurement of corneal astigmatism by measuring the radius of curvature in two meridians 90 degrees apart?
- Keratometry
  - Pachymetry
  - Lensometry
  - A-scan ultrasonography
45. Which statement is true about laser safety glasses? Laser safety glasses:
- Are designed so that one pair can be used for all lasers
  - Can be used even if the coating is cracked or scratched
  - Are not necessary if you wear eyeglasses
  - Should be available for persons entering the room while the laser is in use
46. The automated lensometer analyzes the lens:
- Opacity
  - Size
  - Power
  - Tint
47. When measuring or neutralizing cylinder with a manual lensmeter one must record the:
- Power and axis
  - Prism and bifocal
  - Sphere and prism
  - Axis and add
48. Ms. Smith lives alone and has been diagnosed with advanced stage macular degeneration. She is legally blind with 20/400 vision each eye. Her physician recommends a low vision evaluation to obtain low vision aids. The objective of low vision aids is to:
- Make her feel better about living alone and being legally blind
  - Help her overcome visual limitations and live independently
  - Keep her driver's license and do her own shopping
  - Increase her social security benefits

49. Moisture chambers should be changed every:
- 4 hour
  - 8 hours
  - 12 hours
  - 24 hours
50. Jones tests can be performed to determine what ophthalmic condition?
- Keratoconjunctivitis sicca
  - Entropion
  - Nasolacrimal obstruction
  - Ectropion
51. What color light is used with fluorescein to check for leaking of a filtering bleb?
- White
  - Green
  - Blue
  - Yellow
52. Prior to an oculoplastic procedure it is important for the pre-op nurse to:
- Obtain a brief medical history, vital signs and assess for allergies
  - Obtain the surgical consent
  - Organize the sterile field
  - Apply ice to the operative site
53. The opacity lens meter's range of measurement is calibrated from 0-99. In these relative figures, a perfect lens has a value of:
- 0 to 3
  - 4 to 25
  - 30 and up
  - 90 to 99
54. OCT stands for:
- Ophthalmic Coherence Tonography
  - Ocular Coherence Tomography
  - Ocular Captured Tonogram
  - Optical Coherence Tomography
55. Pachymetry uses an ultrasonic probe to measure the:
- Position of, and distances between structures within the eye and orbit
  - Depth or thickness of the cornea
  - Intraocular pressure
  - Refractive error

56. Prior to starting an eye exam for a child, actively greeting both the parent and child will:
- Make the child cooperate with everything you do during the exam
  - Allow the child's eyes to focus on the examiner so pupil exam can be done
  - Allay all fears that the parent and child may have in the exam room
  - Involve the child and help him/her feel more comfortable
57. After photodynamic therapy with Visudyne™ patients should be instructed to avoid:
- Normal room light
  - Indirect light
  - Incandescent light
  - Sunlight
58. Pneumatic retinopexy refers to treating certain retinal detachments by using:
- Gas
  - Gas and cryotherapy
  - Cryotherapy
  - Thermal therapy
59. At the start of potential acuity meter (PAM) testing, where should the white dot initially be aimed?
- On the iris and moved to the pupil
  - On the closed eyelid
  - Directly on the macula
  - 45 degrees to the patient's left
60. Prostigmin injectable is used in the diagnosis of myasthenia gravis (MG) in children and adults without ptosis. After it is injected, which symptom is the mostly likely to improve?
- Diplopia
  - Blurred vision
  - Epiphora
  - Headache
61. What medication may be applied during pterygium removal to prevent recurrence?
- Mitomycin
  - Prednisolone
  - Proparacaine
  - Timolol
62. Severe dysfunctional dry eye syndrome can be treated with permanent closure of the puncta with?
- Collagen punctal plugs
  - Punctal occlusion cautery
  - Silicone punctal plugs
  - Punctal dilation

63. The main advantage of punctum plugs is that they are:
- Inert and compatible with body tissues
  - Invisible to the naked eye
  - Removable and thus reversible
  - Less expensive than thermal punctal occlusion
64. Indications for removal of a punctum plug include:
- Epiphora
  - Dryness
  - Refractive surgery
  - Increased intraocular pressure
65. A relative afferent pupillary defect is also known as:
- Marcus-Gunn pupil
  - Miotic pupil
  - Hippus
  - Anisocoria
66. GDx testing is used primarily to measure:
- Retinal nerve fiber layer loss (damage)
  - Intraocular pressure
  - Optic nerve cupping
  - Corneal curvature
67. The Schirmer test:
- Uses filter paper to measure the patient's tear output for 1 minute
  - Uses filter paper to measure the patient's tear output for 5 minutes
  - Measures the quality of the tear film
  - Has a normal value of 5mm of wetness from the indentation of the strip
68. Which type of slit lamp illumination is used to best observe corneal thickness or the depth of a lesion or opacity within the cornea?
- Transillumination
  - Direct focal - conical beam
  - Direct focal - optic section
  - Diffuse or wide beam
69. What finding most commonly noted immediately following a subconjunctival injection indicates the presence of the injected medication?
- A subconjunctival hemorrhage
  - A small bleb
  - A widely dilated pupil
  - Clouding of the cornea

