

# HEENT Exam

## Exam Overview

### I. Head

- A. Visual inspection
- B. Palpation of scalp

### II. Eyes

- A. Visual Acuity
- B. Visual Fields
- C. Extraocular Movements/Near Response
- D. Inspection of sclera & conjunctiva
- E. Pupils
- F. Ophthalmoscopy

### III. Ears

- A. External Inspection
- B. Otoscopy
- C. Hearing Acuity
- D. Weber/Rinne

### IV. Nose

- A. External Inspection
- B. Speculum/otoscope
- C. Sinus areas

### V. Throat/Mouth

- A. Mouth Examination
- B. Pharynx Examination
- C. Bimanual Palpation

### VI. Neck

- A. Lymph nodes
- B. Thyroid gland

## HEENT Terms

**Acuity** – (ehk-yu-eh-tee) sharpness, clearness, and distinctness of perception or vision.

**Accommodation** - adjustment, especially of the eye for seeing objects at various distances.

**Miosis** – (mi-o-siss) constriction of the pupil of the eye, resulting from a normal response to an increase in light or caused by certain drugs or pathological conditions.

**Conjunctiva** – (kon-junk-ti-veh) the mucous membrane lining the inner surfaces of the eyelids and anterior part of the sclera.

**Sclera** – (sklehr-eh) the tough fibrous tunic forming the outer envelope of the eye and covering all of the eyeball except the cornea.

**Cornea** – (kor-nee-eh) clear, bowl-shaped structure at the front of the eye. It is located in front of the colored part of the eye (iris). The cornea lets light into the eye and partially focuses it.

**Glaucoma** – (glaw-ko-ma) any of a group of eye diseases characterized by abnormally high intraocular fluid pressure, damaged optic disk, hardening of the eyeball, and partial to complete loss of vision.

**Conductive hearing loss** - a hearing impairment of the outer or middle ear, which is due to abnormalities or damage within the conductive pathways leading to the inner ear.

**Sensorineural hearing loss** - (sen-so-ree-nur-ehl) a hearing impairment of the inner ear resulting from damage to the sensory hair cells or to the nerves that supply the inner ear.

**Polyp** – (pol-lip) a tumor with a small flap that attaches itself to the wall of various vascular organs such as the nose, uterus and rectum.

**Septum** - the partition between the two nasal cavities.

**Septal deviation** - a common physical disorder of the nose, involving a displacement of the nasal septum.

**Turbinates/Concha** – ridge-shaped cartilage or soft bony tissue inside the nose.

**Meatus** – (mee-ay-tus) a passage or channel, especially the external opening of a canal

**Mucosa** – (my-ko-seh) mucous membrane or the thin layer which lines body cavities and passages.

**Uvula** – (yu-vyeh-leh) the small, fleshy mass hanging from the soft palate above the root of the tongue.

**Pharynx** – (fer-inks) the part of the throat that lies between the mouth and the larynx or voice box.

**Isthmus** - a constriction or narrow passage connecting two larger parts of an organ or other anatomical structure.

## General Notes

- The HEENT exam is almost entirely a Tier II exam, based on the patient's complaint. If a complete exam is performed, it should be carried out systematically from top (scalp) to bottom (neck).
- Within each portion of the HEENT exam, the regular examination order is followed: Inspection, Palpation. (There is no auscultation or percussion for this exam.)
- The exam is performed with patient seated and the examiner moving from side to side as necessary.
- Care should be taken when inserting ear & nasal speculums as the structures involved may be easily traumatized.
- Tight clothing about the neck should be removed or loosened.
- Adequate handheld light is necessary to complete the exam.

## Tier I

### *Head*

Tenderness of neck & scalp

### *Eyes*

Extraocular muscle movements

Pupil Size & symmetry

Conjunctiva inspection

### *Throat*

Symmetry of pharynx

## **Head**

*Inspection:* Visually inspect the scalp, moving hair as necessary. You are looking for lesions, trauma, parasites, etc.

*Palpation:* Palpate the scalp, feeling for lesions or tenderness.

