Sick Call Screener Course

Head, Eyes, Ear, Nose, & Throat (HEENT)

(2.1)
Enabling Objectives

• 1.7 Utilize the knowledge of head and neck anatomy while assessing a patient with a HEENT complaint

• 1.8 Utilize the knowledge of eye anatomy while assessing a patient with a HEENT complaint

• 1.9 Utilize the knowledge of eye physiology while assessing a patient with a HEENT complaint

• 1.10 Utilizing the knowledge of ears, nose and throat anatomy while assessing a patient with a HEENT complaint

• 1.11 Utilize the knowledge of ears, nose and throat physiology while assessing a patient with a HEENT complaint
Enabling Objectives (Cont.)

- 1.12 Obtain history from patients with common head, eye, ear, nose, and throat complaints

- 1.13 Perform a head, eye, ear, nose and throat examination

- 1.14 State signs and symptoms of common head, eye, ear, nose and throat disorders

- 1.15 State treatments for common head, eye, ear, nose and throat disorders

- 1.16 State Red Flag criteria
Introduction

• This lesson will improve your understanding of and your ability to perform examinations of the head, neck, eyes, ears, nose, mouth and throat

• One of the most common examinations
Anatomy of the Cranium

• Seven Bones

• Bony structures

• Facial landmarks

• Temporal artery

(From Bates’ Guide to Physical Examination and History Taking – 12th Ed. 2017, Figure 7-2, www.StatRef.com)
Anatomy of the Cranium (Cont.)

- TMJ

- Muscles of mastication (Chewing)

(From Principles of Anatomy and Physiology, 14th Ed.)
Anatomy of the Neck

• Composed of cervical vertebrae, ligaments, sternocleidomastoid and trapezius muscles

• Anterior triangle

• Posterior triangle

• Thyroid
Anterior Triangle

• Formed by the medial border of the sternocleidomastoid muscles, mandible, and the midline

• Contains hyoid bone, cricoid cartilage, trachea and anterior cervical lymph nodes

Posterior Triangle

- Formed by the trapezius and sternocleidomastoid muscles and the clavicle

- Contains the posterior cervical lymph nodes

Thyroid

• Largest endocrine gland in the body, producing two hormones: T3 and T4

• Butterfly in shape on each side of the trachea

Anatomy of the Eye

• General anatomy
  – Measures 2.5cm in diameter
  – Contains three layers:
    • Fibrous tunic
    • Vascular tunic
    • Retina

(From Principles of Anatomy and Physiology, 14th Ed.)
Extrinsic Eye Muscles

- **Superior Rectus**
  - Oculomotor (CN III)
- **Inferior Rectus**
  - Oculomotor (CN III)
- **Lateral Rectus**
  - Abducens (CN VI)
- **Medial Rectus**
  - Oculomotor (CN III)
- **Superior Oblique**
  - Trochlear (CN IV)
- **Inferior Oblique**
  - Oculomotor (CN III)

(From Principles of Anatomy and Physiology, 14th Ed.)
External Eye Functions

- **Functions**
  - Distribute tears
  - Limit light
  - Protect

- **Eyelids**
  - Levator palpebrae superioris
  - Occulomotor (CN III)

- **Conjunctiva**

- **Lacrimal Glands**

(From Principles of Anatomy and Physiology, 14th Ed.)
Internal Eye Functions

- **Outer**
  - Sclera
  - Cornea

- **Middle or Uvea**
  - Choroid
  - Ciliary body
  - Iris

- **Inner**
  - Retina
    - Optic Disc and Optic Nerve (CN II)
    - Macula Lutea
    - Fovea Centralis
    - Rods
    - Cones
Anatomy of the Ear

- Three regions
  - External
  - Middle
  - Inner

(From Principles of Anatomy and Physiology, 14th Ed.)
External Ear

- Auricle
- Auditory Canal
- Tympanic Membrane
- Mastoid

Middle Ear

• Malleus

• Incus

• Stapes

(From Principles of Anatomy and Physiology, 14th Ed.)
Internal Ear

- Bony Labyrinth
- Membranous Labyrinth
- Vestibule
- Cochlea
- Organ of Corti and Vestibulocochlear Nerve (CN VIII)

(From Principles of Anatomy and Physiology, 14th Ed.)
Physiology of Hearing

(From Principles of Anatomy and Physiology, 14th Ed.)
Anatomy of the Nose

• Specialized organ

• Cartilaginous framework
  – Septal
  – Lateral
  – Alar

Interior Structure

- **Functions**
  - Warming, moistening and filtering incoming air
  - Detecting olfactory stimuli
  - Modifying speech vibrations

- **Paranasal sinuses**

- **Upper 1/3 supported by bone**

- **Lower 2/3 of the nose supported by cartilage**

Nasal Physiology

- Olfactory epithelium
- Olfactory sensations
- Olfactory Nerve (CN I)
Anatomy of the Mouth and Throat

- Buccal cavity
- Lips
- Hard palate
- Soft palate
- Uvula

(From Bates’ Guide to Physical Examination and History Taking, 12th Ed.)
Salivary Glands

- Parotid Gland
- Submandibular Gland
- Sublingual Gland

STAT!Ref: Burket’s Oral Medicine, 12th Ed. 2015, https://online.statref.com/
• **Extrinsic**
  - Hypoglossus
  - Genioglossus
  - Styloglossus

• **Intrinsic**
  - Longitudinalis Superior
  - Longitudinalis Inferior
  - Transversus Linguæ
  - Verticalis Linguæ

(From Principles of Anatomy and Physiology, 14th Ed.)
Tonsils

- **Pharyngeal Tonsil (Adenoid)**
  - Posterior wall of nasopharynx
- **Two Palatine Tonsils**
  - Posterior of oral cavity on either side
- **Two Lingual Tonsils**
  - Base of tongue

(From Emergency and Trauma Care for Nurses and Paramedics 2nd Ed., 2016, www.clinicalkey.com)
Obtain a History

• Subjective
  – Chief Complaint (CC)
  – History of Present Illness (HPI)

• OLDCARTS = Onset, Location, Duration, Character, Aggravating, Relieves, Temporal Factors, Severity

Associated Symptoms
Head and Neck

Head and Neck

• Head pain
• Headache
• Laceration
• Change in breathing pattern
• Blurred or double vision
• Discharge from the nose or ears
• Nausea

• Vomiting
• Incontinence
• Paralysis
• Loss of sensation
• Light headed
• Neck swelling
• Neck pain
• Fever
Associated Symptoms Eyes

Eye

• Pain
• Visual disturbances
• Redness
• Purulent discharge
• Crusting
• Mating of the eyelids
• Headaches

• Dizziness
• Tearing
• Itchiness
• Pressure
• Foreign body sensation
• Both eyes affected or just one
Associated Symptoms Ears

Ears

- Nausea
- Vomiting
- Tinnitus
- Hearing loss or change
- Headache
- Double vision
- Ear fullness

- Unsteadiness
- Pain
- Fever
- Discharge
- Itchiness
- Vertigo
- Association with diving or flying
Associated Symptoms Nose

Nose
- Sneezing
- Congestion
- Itching
- Sniffling
- Obstruction
- Mouth breathing
- Bad breath

- Sore throat
- Cough
- Snoring
- Sleep issues
- Bleeding
- Allergies
- Sinus pain or pressure
Associated Symptoms
Mouth and Throat

Mouth and Throat
- Tooth pain
- Difficulty swallowing
- Difficulty speaking or hoarse voice
- Fever
- Swollen tonsils
- Post nasal drip

- Cough
- Runny nose
- Inhalation of smoke or irritants
- Gastroesophageal reflux
- Drooling
- Feeling of obstruction
Remedies Tried

- Head and Neck
- Eyes
- Ears
- Nose
- Mouth and Throat
Preceding Events

• Head and Neck
• Eyes
• Ears
• Nose
• Mouth and Throat

(U.S. Army photo by Staff Sgt. Gene Arnold, 14th Public Affairs Detachment) (Released)
Past Medical and Surgical History

- Head and Neck
  - Eyes
  - Ears
  - Nose
- Mouth and Throat
  - Medications
  - Allergies to food, environment, and medications
Family and Social History

**Family History**
- Head and Neck
- Eyes
- Ears

**Social History**
- Tobacco
- Alcohol
- Travel
- Environmental Hazards
Review of Systems

- **Constitutional**
  - Fever, chills, night sweats, weight gain/loss, fatigue, malaise

- **Respiratory**
  - Cough, sputum, wheezing, dyspnea, hemoptysis, TB exposure, shortness of breath, asthma

- **Cardiovascular**
  - Hypertension, chest pain, palpitations, murmur, orthopnea, exercise intolerance
Review of Systems (Cont.)

