SHOCK Review Notes:

Types of shock with signs and symptoms –

1. Neurogenic (vasodilation )
	1. Warm, dry, pink skin
	2. Hypotension
	3. Bradycardia and bradypnea
	4. May have normal cap refill
2. Septic ( vasodilation )
	1. Hypotension
	2. Altered mental status
	3. Hyper or hypothermic
3. Anaphylaxis ( vasodilation )
	1. Hypotension
	2. Tachycardia
	3. Anxiety
	4. Urticaria, angioedema
	5. Wheezing
4. Hypovolemic ( loss of plasma or blood )
	1. Cool, pale, clammy skin
	2. Hypotension – late sign
	3. Altered mental status
	4. Delayed cap refill
5. Cardiogenic shock ( loss of pump function )
	1. Cool, clammy, pale skin. May also be cyanotic
	2. Increased or decreased heart rate or dysrhythmia
	3. Hypotension
	4. Altered mental status
	5. Decreased cap refill
	6. May have pulmonary edema - crackles
6. Obstructive shock ( tamponade, tension pneumo, pulmonary embolus)
	1. JVD
	2. Tracheal deviation in pneumothorax
	3. Muffled heart tones in tamponade
	4. Pulsus pardoxus
7. Compensated shock – the renin-angiotension-aldosterone system is activated when the blood pressure drops. This causes an increase in preload through reabsorption of water and sodium. Increased preload will also increase afterload.

RESPIRATORY DISORDERS Lecture Notes:

1. COPD patients with an acute onset of SOB may have a pulmonary embolism.
2. Clinical findings of a pulmonary embolism:
	1. Clear breath sounds
	2. Sudden sharp, localized chest pain
	3. Tachypnea
	4. Hypotension (poor outcome)
	5. 12 lead changes
3. Narcotic overdose causes respiratory acidosis
4. Acute Respiratory Distress Syndrome (ARDS) caused a breakdown of the alveolar-capillary membrane.
5. Indications for CPAP (continuous positive airway pressure) (use only in patients who can follow commands and clear their own airway secretions)
	1. COPD
	2. Asthma – if not responding to beta agonists
	3. CHF
6. Respiratory Alkalosis may result from:
	1. Infections, fever
	2. anxiety
7. Respiratory Acidosis may result from:
	1. Narcotic overdose
	2. Benzodiazepines
	3. Pneumonia
	4. Foreign body
8. As we age we have a decreased lung compliance.
9. Left heart failure causes fluid back up in the lungs causing dyspnea at night or paroxysmal nocturnal dyspnea
10. Asthma patients usually present with respiratory distress, no fever, increased expiratory phase of breathing, wheezing
11. COPD patients may present with pursed lip breathing, increased respiratory effort upon exertion, rhonchi, no JVD, wheezing.

CHEST DISCOMFORT Lecture Notes:

1. Pericarditis presents with ST elevation in all leads – global ST elevation
2. Signs and symptoms of Cardiac Tamponade:
	1. Low amplitude EKG
	2. Muffled heart tones
	3. Pulsus Paradoxus
	4. Hypotension
3. In a patient with CP, recent stent placement is concerning
4. Any patient presenting with CP or any possible cardiovascular complaint should have a 12 lead obtained.

ENDOCRINE, METABOLIC, ENVIRONMENTAL Lecture Notes:

1. Signs of hyperglycemia
	1. Polydipsia
	2. Polyphagia
	3. Polyuria
	4. AMS
	5. Tachycardia
	6. Rapid, deep breathing ( Kussmauls )
2. Signs of hypoglycemia
	1. Cold, clammy skin
	2. Diaphoresis
	3. AMS
	4. Seizures
3. Metabolic acidosis
	1. Decreased pH
	2. Normal or abnormal CO2
	3. Decreased bicarbonate and carbonic acid
4. HHNS – hyperglycemic hyperosmolar non ketotic syndrome
	1. Common with Type II diabetics
	2. Become severely dehydrated
	3. Require aggressive fluid resuscitation
5. Allergic reactions
	1. Mild – IV, O2, monitor
6. Graves disease ( overactive thyroid )
	1. If having tachycardia, tremors, anxiety treat with Beta Blockers
7. Hypothermia
	1. Mild – shivering, increased HR and decreased temp

ALTERED MENTAL STATUS Lecture Notes:

