Troop 1

Wilderness Medicine

Troop

1

Awareness & Planning	• Wilderness Challenges • Pre-Planning and Emergency / Evacuation Plans
Determining Injuries	• Patient Assessment System • Communication Report
Treating Typical Wilderness Injuries	• Spine • Breaks & Sprains – Usable: Twisted and Sprained – Unusable: Broken Leg, Broken Arm – Smashed Fingers and Toes • Head Injury: Concussion • Shock • Wounds – Bleeding – Infection • Blisters and Burns • Heat Illness • Frostbite • Hypothermia • Altitude Sickness
First Aid Kit	• Standard First Aid Items • Wilderness First Aid Kit Additions
Summary	• “Be Prepared”
Alternative Medicine	• So…we forgot our first aid kit…what does nature have to offer?

Awareness & Planning

– Factors that are challenging in the Wilderness

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"Wilderness" = Time of injury/illness to hospital arrival ***> 1 hour***

Wilderness Factors

TIME	• Start of illness/injury to professional care is greater than 1 hour • Condition may change (e.g., infection from dirty wound) • Patient's needs may change (e.g., need for food and water)
ENVIRONMENT	• Cold, heat, wind, rain, altitude, etc • Long, rough distance to be able to evacuate • Darkness
EQUIPMENT	• Need to improvise the treatment and evacuation using what is available
COMMIUNCATION	• Rescuers must make decisions about patient treatment and evacuation, often without any outside communication
PREVENTION	• Prevention is critical in wilderness medicine – it is much easier to stay warm than to warm a hypothermic person for example

Awareness & Planning

– Pre-Planning and Emergency / Evacuation Plans

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Emergency response and evacuation plans are an essential part of wilderness medicine. A little bit of planning can go a long way in supporting an efficient emergency response.

Pre-Planning

- Research local search and rescue, sheriffs office, or emergency services. Know how to contact them
- Tell someone where you plan to go and when you plan to return – leave a map and your route with them
- Pack a communication device (cell or satellite phone, radio, personal locator beacon) and a signaling device (fire starter, mirror, bright tape/fabric)
- Pack navigation tools (map, compass, GPS)
- Pack a first aid kit and survival gear appropriate for your trip

Emergency / Evacuation Plan

- Most evacuations are not urgent, there is no life or limb threat
- If life or limb threat a safe rapid evacuation is needed
- Ask for help or do it yourself? Consider:
  - Distance to road
  - Difficulty of terrain
  - Weather
  - Shelter, food, water
  - Group strength and stamina
  - Ability to communicate with rescue services
- If you call for help with cell/radio/satellite phone:
  - Prepare your call. Use the radio report template
  - Describe your location – use coordinates if possible
  - Make a clear statement of your needs and/or plan
- If you send for help
  - Send a team: Ideally three or four people with camping equipment
  - Send a written plan of your situation and plan
  - Send, in writing, an exact location – use coordinates if possible

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	• Head Injury: Concussion
	• Shock
	• Wounds
	  – Bleeding
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	• Blisters and Burns
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Determining Injuries

– Patient Assessment System

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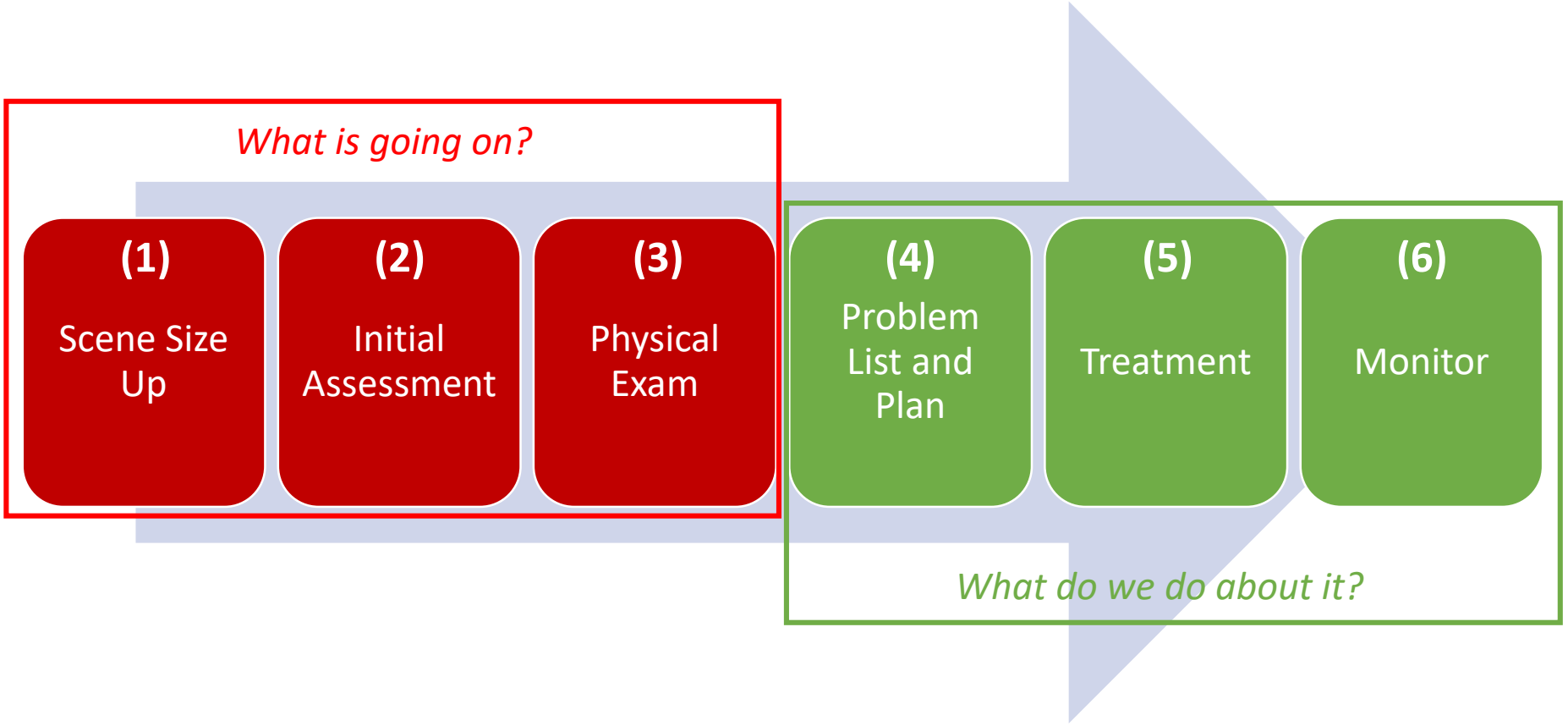
The overall Patient Assessment System has 6 steps:



Determining Injuries

– Factors that are challenging in the Wilderness

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(1) Scene Size Up

1. Look for hazards – Danger to:
   - Rescuers
   - Bystanders
   - Patients
2. Determine what might have caused the accident or injury?
3. Protect yourself from bodily substances (blood, vomit, etc)
4. Determine the number of patients
5. Form initial impression – Hurt or not hurt? Sick or not sick?

(2) Initial Assessment

1. Get permission. Ask patient's name and what happened
2. Attempt to wake the patient
3. Protect the spine until you know it is not injured

A. **Airway**: Look in the patient's mouth. Clear obstructions

B. **Breathing**: Look, listen, and feel. Expose chest injuries

C. **Circulation**: Check for pulse and circulation. Control life-threatening bleeding

D. **Disability**: Maintain protection of the spine

E. **Expose**: Any serious injuries

(3) Head to Toe Exam

1. Check **circulation, sensation, and motion (CSM)** in all hands and feet
2. Vital Signs
   - **Level of Responsiveness (LOR)**: "Awake and oriented" or "awake and disoriented" or "unconscious"
   - **Heart Rate (HR)**: Beats per minute, strong or weak
   - **Respiratory Rate (RR)**: Breaths per minute, easy or labored
   - Skin Color, Temperature and Moisture (SCTM)
3. Patient History (age)

S A M P L E
   - **Symptom** / Main Complaint and Symptoms
   - **Allergies**: "Are you allergic to anything?"
   - **Medications**: "Do you take any medications?"
   - **Pertinent History**: "Any medical condition?"
   - **Last fluid/food intake**, last urine/bowel output: "When did you last eat and drink? How much?"
   - **Events**: "What have you been doing today?"

Determining Injuries

– Example Communication Report

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The report below is an example template that can be used when communicating an emergency or evacuation need:

Example Communication Report

Assessment

Overview

This is (your name)_*John Doe*_with a patient report /evacuation request

We are currently located at: ___*Outlet of Radnor Lake*____

I have a _*28*__year old (male/female) with the main complaint of __*possible broken ankle*___

The cause of the injury/illness is: _*twisted when hiking*_____

Observations and Findings

Description: The patient has: __*deformity, bad swelling and bruising*__

The patient vital signs are:

- LOR - Responsive: _*Awake and alert*____
- Heart Rate: __*120*_____
- Respiratory Rate: ___*20*_____
- Skin: _*pink, warm, dry*_____

SAMPLE history: __*ran out of water*_____

Assessment

We suspect the following problem(s): __*bad sprain or broken ankle*__

Plan

Treatment

Our treatment includes __*splint on the lower leg, elevated*__

Evacuation

Our plan is to: __*move with crutches toward the road*__

Ask

We request: __*the following supplies/support people to help us carry*__

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Treating Typical Wilderness Injuries
– Spine

Troop 1

Prevention / How It Could Happen?

- Blow to the head with loss of responsiveness or mental alertness
- High velocity impact to the head impacts: with (e.g., car/ATV crash, climbing falls, skier/biker crashes)
- Falls from greater than 3 ft (1 meter) landing on the head or buttocks (axial load)
- Falls for a patient over 65 years of age

Signs and Symptoms

- Pain, tenderness or obvious injury along the vertebral column
- Changes in extremity sensations e.g., numbness, tingling, unusual hot or cold sensations
- Weakness or paralysis

Tx - Treatment

Activity

- Protect the head and spine with hands or head blocks
- Check circulation, sensation and motion (CSM) in the extremities
- BEAM lift or log-roll the patient onto a pad and establish a neutral alignment of the spine
- Maintain head stabilization with hands or head blocks and soft neck collar
- Recheck the CSM in extremities

EVACUATE: Develop plan with support from local rescue or emergency medical services (EMS)

Treating Typical Wilderness Injuries

– Breaks and Sprains: Usable

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Prevention / How It Could Happen?

