

VI FIRST AID - HUMAN

- A. Initial Assessment - Assess for responsiveness by attempting to arouse the patient
 1. Assess the airway - open mouth, examine and clear obvious obstructions
 2. Assess for breathing - look, listen and feel
 3. Assess for circulation - check pulse at neck (carotid artery), check for severe bleeding, treat for shock
 4. Assume disability - cervical spine precautions, avoid moving the patient, consider jaw thrust to open airway
 5. Protect patient from environmental exposure and examine major injuries

- B. Vital signs
 1. Heart rate or pulse (60-80) - wrist, neck, upper arm, outside of ankle. Check for rate, rhythm, and quality of pulse.
 2. Respiration rate (12-20)
 3. Skin condition and temperature
 4. Pupils - Check for size and reactivity.
 - a. Unequal - stroke or brain injury
 - b. Constricted - CNS disease or narcotic overdose
 - c. Dilated - Cardiac arrest or head injury
 5. Color of mucous membranes (pink, pale, blue, dry, moist)
 6. CRT
 - a. Fingernails
 - b. Mucous membranes

- C. Medical history
 1. Patient's complaint
 2. Current medical problems
 3. Allergies
 4. Present medications

- D. Complete examination (specially if patient is unconscious)
 1. Head - open airway and breathing, check ears and nose for fluid and/or blood
 2. Neck - assess cervical spine
 3. Shoulders - deformity, swelling, abrasions, punctures, tenderness, lacerations, burns
 4. Arms - same assessment as shoulders plus check for pulse at wrist, movement, and sensation
 5. Chest - same assessment as shoulders plus difficult

- breathing
 - 6. Abdomen - tenderness, rigidity, distention, bruising
 - 7. Back - pain, possible spinal injury
 - 8. Pelvis - pain and instability
 - 9. Legs and feet - same as shoulders plus check for movement and sensation
- E. Soft tissue injuries
- 1. Bruises
 - 2. Hematoma
 - 3. Blisters - moleskin, drain with sterile needle, apply antibiotic ointment and dressing
 - 4. Sprains
 - 5. Abrasions
 - 6. Lacerations
 - 7. Puncture wounds - if there is an impaled object, do not remove it
 - 8. Control bleeding
- F. Treatment for closed injuries
- 1. Ice or cold water
 - 2. Compression bandages to reduce swelling and bleeding
 - 3. Elevate above heart level
- G. Controlling bleeding
- 1. Direct pressure
 - 2. Elevation
 - 3. Pressure points
- H. Cleansing wounds
- 1. Thoroughly clean wound with clean water, surgical scrub solutions if available
 - 2. Remove debris from wound by irrigation or plucking out
 - 3. Do not scrub dirt and debris into open wound
 - 4. Apply antibiotic dressing and bandage
 - 5. Check circulation and movement to assess if bandage is too tight
- I. Infections
- 1. Signs
 - a. Redness and swelling
 - b. Heat, pain, pus
 - c. Red streaks radiating from the wound
 - d. Fever and chills
 - e. Swollen lymph nodes
- J. Signs and symptoms of fractures and dislocations
- 1. Pain and tenderness

2. Crepitus
 3. Swelling and discoloration
 4. Deformity
 5. Loss of function or range of motion at a joint (dislocation)
 6. Loss of function at a bone (fracture)
- K. Assessment of fractures and dislocations
1. Remove clothing and visualize the injury
 2. Look for deformity, swelling, discoloration
 3. Feel for tenderness, deformity and swelling
 4. Assess circulation
 - a. Check distal pulse in wrist or foot
 - b. Check temperature and color in hand or foot
 5. Sensation and movement
 - a. Test for sensation to touch for pain
 - b. Ask the person to move his fingers and toes
- L. Treatment of fractures and dislocations
1. Immobilize the injury
 2. Clean and dress wounds
 3. Splint before moving
 4. Remove tight clothing and jewelry
 5. Elevate to reduce swelling, compression and ice if required
 6. Treat for shock
 - a. Keep patient warm
 - b. Elevate feet above head
- M. Basic splints
1. Qualities of a good splint
 - a. Rigid and supporting the injury
 - b. Padding the injury
 - c. Lightweight
 - d. Offers access to distal circulation
 - e. Pneumatic
 2. Extremity sling and rigid type splint utilizing wood, tree limbs, newspaper, pillows, clothing
 3. Traction
- N. Treatment of eye injuries
1. Don't rub irritated eye
 2. Don't manually remove penetrated objects
 3. Irrigate eye to remove foreign debris
 4. Bandage shut the injured eye
- O. Brain and spinal cord injuries
1. Changes in level of consciousness
 2. Disorientation, confusion, incoherence, irritability
 3. Headache

4. Vision disturbances
5. Nausea and vomiting
6. Paralysis
7. Seizures
8. Combativeness
9. Blood or CSF from the ears, nose or mouth
10. Obvious skull fracture
11. Slow pulse, rising blood pressure, irregular respirations
12. Concussion - usually mild even with loss of consciousness

P. CPR

1. When to apply - all non-breathing and pulseless patients
2. Technique of CPR
 - a. Place the heel of one hand on the lower half of the sternum about two finger widths above the xiphoid process. Place the heel of the other hand on top of the hand that is on the chest, interlocking fingers.
 - b. Compress the chest approximately two inches straight down, leaning forward so your arms are directly over the patient with the back straight and the elbows stiff.
 - c. Rate of compressions is 100/minute.
 - d. After 15 chest compressions, give two rescue breaths and continue this cycle continuously.

Q. Signs of Shock

1. Confusion, restlessness, anxiety
2. Cold, clammy, sweaty, pale skin
3. Rapid and shallow breathing
4. Rapid and weak pulse
5. Increased CRT
6. Nausea and vomiting
7. Fainting
8. Thirst

R. Treatment for Shock

1. Keep warm, flat on back, elevate feet unless head injury
2. Check for open airway, breathing, and circulation
3. Treat the cause, e.g. bleeding (compression bandage), swelling (apply ice)
4. Maintain body temperature
5. No food or water intake
6. Prompt emergency transport to medical facility

PREVENTION IS THE BEST TREATMENT: WEAR A HELMET!

DECIDE EARLY IF YOU NEED TO EVACUATE!

How to evacuate?? Call for helicopter or help with a cell or satellite phone, ride a horse, or walk out.

References: National Outdoor Leadership School Wilderness First Aid 3rd Edition by Tod Schimelpfenig and Linda Lindsey; First Responder in Emergency Care by the National Safety Council

Example of Wilderness First Aid Kit

In an emergency situation, a person should be familiar with how and when to use each item in a first aid kit. Completion of a basic first aid course and a cardiopulmonary resuscitation (CPR) course can prepare a person to render assistance in an emergency.

A well-equipped first aid kit should contain the following:

- *Emergency Handbook*
- 2 X 2-inch sterile gauze pads
- 4 X 4-inch sterile gauze pads
- 2-inch elastic wrap
- 4-inch elastic wrap
- 2-inch rolled gauze
- 4-inch rolled gauze
- Elastic and butterfly bandages
- Cotton swabs
- Adhesive tape
- Tweezers
- Scissors
- Forceps
- Wire cutters
- Soap
- Sterile eyewash
- Syringe, 30 mL
- Acetic acid 5% (vinegar)
- Isopropyl alcohol
- Hydrogen peroxide
- Sunscreen
- Instant heat pack
- Instant cold pack
- Tourniquet

A person should become familiar with both the uses and the warnings for each of the following nonprescription medications. A person should always check for allergies prior to use.

- Acetaminophen (Tylenol), 20 tablets
- Ibuprofen (Motrin), 20 tablets
- Aspirin, 20 tablets
- Bacitracin ointment
- Hydrocortisone cream 1%
- Diphenhydramine (Benadryl) 25 mg, 20 tablets
- Pseudoephedrine (Sudafed, Afrin) 30 mg, 20 tablets
- Ranitidine hydrochloride (Zantac), 20 tablets
- Topical anesthetic ointment

For wilderness trips that involve traveling to locations that are distant from medical care, obtaining the following prescription medications from a family doctor or another health care provider is advisable. Prior to taking any prescription medication, a person should always consult a doctor and check for allergies.

- Bactrim DS, 20 tablets (avoid if allergic to sulfa drugs)
- Ciprofloxacin 250 mg, 20 tablets (not recommended for children)
- Ana-Kit or EpiPen
- Compazine 10 mg, 20 tablets
- Cortisporin Otic suspension, 1 bottle
- Silvadene cream, 1 tube