• Endocrine
  – Diabetes, heat or cold intolerance, sweating, frequent urination, excessive thirst, change in appetite, decreased libido

• Neurological
  – Numbness, tingling, paresthesia, dizziness, paralysis, visual disturbances, seizures, gait, coordination, syncope, tremors, speech problems, taste disturbances
Head Exam

- Hair
- Scalp
- Skull
- Face
- Skin

Neck Exam

• Inspect
  – Symmetry
  – JVD
  – ROM
  – CN XI

• Palpate
  – Midline position
  – Pravertebral muscles
  – Spinous process
  – Evaluate the thyroid
  – Lymph nodes

Lymph Nodes

Eye Exam

• Visual Acuity

• Abnormalities

• Examine

• Extraocular Movements

• Test for Convergence

EOMI

Abduction

Lateral rectus

Inferior oblique

Superior rectus

Medial rectus

Depression of visual axis

Elevation of visual axis

Lateral

Superior oblique

Inferior rectus

Medial
Ear Exam

- Inspect the external ear
- Inspect the auditory canal
- Palpate
- Otoscopic Exam
- Abnormalities
- Assess gross hearing
- Cerumen impaction

Tympanic Membrane

Otitis Media

Normal TM
Cerumen Impaction

Cerumen removal. Christopher H. Hashikawa. Published September 24, 2017
Nasal Exam

• Inspection
  – Inflammation
  – Contour/Shape
  – Nasal Mucosa
  – Deviation, Masses, and Perforations

• Nasal patency

• Palpate the sinuses

Transillumination
Mouth and Throat Exam

- Inspection
  - Lips
  - Gums & Teeth
  - Tongue and Buccal Mucosa
  - Throat
  - Tonsils

Tonsils

Brodsky staging system for palatine tonsil hypertrophy. 1989, Elsevier www.clinicalkey.com
Headache

- Description
- Risk Factors
- General Prevention
- Clinical Presentation
- Differential Diagnosis
- Diagnostic Testing
# Headache (Cont.)

<table>
<thead>
<tr>
<th>Location of Pain for Common Headache Syndromes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sinusitis</strong></td>
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<tr>
<td><img src="image" alt="Sinusitis" /></td>
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<tr>
<td><strong>Migraine</strong></td>
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<td><img src="image" alt="Migraine" /></td>
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<tr>
<td><strong>Cluster</strong></td>
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</tbody>
</table>

- **Treatment**
- **Disposition**
- **Referral**

*Ophthalmology. Weinstein, Joel M.; Wang, Michelle Y.... Published January 1, 2014. Pages 969-975.e1. © 2014.*
Orbital Cellulitis

• Description

• Risk Factors

• General Prevention
Orbital Cellulitis Diagnosis

- Diagnosis
- Differential Diagnosis
- Diagnostic Tests

Orbital Cellulitis Tests

- Frequent eye exam
- Treatment
- Referral
Blepharitis

• Description

• Clinical Presentation

Blepharitis (Cont.)

• Differential Diagnosis

• Laboratory Tests

(From Primary Care, 5th Ed., www.clinicalkey.com)
Blepharitis (Cont.)

- Treatment
- Disposition
- Referral
Hordeolum

- Description
- Clinical Presentation
- Differential Diagnosis

Hordeolum (Cont.)

- Laboratory Tests
- Treatment
- Disposition
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Chalazion

- Description

- Clinical Presentation

Chalazion (Cont.)

- Differential Diagnosis
- Workup
- Treatment
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Conjunctivitis

- Description
- Clinical Presentation
- Red Flag Criteria

Conjunctivitis (Cont.)

• Differential Diagnosis

• Workup

• Laboratory Tests
Conjunctivitis (Cont.)