- Walking in areas where can see the ground
- Loose or unsafe footing – slip and fall
- Stumble due to fatigue, low energy, or dehydration

Signs and Symptoms

- Is usable and needs support or is unusable and needs to be immobilized and evacuated
- Diffuse or specific pain
- Swelling and/or bruising
- Deformity
- Tenderness
- Sounds: Snaps, pops, grating, or crackling of bones
- Altered circulation, sensation, and motion (CSM)
- Wounds with or without protruding bone
- Changes in range of motion

Tx - Treatment

Is usable and needs support or is unusable and needs to be immobilized and evacuated

Usable

1. Assess the injury
   - Look, Ask, Feel (LAF)
   - Check CSM
   - Assess for usability
2. Manage Pain
   - Ice: Cooling the area for 20-40 minutes may help manage pain. May continue ice every 2-4 hours or after use
   - Elevation: Raising the injury above the patient's heart may reduce swelling and help manage pain
   - Consider pain medication
3. Support the usable injury with tape, wraps or braces (e.g., elastic wrap, knee brace)
4. Check CSM

Treating Typical Wilderness Injuries

– Breaks and Sprains: Unusable

Troop 1

Tx - Treatment	
Unusable 1. Assess the injury: Look, Ask, Feel (LAF) 2. Check CSM 3. If necessary (compromised CSM or angulated) use gentle traction-in-line (TIL) to establish normal anatomical position. Go slow and discontinue if pain becomes unmanageable) 4. Splint in a position of function. Splinting principles: • Padded, but not bulky or heavy • Rigid • Adjustable • Fingers/toes accessible for CSM assessment • Immobilize the joints above and below a long bone injury • Immobilize the bones above and below a joint injury • Monitor CSM before and after traction-in-line and splinting	5. If the fracture is open: • Irrigate and clean the wounds prior to traction-in-line • Use traction-in-line and allow bone ends to slip beneath the skin • Protect exposed bone ends from freezing or drying • Pack and dress the wound 6. Manage Pain • Ice: Cooling the area for 20 - 40 minutes may help manage pain. May continue ice every 2-4 hours • Elevation: Raising the injury above the patient's heart may reduce swelling and help manage pain • Consider pain medication **EVACUATE: Develop plan with support from local rescue or emergency medical services (EMS)**

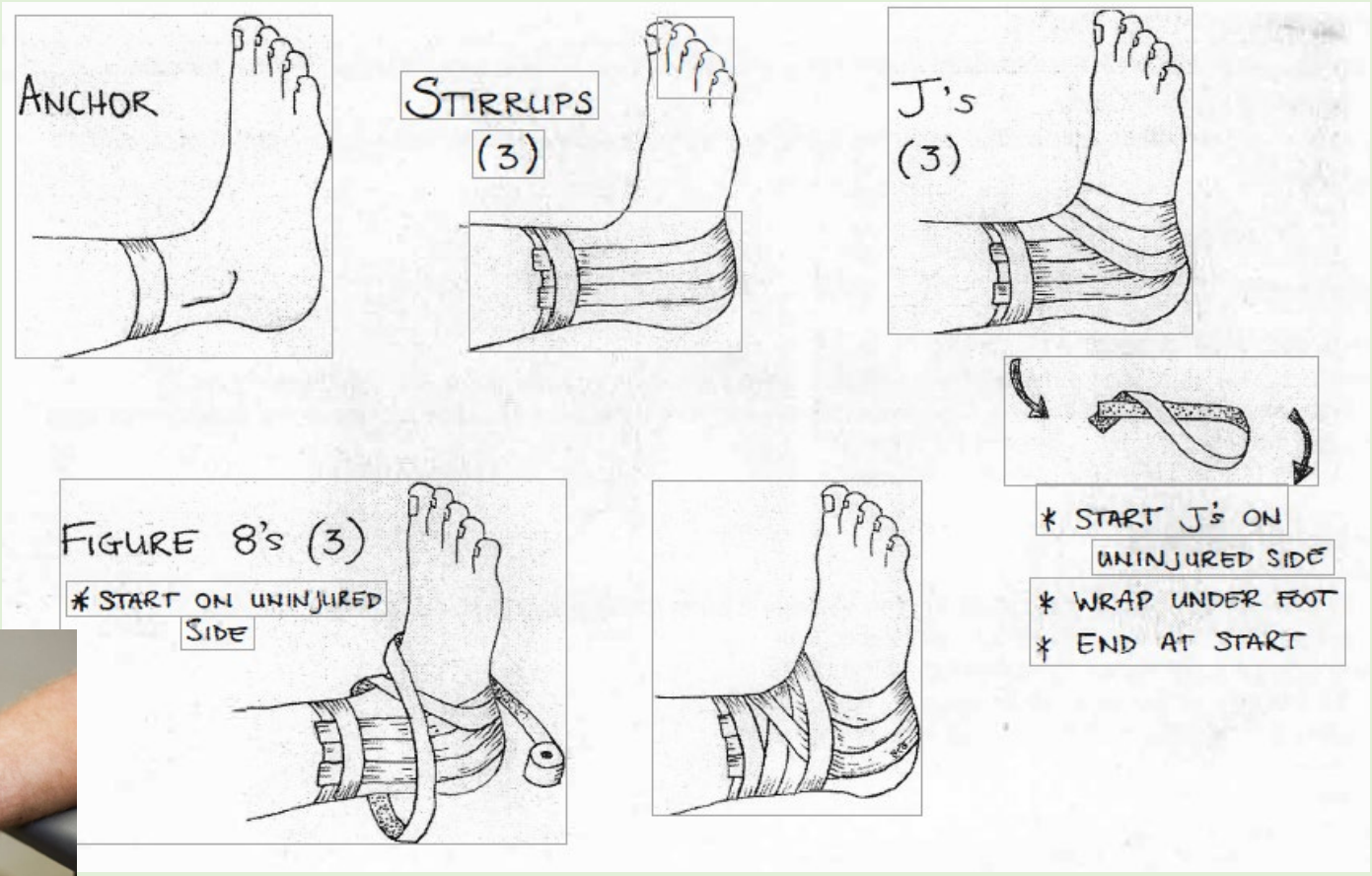
Treating Typical Wilderness Injuries

– Breaks and Sprains: Ankle

Tx - Treatment

Activity

Ankle



Treating Typical Wilderness Injuries

– Breaks and Sprains: Arms and Legs

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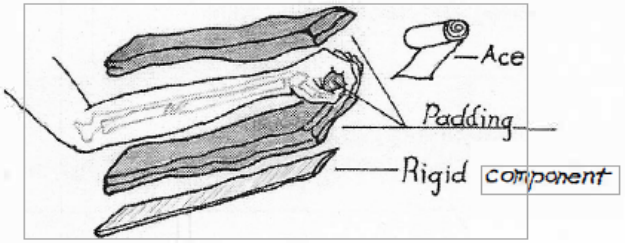
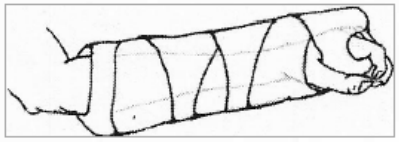
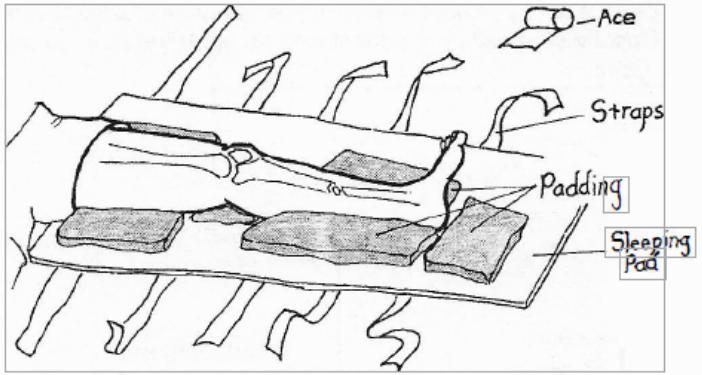
Tx - Treatment

Activity

Arm and Leg







Treating Typical Wilderness Injuries

– Breaks and Sprains: Smashed Fingers and Toes

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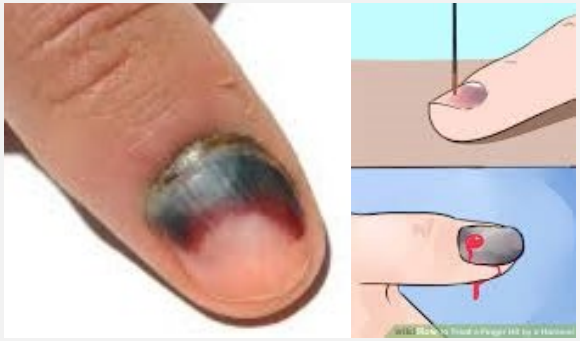
Prevention / How It Could Happen?

- Lifting of heavy objects that if the slip or fall could crush finger tips or toes
- Use care and many people when lifting heavy or awkward objects

Signs and Symptoms

- A smashed finger / toe is a common injury. Though they can be very painful, most smashed fingers heal after a few days of care
- If nail is turning blue or black, and feel a lot of pressure/pain. Letting out pressure will help healing process and significantly reduce pain



Tx – Treatment

- Rest, ice, elevation, and the use of OTC pain and anti-inflammatory medications
- If feel a lot of pressure/pain. Letting the pressure out will help the healing and significantly reduce the pain:
  1. Wash / sanitize the area
  2. Straighten a paper clip (or needle), and heat the tip in a flame until it is red-hot
  3. Place the tip of the paper clip on the nail and let it melt through
  4. Don't push hard; just let the heat do the work.
  5. Go slowly, and reheat the clip as necessary
  6. As soon as the hole is complete, blood will escape and the pain will be relieved
  7. If hole closes up again, you can repeat procedure
  8. This procedure shouldn't hurt much if at all. If the pain is too severe to try, consider evaculating

EVACUATE: For injuries that involve the joints, have noticeable abnormalities or breaks, cause severe pain, or don’t respond to basic treatment.

Treating Typical Wilderness Injuries

– Head Injury: Concussion

Troop 1

Prevention / How It Could Happen?

- Falling object hitting head
- Stumble and fall due to fatigue, low energy, dehydration, or loose or unsafe footing

Signs and Symptoms

Mild

- Brief change in LOR
- Nausea and/or isolated vomiting
- Headache, dizziness and/or lethargy
- Amnesia
- Temporarily blurred vision or "seeing stars"

Serious

- LOR: Not awake and oriented. Disoriented, irritable, combative
- Experience a worsening headache, vision disturbances, repeated vomiting, lethargy, sleepiness, poor balance or seizures
- Skull fracture: blood from ears or nose, obvious injury

Tx - Treatment

Mild

- Evacuate
- If evacuation is prolonged or delayed let patient rest, but wake them every couple of hours to assess LOR
- Monitor for developing signs of serious head injury

Serious

- Consider positioning the patient on his or her side.
- Do not apply direct pressure to control bleeding; use light pressure with a bulky dressing
- Protect the spine
- Evacuate immediately

EVACUATE

- **Evacuate if there was any loss of consciousness or signs and symptoms of mild head injury**
- **Rapidly evacuate if there are distinct changes in the patient's mental status (disoriented, irritable, combative) or there are any signs and symptoms of a serious head injury**

Treating Typical Wilderness Injuries

– Shock

Troop 1

Prevention / How It Could Happen?

