

Section One: 2007



EMT-BASIC LEARNING OBJECTIVES

Anatomy and Physiology	Chapt. 4
General Concepts	Chapt. 29
Shock	Chapt. 20 & 29
Patient Assessment	Chapt. 9
Vital Signs	Chapt. 5 & 9
Scene Safety	Chapt. 8
Mechanism of Injury	Chapt. 8 & 28
Lifting and Moving	Chapt. 6 & 39
Communicable Disease	Chapt. 2
Bloodborne Pathogens	Chapt. 2
Written Reports	Chapt. 12
Confidentiality & HIPAA	Chapt. 3, 12 & Handout

Rev. 8/07



2007

EMT-BASIC LEARNING OBJECTIVES SECTION ONE

ANATOMY and PHYSIOLOGY

1. Define the term “anatomy”.
 - *The study of the structure of the body*
2. Define the term “physiology”.
 - *The study of the functions of parts of the body*
3. Describe the following anatomic references:
 - *anterior: front*
 - *posterior: back*
4. Describe the following directional terms:
 - *superior: toward the head*
 - *inferior: toward the feet*
 - *proximal: toward the trunk (on extremity)*
 - *distal: away from the trunk (on extremity)*
 - *medial: toward the midline*
 - *lateral: away from the midline*
 - *bilateral: referring to both sides (left and right)*
5. Describe the following anatomical positions:
 - *prone: lying horizontal with face downward*
 - *supine: lying on back with face upward*
 - *fowlers: a semi-sitting position*
 - *trendelenburg: a position in which the patient’s head is lower than the body and the legs are elevated*
 - *lateral recumbent: lying on their side*

6. Identify the four (4) body cavities:
- *cranial/spinal, thoracic, abdominal, pelvic*
7. Identify and label on a diagram the four (4) abdominal quadrants and list the major organs/contents of each quadrant and whether each organ is solid or hollow:
- *RUQ: liver (S), gallbladder (H), portion of colon (H), portion of the pancreas (S)*
 - *LUQ: spleen (S), most of stomach (H), portion of colon (H), portion of the pancreas (S)*
 - *RLQ: large intestine (cecum & ascending colon)(H), appendix (H), ovary (S), fallopian tube (H), and a portion of the uterus (H)*
 - *LLQ: descending and sigmoid colon (H), ovary (S), fallopian tube (H), and a portion of the uterus*
 - *Retro-peritoneal space: kidneys (S), pancreas (S)*
8. Identify the eleven (11) major body systems that compose the body:
- *skeletal*
 - *digestive*
 - *urinary*
 - *circulatory*
 - *nervous*
 - *lymphatic*
 - *muscular*
 - *endocrine*
 - *reproductive*
 - *respiratory*
 - *integumentary*
9. Identify each of the following components of the skeletal system. Be able to locate each on a diagram of the body, and list at least one function of each:
- *cranium*
 - *vertebrae*
 - *mandible*
 - *clavicle*
 - *xiphoid process*
 - *pelvis*
 - *patella*
 - *fibula*
 - *metatarsals*
 - *radius*
 - *carpals*
 - *phalanges*
 - *foramen magnum*
 - *maxilla*
 - *scapula*
 - *sternum*
 - *ribs*
 - *femur*
 - *tibia*
 - *tarsals*
 - *humerus*
 - *ulna*
 - *metacarpals*

10. Identify each of the following components of the spinal column. Be able to locate each of the vertebrae on a diagram of the body and state how many vertebrae are in each section.

- *Cervical spine – 7*
- *Thoracic spine – 12*
- *Lumbar spine – 5*
- *Sacral spine – 5*
- *Coccyx - 4*

11. Identify the three types of muscle tissue and where they can be found in the body:

- *voluntary muscle – also called skeletal muscle*
- *involuntary muscle – also called smooth muscle*
- *cardiac muscle – striated muscle*

12. Identify each of the following components of the digestive system. Be able to locate each on a diagram of the body, and list at least one function of each:

- | | |
|--------------------------|----------------------|
| - <i>tongue</i> | - <i>gallbladder</i> |
| - <i>teeth</i> | - <i>liver</i> |
| - <i>salivary glands</i> | - <i>pancreas</i> |
| - <i>esophagus</i> | - <i>intestine</i> |
| - <i>stomach</i> | - <i>colon</i> |
| - <i>appendix</i> | - <i>rectum</i> |

13. Identify each of the following components of the urinary system. Be able to locate each on a diagram of the body, and list at least one function of each:

- | | |
|------------------|------------------|
| - <i>kidneys</i> | - <i>bladder</i> |
| - <i>ureters</i> | - <i>urethra</i> |

14. Identify each of the following components of the reproductive system. Be able to locate each on a diagram of the body, and list at least one function of each:

- | | |
|------------------|--------------------------|
| - <i>testes</i> | - <i>ovaries</i> |
| - <i>scrotum</i> | - <i>fallopian tubes</i> |
| - <i>penis</i> | - <i>uterus</i> |
| - <i>vagina</i> | - <i>cervix</i> |

15. Identify each of the following components of the nervous system. Be able to locate each on a diagram of the body, and list at least one function of each:

- *meninges*
- *cerebellum*
- *spinal cord*
- *peripheral nerves*
- *cerebrum (cerebral cortex)*
- *brainstem*
- *cerebral spinal fluid (CSF)*

16. Identify each of the following components of the respiratory system. Be able to locate each on a diagram of the body, and list at least one function of each:

- *nasopharynx*
- *oropharynx*
- *epiglottis*
- *larynx*
- *cricothyroid membrane*
- *intercostal muscles*
- *pleurae (parietal & visceral)*
- *cricoid cartilage*
- *lungs*
- *bronchi*
- *bronchioles*
- *alveoli*
- *trachea*
- *diaphragm*
- *thyroid cartilage*
- *pharynx*

17. Identify each of the following components of the circulatory system. Be able to locate each on a diagram of the body, and list at least one function of each:

- *pulmonary vein*
- *coronary arteries*
- *carotid arteries*
- *jugular veins*
- *brachial artery*
- *radial artery*
- *femoral artery*
- *dorsalis pedis*
- *popliteal artery*
- *right atrium*
- *right ventricle*
- *left atrium*
- *left ventricle*
- *vena cava*
- *aorta*
- *pulmonary artery*
- *posterior tibial*

18. Identify the components of blood and list their function:

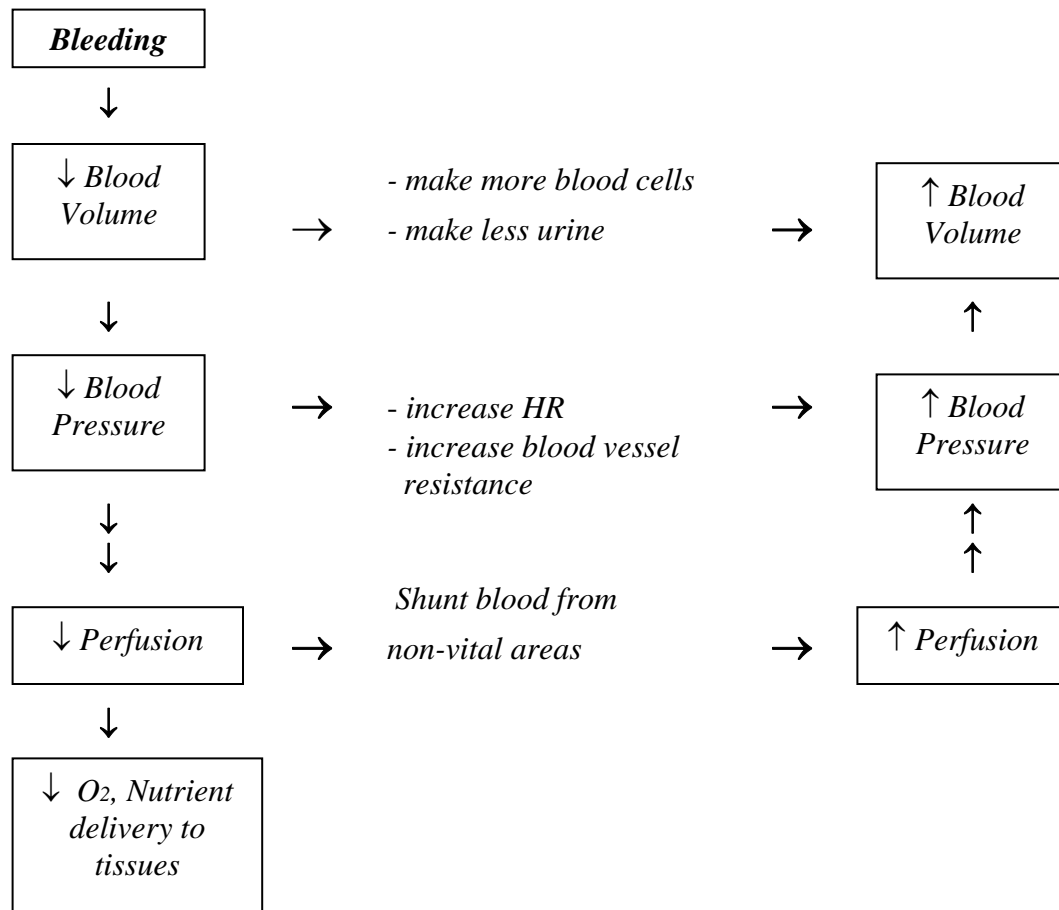
- *red Blood cells*
- *Platelets*
- *White blood cells*
- *Plasma*

GENERAL CONCEPTS

1. Define the term “**Homeostasis**”, a relatively constant state within the body, and discuss why each of the following four (4) areas must maintain a constant state in order to promote homeostasis:
 - ***Homeostasis** is the tendency of any biological system to maintain stability while continually adjusting for and to changing conditions. When there is a disturbance in any system, the patient will compensate to minimize the disturbance. (**Compensation**) This concept is universal!!!!*
 - *Temperature: Average body temp. is 98.6° Fahrenheit (37° Celsius). Body function is adversely affected when the core temp. increases or decreases over the ideal. Thermoregulation is assisted by mechanisms such as shivering (to produce heat) and sweating (to decrease heat).*
 - *Oxygen supply: Oxygen is essential for metabolism. The body cannot use extra oxygen nor can it survive without it. Without a constant, adequate oxygen supply, cells begin the process of anaerobic (without O₂) metabolism. Anaerobic metabolism produces lactic acid, a potential threat to homeostasis.*
 - *Carbon dioxide level: Carbon dioxide is a normal by-product of normal aerobic metabolism. A constant level of carbon dioxide in blood is important as it provides the stimulus for our respiratory drive. Increases or decreases in the CO₂ level will result in corresponding increases and decreases in the respiratory rate.*
 - *Nutrient supply: Body cells require a near constant supply of nutrients. While some nutrients can be stored, exhaustion of nutrient reserves will soon lead to fat metabolism resulting in the production of ketones leading to acidosis.*

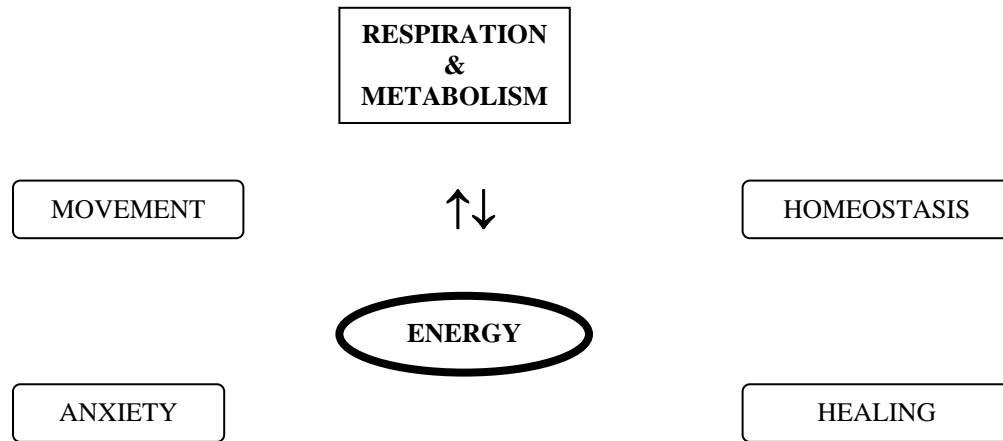
2. Give an example of how the body compensates when homeostasis is interrupted:

Example Hemorrhage:



Uncompensated occurs when the patient is overwhelmed by the disturbance and responds in the wrong direction.

3. List all the energy requirements of a patient and explain how various treatment strategies can conserve or waste energy.



Patients can use their energy to maintain homeostasis (like keeping warm in a cold environment), for locomotion (walking out from the injury site), or on worrying and anxiety. We can help them with some of these tasks (by removing wet clothes, wrapping them in a warm blanket, carrying them out on a stretcher, providing reassurance and pain control), so they can dedicate more of their energy to healing.

4. Compare and contrast circulation vs. perfusion and ventilation vs. respiration:

Circulation vs. Perfusion:

- *Circulation – movement of blood through the major arteries and veins of the body.*
- *Perfusion – movement of blood through the capillary beds of the tissues.*

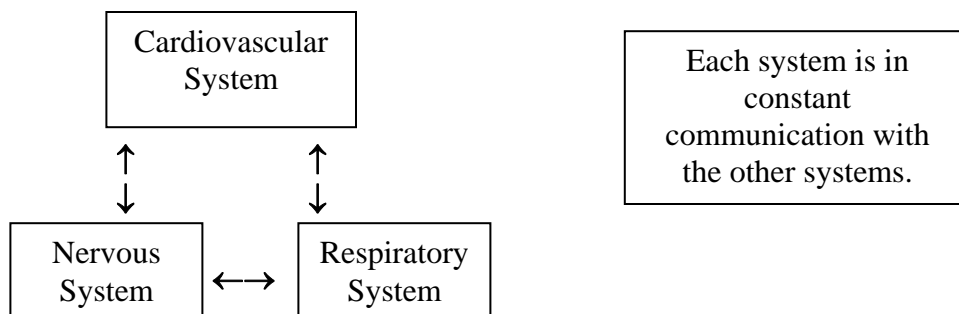
- A patient might have adequate circulation, where the heart is pumping blood, but if perfusion is inadequate the tissues will not receive the oxygen and nutrients they need

- Think of a garden hose with holes poked in it, where the hose is an artery and the holes are capillaries. If the faucet is turned on all the way (high pressure) water will come out the holes in the side of the hose (good perfusion). If the faucet is just barely on (low pressure), water may come out the end of the hose, but not much will be coming out the holes (circulation, but no perfusion).

