Differentiate between seizure and syncope.
Seizure

- Tongue biting/lateral tongue lacerations
- Presence of post-ictal symptoms (confusion, altered mental status)
- Loss of bowel or bladder control
- Longer duration of ictal symptoms (e.g., convulsions, jerking)

Syncope

- No tongue biting/lateral tongue lacerations
- Rapid recovery post-event (seconds) without persistent confusion or altered mental status
- No loss of bowel or bladder control
- Short convulsions or myoclonic activity

What are the red flags of secondary causes of headache?
(SNOOP MEETS Pregnancy)
Systemic symptoms (fevers, chills, night sweats, vomiting)

Neurological signs (focal, AMS, seizures)

Onset abrupt or sudden

Old age >50 Y

Progression or pattern change

Morning worse

Exertion posture & sexual activity worsens headache

Exposure history

Trauma

Secondary risk factors i.e. CA, HIV

Pregnancy
List five critical causes of headaches.
Don't Miss The Critical Headaches

D - Meningitis/Encephalitis
T - CVST / CO Poisoning
H - Hemorrhage (SAH)
M - Temporal Arteritis
C - Dissection

List 5 risk factors for miscarriage.
Other risk factors include:
Maternal stress, alcohol use, poorly controlled disease (diabetes, thyroid disease, obesity)
What is Charcot's Triad and Reynold's Pentad?
Physical exam findings associated with ascending cholangitis

**CHARCOT'S**

- Fever
- RUQ Pain
- Jaundice

**REYNOLD'S**

- Charcot's Triad
- Hypotension
- Altered Sensorium

Reference:
List the targets for MAP, CPP, and ICP in patients with elevated ICP
ICP < 20 mm Hg
CPP 50-70 mm Hg
MAP > 65 mm Hg

What are the predictors of a difficult bag-mask ventilation?
M O A N S

Mask Seal Compromise  Obesity or Obstruction  Advanced Age (>55)  No Teeth  Stiff Lungs (Asthma, COPD, ILD, etc)

What are the characteristics of central vertigo?
Onset: Gradual OR Sudden

Duration: Usually weeks or months

Effect on head position: Little change, can worsen

Auditory findings: Rare

Intensity: Mild (unless stroke)

Neurologic findings: Usually present

Nystagmus Direction: Purely vertical, spontaneous, purely torsional, direction changing on lateral gaze, down beating (towards nose)
What are the characteristics of peripheral vertigo?
Onset: Sudden

Intensity: Initially severe

Duration: Intermittent episodes (Seconds to hours for BPPV, hours to days for vestibular neuritis)

Effect on head position: Induces or worsens vertigo

Auditory findings: Tinnitus or hearing loss

Neurologic findings: None

Nystagmus direction: BPPV usually torsional and upbeat (fast phase beating toward forehead); horizontal canal BPPV will be horizontal vertigo; horizontal torsional with vestibular neuritis and labyrinthitis

List 6 causes for an absent red reflex.
Opacification of cornea

Extremely miotic pupil

Lens cataract

Retinal detachment

Anterior chamber hyphema or hypopyon

Blood in vitreous or posterior eye wall

Reference:
What is your DDx for Altered Mental Status?
Infection

Opioids/Overdose

Uremia

Encephalopathy
Electrolytes
Endocrine

Alcohol Acidosis

TIPS

Trauma
Insulin
Psychiatry
Stroke
Seizure

Reference:
List the 7 P’s of RSI.
1. Prepare
2. Preoxygenation
3. Pretreatment
4. Paralysis & Induction
5. Positioning
6. Placement of Tube
7. Post-Intubation Management
What is central cyanosis and what typically causes it?
Central Cyanosis: blue/purple hue present in the:

- Conjuctiva
- Oral Mucosa
- Lips

Causes:

- Decreased arterial oxygen saturation
- Shunting of venous unsaturated hemoglobin into arterial circulation
- Presence of pathologic or abnormal hemoglobin

What is peripheral cyanosis and what typically causes it?
Central Cyanosis: blue/purple hue present in the peripheral tissues

Causes:
- Low flow states of normally oxygenated hemoglobin in arterial blood
- Peripheral vasoconstriction

List the rotator cuff muscles, and their functions
Mnemonic: SITS

- Supraspinatus
  - Abduction
- Subscapularis
  - Internal Rotation
- Infraspinatus
  - External Rotation
- Teres Minor
  - External Rotation
What are the predictors of difficult laryngoscopy?
Infographic by Maham Khalid
Template by Maham Khalid and Andrew Tolmie
Edited by Alvin Chin
Reference:
Describe the four herniation syndromes
Tonsillar
Cerebellar tonsils herniate through the foramen magnum
Presents with:
- Irregular breathing
- Bradycardia
- Hypertension