- Shock may result from trauma, heatstroke, blood loss, an allergic reaction, severe infection, poisoning, severe burns or other causes
- When a person is in shock, organs aren't getting enough blood or oxygen

Signs and Symptoms

- The main symptom of shock is low blood pressure
- Other symptoms include rapid, shallow breathing, cold clammy skin, rapid weak pulse, dizziness, fainting, or weakness

Tx - Treatment

- Treat the cause (bleeding, allergy, broken bone, etc)
- Keep the patient warm
- Keep the patient calm
- Keep the patient flat with their legs elevated no more than 12 inches (30.5 cm). Head or lower extremity injury may preclude this
- Consider administering oral fluids in an extended care situation only if the patient is alert and can swallowing
- Monitor the patient closely

EVACUATE

- **Rapidly evacuate any patient whose vital signs do not stabilize or improve over time**

Treating Typical Wilderness Injuries

– Wounds: Bleeding

Troop 1

Prevention / How It Could Happen?

- Small wounds are common injuries in the wilderness. Preventing infection and promoting healing are important

Tx – Control Bleeding

- **Manual Direct Pressure and Elevation**: most commonly useful technique. Pressure with fingertips or gauze must be focused on the source of the bleeding. Elevation might help with bleeding control
- **Wound Packing**: Pack the wound with hemostatic gauze, plain gauze, or a clean cloth and then apply direct pressure
- **Pressure Dressings**: free the hands for other tasks or secure dressing after bleeding is controlled
- **Tourniquet**: Should be minimal width of 1.5”, padded, and ideally 1-2" above the wound. Tight enough to block the distal pulse

Tx - Treatment

- Clean around the wound with soap or disinfectant and rinse with clean drinkable water
- Remove any foreign matter with disinfected tweezers
- Irrigate the wound with disinfected water using a syringe
- Cover the wound with a clean dressing and bandage
- Monitor CSM

Treatment for Types of Wound

- **Abrasions**: Clean and cover with a sterile dressing coated with a thin layer of antibiotic ointment
- **Lacerations**: Bring wound edges together with wound closure strips. If cut gapes open or is on the face, pack open (moist to dry) to keep it moist during evacuation
- **Avulsions**: Irrigate under the flap
- **Amputations**: Wrap the amputated part in a moist, sterile dressing and seal in a plastic bag. Immerse bag in cool water and transport with patient to the hospital
- **Punctures**: Wash the surface of the skin only. Do. not close the wound. Monitor for infection
- **Impaled Objects**: Stabilize in place unless it is an airway obstruction or interferes with transport

Treating Typical Wilderness Injuries

– Wounds: Infection

Troop 1

Prevention / How It Could Happen?

- Small wounds are common injuries in the wilderness. Preventing infection and promoting healing are important
- Tetanus shots should be up to date

Signs and Symptoms

Mild Infection

- Redness extending beyond the wound
- Warmth, mild swelling, tenderness
- Pus formation

Serious Infection

- Heat, swelling, discoloration and pain often associated with increased pus formation
- Red streaking may form from the wound towards the nearest lymph nodes
- Swollen lymph nodes
- Fatigue, fever and shock

Tx - Treatment

- Check wounds frequently
- Hot soaks for 20-30 minutes several times daily
- Clean the wound following the hot soak
- Consider packing the wound open (moist to dry) to allow drainage
- Monitor CSM

EVACUATE

- **Any patient with a wound that cannot be closed in the field**
- **Any patient with an infection who does not show improvement within 12-24 hours**
- **Rapidly evacuate any patient with signs or symptoms of a serious/systemic infection**
- **Rapidly evacuate any patient with a wound that is heavily contaminated, opens a joint space, involves underlying tendons or ligaments, was caused by an animal bite, is on the face, has an impaled/imbedded object, was caused by a crushing mechanism, or shows evidence of serious infection**

Treating Typical Wilderness Injuries

– Blisters and Burns

Troop 1

Prevention / How It Could Happen?

Blisters

- Rubbing of shoes and clothing
- Wet clothing causing friction
- **PREVENTION**:
  - Stop and check your feet often
  - Look for hot spots (red areas from rubbing or pressure)
  - Apply moleskin to red areas
  - Use talc to absorb moisture and reduce friction

Burns

- Sunburn
- Spilled hot water
- Taking hot items (pots) off the fire or stove

Tx - Treatment

Blisters

Blisters – Intact

- Consider draining the fluid. If you're worried the blister will burst (usually nickel-sized or larger), drain it.
- Cover with 2nd Skin®, Blist-o-Ban® or similar product.
- Traditional donut hole works with moleskin. Other tapes tend to be too thin for the donut technique.
- Cover with duct, athletic or other medical tape or moleskin.
- Pad with moleskin, duct tape, athletic tape or other medical tapes as a buffer against further rubbing

Blisters – Open

- Clean open blisters
- Cover with 2nd Skin or similar product
- A moleskin donut hole filled with 2nd Skin or antibiotic ointment works well
- Cover with medical or duct tape or moleskin
- Monitor for infection