Ventilation vs. Respiration:

- *Ventilation – movement of air into and out of the lungs.*
- *Respiration – movement of O₂ from the air into the blood and of CO₂ from the blood into the air in the lungs.*
- *When you “bag” a patient, you may be effectively moving air into and out of the lungs (good ventilation), but if the patient’s lungs are filled with fluid (ex. pneumonia) gas exchange cannot occur (no respiration) and the blood will not be adequately oxygenated.*

5. List the requirements each cell in the human body must receive to remain healthy:
- *Oxygen – drives the energy producing machinery of the cell.*
 - *Nutrients – glucose, protein, vitamins, etc.*
 - *Waste removal – lactic acid, CO₂*
 - *Proper pH – 7.35 to 7.45*
 - *Appropriate temperature - 36 °C to 38 °C*
 - *Adequate hydration and electrolyte balance.*
6. List the levels of how the body is organized from the most simple to the most complex:
- *CELL → TISSUE → ORGAN → ORGAN SYSTEM → ORGANISM*
7. Give an example of how injury or death at one level of organization can affect other levels:
- *Ex: Myocardial Infarction (Heart Attack)*
 - *A clot in one of the arteries supplying the heart will cause death of cardiac muscle cells. That area of cardiac muscle (tissue) becomes necrotic (dead) and is unable to contract, therefore the heart (organ) is unable to pump effectively, and not enough blood is pumped into the blood vessels (system), leading to inadequate perfusion throughout the body and possibly death of the entire organism.*
8. List the three major systems of the body:



9. Give an example of how each of the three levels is interconnected:

- *Ex: problems in one system will also cause symptoms in the other two systems. For example, a patient with a head injury (nervous system) may have irregular respirations (respiratory system) and have a low blood pressure (cardiovascular system), because of a lack of communication between the systems. Failure in any one of these systems will result in **immediate** death of the patient. Injuries in other systems, like the GI or musculoskeletal systems, are not immediately life threatening, unless they also involve one of the major three systems. For example, a femur fracture that lacerates a major artery.*

10. Explain the pH scale:

pH

- *As H⁺ (Hydrogen ion concentration) increases, pH decreases*
- *Acids give off H⁺ (have an increase in H⁺ concentration)*
- *Bases take up H⁺ (have a decrease in H⁺ concentration)*
- *Our bodies like to live between pH 7.35 – 7.45*

11. Explain the 3 main systems for regulating pH:

- *Blood – fast acting*
- *Lungs – short term*
- *Kidneys – long term*

- *Our body's main buffering system:*



- *Hold your breath – pH goes down, because you don't blow off CO₂, and the equation pushes to the left, increasing H⁺. (respiratory acidosis)*
- *Breathe too fast – pH goes up, because you blow off too much CO₂, pulling the equation to the right, decreasing H⁺. (respiratory alkalosis)*
- *Ingest a poison, which increases H⁺ in the body, compensate by breathing faster to blow off more CO₂, and pulling the equation to the right. (compensation)*

12. Briefly describe how the brain is organized and how this organization is evident in injury:

- *The brain is organized like an onion, with the most complex functions (like personality, memory, calculations, etc.) on the outside (cortex), and more primitive functions (like breathing, sleeping) on the inside (brain stem).*

- *Global brain injury (lack of oxygen, or hypoxia) affects the outermost areas first and the innermost areas last, so that initially patients are disoriented, anxious, and combative, and later they might stop breathing.*

- *Many tissues of the body can heal or regenerate, but brain damage is **irreversible!***

13. Describe how signs and symptoms should be evaluated:

-*Symptoms and vital signs must be evaluated in the context of the patient and the situation!!*

Ex: -A heart rate of 170 in an elderly man who's been watching TV all day is pathologic.

- *A heart rate of 170 in a 21 year old man who just ran 5 miles is normal/expected.*

14. Describe how “ruling in” and “ruling out” possibilities can help you make a differential diagnosis:

-*Patients are a mystery! During an initial evaluation there are many possibilities. Many different diseases can have similar symptoms and presentations. Your job is to look for clues that can help you rule in or rule out the possibilities, until the most likely one remains.*

15. Give an example of how either a disease or injury may progress:

- *All diseases/injuries (like stories) have a beginning, middle, and an end, and they look different at each stage of the progression.*

For example: Hemorrhagic shock

<u>Initially</u>	<u>Middle</u>	<u>Late</u>
<i>Mildly increased HR</i>	<i>Increased HR</i>	<i>Severely increased HR</i>
<i>Normal BP</i>	<i>Decreased BP</i>	<i>Severely decreased BP</i>
<i>Anxious</i>	<i>Combative</i>	<i>Unconscious</i>

16. Give three reasons why reassessment is so important:
- *Because diseases and injuries are dynamic processes, it is important to monitor them continuously.*
 - *You want to be sure if your patient progresses to a more serious level, or if your treatments are not working, that you are aware of it.*
 - *If your treatment is not having the desired effect after at most two attempts, sit back, rethink your evaluation and make a new plan.*
17. Explain why wasted time on scene is so detrimental to seriously hurt or ill patients:
- *The more time spent at scene, the more time the patient has to progress to a more serious stage of disease or injury. It is very important to be as efficient as possible. Decide if remaining on scene to administer a treatment is more beneficial than rapid transport to the hospital.*
18. Describe how you make the decision of whether to treat on scene or enroute:
- *Every treatment, even something as small as starting an I.V., is associated with serious risks to the patient.*
 - *You must decide when and if the benefits of a treatment are worth the risks.*
 - *For example: Temporary tourniquet*
 - *Benefit – control of life threatening hemorrhage*
 - *Risk – potential loss of limb*
19. Describe the relationship between a patient's physical and emotional needs:
- *Accidents and illnesses are not just traumatic to our bodies but to our souls as well. Medical personnel must attend to the physical needs of the patient first and foremost, as this can make the difference between life and death. However, time permitting, a patient will remember and perhaps be more grateful for the time spent tending to their emotional needs as well.*

SHOCK

1. Define the term shock:
- *Inadequate perfusion of tissues with oxygenated blood and/or nutrients.*

2. Briefly describe the early, middle and late SxS of shock as they relate to:

- *Level of Consciousness: Level of consciousness changes manifest first as anxiety and confusion, and then proceed to slide down the AVPU scale resulting in an unresponsive patient.*
- *Skin Temperature: Skin temp. gradually cools as peripheral vasculature vasoconstricts in order to send blood where it is needed to preserve vital organs – at the core.*
- *Skin Color: Skin color gradually pales as peripheral vasculature vasoconstricts in order to send blood where it is needed....etc.*
- *Blood Pressure: Blood pressure is preserved, perhaps even very slightly elevated in very early shock as the body strives to compensate. As volume decreases or as vasodilation or decreased cardiac output occurs, pressure is lost from “the system” – resulting in a decline in systolic and diastolic pressures.*
- *Pulse: Pulse rate begins to increase as shock progresses as the heart tries to increase its cardiac output in an attempt to compensate for the loss of pressure due to volume loss, vasodilation, or damaged heart muscle. As a pre-terminal event, the heart will begin to slow. In rare cases of penetrating abdominal trauma, the pulse may be paradoxically slow.*
- *Respirations: Respiratory rate begins to increase as shock progresses in an attempt to increase the oxygen content of the blood which is being poorly circulated. Respirations also will slow as a pre-terminal event in shock (assuming no increasing ICP).*

3. List and give an example of each of the four (4) categories of shock:

- *Hypovolemic Shock: shock caused by reduced intravascular circulating volume, resulting from hemorrhage (Hemorrhagic shock), third-space fluid shifts, and/or systemic fluid loss(dehydration, diarrhea, vomiting).*
- *Distributive shock: shock caused by decreased vascular resistance, or increased venous capacity, resulting from vasomotor dysfunction. Distributive shock can further be classified into: Septic shock - caused by toxins in the blood, as a result of disease or infection, that can cause potentially lethal systemic vasodilation. Anaphylactic shock – shock caused by exaggerated systemic response to an allergen. Neurogenic shock – shock caused by damage to the sympathetic nervous system causing reduction in peripheral vascular resistance secondary to widespread vasodilation. Vasogenic shock (fainting) is another form of neurogenic.*

- *Cardiogenic shock: shock caused by failure or inability of the heart to maintain a level of cardiac output sufficient to perfuse tissues with oxygenated blood. ie. due to damage to the myocardium, as in an AMI or CHF. The heart is no longer able to pump effectively, and the result is a decrease in cardiac output leading to inadequate tissue perfusion.*

- *Obstructive shock – shock caused by impedence of the circulatory flow, resulting from blockage, compression, embolic, dissecting, and/or tamponade type insults. Examples of causes include – cardiac tamponade, tension pneumothorax, pericarditis, supine hypotension syndrome, pulmonary embolism, aortic dissection.*

4. List two (2) common causes of fluid loss (other than bleeding) that can result in shock:

- *Burns and excessive vomiting/diarrhea*

5. Define the term “Distributive Shock” and give an example:

- *Uncontrolled vasodilation: Neurogenic, Septic, Anaphylactic*

6. Compare and contrast the causes of hypovolemic shock and distributive shock:

- *Hypovolemic shock is a result of fluid loss from the vascular system, whether or not fluid is actually leaving the body as well (as in external bleed) or leaving the vasculature and accumulating in a body cavity (as in internal abdominal bleed).*

- *Distributive shock does not involve fluid loss from the vasculature. Rather it involves dilation of the vasculature such that the normal amount of fluid remaining in the vascular system is insufficient to maintain adequate perfusion pressure.*

7. Define the term “Cardiogenic Shock” and list one medical condition that can cause it:

- *Pump failure: Any medical condition such as chronic CHF or an AMI can result in cardiogenic shock.*

8. Explain why both very young and old patients are more susceptible to shock:

- *Very young patients have less circulating blood volume and even a seemingly insignificant blood loss can have serious consequences.*

- *Very old patients have aging body systems (i.e. cardiovascular) that are more susceptible to damage. Also, these patients have a higher incidence of heart disease and cannot compensate well in early shock with an increased heart rate.*

9. Define “Anaphylactic Shock” and give two (2) examples of common agents that can cause this condition:

- *Anaphylactic shock is the cardiovascular component of a condition called anaphylaxis. Anaphylaxis is the most extreme form of an allergic reaction in which the reaction is not local but systemic. The reaction causes a release of histamine and other chemicals which cause vasodilation, leaking of capillaries, and a drop in cardiac output, thus, the patient may be suffering from hypovolemia, distributive, and cardiogenic shock. In addition, the histamines and other chemicals (especially one called leukotriene) may stimulate a severe response in the airway, which causes spasm of the bronchioles and swelling of the lower and upper airway structures.*

An antigen (usually some type of foreign protein) enters the body. Immune system cells surround the antigen and design specific proteins of their own which combine with the antigen and inactivate it. These are called antibodies. Antibodies are placed on two different types of cells: basophils – which are stationed at fixed points within the body’s tissues, and mast cells which “patrol” connective tissues. Mast cells and basophils contain histamines and other chemicals that are released when an antigen attaches to an antibody on the cell surface.

- *Insect bites and food are two common agents involved in anaphylactic reactions.*

10. List the SxS of anaphylactic shock and indicate which ones would help the EMT differentiate anaphylaxis from any other type of shock:

- *Those SxS marked with an * are differential.*

SKIN: (first to occur)

- * *Flushing (from peripheral vasodilation)*
- * *Edema (from leaking capillaries – especially around eyes: periorbital edema)*
- * *Itching*
- * *Hives*

RESPIRATORY:

- * *Shortness of breath (from bronchoconstriction)*
- * *Chest tightness*
- * *Wheezes (reactive bronchioles/bronchoconstriction)*
- * *Feeling of swelling in throat (leaky capillaries in laryngeal area)*
- *Dry cough*
- * *Hoarse/Stridorous voice and breathing (from increasing laryngeal edema)*

CARDIOVASCULAR SYMPTOMS:

- *Tachycardia (from heart trying to compensate)*
- *Dysrhythmias (from lack of oxygen)*
- * *Systemic peripheral vasodilation*
- *Hypotension (from plasma leakage, decreased cardiac output and vasodilation)*

GI SYMPTOMS:

- Nausea and vomiting
- Cramps and bloating
- Watery profuse diarrhea

CNS SYMPTOMS:

- Headache, dizziness, confusion (from inadequate cerebral perfusion)
- Eventual decrease in LOC

11. Describe a situation where an ALS intercept would be appropriate in the case of severe anaphylactic shock:

- When the airway is deteriorating rapidly, ALS intercept could provide intubation and medications (i.e. Epinephrine) to deal more effectively with the airway.

12. Briefly describe the two (2) life-threats caused by anaphylactic shock:

- Airway closing off
- Hypotension from plasma leakage, decreased cardiac output and systemic vasodilation.

PATIENT ASSESSMENT

1. Briefly explain the purpose of each of the following:

Scene Survey (Size-up): to identify hazards, assess the need for additional resources, and assess the mechanism of injury/chief complaint.

Primary Survey (Initial Assessment): to identify and treat the life threats.

Secondary Survey (Focused History/Physical Exam vs. Detailed Physical Exam): to finish the assessment and perform a physical exam.

2. List the component parts of each of the surveys according to the skill sheets:

Scene: assure scene safety, assess the need for additional resources, don personal protective gear, and identify the mechanism of injury/chief complaint.

Primary: check LOC, assess and manage Airway (with attention to C-spine if indicated), Breathing, Circulation, check AVPU, Expose (if not done earlier), Spinal Immobilization (if indicated) and Transport with continued reassessment. Immobilization, MAST inflation, etc. done enroute.

Secondary: the order depends on patient condition: ID chief complaint, take measured vital signs, obtain history (SAMPLE), and perform a physical exam.

3. Briefly describe the rationale guiding the correct order to perform the secondary survey:
 - *The order of the secondary survey is entirely dependent upon the patient's condition. In some situations it may be more appropriate to perform the physical exam first and then get a history. In other cases, the EMT may wish to get a measured set of vital signs before proceeding.*
4. List two examples of patient care that would typically be a waste of time if performed on the scene, rather than enroute on a severely traumatized patient:
 - *Taking a blood pressure by auscultation rather than just estimating by pulse location.*
 - *Splinting an extremity fracture.*
5. Explain the term "Definitive Care" and give an example:
 - *Definitive care refers to the care that will ultimately "fix the patient". In some cases of severe trauma, definitive care is provided by a surgeon in the O.R. In some cases definitive care is provided in the E.R. by an emergency physician. Rarely does the EMT provide definitive care. However, one example would be an EMT relieving an obstructed airway by performing the Heimlich maneuver.*
6. Differentiate between Level One, Two, and Three trauma centers:
 - *A Level One trauma center is that trauma center designated as having the capability to care for patients with the highest acuity of injury. Usually, Level One centers are defined by the fact that they have a variety of specialists (i.e. trauma surgeons) in house 24 hours every day, and that they have an operating room reserved for only trauma patients. The only Level One trauma center in New Mexico is at UNM Hospital in Albuquerque.*
 - *A Level Two trauma center may have all the specialists, but they are not all in house at all times and must be called in.*
 - *A Level Three trauma center is not required to have all types of specialists, and they are not required to be in house.*

VITAL SIGNS

1. Differentiate between a sign and a symptom:
 - *Sign: An objective finding that can be seen, heard, felt, smelled, or measured.*
 - *Symptom: A subjective finding that the patient experiences but can only be described by the patient.*

2. List all of the vital signs that may be appropriate to obtain on a patient:
 - *LOC*
 - *Respirations*
 - *Skin color and temperature*
 - *Capillary refill*
 - *Pupillary response*
 - *Heart Rate*
 - *Breath Sounds*
 - *Blood pressure*
 - *Pulse Ox (SPO₂)*

3. What are the normal ranges for an adult for the following vital signs:
 - *LOC: Awake, alert and oriented to person, place, time and event*
 - *Ventilations: 12 to 20 breaths per minute*
 - *Heart rate: 60 to 100 beats per minute*
 - *Skin color and temperature: Pink, warm and dry*
 - *Blood pressure: Dependent on patient (generally 100-120/60-90)*
 - *Pupillary response: Equal and round, reactive to light (PEARL or PERRL)*
 - *Breath sounds: Clear and equal with good air exchange bilaterally*
 - *Oxygen saturation: 95-100%*

4. Describe the techniques used to measure ventilations:
 - *Look, Listen, Feel. Count the ventilatory rate for one minute – or for 30 seconds x2. Observe depth of ventilations: normal, shallow, deep, sighing, etc. Is there evidence of accessory muscle use, pursed lips, etc.?*

5. List the approximate range of normal ventilations for:
 - *Adult - 12 to 20*
 - *Child - depending on age: 15 to 30 (the younger the child, the higher the rate)*
 - *Infant - 30 - 60*

6. Compare and contrast the management of a patient's airway with and without possible spinal injury:
 - *A patient without a suspected spinal injury may have his/her airway opened with the head-tilt/chin-lift maneuver and may have his/her head turned to the side in the event of vomiting. A patient with a suspected spinal injury must have his/her airway opened with the jaw thrust techniques. If vomiting occurs before full spinal immobilization, the patient must be turned as a unit on his/her side.*

7. Explain the significance of systolic and diastolic blood pressures:
 - *Systolic blood pressure represents the level of pressure created by the left ventricle against the arterial walls during contraction of the heart. This is the pressure needed to push the blood through the circulatory system. Diastolic pressure represents the pressure remaining when the heart is relaxed.*

8. Indicate the approximate minimal systolic blood pressure when pulses are felt at:
- **Carotid** - 60 mmHg
 - **Femoral/Brachial** - 70 mmHg
 - **Radial** - 80 mmHg
9. Describe the proper way to take a pulse:
- *Select a pulse point. Using two fingers palpate the pulse and assess for rate by counting for a full minute, or for 15 seconds x4. Determine strength (bounding, weak, normal, etc.) and regularity (any missed beats?).*
10. Briefly describe the “Normal” male and female blood pressures (systolic and diastolic).
- **NOTE** – *New recommendations from the American Medical Association now indicate that the systolic number should not exceed the 120 range for all adults. Keep this in mind for “healthy” numbers.*
 - *Male diastolic runs about 60-90 mmHg. The systolic pressure is about 10 mmHg lower in a female of the same age.*
11. Briefly describe each of the following patient assessment techniques:
- *Inspection: looking/visualizing*
 - *Auscultation: listening (specifically – with a stethoscope)*
 - *Palpation: feeling with fingertips/hands*
12. Briefly describe what each of the following terms measures and what vital sign the term applies to:
- **Rate:** *measures how many times something occurs over a one minute time period. Used to measure heart rate and respiratory rate.*
 - **Quality:** *Describes aspects of pulse and respirations. A rate may be regular but with poor quality. Examples of qualitative terms are bounding, weak, thready, labored, snoring, etc.*
 - **Regularity:** *Describes how regular a rate is. Used for pulse and respirations.*
 - **Depth:** *Describes how deep or shallow respirations are versus normal depth.*

13. Describe, and be able to demonstrate, the technique used to measure the following vitals signs:

- Blood Pressure:

Auscultation: Cuff placed around arm. Pulse palpated radially. Cuff inflated about 30 mmHg beyond disappearance of radial pulse. Place stethoscope at antecubital fossa. Slowly deflate cuff and listen for first pulse sound (systolic) and last pulse sound (diastolic).

Palpation: Cuff placed around arm. Pulse palpated radially. Cuff inflated about 30 mmHg beyond disappearance of radial pulse. Cuff deflated slowly. Return of radial pulse palpated is systolic BP.

Pulse Location: If pulse can be palpated at radial, systolic BP at least 80 mmHg, and so on (see #8)

****NOTE**** *This is the only method of estimating a BP that should be used during a primary survey of a trauma patient.*

- Pupillary Response:

- PERRL: Shine a light, such as a penlight, into the patient's eyes briefly (one at a time). Both pupils should constrict equally.

- Temperature:

- Skin: Feel skin temperature with hand. Assess for unnaturally cool or warm. Make sure to take into account environmental factors. Assess also for dry vs. diaphoresis, etc. Remember that your assessment is subjective and may be inaccurate.

- Core: Can only be obtained via a thermometer: rectal, or tympanic.

****NOTE**** *Special thermometers are required to measure core temps of especially hypothermic or hyperthermic patients.*

-Level of Consciousness:

- Assessed first during primary survey as simply "conscious" or "unconscious". Further assessment using AVPU to determine exact level of response. Remember that "Alert" does not automatically mean "oriented and appropriate". Further assessment of mental status may be required for "Alert" patients.

- Skin Color:

- In conjunction with skin temp: pale, flushed, cyanotic, ashen, etc. Used to assess perfusion/oxygenation and as an adjunct to temperature.

14. Explain the importance of taking multiple sets of vital signs:

- *More important than an isolated set of vitals is a record of those vital's change over time. Simply reporting pulse = 90, resp. = 20, BP = 100/60 is minimally informative. However, if your second set of vitals reflects pulse = 120, resp. = 28, BP = 88/58, this clearly reflects a change (for the worse) in the patient's condition.*

15. State the importance of accurately reporting and recording the baseline vital signs:

- *Baseline vital signs create a picture of the patient's condition when they were taken. When compared to repeat vital signs later, a trend can be established that shows the patient's response to treatment. If the base line vitals are reported incorrectly, it could negatively impact the patient's treatment.*

16. Explain what each of the letters of the acronym AVPU indicates:

- A *Alert, awake (i.e. Eyes open, tracking movement).*
- V *Responsive to Verbal stimuli.*
- P *Responsive to Pain or noxious stimuli only.*
- U *Unresponsive to verbal and noxious stimuli.*

17. Explain what each of the letters of the acronym PQRSTU stands for and identify the most common situation in which PQRSTU is used as an assessment device:

- *Commonly used with medical patients or mild trauma patients to assess their pain or injuries.*

- P *Provoke/Palliate: What provoked (caused) the pain to occur and what palliated (relieved) the pain?*
- Q *Quality: What is the pain like? Let the patient describe in his or her own words (i.e. sharp, dull, elephant on chest, etc.).*
- R *Radiate: Is the pain localized or does it radiate? (i.e. to the jaw, down the arm, etc.). Also can be used for Relieve (what relieves the pain?).*
- S *Severity: How severe is the pain on a 1 to 10 scale? With 10 being the worst pain ever experienced. (Remember that the actual number is not important, however this system is useful for monitoring changes in pain).*
- T *Time: When did the pain begin and how long has it lasted?*
- U *You: Has the patient ever had this pain before?*

18. Explain what each of the letters of the acronym SAMPLE stands for:

- S *Signs/Symptoms: Signs and Symptoms of the injury or illness that caused the patient to call for EMS. In the patient's own words.*
- A *Allergies: Any allergies the patient may have.(Meds, Food, Particles, Etc.)*
- M *Medications: List any medications the patient is taking. (Prescription, Over the counter, Illegal)*
- P *Past Medical History: Any history that may be related to the patient's current complaint, then any other pertinent.*
- L *Last oral intake: When did the patient last eat or drink and what was it?*
- E *Events: What was the patient doing when the pain or complaint began?*

SCENE SAFETY and MECHANISM OF INJURY

1. List the three (3) initial steps of the scene survey as indicated on the skill sheet:

- *Check scene safety*
- *Assess the need for additional resources*
- *Don personal protective equipment*

2. Briefly describe the role each of the following agencies would play at the scene of a medical emergency, and under what circumstances it would be proper to mobilize these resources:

- *Police: Appropriate to mobilize for almost every scene. Roles include traffic control, scene investigation, scene control, etc.*
- *Fire Dept.: Mobilize for calls involving fire suppression, extrication, and rescue operations.*
- *Heavy Rescue (Extrication): Usually part of the Fire Dept. Used for vehicle extrication.*
- *HazMat Unit: Also usually part of the Fire Dept. Used for management of hazardous materials incidents.*
- *ALS (Advanced Life Support) Unit: Appropriate to mobilize any time the patient's illness or injuries exceed the capability of BLS.*
- *Air Ambulance: Appropriate to mobilize any time ALS is needed and when distance or prolonged scene time is a factor.*
- *Utility Companies: Appropriate to mobilize when power or gas needs to be shut off at a scene (i.e. car hits power pole with downed wires).*

3. Recognize common scene hazards:
 - *Cars running and spilling gas*
 - *Unstable vehicle at MVC (Motor Vehicle Crash)*
 - *Patients with weapons, or weapons visible at scene*
 - *Ice on the ground*
 - *Power lines down*
 - *Fire*
 - *Anything that may interfere with patient care or cause harm to the patient or rescuers.*

4. Discuss the roles and responsibilities of the EMT-Basic towards the safety of the crew, the patient and bystanders:
 - *As an EMT providing care, it is your responsibility to ensure the safety of yourself, your crew, and your patient – in that order. Take steps to ensure your crew is following established safety procedures by wearing PPE, lifting correctly and exercising caution in dangerous situations. Lead by example when it comes to safety. If you don't practice safe procedures, neither will your crew. If proper steps are taken, and you and your crew are safe, the patient will be safe with you and the scene will be less hazardous.*

5. Briefly describe the rationale of a BLS (Basic Life Support) unit requesting a rendezvous with an ALS (Advanced Life Support) unit for the purpose of patient transferal.
 - *Many times a BLS unit is closest to a scene or a patient whose injuries clearly exceed the capabilities of BLS. In these situations, if an ALS unit is able to meet the BLS unit enroute and effect a patient transferal, the patient's best interests are served. An example would be a BLS unit transporting a patient who is developing a tension pneumothorax. An ALS unit intercepts the BLS unit enroute to the hospital so that a paramedic can perform the life-saving needle decompression that the patient needs in order to survive. Obviously, in many rural parts of New Mexico, ALS intercept is not an option, but ILS intercept may be possible and this option should be encouraged. The EMT should always weigh the possible benefits with the risk of delaying transport of transferring the patient to another unit at the roadside.*

6. List three (3) factors that must be considered when parking an emergency vehicle at the scene of an emergency:
 - *Approaching traffic*
 - *Wind direction (at a fire or hazmat scene)*
 - *Subsequent arrival of other rescue vehicles*
 - *Is there an escape or exit route available?*

7. Differentiate the actions that an EMT-Basic should take to assist in the preservation of a crime scene:

- Mentally note the location of any weapons found. When removing clothing avoid cutting or tearing through gun shot holes or stab tears as they will later be needed by the police. Do not clean the scene. Excess blood will need to be photographed for later evaluation. Document clearly your actions in entering and exiting the scene as these recollections may be needed in court.

8. Define the term “Mechanism of Injury”:

- The means by which a patient was injured.

9. List examples of additional information that would help clarify the EMT’s evaluation of each of the following types of mechanism of injury:

*Fall: How far the patient fell.
Type of surface the patient landed on.
How the patient landed (on back, feet, etc.)*

Car Accident:

*Were the occupants restrained?
How fast was the vehicle traveling?
How did the car impact?
Was the patient thrown from the vehicle?
Did the accident result in any fatalities?*

Shooting:

*How close was the range?
What type of weapon?
What caliber of bullet?*

Stabbing:

*How big a knife?
Angle of insertion?*

Drowning:

*How long under water?
Temperature of the water?*

Electrocution:

*Source of power?
How many volts?*

10. Give an example of an accident where the full energy of the mechanism of injury has been absorbed by the patient:

- *Car at full speed hits a pedestrian.*
- *Patient jumps from building, landing on asphalt.*
- *Patient shot at point blank range.*

11. List two examples of scene evidence that would indicate part of the force of the mechanism of injury had been dissipated/lessened before being absorbed by the patient:

- *Skid marks showing the car had begun to slow down before impact.*
- *Bullet traveled through car door, leaving a hole, before hitting patient.*

12. Compare and contrast weight (mass) and speed (velocity) as they relate to mechanism of injury:

- *Speed (velocity) increases the production of kinetic energy more than weight (mass) does. Kinetic energy is a key factor in mechanism of injury. The relationship between velocity, mass, and kinetic energy can be illustrated by the formula:*

$$KE = M/2 \times V^2$$

13. List the injuries you would expect to find as a result of the following mechanisms of injury:

- Car accident where the patient is thrown into and over the steering wheel or dashboard:
 - *Chest, abdominal and head injuries from the steering wheel and windshield.*
- Car accident where the patient slips under the steering wheel or dashboard:
 - *Abdominal and lower extremity injuries from the steering wheel and dashboard.*
- Car accident where the patient is wearing only a lap belt that is loose and high:
 - *Abdominal and possibly head or lumbar spine injuries from "jackknifing" forward.*

14. Define the term “High Index of Suspicion” as it relates to mechanism of injury:

- There are occasions when the mechanism of injury alone should cause the EMT to have a “high index of suspicion” – meaning a feeling of certainty that the mechanism was severe enough to cause injury – even if the patient denies pain or any other signs or symptoms of injury.

LIFTING and MOVING

1. Identify the one situation in which it is appropriate to use a one-rescuer patient lift or move:

- An immediate life threat to a patient and/or rescuer is the only situation in which a one-rescuer lift or carry should be attempted.

- Clothes or blanket drag*
- Firefighter’s carry*
- Pack strap carry*

2. Identify the leading cause of injury among EMS providers:

- Back injury

3. For each of the following situations, identify the most appropriate patient carrying device or technique:

Moving a patient up or down a steep incline:

- Basket litter (Stokes)

Moving a patient w/o spinal injury down narrow stairwells or small elevators:

- Stair chair

Moving a patient w/o spinal injury from a bed to the ambulance stretcher:

- Draw sheet technique

Lifting a patient who is wedged in a narrow space (i.e. between toilet and tub):

- Hands/straps or scoop stretcher

Removing a patient with possible spinal injury from the water:

- Long spine board

4. Describe the proper technique to lift a patient with a partner:
 - *Both rescuers should keep their backs straight.*
 - *Both should keep their feet firmly on the ground while bending their knees sufficiently to grab the lifting device.*
 - *Both rescuers should keep eye contact with each other while lifting.*
 - *Arms should be kept as close to the body as possible.*
 - *One rescuer should take charge and give a 3 second count to initiate the lift.*
 - *The leg muscles, not the muscles of the back, should be used during the lift.*

COMMUNICABLE DISEASES AND BLOOD BORNE PATHOGENS

1. Define the term "communicable disease" and list 4 examples of communicable diseases:

- A disease that can be transmitted from one person to another.

-Hepatitis

-HIV Infection

-Meningitis

-Tuberculosis

-Common cold

2. Briefly describe 4 modes of transmission of a communicable disease:

*-Contact: Direct physical contact between two people (e.g. sexual contact)
Indirect physical contact between two persons via an inanimate object (e.g. EMT handles contaminated/bloodstained dressings)*

-Air Borne: Infected patient coughs or sneezes and airborne particles are inhaled by EMT

-Vehicle: Introduction directly into body by ingestion or injection via a needle

-Vector: Transmitted by animals or insects (e.g. malaria transmitted via mosquito bite)

3. Distinguish between exposure and infection with regard to a communicable disease:

-A person who has experienced an exposure to a communicable disease has had contact with one of the four modes of transmission described in #2.

-A person who becomes infected by a communicable disease has had a successful transmission of the disease due to one of the variables described in #2.

4. Briefly define each of the following factors which influence the development of infection in an exposed individual:

Amount of organism present: *How large was the exposure*

Virulence of organism: *Degree to which organism survives when exposed to light and air*

Resistance of patient: *How well can the patient (host) defend against the organism*

Portal of entry into body: *How quickly/easily did the organism enter the Host (injection vs. abrasion)*

5. Define the term "carrier" in relation to a communicable disease:

- *Person (host) who is capable of transmission of the communicable disease, but shows no signs or symptoms of the disease.*

6. Define the following terms:

Incubation period: *The time period from exposure with infection to the first symptoms of illness.*

Communicable period: *The time period during the illness during which the disease can be transmitted to others. Otherwise known as the contagious phase.*

7. Define OSHA and explain the role of OSHA in the practice of prehospital emergency care:

-*OSHA stands for the Occupational Safety and Health Administration. OSHA is responsible for the development and enforcement of safety standards in the work place. Examples of safety standards in the EMS work place include rules for the proper disposal of contaminated materials and sharps, the prohibition of food in patient care areas, replacement of soiled uniforms with clean ones.*

8. Describe what personal protective equipment is appropriate to use when you are likely to come in contact with a patient's body fluids:

- *Gloves (always)*
- *Goggles (always)*
- *Mask (always)*
- *Gown (to protect uniform from blood, vomitus, etc. per OSHA)*

9. Describe the recommended field procedure if you are contaminated by a patient's blood in the following ways:

- *Splashed on clothing and skin: Wash skin with cleanser and water. Any open cut or sore on skin must be considered as a route for infection. Change clothing – bag soiled clothes in red bag – launder with disinfectant detergent.*
- *Splashed into eyes: Flush eyes with water or saline. Report to supervisor. Seek medical attention through your service or personal MD.*
- *Needle stick: Wash with water and cleanser immediately. Report to supervisor immediately and assure documentation. Seek immediate medical attention for testing and follow-up.*
- *Cut by broken contaminated glass: Same as above.*

10. Describe what is meant by the term "Body Substance Isolation" and list 5 ways health care providers can help protect themselves:

*-The practice of protecting yourself from disease transmission through exposure to blood and other body fluids is referred to as Body Substance Isolation. The equipment utilized for Body Substance Isolation practices are referred to as **personal protective equipment (PPE)**.*

*-Hand Washing: **First line** defense against transmission. Hands should be washed after every patient contact after gloves are removed.*

-Disposable Gloves: Gloves should always be worn whenever there is the possibility the EMT will come in contact with a patient or a patient's body fluids.

-Mask: Used when airborne transmission is a possibility. In cases of extremely virulent disease, it is recommended that double masking take place (both patient and rescuer are masked). HEPA respirators should be worn anytime the possibility of TB is suspected.

-Goggles: Used primarily when dealing with the possibility of a patient's blood or body fluids splashing up into rescuer's face.

-Gowns: Used to protect rescuer's clothing/uniform from contamination. OSHA regulations prohibit health care personnel from continuing to treat patients in a soiled/contaminated uniform.

