

# BACKCOUNTRY TRAUMA AND IMPROVISATION

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LOVER OF ALL THINGS IN THE WILDERNESS....



# BAD LUCK BIKER

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- 30 year old helmeted mountain biker catapults off the front of his bike down an embankment. He is on his side lying unconscious bleeding from his mouth and nose. He has noisy respirations and crepitus in his right chest. He has a branch in his right leg with lots of bleeding. He has a briskly bleeding wound on his scalp.





# NEVER FORGET

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- **S**tay calm
- **S**urvey situation before you enter it. Don't create more casualties
- **B**ody substance precautions: gloves, eye protection
- **I**ntroduce yourself to patient
- **A**ctivate resources early, just after you initial assessment



# ABCDE APPROACH TO SICK PEOPLE

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☐ AIRWAY

☐ BREATHING

☐ CIRCULATION

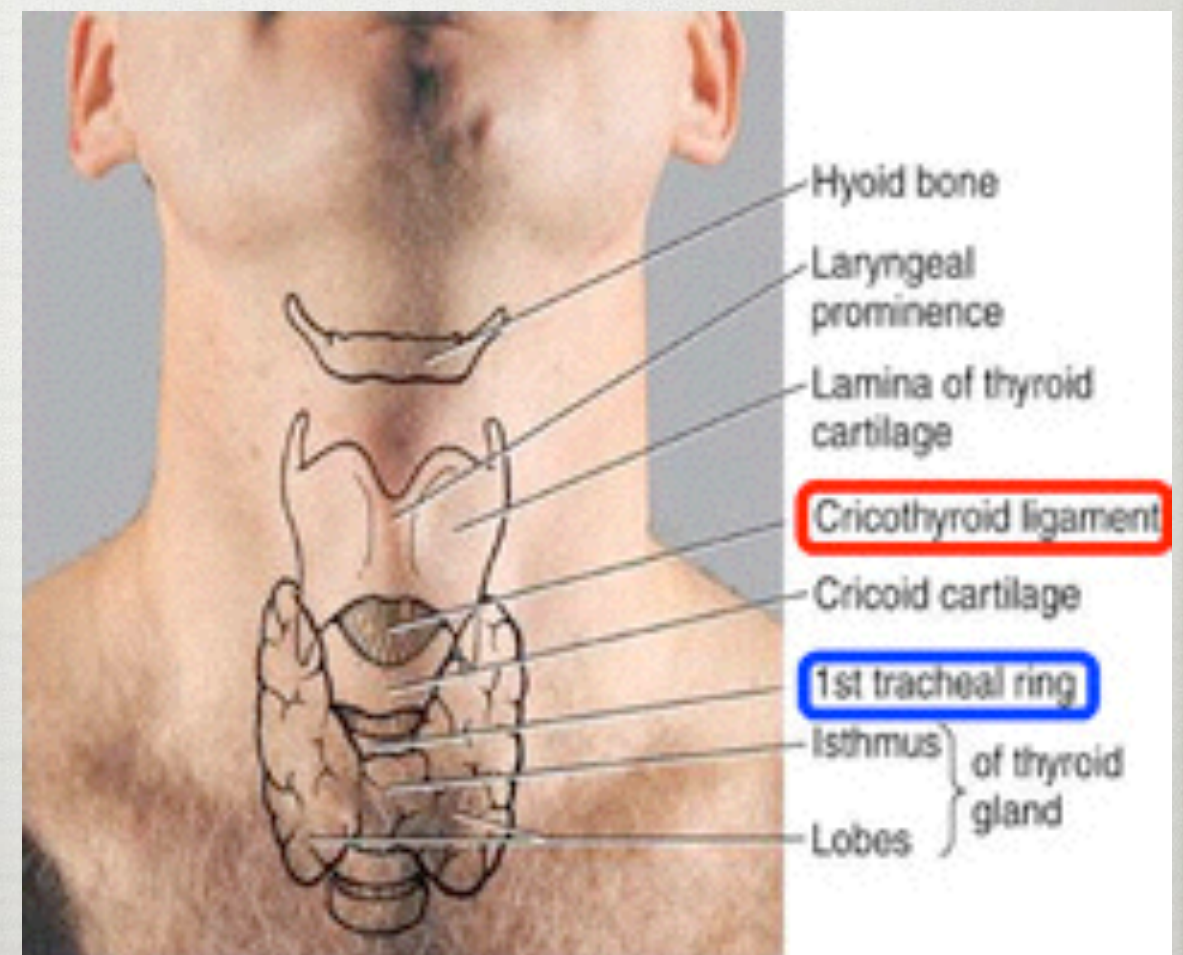
☐ DISABILITY

☐ EXPOSURE



# ABCDE: AIRWAY

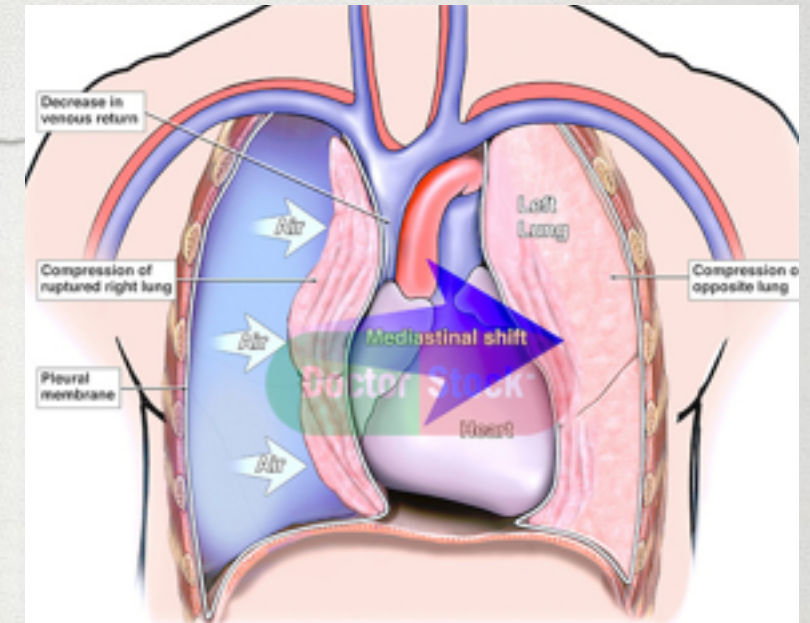
- Remove dirt/objects that you can see (no blind sweeps)
- Jaw thrust—helps to keep tongue forward
- Chin lift? remember the neck
- \*Rolling onto side
- **Improviseational Techniques:**
  - Safety pin technique
  - Nasopharyngeal (NP) Airway: a hollow tube
  - Cricothyroidotomy: last resort!! Knife and hollow tube





# ABCDE: BREATHING

- Look Listen Feel (crepitus)
- Determine respiratory rate, signs of respiratory distress, equal chest rise
- The word on CPR (exceptions: hypothermia, lightning strikes, drowning)
- **Improvvisational Techniques:**
  - Barrier mask: glove
  - Tension pneumothorax decompression: pale, shocky, severe respiratory distress, signs of tension pneumothorax. 14G IV
  - Open Pneumothorax: baggie taped, 3 sides





# ABCDE: CIRCULATION

- Lay victim down
- Check pulse—rate, quality, location palpable (radial SBP=80, femoral 70, carotid 60)
- Skin signs—pale, cool, moist, capillary refill time >2 seconds
- Control bleeding with **direct** pressure 10–15 min or more
- Still bleeding? tourniquet. Not working? Second tourniquet higher up
- Impaled objects?
- **Improvisational techniques:**
  - Tourniquet
  - Rapid wound closure: duct tape, crazy glue, hair tie, staples