## **Eyes**

### *Inspection*

#### **A. Visual Acuity**

- Use best corrected vision (contacts or glasses).
- Hold the near card approximately 14 inches from patient, or allow the patient to hold card him/herself.
- Have patient close or cover eye not being tested.
- Have patient read the smallest line they can see clearly. Repeat with other eye.
- If pinhole helps to improve vision, the problem is visual only, not neurological.

#### **B. Visual Fields (peripheral vision)**

##### 1. Both eyes at the same time

- a. Have patient on your eyes with both eyes open.
- b. Hold up different numbers of fingers on both hands and have patient add up how many fingers he/she sees.

##### 2. One eye at a time

- c. Have patient cover one eye. The examiner stands a few feet away from patient and closes opposite eye. (Patient covers right, examiner covers left. Covered eyes should be parallel.)
- d. Tell the patient to fixate his/her open eye on your open eye.
- e. Hold up any number of fingers on one hand and move them slowly into view. Ask the patient to tell you how many they see. Test four quadrants this way. (Coming from the top right, bottom right, top left & bottom left.)
- f. Keep your hand in a plane directly between yourself and the patient.
- g. Compare your (normal) field of vision to the patient's. Your patient should see your fingers at approximately the same time as you do.
- h. Test the other eye.

#### **C. Extraocular Movements/Near Response**

1. Have patient keep their head stationary and track your finger as you move it around.

2. Both eyes can be tested at the same time.
3. Since each eye has six muscles with distinct actions, each eye should be Brought through its six cardinal motions. Move your hand in the shape of a giant H or asterisk.
4. Try to test the limits of the muscles by making the shape as big as your arms will allow. Switch hands in the middle to get the same amount of stretch on both sides.
5. Finish the exam by bringing your finger towards the patient's nose to test near response. The pupils should constrict (miosis) and the patient's eyes should cross (convergence).

**D. Sclera, conjunctiva, cornea**

1. Wash your hands! Yes, again! Warn the patient you will be touching their eyelids. Don't touch your own face while explaining this, or you'll have to wash your hands a third time!
2. Both eyes can be tested at the same time.
3. Pull down gently on lower lids, and have patient look up.
4. Pull up gently on upper lids (just below brow), and have patient look down.

*You may see a fleshy overgrowth on the sclera at the inside corner of the eye. This is called a pterygium. It can be caused by UV exposure, or it can be genetic in origin. Unless it obscures vision, it is usually only a cosmetic issue.*

Color of Sclera	
<b>White</b>	Normal
<b>Yellow</b>	Jaundice
<b>Blue</b>	Rheumatoid Arthritis or Osteogenesis Imperfecta
<i>Must look in natural light!!</i>	

To estimate hematocrit (blood count) when inspecting conjunctiva	
<b>Red</b>	>35
<b>Orange</b>	30-35
<b>Pink</b>	25-30
<b>White</b>	<25

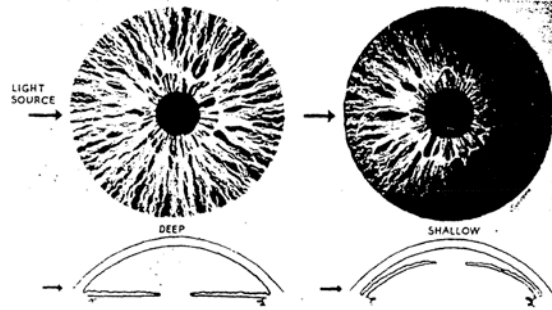
**\*\*DIM THE LIGHTS.\*\***

**E. Pupils**

1. Have patient focus on a distant target to eliminate accommodation.
2. Hold the penlight approximately 6 inches away.
3. Shine in one eye at a time. On the first pass, look for direct response. Pass a second time, looking for consensual response (constriction of the other pupil).
4. Repeat with other eye.

**Shaffer/Penlight Test**

Shine the penlight tangentially to patient's eye. Anterior chamber depth is graded as "shallow" if a shadow is cast over 1/2 of opposite iris. Indicates less common narrow-lens glaucoma.