• Treatment
• Disposition
• Referral
Corneal Abrasions

• Description

• Clinical Presentation

• Red Flag Criteria

• Differential Diagnosis

Corneal Abrasions (Cont.)

- Workup
- Treatment
- Disposition
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Retinal Detachment

• Description

• Risk Factors

• Clinical Presentation

Retinal Detachment (Cont.)

• Differential Diagnosis

• Workup

• Laboratory Tests

• Imaging Studies
Retinal Detachment (Cont.)

- Treatment
- Disposition
- Referral

Otitis Externa

- Description

- Clinical Presentation
Otitis Externa (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests

Otitis Externa (Cont.)

- Treatment
- Disposition
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Otitis Media

• Description

• Clinical Presentation
Otitis Media (Cont.)

- Differential Diagnosis
- Workup
- Labs and Imaging

Otitis Media (Cont.)

- Treatment
- Red Flags
- Disposition
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Perforated Tympanic Membrane

- Description

- Risk Factors

Perforated Tympanic Membrane (Cont.)

• Diagnosis

• Diagnostic Tests

• Differential Diagnosis
Perforated Tympanic Membrane (Cont.)

- Treatment
- Additional Therapies
- Surgery

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Tinnitus

• Description

• Risk Factors

• Clinical Presentation
Tinnitus (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests
- Imaging Studies
Tinnitus (Cont.)

- Treatment
- Disposition

Photo by Daniel C Coxwest, U.S. Navy
Mastoiditis

• Description

• Clinical Presentation
Mastoiditis (Cont.)

• Differential Diagnosis

• Workup

• Laboratory Tests

• Imaging Studies
Mastoiditis (Cont.)

• Treatment

• Disposition

• Referral
Sinusitis

• Description

• Clinical Presentation

Sinusitis (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests
- Imaging Studies
Sinusitis (Cont.)

- Treatment
- Complications
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Allergic Rhinitis

• Description

• Clinical Presentation
Allergic Rhinitis (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests
- Imaging Studies
Allergic Rhinitis (Cont.)

• Treatment

• Disposition

• Referral
Nonallergic Rhinitis

- Description

- Clinical Presentation
Nonallergic Rhinitis (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests
- Imaging Studies
Nonallergic Rhinitis (Cont.)

• Treatment

• Disposition

• Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Acute Pharyngitis

• Description

• Clinical Presentation
  – Viral Pharyngitis
  – Bacterial Pharyngitis
  – Red Flags

(From Infectious Disease Clinics of North America, Vol.21, Issue 2, Figure 1, www.clinicalkey.com)
Acute Pharyngitis (Cont.)

• Differential Diagnosis

• Workup

• Laboratory Tests

• Imaging Studies

(From Elsevier Point of Care: Pharyngitis, www.clinicalkey.com)
Acute Pharyngitis (Cont.)

• Treatment

• Referral
Peritonsillar Abscess

- Description

- Clinical Presentation

Peritonsillar Abscess (Cont.)

- Differential Diagnosis
- Workup
- Laboratory Tests
- Imaging Studies
Peritonsillar Abscess (Cont.)

- Treatment
- Disposition
- Referral

STAT!Ref: Clinical Checklist, Lab Advisor & Drugpoints System, https://online.statref.com/
Summary and Review

• 1.7 Utilize the knowledge of head and neck anatomy while assessing a patient with a HEENT complaint

• 1.8 Utilize the knowledge of eye anatomy while assessing a patient with a HEENT complaint

• 1.9 Utilize the knowledge of eye physiology while assessing a patient with a HEENT complaint

• 1.10 Utilizing the knowledge of ears, nose and throat anatomy while assessing a patient with a HEENT complaint

• 1.11 Utilize the knowledge of ears, nose and throat physiology while assessing a patient with a HEENT complaint
Summary and Review (Cont.)

- 1.12 Obtain history from patients with common head, eye, ear, nose, and throat complaints
- 1.13 Perform a head, eye, ear, nose and throat examination
- 1.14 State signs and symptoms of common head, eye, ear, nose and throat disorders
- 1.15 State treatments for common head, eye, ear, nose and throat disorders
- 1.16 State Red Flag criteria
Questions
Application

• HEENT System Job Sheet, SCSC 2.1-3

• Performance Test 2