Treating Typical Wilderness Injuries

– Burns

Troop 1

Tx - Treatment

1. **Safety**
   - Ensure that the scene is safe and remove the patient from danger
   - Cool compresses or rinsing with running water. Don't use ice to cool a burn
   - Remove clothing and constricting objects (e.g., jewelry, watches, belts)
2. **Airway and Breathing**: Be suspicious of face/neck burns, soot in the mouth/nose, singed hair, and a dry cough
3. **Circulation**: Treat for shock
4. **Assess Burn Severity**
   - Depth of the burns: Superficial, partial thickness, full thickness
   - Superficial burns injure only the epidermis. They are red, swollen and painful. The area heals in 4 or 5 days with the epidermis peeling
   - Partial thickness burns injure both the epidermis and the dermis and take longer to heal. They are red, swollen, painful and blistered
   - Full thickness burns penetrate deeply and injure epidermis, dermis, and subcutaneous tissue. They can be painless, without blisters and charred or pale
   - Extent of the burns: Palm and fingers are 1 % of patient's total body surface area
   - Location of the burns. Face, neck, hands, feet, armpits and groin, and circumferential burns are particularly dangerous
5. **Dress Burns**: Sterile dressings, burn sheets/creams, 2nd Skin. Don't drain blisters
6. **Pain Medications**: Aspirin or ibuprofen are often recommended
7. **Hydration and Monitor**

EVACUATE:

- **Evacuate any patient with partial thickness burns, especially to the hands, feet, face, armpits or groin**
- **Rapidly evacuate any patient with partial and/or full thickness burns that are > 10% body area or circumferential, or all airway burns**

Treating Typical Wilderness Injuries

– Heat Illness

Troop 1

Dehydration

Signs and Symptoms

- Thirst
- Weakness, headache, fatigue, lightheadedness, irritability.
- Dark, smelly urine, and less urine output
- History of inadequate water intake

Tx - Treatment

- Rest and avoid further heat stress
- Hydrate – water and electrolytes
- Treat exercise-associated muscle cramps with gentle stretching
- Evacuate if not improving

Heat Exhaustion

Signs and Symptoms

- Fatigue
- Nausea or vomiting
- Exercise-associated muscle cramps
- LOR: Dizziness with fainting possible
- HR and RR elevated
- May be pale, cool, clammy, or flushed

Heat Stroke

Signs and Symptoms

- LOR changes: Disoriented, irritable, combative or unconscious
- Hallucinations, seizures, poor balance
- Increased HR and RR, SCTM hot, dry and red (possibly moist and pale)
- Temperature above 104°F

Tx - Treatment

- Aggressive cooling for any heat illness patient with altered mental status
- Spray with water, fan patient
- Immersion in cool water

EVACUATION

- **Rapidly evacuate patient with altered mental status**

PREVENTION

1. Hydrate: Monitor urine output for color and quantity
2. Don't over hydrate
3. Exercise early or late in the day in hot environments – rest often
4. Acclimate before you exercise heavily in a hot climate if possible
5. Wear well-ventilated, open-weave clothing. Cover your head and wear sunglasses

Treating Typical Wilderness Injuries

– Cold: Frostbite

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Prevention / How It Could Happen?

- Not knowing environment and conditions
- Ignoring signs and symptoms (you and others)
- Not wearing wind and rain gear to keep you warm and dry (boots, clothing layers)
- Not having adequate nutrition and hydration
- Staying wet (stay dry, ace yourself)
- Not having changes of dry clothes and boots
- Sleeping with cold, wet feet
- Exposed skin – e.g. ears, nose, chin, fingers
- Untreated numbness in your feet and hands

Signs and Symptoms

- Feeling cold
- Waxy, pale or mottled skin
- Mild tingling, numbness or pain
- Soft (if not frozen or partially frozen), hard (if completely frozen)
- Blisters may form if frostbite has been thawed

Tx - Treatment

If not frozen

- Warm the injury with skin-to-skin contact

If frozen

- Ideally: Immerse in a warm water bath 99-102° F
- Practical: Warm the injury with skin-to-skin contact

Both

- Protect from re-freezing
- Never massage or use radiant heat
- Manage pain: Anti-inflammatory painkillers

EVACUATE:

- **If injury is larger than a nickel**
- **If cannot be prevented from infection or refreezing**
- **If pain from injury is not tolerable**

Treating Typical Wilderness Injuries

– Cold: Hypothermia

Troop 1

Prevention / How It Could Happen?

- Constantly wet and cold lowers the body's core temperature to a level where brain and/or muscle function is impaired

Signs and Symptoms

- Mild: Impaired ability to perform complex tasks, fine motor shivering, apathy, confused and sluggish thinking, slurred speech, "the umbles:" stumbling, fumbling, mumbling, grumbling.
- Moderate: Uncontrollable violent shivering, worsening of "the umbles“
- Severe: Shivering stops, muscular rigidity, stupor progressing to unconsciousness, decreasing pulse and respiratory rates which may become non-detectable

Tx - Treatment

Activity

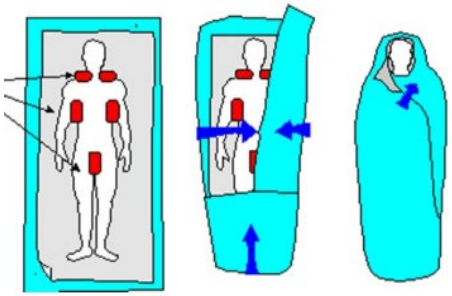
Mild / Moderate

1. Change the patient's environment
   - Find shelter – move patient off cold /wet ground
   - Replace wet clothing with dry clothing
   - Add wind and waterproof layers
2. Insulate the patient
   - Add insulation under and around the patient
   - Insulate patient's head and neck, hands and feet
   - Consider a hypothermia wrap
3. Add heat packs or hot water bottles – insulate these
4. Encourage patient to eat and drink (warm and sweet)
5. Exercise if possible for mildly hypothermic patients

Severe: EVACUATE – Rapidly and gently evacuate

Hypothermic Wrap

- Wrap in tarp, foil blanket, sleeping bag
- Use insulated hot water bottles or heating pads



Treating Typical Wilderness Injuries
– Altitude Sickness

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Prevention / How It Could Happen?