70. The objective of a tarsorrhaphy is to protect an exposed:
- Cornea
  - Tear duct
  - Pterygium
  - Conjunctival cyst
71. Temporal arteritis or giant cell arteritis usually presents with the following findings:
- Progressively worse pain over both eyes, blood in urine and loss of vision
  - Headache, tenderness over temporal area, elevated sedimentation rate and visual loss
  - Blurred vision, optic nerve changes and weight gain
  - Loss of vision, low heart rate, pain in back of head and elevated sedimentation rate
72. A Tensilon test is performed for the differential diagnosis of:
- Multiple sclerosis
  - Myasthenia gravis
  - Muscular dystrophy
  - Amyotrophic lateral sclerosis
73. If the reading on the tonometer drum is “4”, the patient’s intraocular pressure is recorded as:
- 4.0
  - 20
  - 2.0
  - 40
74. The pneumotonometer uses which of the following in its operation?
- Compressed gas
  - Liquid nitrogen
  - Ultrasound
  - Radio waves
75. Tonometry readings can be obtained by several instruments. Of the following, the most portable tonometer is the:
- Noncontact
  - Goldmann
  - Pneumo
  - Tono-Pen
76. 10% povidone-iodine swabs should be used with caution around the eye since they may cause:
- Conjunctival chemosis
  - Irreversible skin discoloration
  - Epilation of eyelashes
  - Change in iris pigment

77. Which of the following is considered an ophthalmic emergency?
- Progressively worsening eye pain.
  - Red eye
  - Flashes and floaters without vision loss
  - Chemical injury
78. The ultrasonic biomicroscope produces very high resolution images showing small details of the:
- Posterior segment of the eye
  - Anterior segment of the eye
  - Orbit
  - Microorganisms obtained from eye cultures
79. Pertaining to ophthalmic ultrasonography, which of the following statements is true?  
Ultrasonography:
- Utilizes radio waves to help create an image.
  - Must be performed only on the open eye.
  - Can be used to measure the size of an ocular lesion.
  - Displays images in three dimensions.
80. What is the distance (or equivalent) in feet, used in measuring distance visual acuity?
- 10 feet
  - 20 feet
  - 40 feet
  - 15 feet
81. How far away from the eye is the near card usually held when determining near visual acuity?
- 10 inches
  - 14 inches
  - 18 inches
  - 22 inches
82. Automated visual field evaluation is an excellent tool in determining a central:
- Scotoma
  - Foveal reflex
  - Intraocular lens
  - Astigmatism
83. A confrontation visual field is most helpful to determine:
- Loss of central vision
  - Loss of peripheral vision
  - Pupil function
  - Lid function

84. Goldmann visual field evaluation is:
- a. Automated
  - b. Manually performed
  - c. Difficult to reproduce
  - d. Done bilaterally and simultaneously

## Ophthalmic Procedures in the Office and Clinic Evaluation

Please evaluate this educational activity based on how well each objective was met.

As a result of this educational activity I am able to:

	Very Well	Moderately Well	Fairly Well	Not at All
• Identify equipment and supplies required to perform ophthalmic tests and procedures.	4	3	2	1
• Describe the fundamentals of aseptic technique in the office or clinic setting.	4	3	2	1
• Demonstrate safe handling, administration, and disposal of medications used in the ophthalmic office or clinic setting.	4	3	2	1
• Describe the steps necessary to perform individual ophthalmic tests accurately and safely.	4	3	2	1
	Very Well	Moderately Well	Fairly Well	Not at All
The content supports the objectives.	4	3	2	1
Independent study was an effective teaching method.	4	3	2	1
This activity helped me to achieve my personal objectives.	4	3	2	1
This activity contributed to my professional development.	4	3	2	1

Did you perceive a financial or commercial bias associated with this educational activity?

Yes  No

The time required to complete this activity and take the post-test was: \_\_\_\_\_

Additional comments: