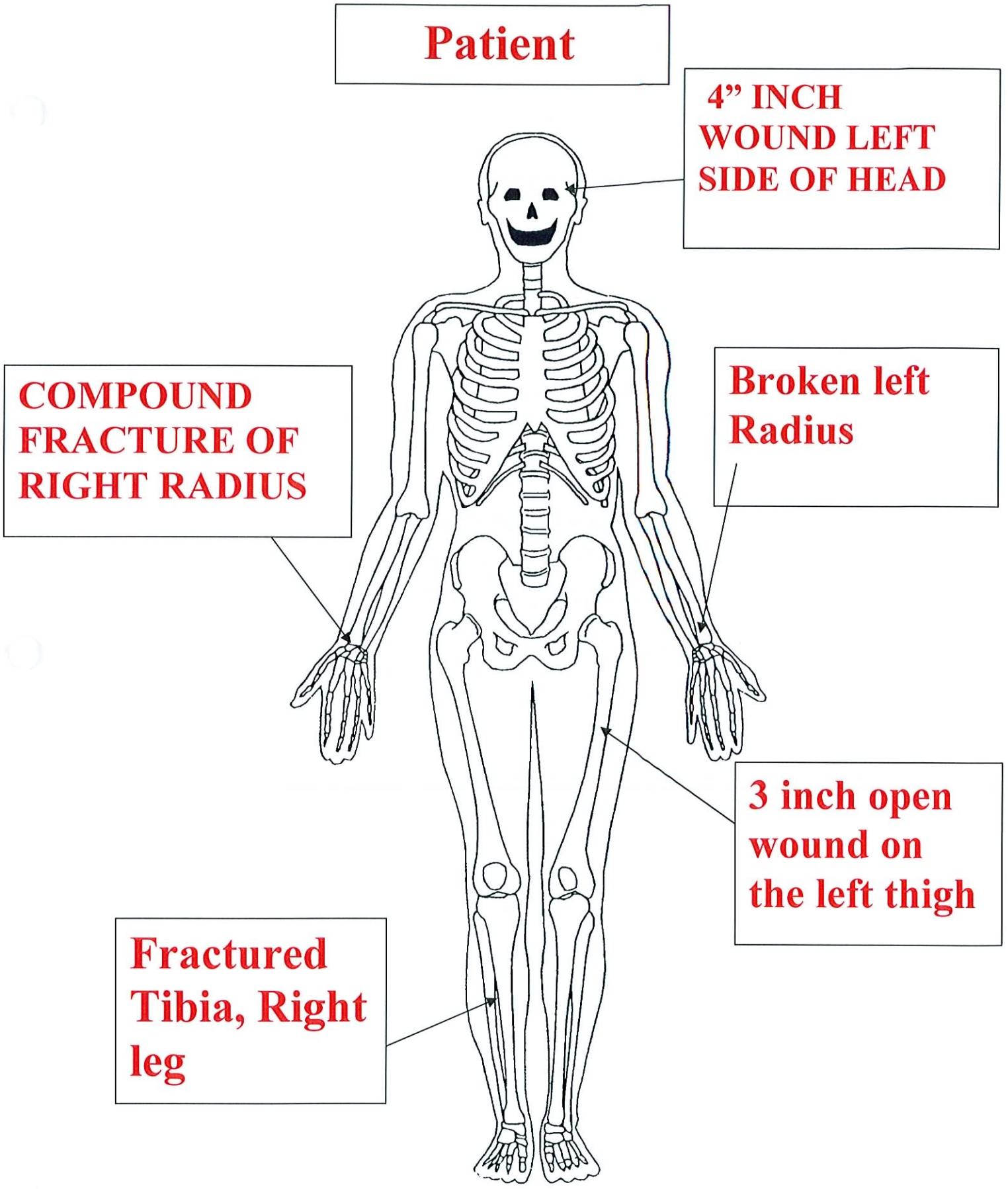
Post #6

2015

First Aid Problem

During the midnight shift at the Black Gold underground coal mine, you and your first aid partner have been called to an accident on the Longwall section. The victim was working out from under the shields at the face when a burst occurred and injured the worker. The area has been posted and safe to enter. You find the victim unconscious, no pulse, and not breathing. Perform one set of 2-Man CPR and each contestant will do one set of A V. He will then have a pulse and is breathing. Treat and prepare for transportation.


Patient
4" INCH WOUND LEFT SIDE OF HEAD
COMPOUND FRACTURE OF RIGHT RADIUS
Broken left Radius
3 inch open wound on the left thigh
Fractured Tibia, Right leg

2015

POST #6
FIRST AID
LIST OF INJURIES

- **4-INCH WOUND ON LEFT SIDE OF HEAD**
- **FRACTURED TIBIA, RIGHT LEG**
- **3-INCH OPEN WOUND , LEFT THIGH**
- **COMPOUND FRACTURE OF RIGHT RADIUS**
- **BROKEN LEFT RADIUS**

TWO-RESCUER CPR (NO SPINAL INJURY - MANIKIN ONLY)

PROCEDURES		CRITICAL SKILL
1. RESCUER 1 - ESTABLISH UNRESPONSIVENESS	□	A. Tap or gently shake shoulders
	□	*B. "Are you OK?"
	□	C. Determine unconsciousness without compromising cervical spine (neck) injury
	□	*D. "Call for help"
	□	*E. "Get AED" (Note: If AED is used, follow local protocol)
2. RESCUER 1 - MONITOR PATIENT FOR BREATHING	□	A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)
3. RESCUER 1 - CHECK FOR CAROTID PULSE	□	A. Correctly locate the carotid pulse - on the side of the rescuer, locate the patient's windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and the muscle in the neck
	□	B. Check for presence of carotid pulse for 5 to 10 Seconds
	□	*C. Absence of pulse
4. RESCUER 2 - POSITION FOR COMPRESSIONS	□	A. Locate the compression point on the breastbone between the nipples
	□	B. Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel.
	□	C. Do not intentionally rest fingers on the chest. Keep heel of your hand on chest during and between compressions.
5. RESCUER 2 - DELIVER CARDIAC COMPRESSION	□	A. Give 30 compressions
	□	B. Compressions are at the rate of at least 100 per minute (30 compressions delivered within 18 seconds)
	□	C. Down stroke for compression must be on or through compression line
	□	D. Return to baseline on upstroke of compression
6. RESCUER 1 - ESTABLISH AIRWAY	□	A. Kneel at the patient's side near the head
	□	B. Correctly execute head-tilt/ chin-lift maneuver

7. RESCUER 1 - VENTILATIONS BETWEEN COMPRESSIONS	□ □ □ □	A. Place barrier device (pocket mask / shield with one way valve) on manikin B. Give 2 breaths 1 second each C. Each breath - minimum of .8 (through .7 liter line on new manikins) D. Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of last down stroke to the start of the first down stroke of the next cycle.)
8. CONTINUE CPR FOR TIME STATED IN PROBLEM	□ □ □ □ □ □	A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR C. Rescuer at patient's head maintains airway and checks for adequate breathing or coughing D. The rescuer at the patient's head shall feel for a carotid pulse E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set F. A maximum of 10 seconds will be allowed to complete ventilations and required pulse checks between sets (this will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle
9. CHANGING RESCUERS	□	A. Change of rescuers shall be made in 5 seconds or less and will be completed as outlined in the problem. Team must switch every 5 cycles in less than 5 seconds.
10. CHECK FOR RETURN OF PULSE	□ □	A. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds) *A. "Patient has a pulse."

MOUTH-TO-MASK RESUSCITATION

PROCEDURES		CRITICAL SKILL
1. ESTABLISH UNRESPONSIVENESS	□ □ □ □ □	A. Tap or gently shake shoulders *B. "Are you OK?" C. Determine unconsciousness without compromising C-spine injury *D. "Call for help" *E. "Get AED" (Note: If AED is used, follow local protocol)
2. MONITOR PATIENT FOR BREATHING	□	A. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds)
3. CHECK FOR CAROTID PULSE	□ □ □	A. Correctly locate the carotid pulse (on the side of the rescuer) B. Check for presence of carotid pulse within 10 seconds *C. Presence of pulse
4. ESTABLISH AIRWAY	□	A. Correctly execute head tilt / chin lift or jaw thrust maneuver depending on the presence of cervical spine (neck) injuries
5. VENTILATE PATIENT	□ □	A. Place barrier device (pocket mask/shield with one-way valve on manikin B. Ventilate patient 10 to 12 times per minute. Each ventilation will be provided at a minimum of .8 (through .7 liter line on new manikins)
6. CHECK FOR RETURN OF BREATHING AND PULSE	□ □	A. After providing the required number of breaths (outlined in problem), check for return of breathing and carotid pulse within 10 seconds *B. "Patient is breathing and has a pulse"

INITIAL ASSESSMENT

PROCEDURES		CRITICAL SKILL
1. SCENE SIZE UP	□ □	*A. Observe area to ensure safety *B. Call for help
2. MECHANISM OF INJURY	□ □ □	*A. Determine causes of injury, if possible *B. Triage: Immediate, Delayed, Minor or Deceased. *C. Ask patient (if conscious) what happened
3. INITIAL ASSESSMENT	□ □ □	*A. Verbalize general impression of the patient(s) *B. Determine responsiveness/level of consciousness (AVPU) Alert, Verbal, Painful, Unresponsive *C. Determine chief complaint/apparent life threat
4. ASSESS AIRWAY AND BREATHING	□ □ □	A. Correctly execute head-tilt/chin-lift or jaw thrust maneuver, depending on the presence of cervical spine (neck) injuries B. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds) C. If present, treat sucking chest wound
5. ASSESS FOR CIRCULATION	□ □ □	A. Check for presence of a carotid pulse (5-10 seconds) B. If present, control life threatening bleeding C. Start treatment for all other life threatening injuries/conditions (reference Rule 2).

(JUDGES NOTE) **Each critical skill identified with an asterisk (*) shall be clearly verbalized by the team as it is being conducted. After initially stating what DOTS stands for, the team may simply state "DOTS" when making their checks.**

PATIENT ASSESSMENT

PROCEDURES		CRITICAL SKILL
1. HEAD	☐	*A. Check head for DOTS: Deformities, Open wounds, Tenderness and Swelling
	☐	*B Check and touch the scalp
	☐	*C Check the face
	☐	*D Check the ears for bleeding or clear fluids
	☐	*E. Check the eyes for any discoloration, unequal pupils reaction to light, foreign objects and bleeding
	☐	*F Check the nose for any bleeding or drainage
	☐	*G Check the mouth for loose or broken teeth, foreign objects, swelling or injury of tongue, unusual breath odor and discoloration
2. NECK	☐	*A. Check the neck for DOTS
	☐	*B. Inspect for medical ID
3. CHEST	☐	*A. Check chest area for DOTS
	☐	*B. Feel chest for equal breathing movement on both sides
	☐	*C. Feel chest for inward movement in the rib areas during inhalations
4. ABDOMEN	☐	*A. Check abdomen (stomach) for DOTS
5. PELVIS	☐	*A. Check pelvis for DOTS
	☐	*B. Inspect pelvis for injury by touch (Visually inspect and verbally state inspection of crotch and buttocks areas)
6. LEGS	L ☐ / R ☐	*A. Check each leg for DOTS
	☐ ☐	B. Inspect legs for injury by touch
	☐ ☐	C. Unresponsive: Check legs for paralysis (pinch inner side of leg on calf)
	☐ ☐	*D. Responsive: Check legs for motion; places hand on bottom of each foot and states "Can you push against my hand?"
	☐ ☐	*E. Check for medical ID bracelet
7. ARMS	L ☐ / R ☐	*A. Check each arm for DOTS
	☐ ☐	B. Inspect arms for injury by touch
	☐ ☐	C. Unresponsive: Check arms for paralysis (pinch inner side of wrist)
	☐ ☐	*D. Responsive: Check arms for motion (in a conscious patient; team places fingers in each hand of patient and states "Can you squeeze my fingers?"
	☐ ☐	*E. Check for medical ID bracelet
8 BACK SURFACES	☐	*A. Check back for DOTS

4 INCH OPEN WOUND ON THE LEFT SIDE OF HEAD

DRESSINGS AND BANDAGING - OPEN WOUNDS

PROCEDURES		CRITICAL SKILL
1. EMERGENCY CARE FOR AN OPEN WOUND	☐	*A. Control bleeding
	☐	*B. Prevent further contamination
	☐	*C. Bandage dressing in place after bleeding has been controlled
	☐	*D. Keep patient lying still
2. APPLY DRESSING	☐	A. Use sterile dressing
	☐	B. Cover entire wound
	☐	C. Control bleeding
	☐	D. Do not remove dressing
3. APPLY BANDAGE	☐	A. Do not bandage too tightly.
	☐	B. Do not bandage too loosely.
	☐	C. Do not leave loose ends.
	☐	D. Cover all edges of dressing.
	☐	E. Do not cover tips of fingers and toes, unless they are injured.
	☐	F. Bandage from the bottom of the limb to the top (distal to proximal) if applicable.

FRACTURE TIBIA, RIGHT LEG

SPLINTING UPPER EXTREMITY/LOWER EXTREMITY FRACTURES (AIR SPLINT)

PROCEDURES		CRITICAL SKILL
1. CARE FOR FRACTURE	☐	*A. Assess distal circulation, sensation, and motor function(fingers/toes)
2. IMMOBILIZE FRACTURE	☐ ☐ ☐ ☐ ☐ ☐	A. Grasp above and below the injury site B. Maintain support C. Properly apply air splint D. Splint should be relatively free of wrinkles E. Inflate splint to point that slight dent can be made *F. Reassess distal circulation, sensation, and motor function (fingers/toes)
3. MONITOR AIR-INFLATED SPLINT	☐ ☐ ☐ ☐	*A. Periodically check for increase or decrease in pressure *B. Monitor pressure in splint with finger tip C. Make sure desired pressure is maintained *D. Reassess distal circulation, sensation, and motor function (fingers/toes)

NOTE: Air splints may not be used with open (protruding bones) fractures. Air splints may only be used on the lower part of the extremities (from below the elbow on the arm and below the knee to the leg).

3 INCH OPEN WOUND ON LEFT THIGH

DRESSINGS AND BANDAGING – OPEN WOUNDS

PROCEDURES		CRITICAL SKILL
1. EMERGENCY CARE FOR AN OPEN WOUND	☐ ☐ ☐ ☐	*A. Control bleeding *B. Prevent further contamination *C. Bandage dressing in place after bleeding has been controlled *D. Keep patient lying still
2. APPLY DRESSING	☐ ☐ ☐ ☐	A. Use sterile dressing B. Cover entire wound C. Control bleeding D. Do not remove dressing
3. APPLY BANDAGE	☐ ☐ ☐ ☐ ☐ ☐	A. Do not bandage too tightly. B. Do not bandage too loosely. C. Do not leave loose ends. D. Cover all edges of dressing. E. Do not cover tips of fingers and toes, unless they are injured. F. Bandage from the bottom of the limb to the top (distal to proximal) if applicable.

COMPOUND FRACTURE, RIGHT RADIUS

SPLINTING (RIGID OR SOFT) PELVIC GIRDLE, THIGH, KNEE, AND LOWER LEG

PROCEDURE		CRITICAL SKILL
1. DETERMINE NEED FOR SPLINTING	☐	*A. Assess for: ▪ Pain ▪ Swelling ▪ Deformity
	☐	B. Determine if splinting is warranted
2. APPLY MANUAL STABILIZATION	☐	A. Support affected limb and limit movement ▪ Do not attempt to reduce dislocations
3. SELECT APPROPRIATE SPLINT	☐	A. Select appropriate splinting method depending on position of extremity and materials available
	☐	B. Select appropriate padding material
4. PREPARE FOR SPLINTING	☐	A. Remove or cut away clothing as needed
	☐	*B. Assess distal circulation, sensation, and motor function
	☐	C. Cover any open wounds with sterile dressing and bandage
	☐	D. Measure splint
	☐	E. Pad around splint for patient comfort

BROKEN LEFT RADIUS

SPLINTING UPPER EXTREMITY/LOWER EXTREMITY FRACTURES (AIR SPLINT)

PROCEDURES		CRITICAL SKILL
1. CARE FOR FRACTURE	☐	*A. Assess distal circulation, sensation, and motor function(fingers/toes)
2. IMMOBILIZE FRACTURE	☐	A. Grasp above and below the injury site
	☐	B. Maintain support
	☐	C. Properly apply air splint
	☐	D. Splint should be relatively free of wrinkles
	☐	E. Inflate splint to point that slight dent can be made
	☐	*F. Reassess distal circulation, sensation, and motor function (fingers/toes)
3. MONITOR AIR-INFLATED SPLINT	☐	*A. Periodically check for increase or decrease in pressure
	☐	*B. Monitor pressure in splint with finger tip
	☐	C. Make sure desired pressure is maintained
	☐	*D. Reassess distal circulation, sensation, and motor function (fingers/toes)

NOTE: Air splints may not be used with open (protruding bones) fractures.
Air splints may only be used on the lower part of the extremities (from below the elbow on the arm and below the knee to the leg).

TWO-PERSON LOG ROLL

TWO-PERSON LOG ROLL

PROCEDURES		CRITICAL SKILL
1. STABILIZE HEAD	☐	*A. Stabilize the head and neck
2. PREPARING THE PATIENT	☐ ☐	A. When placing patient on board place board parallel to the patient B. Kneel at the patient's shoulders opposite the board (if used) leaving room to roll the patient toward knees Raise the patient's arm, if not injured (the one closer to the rescuer) above the patient's head
3. PREPARING THE RESCUER	☐ ☐	A. Grasp the patient at the shoulder and pelvis area B. Give instructions to bystander, if used to support
4. ROLLING THE PATIENT	☐ ☐ ☐ ☐ ☐	A. While stabilizing the head, roll the patient toward the rescuer by pulling steadily and evenly at the shoulder and pelvis areas B. The head and neck should remain on the same plane as the torso C. Maintain stability by holding patient with one hand and placing board (if used) with other D. Roll the body as a unit onto the board (if used) (board may be slanted or flat) E. Place the arm alongside the body

IMMOBILIZATION – LONG SPINE BOARD (Backboard)

PROCEDURES		CRITICAL SKILL
1. MOVE THE PATIENT ONTO THE LONG SPINE BOARD	□ □ □ □ □ □ □ □ □	A. One First Aid Provider at the head must maintain in-line immobilization of the head and spine B. First Aid Provider at the head directs the movement of the patient C. Other First Aid Provider control movement of the rest of body D. Other First Aid Provider position themselves on same side E. Upon command of First Aid Provider at the head, roll patient onto side toward First Aid Providers F. Quickly assess posterior body, if not already done G. Place long spine board next to the patient with top of board beyond top of head H. Place patient onto the board at command of the First Aid Provider at head while holding in-line immobilization using methods to limit spinal movement I. Slide patient into proper position using smooth coordinated moves keeping spine in alignment
2. PAD VOIDS BETWEEN PATIENT AND LONG SPINE BOARD	□ □ □	A. Select and use appropriate padding B. Place padding as needed under the head C. Place padding as needed under torso
3. IMMOBILIZE BODY TO THE LONG SPINE BOARD	□	A. Strap and secure body to board ensuring spinal immobilization, beginning at shoulder and working toward feet
4. IMMOBILIZE HEAD TO THE LONG SPINE BOARD	□ □	A. Using head set or place rolled towels on each side of head B. Tape and/or strap head securely to board, ensuring cervical spine immobilization
5. REASSESS	□ □	*A. Reassess distal circulation, sensation, and motor function *B. Assess patient response and level of comfort

SHOCK

SHOCK

PROCEDURES		CRITICAL SKILL
1. CHECK FOR SIGNS AND SYMPTOMS OF SHOCK	☐	*A. Check for pale (or bluish) skin (in victim with dark skin examine inside of mouth and nailbeds for bluish coloration.
	☐	*B. Check for cool, clammy skin
	☐	*C. Check for weakness
2. TREATMENT	☐	A. Keep victim lying down
	☐	B. Cover with blanket to prevent loss of body heat and place a blanket under the patient. (Do not try to place blanket under patient with possible spinal injuries)
	☐	C. Elevate according to injury
	☐	*D. Reassure and calm the patient

Option 1: Elevate the lower extremities or foot end of the back board. This procedure is performed in most cases. Place the patient flat, face up and elevate the legs or foot end of the back board 8 to 12 inches. Do not elevate any limbs with possible fractures or pelvic injuries until they have been properly splinted. Remember to consider the mechanism of injury for every patient.

Option 2: Lay the patient flat, face up. This is the supine position, used for patients with a spinal injury and patients who have serious injuries to the extremities that have not been supported. If the patient is placed in this position, you must constantly be prepared for vomiting.

Option 3: Slightly raise the head and shoulders. This position should be used only for responsive patients with no spinal injuries, life threatening chest or abdominal injuries and only for patients having difficulty breathing, but who have an open airway. A semi-seated position can also be used for patients with a history of heart problems. It is not recommended for moderate to severe cases of shock. Be certain to keep the patient's head from tilting forward.

Note: Injuries requiring the injured side to be tilted or placed down may be done after patient has been properly secured to a back board if a back board is required.