- If you travel quickly to 10,000 feet or above, take 2-3 rest days with light exercise
- Ascend 1,000-1,500 feet per day above 10,000 feet with frequent rest days
- Climb high and sleep low

Signs and Symptoms

- Acute mountain sickness is a headache commonly accompanied by one or more of the following signs and symptoms, in conjunction with recent altitude gain:
  - Nausea and, possibly, vomiting
  - Loss of appetite
  - Mild feelings of low energy, fatigue or weakness at rest
  - Insomnia

Tx - Treatment

- Don't go up until the symptoms go down
  - Stop your ascent until symptoms have resolved
  - Descend if the signs and symptoms don't improve
  - Descend immediately at the first sign of severe altitude illness
- Maintain adequate hydration and nutrition
- Taking pain medication for the headache is okay
- Monitor for signs / symptoms of severe altitude illness
  - Loss of balance
  - Shortness of breath at rest
  - Extreme fatigue
  - LOR changes

EVACUATE:

- **Anyone who is not adjusting to altitude, or**
- **Has signs and symptoms of severe altitude illness**

Troop

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Determining Injuries	• Patient Assessment System • Communication Report

Treating Typical Wilderness Injuries	• Spine
	• Breaks & Sprains
	  – Usable: Twisted and Sprained
	  – Unusable: Broken Leg, Broken Arm
	  – Smashed Fingers and Toes
	• Head Injury: Concussion
	• Shock
	• Wounds
	  – Bleeding
	  – Infection
	• Blisters and Burns
	• Heat Illness
	• Frostbite
	• Hypothermia
	• Altitude Sickness

First Aid Kit	• Standard First Aid Items • Wilderness First Aid Kit Additions
Summary	• “Be Prepared”
Alternative Medicine	• So…we forgot our first aid kit…what does nature have to offer?

First Aid Kit

– Wilderness Additional Items

Troop 1

Standard Items

1. Pocket First Aid guide
2. Band-Aids (several sizes)
3. Sterile gauze pads (several sizes)
4. Antibiotic ointment
5. Antiseptic wipes
6. Antihistamine cream
7. Antihistamine pills
8. Medical wrapping tape
9. Elastic bandage
10. Cotton balls
11. Burn dressing
12. Ibuprofen
13. Gloves
14. Scissors
15. Tweezers
16. Safety pins
17. Pencil and paper

Additional Wilderness Items

Blisters / Burns
- Moleskin (more of it)
- Burn dressing

Small Wounds
- Irrigation syringe
- Wound closure strips
- Transparent dressings
- Gauze bandages
- Blood stopping gauze

Fractures / Dislocations
- SAM splint
- Triangular bandages
- Compression wraps
- Medical wrapping tape (more of it)

Other
- Foil blanket
- CPR mask
- Oral thermometer

Troop

1

Awareness & Planning	• Wilderness Challenges • Pre-Planning and Emergency / Evacuation Plans
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Summary

– The Wilderness can be challenging…"Be Prepared"

Troop 1

(4) Problems and Plan

1. The equipment you have is all you have – "Be Prepared"
2. Plan for your surrounding and weather
3. Leave a copy of your route and plan with someone
4. Have a communication device for emergencies
5. Know the emergency numbers to call
6. Be familiar with First Aid training
7. Take preventative steps for common issues
   - Hydration
   - Blisters
   - Heat exhaustion

(5) Treatment

1. Work as a team to solve problems
2. Take a pocket First Aid guide – use it
3. Don't over react – stay calm
4. Evacuate if needed

(6) Monitor

1. Continuously monitor yourself and the group – be aware of others as they might not see their symptoms
2. Closely monitor a treated person – check wounds frequently
3. Check for hot spots at every water break – take off your socks and boots
4. Hydrate constantly – remind others to hydrate

Troop

1

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Treating Typical Wilderness Injuries

– Pain Relief and Antiseptic

Troop 1

Yarrow
- Blood Clotting and Antiseptic

The yarrow plant also has a long history as a powerful healing herb used topically for wounds, cuts, and abrasions.

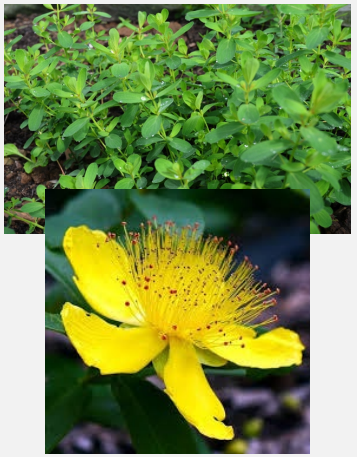
Crushed leaves and flowers placed on cuts and scratches can stop bleeding and reduce the chance of infection. The leaves made into a paste encourage clotting and are antiseptic.

Antiseptic – Balsam Fir (Christmas Tree)

Sap from "blisters" on balsam firs (Christmas Trees) is a strong antiseptic. Pop the blisters on the trunks of young trees, and the sap will ooze out. Spread it over cuts and small wounds to prevent infection.

Antiseptic – Saint John's Wort

The crushed leaves of Saint John's Wort can be used as an antiseptic dressing. A wad mashed leaves on a cut, replace it occasionally, the cut heals fast.
St. John's Wort has anti-bacterial, anti-viral and anti-fungal properties.



Treating Typical Wilderness Injuries
– Pain Relief

Troop 1

Plantain
- Pain Relief & Anti Venom

This humble weed is common in lawns and fields across America and around the world. Plantain is a small plant with parallel veins and a rubbery feel.

The green leaves can be crushed into a paste and applied to venomous stings and bites with great effect.

Though not strong enough to tackle snake bites, plantain can help to neutralize the venom of bees, wasps, scorpions, and other pain inducing creatures.

Keep the paste of plantain leaf on the wound, and replace as it dries out. Relief should be swift.

Willow Tree – Black Willow
- Pain Relief

Leaves – Helps Blood Clotting
Boil a palmful of green leaves in a cup of water for 10 minutes. Soak a clean cloth in the brew and apply to skin irritations, minor cuts and abrasions, allergies, eczema, and insect bites.

Bark – Anti Diarrhea & Mild Pain Killer
Soak bark twig scrapings in a cup of hot water for 10 minutes for a bitter tasting anti-diarrhea drink.

Fill the bottom of a cup with shredded willow bark (the pink part is best), and make a tea with it.

Let it steep for a few minutes. The active ingredient salicin, is related to salicylic used to make aspirin.

Treating Typical Wilderness Injuries

– Diarrhea

Troop 1

Blackberry / Oak
- Diarrhea

The most common medicinal remedy for diarrhea is blackberry plant roots. Simply wash and shred the roots. Then pour boiling water over it and let it soak for at least 5 minutes, it is then ready to drink.

If there are no blackberries in the nearby areas, you can settle for oak barks. However, only do this if you have no other choices since it can stress the kidneys.

- Chop up a tablespoon of bark for a cup of tea. After drinking one cup, just wait for the tannin to have effect. Don't drink more than one cup.

Alternative Medicine

– Wound Dressing: Using Bog Moss

Troop 1

The Perfect Wound Dressing…and Boy Scouts

History

A Scottish surgeon had an idea: stuff the wounds full of moss. Peat moss thrives in cold, damp climates. Today, this tiny, star-shaped plant is known for its use in gardening and biofuel, not to mention preserving thousands-year-old "bog bodies" like the Tollund Man, but humans have used it for at least 1,000 years to help heal their injuries.

Charles Cathcart, the Scottish surgeon, organized collections of moss throughout Scotland. Most collecting was done by boy scouts or girl guides.

On 30 August 1917, Chief Scout, Sir Robert Baden-Powell, visited Edinburgh – he had been told that many Scouts had stopped working for 'Tenderfoot' and 'efficiency' badges in favor of picking moss. Sir Robert – an old soldier - gave his full approval.

How to Use Bog Moss

Many types of moss, including bog moss, are great for dressing a wound. It contains iodine which is an antiseptic that will keep the wound sterile.

After cleaning the wound, apply moss as a bandage directly to a wound to staunch bleeding or dried and placed in a cloth sack to be pressed to a wound. Change the moss out each time you clean the wound.

This type of moss is also good for soothing and healing rashes. Just apply is as a bandage and change as it dries out. Relief will come quickly.

Because of the high acidity and antibacterial properties of moss, it can be included in your filtration system to help filter water.

Alternative Medicine

– More Moss Uses

Troop 1

Perfect for a Shelter Roof

Moss is Waterproof

Moss is full of moisture, but it likes to keep it for itself, that's why you can use it to cover your shelter. The roots of the moss are a complex system which makes it easy to cut off big pieces and transport them to the roof of your shelter. The moss roof will collect all the humidity, keeping you dry during the night.

Moss is an Insulator

Thanks to its tight root system, moss can be used as an insulator to keep your shelter either warm or cold, depending on the weather conditions.

Fire Starter

Dried Moss for Fire Starter

Dried moss is extremely flammable, so it's always good to have it around. You can use it to make fire and add some to your fire-starting kit for the rest of the journey.

Alternative Medicine

– More Moss Uses

Troop 1

Some Moss is Edible

Lost in the forest for days? Probably your food resources are gone. But, if there's moss around, you're saved.

Reindeer / Caribou Moss

This type of moss grows to about an inch tall and is gray and branchy in appearance. It can be seen with red tips that look like flowers from a distance.

It grows in most parts of the US. Normally you will find it on a thin layer of soil on top of rocks.

You can eat reindeer moss raw if needed, but the acids can upset your stomach. Natives typically boil it until soft. You can also crush the lichen to medicinal tea used by natives to relieve kidney stones. It can also be used to help ease diarrhea.

Wila Moss

Grows in northern regions hanging from conifer trees, dark brown in color, grows at the base of the Rocky Mountains elevations of 1,000 to 2,500 feet. Grows between 10 inches and four feet long. Tends to grow high in trees, prefers dead or dying trees.

Cook wila on a hot stone over a fire. Keep flipping it until it is dry and hard. Then crumble and boil it until it is the consistency of molasses. Raw wila can be boiled and eaten.

Wila has medicinal purposes in native cultures. Used for digestive troubles. For broken bones, reduce swelling, eases arthritis, help wounds heal faster.

Troop

1

Questions?