**F. Ophthalmoscopy**

Demonstrate how to turn ophthalmoscope on and off, how to focus & how to adjust aperture. Have students focus the ophthalmoscope on the lines on their hand. Remind students that because your pupils have not been dilated, they will see much less of your retina than they would otherwise.

1. Ask patient to look at distant target without moving eyes.
2. When examining patient's right eye, hold ophthalmoscope in right hand and look through it with right eye.
3. Use your left hand on patient's shoulder, or where appropriate, patient's forehead, to help steady you.
4. Use a larger aperture, and make sure the light is not too bright.
5. Approach the patient from an angle about 15 inches away, shining light beam on patient's pupil. Look for red reflex.
6. Move slowly towards patient, and adjust lens strength until retina is visible. (The hyperopic, or farsighted, eye requires more plus or green numbers for clear focus. The myopic, or nearsighted, eye requires more minus or red numbers.)
7. Inspect entire retina in systematic fashion.
8. Use left hand to hold ophthalmoscope and left eye to look through it when examining the left eye.

**\*\*LIGHTS ON.\*\***

**Notes:**

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## **Ears**

### *Inspection*

#### **A. External Inspection**

1. Pinna – Check for skin changes that may represent skin cancer, nodules that may indicate gout.
2. External auditory canal – Look for redness, swelling, large amounts of cerumen (ear wax) that may need to be removed before introducing otoscope.

#### **B. Otoscopy**

Demonstrate otoscope attachment & ear speculum.

1. Color and shape of eardrum
2. Is it bulging or retracted?
3. Cone of light
4. Umbo
5. Long and short processes of malleus
6. Pars tensa & pars flaccida
7. Annulus

#### **Otoscope Tips:**

- Move slowly; let the patient's individual anatomy guide you.
- Hold the otoscope with 3 fingers and your thumb, and keep it parallel to the ground. This will help prevent you from wrenching the instrument side to side, which could injure your patient.
- Use full brightness.
- Wait until the otoscope is fully inserted before looking through the instrument. (Unlike ophthalmoscope technique, where you look through the instrument as you approach the patient.)

#### **C. Hearing Acuity**

1. Have patient cover one ear and close eyes.
2. Rub fingers together near ear being tested and ask if patient can hear the sound.
3. Alternatively, whisper something in patient's ear and ask him or her to repeat it.

#### **D. Weber**

1. Place vibrating 512 Hz tuning fork on apex of skull.
2. Ask patient in which ear is the sound louder.

#### **E. Rinne**

1. Place vibrating 512 Hz tuning fork on mastoid process for a few seconds.
2. Move tuning fork in front of external ear.
3. Ask patient which sound is louder.
4. Repeat with other ear.

## Interpreting Weber/Rinne Test

### TWO TYPES OF HEARING LOSS

1. **Conductive Hearing Loss (CHL):** Loss of hearing due to problems in the external or middle ear. Examples of problems causing CHL are obstruction (fluid, ear wax, object such as Mardi Gras bead), or perforated ear drum.
2. **Sensorineural Hearing Loss (SNHL):** Loss of hearing due to problems in the inner ear, the cochlear nerve, or its central connections in the brain. Examples of problems causing SNHL are noise induced hearing loss and ototoxicity.

### **WEBER TEST**

**The Weber Test checks for symmetry of hearing.**

1. Place a vibrating tuning fork on the apex of the skull.
2. Ask the patient which side s/he hears the sound the loudest.

#### **Normal Response:**

- If hearing is normal, the patient will hear the sound equally on each side.

#### **Abnormal Response:**

- If the patient has a **sensorineural hearing loss (SNHL)** in one ear, the sound will lateralize to the side of better hearing.
- If the patient has a **conductive hearing loss (CHL)** in one ear, the sound will lateralize to the side with the hearing loss.

### **RINNE TEST**

**The Rinne Test checks air / bone conduction.**

1. Place a vibrating tuning fork on the mastoid process.
2. Move the tuning fork to the front of the external ear.
3. Ask the patient which sound is louder.
4. Repeat the procedure with the other ear.