  - \*Epi-pen use





# ABCDE: DISABILITY

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- Assess level of consciousness (normal, confused, responds to loud voice, responds to pain), pupils, ability to move both arms and legs
- Assume neck injury if: head injury, major injuries/broken bones, intoxicated, major mechanism
- Imagine victim as a log—cannot twist a log
- **Improvisational techniques—cervical spine protection:**
  - Collar
  - Side Rolls
  - Backboard





# ABCDE: EXPOSURE

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- Do not remove impaled objects
- Keep victim warm (**garbage bag**)
- **Improvisational techniques for bone/joint injuries:**
  - Splints reduce pain and bleeding
  - Immobilize joint above and below
  - Check pulses





# IMPROVISING WOUND CARE

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- **Improvisational techniques for wound irrigation:**
  - 30cc syringe with 18g needle
  - Needle holes in baggie or condom → high pressure water
  - Chlorine tabs to clean water
- **Improvisational Techniques for wound closure**
  - Crazy glue, staples, hair closure
  - Duct tape





# EVACUATION

- **Who needs evacuation?**
  - Breathing difficulties
  - Dizzy/weak/weak pulse
  - Unconscious/confused
  - Trouble breathing
  - Neck or torso pain
  - Unable to walk
  - Visible bone or clear dislocation
  - Unsure of severity of injury
- **Evacuation considerations:**
  - Terrain/distance
  - Remoteness
  - Number of assistants
  - Means of evacuation





# THE ABSOLUTELY ESSENTIAL FIRST AID KIT

## \* Wound Care:

- gloves: to protect yourself
- condoms/baggies: to clean wounds, carry water
- 10 4x4 gauze: to put pressure on bleeding wounds
- band aids

## \* Medications:

- tylenol, ibuprofen: pain control
- benadryl: bee stings

## \* Miscellaneous:

- 14 G IV catheter: pneumothorax, cricothyroidotomy, wound cleaning
- knife
- tweezers: remove splinters
- safety pins: for everything
- duct tape: for everything
- iodine/chlorine tablets: clean water
- para cord
- garbage bag
- crazy glue



# **1001 Uses of Safety Pins**

Tongue extension  
Making eyeglasses  
Removing foreign bodies from skin/cornea  
Abscess drainage  
Fishhook  
T-shirt arm splint  
Sewing needle  
Wound closure  
Unclogging camping stove jet  
Tick removal  
Fix zippers/bindings.....