11. Discuss the mode of transmission, incubation & communicable periods, signs and symptoms and long term consequences of each of the following communicable diseases:

Viral hepatitis:

Type A: *Type A or infectious hepatitis is generally transmitted via ingestion food or water that has been contaminated by infected feces. Incubation period is approximately 4 weeks and communicable period begins toward the end of the incubation period and continues for a few days. SxS include jaundiced (yellow) skin, and a general feeling of malaise. The illness lasts for a week or two. However, it may take some time for the patient to feel fully recovered. There are generally no long term consequences to hepatitis A.*

Type B: *Type B or serum hepatitis is generally transmitted through sexual contact or via injection. Incubation period of hepatitis B varies widely (45-180 days). The communicable period may start weeks before the first symptoms appear and persists for years in chronic carriers. SxS include loss of appetite, nausea, vomiting, abdominal discomfort, general fatigue and malaise, low grade fever. Eventually, the patient's urine turns dark and they begin to develop jaundice and scleral icterus (yellowing of the eyes). While some patients recover completely from hepatitis B in 3-4 months, many patients develop a chronic infection that can last the patient's lifetime and predispose him/her to other serious illness such as cancer of the liver.*

Tuberculosis: *Tuberculosis is transmitted via airborne droplets. Incubation of tuberculosis is 4-8 weeks, but it becomes communicable only when the patient develops an active lesion in the lungs. At that point the communicable period lasts until about 48 hours after antibiotic treatment has been started. SxS are initially minimal, and early infection can usually only be detected via a tuberculin skin test or by chest x-ray. Later SxS include night sweats, headache, cough and weight loss. Long term consequences of disability and death are largely preventable in the United States where effective treatment exists.*

Meningitis: *Meningitis is an inflammation of the meninges and can be caused by bacteria or virus. Contagiousness depends primarily on the type of microorganism involved. Transmission of the most common type involved in epidemic outbreaks (meningococcal meningitis – bacterial) is via droplet spread or direct contact with nasopharyngeal secretions. The communicable period of meningococcal meningitis is 2 –10 days, and the communicable period lasts until about 24 hours after antibiotic treatment has been started. SxS include fever, headache and stiff neck. Changes in level of consciousness range from apathy to delirium. Onset may be sudden and accompanied by a blotchy red or bluish rash.*

Acquired Immunodeficiency Syndrome:

Caused by the Human Immunodeficiency Virus (HIV), acquired immunodeficiency syndrome (AIDS) attacks the patient's immune system and impairs the ability to fight off other infections and illness. Transmission of HIV can occur via sexual contact, injection/transfusion, and via perinatal transmission (mom to fetus). There are two (2) incubation periods to consider with HIV and AIDS. The first one is the time it takes from a person's initial exposure to the time it takes for their blood to show seropositive or HIV-positive. This period may be anywhere from a few weeks to a few months. The second period is the time between initial seroconversion to the development of AIDS. This time period may range from 2 – 15 years. The communicable period of AIDS is not known, but is thought to continue throughout the period that the patient is seropositive – even before the development of clinically apparent AIDS. There are no obvious clinical SxS of HIV seroconversion. The early SxS of AIDS can vary, but generally include persistent swollen lymph glands, fatigue and general malaise, night sweats and weight loss. There are courses of drug therapy for AIDS patients, but no long term "cure", and to date AIDS remains a disease with eventual 100% mortality.

12. List at least three (3) high risk populations for AIDS:

- Intravenous drug abusers
- Bisexuals
- Infants born to HIV+ mothers
- Homosexuals
- Hemophiliacs

13. List the recommended vaccinations for health care providers:

- Measles
- Tetanus/Diphtheria
- Polio
- Influenza vaccine
- DPT (diphtheria–pertussis-tetanus) tetanus booster every 10 years
- Rubella
- Mumps
- Hepatitis B
- Hepatitis A

14. Describe the correct procedure for disposing of materials contaminated by blood or other body fluids:

- Follow local health department procedures. This usually means bagging the contaminated materials in special red or orange plastic bags and making special arrangements for their disposal.

15. Describe the correct procedure for disposing of contaminated sharps (needles):

- Contaminated sharps should be placed in specially designed puncture resistant containers known as sharp containers. These are usually red in color and have an opening which prevents contaminated materials from being retrieved. The EMT should NEVER attempt to re-cap a needle before placing in a sharps container as this is often how accidental needle sticks occur.

WRITTEN REPORTS

1. Describe the components of the acronym “D LOC CHARTE” as used in report writing and give examples of each:

D = Dispatch information, where/what you are dispatched to. (Ex. “dispatched by DPS to 1000 New York ref. patient having chest pain”)

LOC= Location of where patient is found at scene. (Ex. “Pt. found lying in bed in residence”)

C = Chief complaint, what the patient complains of in their own words. (Ex. “pt. states “I can’t breathe, my chest hurts”, age can also be put in here)

H = History, of current illness/injury, and also of any past pertinent history, PQRSTU and AMPLE go here. (Ex. Pt. states pain began 30 min. ago, took two Nitro. with no pain relief, has prev. med. Hx of AMI 4 yrs. Ago”)

A = Assessment, document what “You” find here. (Ex. Pt. CAO to PPTE, skin W&D – good color – cap. refill within 2 sec.)

R = Treatment. Identify the treatments done, in the order accomplished. (Ex. pt. placed in C-Collar – placed on LSB – full strapping applied – head secured with tape)

T = Transport information. Indicate how transported (C-1, C-3), to where, any changes in patient condition noted during transport, who patient care was turned over to?

E = Exceptions. These are bits of information that need to be documented to help explain potential patient care violation issues. (Ex. delayed response due to train at crossing)

2. Describe what is meant by the term “pertinent negative”

- Something that was expected but not found. (i.e. the patient is suffering from chest pain and has other symptoms of an AMI but denies any shortness of breath – which one would expect to see in an AMI patient).

CONFIDENTIALITY & HIPAA

1. Understand the importance of Patient Confidentiality and it's relation to EMT's:
 - *Releasing any patient information for other than current treatment purposes requires the patient's or authorized health care decision makers consent. There are both civil and federal remedies for patients whose information has been used/disclosed inappropriately. (Refer to Confidentiality Signature document)*

2. Identify the acronym HIPAA:
 - *Health Insurance Portability and Accountability Act*

3. Describe the type of information covered by the HIPAA privacy regulations:
 - *Establishes national standards that all health care organizations and insurers must use when they exchange health information electronically.*

 - *Includes regulations to safeguard the privacy and confidentiality of patients and members' health information.*

4. List some example of "protected health information"
 - *Information created or received by a health care organization subject to HIPAA regulations.*

 - *Identifies the individual or there is a reasonable basis to believe it could be used to identify the individual, and*

 - *Is related to the individual's past, present, or future physical or mental health or condition.*

5. Describe who must comply with HIPAA privacy regulations:
 - *Covered Entities – Health plans, Health care clearinghouses, and Health care providers (Doctors, Nurses, EMT's)*

 - *Business associate – an individual or organization that "performs or assists in the performance of" an activity that involves the use or disclosure of protected health information on a covered entity's behalf. (ie. EMT students)*

6. Describe the penalties for non-compliance for individuals:
 - *refer to HIPAA handout.*

7. Understand the key points of the HIPAA privacy regulations:
 - refer to *HIPAA* *handout*.
8. Complete the HIPAA self-study module and complete and turn in exam:
 - refer to *HIPAA* *handout*.