#### **Normal Response:**

If the patient has normal hearing, s/he will hear it louder in front of the external ear. (Air conduction of sound is louder through air than bone. In the normal patient, the external and middle ear system are unimpaired so s/he will hear the sound better through air conduction.)

#### **Abnormal Response:**

1) If the patient has a sensorineural hearing loss (SNHL), s/he will hear the sound better in front of the ear canal just as in the normal response. Since the hearing loss is because the inner ear or cochlear nerve is less able to transmit impulses regardless of how the vibrations reach the cochlea, the normal pattern prevails - air conduction is still louder. [In other words, the reduction of the sound impulse begins at the inner ear or cochlear nerve and uniformly reduces impulses received through air or bone conduction. If there were a 20% reduction in an impulse received through air conduction, there would be a 20% reduction in an impulse received through bone conduction also. Since the air conduction impulse would reach the inner ear or cochlear nerve louder, it would still be perceived as louder after the 20% reduction.]

2) If the patient has a conductive hearing loss (CHL), s/he will hear the sound louder on the mastoid process. Pathways of normal air conduction through the external and middle ear are blocked. Vibrations through bone bypass the obstruction to reach the cochlea and are perceived as louder.

### **ABNORMAL**

Conductive hearing loss  
Sensorineural hearing loss

### **WEBER**

louder on side with hearing loss  
louder on opposite side

### **RINNE**

louder on bone  
louder in front (as a normal response)



## **Nose**

### ***Inspection***

#### **A. Examine external nose.**

#### **B. Otoscope**

1. Explain otoscope.
2. Examine septum.
3. Examine inferior & middle turbinates/meatus. (Superior turbinates are not usually visible.)

### ***Palpation***

#### **A. Palpate frontal & maxillary sinus areas.**

## **Throat & Mouth**

### ***Inspection***

#### **A. Pharynx**

1. When inspecting the pharynx, use a penlight. A tongue depressor is helpful, but not necessary.
2. Examine hard & soft palate. You may see a bony abnormality called torus palatinus. It is congenital and not cancerous.
3. Have patient say "Aaaah", noting whether the uvula rises symmetrically.
4. Examine palatine pillars and tonsils.

*Ask patients if they snore. Patients who snore are at risk for sleep apnea, as are patients with a neck circumference greater than 18".*

#### **Tips for using tongue depressors**

To reduce gag reflex:

- Wet tongue depressor.
- Insert at an angle, rather than straight back.
- Insert up to midline of visible tongue, not all the way to the back of the throat.

#### **B. Mouth**

1. Use a gloved hand or tongue depressor to stretch the cheeks and move the tongue.
2. Use a penlight to examine lips, gums, teeth, tongue, cheeks and the floor of the mouth.

## ***Palpation***

### **A. Bimanual palpation**

1. Use a glove on the hand that will be inside the patient's mouth, leaving the other ungloved.
2. Warn patient you will be putting your finger inside his or her mouth, and ask him/her not to bite down.
3. Place one finger inside mouth, while externally palpating with the ungloved fingers.
4. Palpate the parotid and submandibular salivary glands.
5. Palpate the lateral margins of the tongue and floor of the mouth looking for nodules, ulcerations and carcinoma.

## **Neck**

### ***Inspection***

- A. Visually inspect the thyroid gland by having the patient swallow.**

### ***Palpation***

#### **A. Thyroid**

1. Palpate isthmus.
2. Palpate gland from behind patient (in front OK). Stabilize one side with your hand, and palpate opposite lobe with other hand.

#### **B. Lymph Nodes**

1. Occipital (base of skull)
2. Postauricular (behind ear)
3. Preauricular (in front of ear)
4. Submandibular (upper middle jawbone)
5. Submental (under chin)
6. Anterior Cervical (in front of SCM)
7. Posterior Cervical (behind SCM)
8. Deep Cervical Chain (under SCM)
9. Supraclavicular (slightly behind collarbone, have patient shrug to locate)

**Describe nodes by:**

- Size
- Consistency
- Location
- Number
- Shape
- Tenderness
- Fixed/mobile