1. Anaphylaxis causes a relative hypovolemia by vasodilation.
2. HHNS is hyperosmolar hyperglycemic nonketonic syndrome and is a very high blood glucose level. This is more common with Type II diabetics. The body is still producing a small amount of insulin but not enough for the amount of sugar intake. The body does not produce ketones so there is no fruity odor to the breath and no Kussmauls respirations. Patient may have been feeling bad with a low grade fever for several days and be lethargic.
3. Management of HHNS is initially a fluid bolus due to significant volume depletion. Other management includes supporting airway, breathing and circulation.
	1. Initial bolus is 1-2 liters rapid infusion (peds 20ml/kg)
	2. Frequent glucose checks
	3. EKG to monitor for hyperkalemia, wide QRS and bradycardia
4. Crucial findings in a stroke patient are the time of onset of neurological deficits or onset of symptoms
5. Subarachnoid hemorrhage presents with sudden, severe headache ( described as like a thunderclap ), possible AMS, elevated blood pressure, blurred vision, seizures, nausea and photophobia
6. Meningitis often presents with:
	1. Nuchal rigidity
	2. Fever & chills
	3. Photophobia
	4. AMS
	5. Positive Brudzinski sign (legs flex when neck flexed )

INFECTIOUS DISEASES Lecture Notes:

1. Clostridium difficile results from long term antibiotic therapy
	1. Signs and symptoms:
		1. Diarrhea with very foul odor
		2. Abdominal pain
2. Signs and symptoms of tuberculosis:
	1. Night sweats
	2. Weight loss
	3. Headache
	4. Persistent cough (2-3 weeks)
	5. Chest pain
3. When dealing with an infectious disease in geriatrics you may have a hard time getting a history a history, they have multiple medical conditions, living conditions may be bad, they may have malnutrition and cannot regulate temperatures (may not present with a fever).
4. Anaphylaxis is a heightened immune response.
5. MRSA is methicillin resistant staph aureus – presents with rash, then may progress to fever and signs of systemic infection.
6. Meningitis – flat red rash, fever, HA, feels bad, nausea and vomiting, neck stiffness

ABDOMINAL Lecture Notes:

1. Melena is black, tarry stools and are a sign of an blood that is partially digested from an upper GI bleed.
2. Diffuse abdominal pain (peri-umbilical) nausea, vomiting that progresses to a precise pinpoint pain when rt. Leg is extended from hip is most likely to be associated with appendicitis (called positive psoas sign).
3. Cullen’s sign is discoloration or bruising around the umbilicus and is associated with an intra-abdominal bleed.
4. All patients over 50 with vague complaints - indigestion, aching between the shoulders and weakness should have a 12 lead EKG performed.
5. In a patient with lower abdominal pain on the left side should include considering the following as a possible differentials diagnosis:
	1. Diverticulitis
	2. Ectopic pregnancy
	3. Aortic aneurysm
	4. Ovarian cyst
	5. PID
	6. Endometriosis
	7. Renal calculi (kidney stones)
	8. Psoas abscess (appendicitis)
	9. UTI
6. When assessing abdominal pain remember that patients do not benefit from staying on scene. Look for life threats and relevant information and transport.
7. Pancreatitis presents with nausea, vomiting, fever and constant mid-epigastric pain and may have a history of gall stones and heavy alcohol use.
8. Gastroenteritis usually presents with diffuse abdominal cramping, vomiting and diarrhea.

TOXINS, HAZ MAT, WMD Lecture Notes:

1. Beta Blockers overdose causes:
	1. Bradycardia
	2. Hypotension
	3. Hypoglycemia
	4. Heart Blocks
	5. AMS
2. Organophosphate ( or nerve agent ) poisoning side effects:
	1. bradycardia
	2. Incontinence
	3. Nausea/vomiting
	4. Dyspnea
	5. Increased oral secretions
	6. Seizures ( treat w/ midazolam )
3. Acetaminophen overdose side effects:
	1. Abdominal pain, nausea and vomiting
	2. Pallor and diaphoresis
	3. Hypotension
	4. Late signs - jaundice
4. Cyanide Poisoning
	1. Hyperventilation (early)
	2. Restlessness, anxiety
	3. Headache, confusion
	4. Bradycardia then tachycardia
	5. Bitter almond smell
	6. Confusion
5. Tricyclic antidepressant overdose
	1. May have no symptoms early in ingestion
	2. Dysrhythmias
	3. Hypotension
	4. Altered mental status
6. When seizures develop as a result of a suspected nerve agent exposure treat with valium, midazolam, or versed.

**AMLS Assessment Sequence**

**Initial Impression**

**Scene Size-Up/General Impression**

**Initial Assessment**

**MS, ABC, D/Perfusion**

**Status After Initial Assessment**

**Possible Field Diagnoses**

**Initial Management Priorities**

**Focused History (SAMPLE)**

**OPQRST**

**VS**

**Focused Physical Exam**

**Field Diagnosis**

**Management**

**Detailed Physical Exam**

**Ongoing Assessment**