Uncal
Anteromedial temporal lobe herniates into the tentorial notch, which compresses brainstem and CNIII
Presents with:
- Ipsilateral blown pupil
- Decreased LOC
- Contralateral hemiparesis

Upward Transtentorial
Results from a posterior fossa lesion, which herniates through the tentorial notch
Presents with:
- Decreased LOC
- Pinpoint pupils
- Downward gaze

Central Transtentorial
Caused by lesion at the vertex, frontal, or occipital pole
Presents with:
- Decreased LOC
- Bilateral weakness
- Pinpoint pupils
- Decorticate posturing and fixed pupils may also be present

Reference:
Rosen's Emergency Medicine: Concepts and Clinical Practice - 9th ed. 2017: Chapter 34 Head Trauma
Indications for Emergent Hemodialyisis in Acetaminophen Poisoning
Highly elevated serum Acetaminophen conc. (>1000 mg/L) at 4 hours post-ingestion

Hepatorenal syndrome (Cr >3.5)

Metabolic acidosis (pH <7.30)

Encephalopathy

Elevated lactate (>3.5 mmol/L)

Lactic Acidosis

What are 5 ECG changes to look for in a syncopal patient?
List 5 risk factors for an ectopic pregnancy.
<table>
<thead>
<tr>
<th></th>
<th>Risk Factor</th>
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<tbody>
<tr>
<td>1</td>
<td>Prior tubal infection</td>
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<tr>
<td>2</td>
<td>Women of minority groups</td>
</tr>
<tr>
<td>3</td>
<td>Previous ectopic pregnancy</td>
</tr>
<tr>
<td>4</td>
<td>Older women</td>
</tr>
<tr>
<td>5</td>
<td>Intrauterine device</td>
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</tbody>
</table>

Other risk factors include:
- Smoking, prior abortion (spontaneous or medically induced), hx of infertility, anatomic abnormalities of the fallopian tubes, assisted reproduction (especially multiple embryo transfers), abnormal endometrium, prior tubal surgery (tubal sterilization, removal of ectopic).
List 6 components of high-quality CPR in adult resuscitation
Limit interruptions to less than 10 seconds

Compression rate between 100-120 per minute

10 breaths per minute (without an advanced airway)

Place two hands over lower half of sternum

Compression depth of 5-6 cm

Allow full chest recoil between compressions
What are the features of each oculomotor cranial nerve palsy?
### Normal Eyes vs. Affected Eyes

#### CN III

- **Gaze Direction:** "Down and Out"
- **Symptoms:** Multidirectional diplopia except for lateral gaze to affected side, ptosis +/- pupillary dilation
- **Muscles:** Medial/inferior/superior rectii, inferior oblique, levator palpebrae, ciliary/constrictor pupillae

#### CN IV

- **Gaze Direction**
- **Symptoms:** Rotational diplopia worsened with downward gaze
- **Muscle:** Superior oblique (remember SO4)

#### CN VI

- **Gaze Direction**
- **Symptoms:** Horizontal diplopia when gazing towards affected side
- **Muscle:** Lateral rectus (remember LR6)

---

Reference:
Name four factors that shift the oxyhemoglobin dissociation curve to the left.
Presence of sulfhemoglobin

- Increased pH
- Increased methemoglobin
- Decreased 2,3 DPG
- Decreased temperature
Outline the components of the Modified Centor Score and describe its application.
# Modified Centor Score:
Approximates the probability that pharyngitis is caused by Streptococcus pyogenes

<table>
<thead>
<tr>
<th>Score</th>
<th>Next Steps</th>
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<tr>
<td>+1</td>
<td>Antibiotics</td>
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<tr>
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<td>Rapid Strep Test +/- Culture</td>
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### Score Categories

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<td>Antibiotics</td>
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### Criteria

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<tbody>
<tr>
<td>+1</td>
<td>Tender/Swollen Anterior Cervical Lymph Nodes</td>
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<tr>
<td>+1</td>
<td>Temp &gt; 38.0 deg Celcius</td>
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<tr>
<td>+1</td>
<td>Absence of Cough</td>
</tr>
<tr>
<td>0</td>
<td>Age: 15-44 years</td>
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<tr>
<td>-1</td>
<td>Age: &gt;/45 years</td>
</tr>
<tr>
<td>-1</td>
<td>Exudate or Swelling on Tonsils</td>
</tr>
</tbody>
</table>

### Reference:
List the Signs of Anticholinergic Toxidrome
**Anticholinergic Toxidrome**

Tachycardia +
Hypertension +

- **Mad** as a Hatter
- **Hot** as a Hare
- **Blind** as a Bat
- **Red** as a Beet
- **Dry** as a Bone

- Delirium
- Hyperthermia
- Mydriasis
- Skin flushing
- Dry skin Urinary retention

Reference: