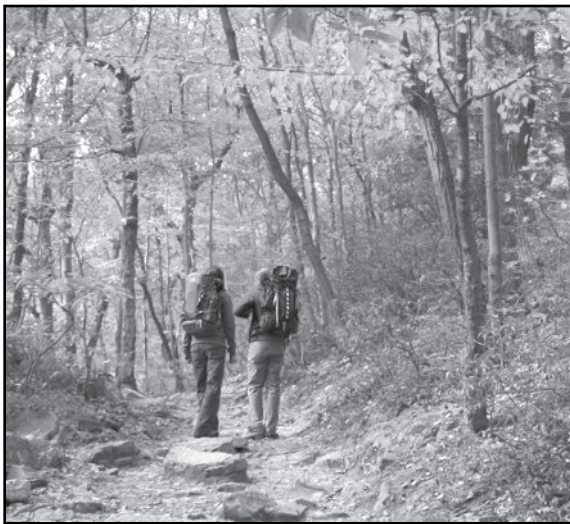


POCKET GUIDE



# Wilderness and Remote First Aid





# CHECK



# CALL



# CARE

## CHECK

CHECK the Scene, the Resources and the Patient



### CHECK THE SCENE

- Establish control.
- CHECK the scene by asking yourself:
  - Is the scene safe to approach? (Check for immediate dangers to you, the person and any bystanders.)
  - If the scene is unsafe, can I do something to make it safe?
  - What happened?
  - How did it happen?
  - How many injured or ill people are there?
  - Is there someone who appears to be unconscious?
  - Are there daylight, environmental or weather conditions that affect my own or others' safety?
- Follow standard or body substance isolation (BSI) precautions to prevent disease transmission.
  - Use disposable gloves, glasses and masks, if necessary and available.
- Obtain consent to give care from the patient or, if a minor, from the parent or guardian.

**NOTE:** If the scene is not safe and there is a way to call for additional help, do so quickly. Be ready to check the patient and give care if the scene becomes safe.

## CHECK RESOURCES

- Identify available resources. Ask yourself:
  - Is there someone to help me? Do I need other help?
  - How far away is additional help?
  - What supplies and materials do I have to help keep me safe?
  - Do I have the resources to give care immediately and/or long term for this patient?
  - Do I have the resources to safely move this patient and/or provide a safe environment until help arrives or the patient is healthy?
  - What combined resources will contribute to the overall health and safety of the group?

## CHECK THE PATIENT

Document everything you find out during the primary (initial) assessment, SAMPLE history and secondary (focused) assessment.

### Primary (Initial) Assessment

Use the ABCDEs to assess life-threatening conditions.

- **A** = Use the head-tilt/chin-lift technique to open the **airway**. A patient who is speaking or breathing has an open airway.
- **B** = Look, listen and feel for movement and normal **breathing** and quality of **breathing** (for no more than 10 seconds). If the patient is not breathing, immediately begin rescue breathing or CPR.
- **C** = Assess the patient's **circulation**. Check for a pulse in a child (for no more than 10 seconds or for up to 45 seconds for a hypothermic child). For an adult and child, check for severe bleeding. If the patient does not have a pulse, immediately begin CPR. If severely bleeding, immediately expose the wound and use direct pressure to control the bleeding.
- **D** = Look for any **disability** from damage to the spinal cord. If you suspect a spinal injury, keep a hand on the patient's head or ask someone else to take control of the head.

- **E** = Assess the threat of the **environment** and **expose** any injuries. Look for signs and symptoms of exposure to extreme environmental conditions, especially cold weather, which can cause changes to the body's temperature and threaten a patient's life. It is important to protect the patient from extreme conditions, but if necessary, you may expose part of the patient's skin to assess the damage and to give care.

If you find a life-threatening condition during the primary assessment, call for help if possible and give care for the condition found. The caller should be prepared with information about the patient, location/ environment and resources (people and materials). If you do not find a life-threatening condition, continue to the secondary assessment and SAMPLE history before giving specific care for an injury or illness.

**NOTE:** If you suspect a head, neck or spinal injury and the patient is face-down when you come upon the scene, use a log roll to turn the patient face-up.

## Secondary (Focused) Assessment

### *Hands-On Physical Exam*

Check the patient head to toe during the hands-on physical exam:

- Look for DOTS:
  - **D** = Deformity
  - **O** = Open injuries
  - **T** = Tenderness
  - **S** = Swelling
- Check circulation, sensation and motion (CSM) at each extremity.
- Assess skin color, temperature and moisture.

**NOTE:** If you suspect a head, neck or spinal injury, do not move the patient. Tell the patient not to move. Ask the patient to answer “yes” or “no” to your questions. Use a log roll to check the patient’s back for injury, if necessary.

### *Level of Responsiveness*

Use the AVPU scale to describe the patient's level of responsiveness.

- **A = Is alert** and able to answer orientation questions
  - A+O×4: knows who (name), where (current location), when (day) and what happened
  - A+O×3: knows who, where and when
  - A+O×2: knows only who and where
  - A+O×1: knows only who
- **V = Responds only to verbal** stimuli (e.g., by grimacing or rolling away from your voice when you speak or shout)
- **P = Responds only to painful** stimuli (e.g., pinch)
- **U = Is unresponsive** to any stimuli

### *Normal Vital Signs for an Adult*

- Respiratory rate (breath): 12 to 20 breaths per minute; regular and unlabored pace
- Heart rate (pulse): 50 to 100 beats per minute; strong and regular
- Skin color, temperature and moisture: Pink, warm and dry to your touch

### *Special Considerations: Focused Spine Assessment*

If a spinal injury was suspected but there are no signs and symptoms of spinal cord injury, you may choose to perform a focused spine assessment. If you answer “yes” to all of these questions, discontinue spinal immobilization:

- Is the patient fully reliable (assessed on the AVPU scale as at least A+O×3)? Does he or she appear sober and without

distractions, such as severely painful injuries or deep psychological distress?

- Is the patient without altered sensations in the extremities, such as tingling, and does he or she have the ability to move the extremities?
- Does the patient demonstrate grip strength and the ability to lift the legs against resistance?
- Does the patient deny feeling spinal pain and tenderness to the touch of the spine, and does he or she have normal range of motion?

### SAMPLE History

To gain essential information about the patient's medical history, ask the patient questions, such as:

- **S = Signs and symptoms.** What are your signs and symptoms (i.e., what hurts)? Are you experiencing any pain, nausea, light-headedness or other things that are not visible?
- **A = Allergies.** Do you have any known allergies or allergic reactions? What happens? Has there been any recent exposure?
- **M = Medications.** What medications are you taking? Are they over-the-counter or prescription? What is the medication for? When was it last taken? Where is the medication so we can keep it with you?
- **P = Pertinent past medical history.** Has anything like this happened before? Are you currently under a health care provider's care for anything, such as for a cardiac or respiratory condition? Have you recently had surgery? Are you pregnant (if a woman)?
- **L = Last intake and output.** When did you last eat or drink? How much? Are you hungry or thirsty? When did you last urinate and defecate? Were they normal?
- **E = Events leading up to the injury or illness.** What led up to the incident? When did it happen? How did it happen?



# CHECK



# CALL



# CARE

## CALL

Stay or Go, Fast or Slow

To decide whether to stay or go, consider:

- Extent of the patient's injuries.
- Environmental dangers (e.g., fires).
- How long before help could arrive.
- Other members of the party.
- Available equipment.
- Weather.
- Distance.
- Terrain to be crossed.

If the decision is to stay, continue care as trained and as needed.

Once the injury or illness is resolved, the person can resume normal activities with prevention of future injury or illness in mind. If evacuation is necessary, determine if it should be fast or slow. Establish a plan and assemble resources. Continue care as trained throughout the evacuation until the injury or illness is resolved or other help arrives.



## CALL FOR HELP

- CALL to signal that there is an emergency and help is needed by shouting for help or using a signaling device, such as a whistle or two-way radio.
- If a trip itinerary is in place, follow the protocols for whom to contact and how.
- Based on the patient's condition and environmental considerations, an evacuation may be necessary. In some cases, you may need to move the patient to a safer location or you may need to seek professional evacuation from an organized rescue party.

- To request evacuation, CALL using phones, radios, signaling devices or by sending out a party.
  - Signal in threes and use ground-to-air signals (e.g., three blasts from a gun or three blasts from a whistle).
  - Give exact location, including either map or GPS coordinates.
  - Examples of signaling devices include flare guns, smoke, mirrors, emergency beacon and whistles.
- Have the patient care information available. Send out the Wilderness and Remote First Aid Report Form/Rescue Request, if possible.

**EVACUATE RAPIDLY—GO FAST—Anyone Who Has Any of These Conditions or Signs and Symptoms:**

- Decreased mental status or worsening vital signs, especially if the heart rate keeps speeding up
- Severe hypothermia
- Severe head injury, especially a skull fracture, stroke and/or a decrease in mental status

*(continued on reverse)*

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## **EVACUATE RAPIDLY**—GO FAST—Anyone Who Has Any of These Conditions or Signs and Symptoms:

*(continued from reverse)*

- Spinal injury
- Serious infection
- Chest injury with increasing trouble breathing
- Serious abdominal problem
- Heart attack
- Angulated fractures, open fractures or fractures of the pelvis, hip or femur
- Injuries that create a decrease in circulation, sensation and movement (CSM) beyond the injury
- Altered mental status caused by heat or hyponatremia
- High-altitude cerebral edema (HACE) or high-altitude pulmonary edema (HAPE). (These patients require an evacuation to a lower altitude—at least 1000 to 1500 feet—and evaluation as soon as possible by a health care provider.)
- Unconsciousness due to a submersion incident (no matter how short a time) or respiratory problems after a submersion incident
- Seizures that do not resolve within 5 to 10 minutes
- A wound that:
  - Is heavily contaminated
  - Opens a joint space
  - Involves tendons or ligaments
  - Was caused by an animal bite
  - Is deep and on the face
  - Involves an impalement
  - Was caused by a crushing injury

You should also evacuate rapidly—**GO FAST**—anyone who has been:

- Struck by lightning, even if he or she appears to have recovered soon after the injury.
- Treated for anaphylaxis. (During evacuation, keep the patient well-hydrated and on a regimen of oral antihistamines.)

**EVACUATE SLOWLY**—**GO SLOW**—Anyone Who Has Any of These Conditions or Signs and Symptoms:

- Mild head injury (when responsive, this patient can walk out if able to keep balance and the terrain is safe)
- Wound that cannot be closed in the field
- Infected wound or skin infection that does not improve within 12 hours of treatment or which spreads to other parts of the body
- Suspected fractured rib
- Persistent abdominal discomfort
- Injuries that prevent use of an extremity
- First-time dislocations (except perhaps dislocations of the fingers or toes)
- Heat exhaustion or mild hyponatremia from which he or she does not recover



# CHECK



# CALL



# CARE

## CARE

Prioritize Care by Severity of Injury or Illness



### ABDOMINAL ILLNESSES

- For stomachache or diarrhea, keep the patient hydrated and on a bland diet, if tolerated.



### ABRASIONS

- For an abrasion treated within 10 minutes, apply antibiotic ointment and cover with a sterile dressing.
- For an abrasion treated after 10 minutes or there are items, such as sand and pebbles, in the wound, scrub the wound, apply antibiotic ointment and cover with a sterile dressing.



### ALTITUDE SICKNESS

- Descend safely to a lower altitude.
- Administer supplemental oxygen, if available and you are trained to do so.



### ANAPHYLAXIS (SEVERE ALLERGIC REACTION)

- Assist the patient with his or her prescribed epinephrine.
- Help the patient self-administer an oral antihistamine if he or she can swallow and has no known contraindications.



### BLEEDING AND WOUND CARE

- Apply direct pressure, except to a head or neck wound.
  - For neck wounds: Carefully pinch the opening of the wound closed.
  - For head wounds: Cover the wound with a bulky dressing and press lightly.

- Control bleeding, then thoroughly wash the wound with a large amount of disinfected water under pressure.
- Close and protect wounds with antibiotic ointment, cover with sterile dressings and secure in place (except lacerations bigger than ½ inch wide; animal bites; deep puncture wounds; wounds that expose bones, tendons or ligaments; or dirty/infected wounds. Pack these with sterile dressings, apply antibiotic ointment, cover with dressings and then bandage).
- Re-clean any area you suspect is infected. Pack with moist sterile dressing then dry dressing to promote draining at least twice daily. Continue to monitor.



## BLISTERS

- Clean around the site thoroughly.
- If the blister is intact:
  - Sterilize the point of a needle or knife.
  - Open the blister on one side, enough to massage fluid out, but leave the roof (skin of blister) intact.
- Apply moleskin around the blister (doughnut shape) and fill the middle with antibiotic ointment.
- Cover and secure moleskin in place.



## BRAIN AND HEAD INJURIES

- Consider spinal injury.
- Control any bleeding.
- Have the patient remain still if you suspect a head, neck or spinal injury.
- Continually monitor the patient's condition.



## BURNS

- Immediately remove the patient from the source of the burn and cool the burn with large amounts of cool water.

- Remove any clothing and jewelry from the area by carefully removing or cutting material away. (Do not take off clothing that is melted to the skin.)
- For small superficial burns or small burns with open blisters:
  - Wash the area.
  - Apply antibiotic ointment.
  - Cover the burn with a sterile dressing and secure it in place.
- For large burns and severe burns, cover the burned area by loosely bandaging dry, sterile dressings in place.
- Take steps to minimize shock and prevent hypothermia and dehydration.



## CHEST WOUNDS

- For rib fracture(s), stabilize the fracture, being careful to not restrict breathing.
- For a sucking chest wound, use an occlusive dressing taped down on three sides. Monitor for difficulty breathing.
  - If the patient has difficulty breathing, remove the dressing. Insert a gloved finger to release pressure, if necessary.



## EAR INJURIES

- Do not use force to dislodge objects.
- To remove insects from ear, flood the ear with cooking oil.
- To prevent infection, rinse with 50 percent water and 50 percent alcohol or vinegar solution.



## HEART ATTACK

- Help the patient self-administer four 81-mg aspirins or one 325-mg aspirin, if he or she can swallow and has no known contraindications.
- If the patient has a strong pulse in the wrist (radial) and has been prescribed nitroglycerin, help him or her self-administer one pill under the tongue with the patient sitting.

## HEAT EXHAUSTION

- Remove the patient from the heat.
- Remove clothing and help the patient rest.
- Help the patient replace lost fluids and salt.

## HEAT STROKE

- Cool the patient immediately using cold water immersion or by drenching the patient with cold water.

## HYPOTHERMIA

- Remove the patient from the cold.
- Remove all wet clothing.
- Insulate the patient from the ground and bundle in dry blankets.
- Give the patient something warm to drink.
- For moderate hypothermia, re-warm the patient using warm bottles, heat packs or body heat from another person's body. Continue to monitor both patient and caregiver.
- For severe hypothermia, gradually re-warm the patient using a hypothermia wrap with warm water bottles, placed on the groin and under the armpits.

## NOSEBLEEDS

- Have the patient lean forward and pinch just below the bridge of the nose for 10 minutes. Repeat as necessary.
- If the patient suffered a blow to the nose that caused a deformity, care for the injury with cold packs.

## SHOCK

- Identify the cause and care for the condition found.
- Protect the patient from getting chilled, overheated or wet. Keep the patient calm.
- For long-term care, keep the patient from getting dehydrated.

## SPINAL INJURIES

- Immobilize the head, neck and back.
- Keep the patient still and do not move him or her.

## SPRAINS, STRAINS AND FRACTURES

- Use RICE for sprains, strains and fractures. Repeat RICE 3 to 4 times a day until pain and swelling subside.
  - **R = Rest** the injured area.
  - **I = Immobilize** the injured area.
  - **C = Apply cold** to the injured area.
  - **E = Elevate** the injured area above heart level, except with certain serious injuries to the limbs.
- Splinting considerations:
  - Pad the injury, but make it rigid enough to provide support.
  - Splint in the position of function.
  - Check circulation, sensation and motion (CSM) often.
  - Remove jewelry.

## TOOTH INJURIES

- For temporary fillings, use sugarless gum, oil of cloves or a commercial dental adhesive product, such as Fixadent®.
- For knocked-out teeth, hold the tooth by the crown and avoid touching the root, rinse the socket and tooth with clean (preferably sterile) water and immediately replace the tooth in the socket. If the tooth cannot be replaced, have the patient hold it in his or her mouth, taking care not to swallow it. If the patient cannot hold the tooth in his or her mouth, ideally transport it in milk or a 0.9 percent saline solution.



## TOURNIQUETS

Use a tourniquet on an arm or leg **ONLY** if blood loss is *uncontrolled* by direct pressure or if direct pressure is *not* possible. Note the time the tourniquet is applied.

- Use a commercial or improvised device (4-inches wide) placed approximately 2 inches above the wound but not over the joint.
- Tighten until all bleeding stops.
- Once other injuries or illnesses have been cared for and the scene is safe:
  - Apply direct pressure.
  - Loosen the device (ideally within 2 hours) and attempt to control bleeding.
  - If bleeding cannot be controlled, re-apply the tourniquet.

## Important Additional Information

### CPR

- Find the correct hand position on the center of the chest to perform compressions.
- Perform 30 chest compressions.
- Using a breathing barrier, provide 2 breaths.
- Perform cycles of 30 compressions and 2 breaths.

### Choking Patient— Conscious

- Give 5 back blows.
- Give 5 abdominal thrusts.

- Continue cycles of back blows and abdominal thrusts until the patient can breathe.

### Choking Patient— Unconscious

- Find the correct hand position on the center of the chest to perform compressions.
- Perform 30 chest compressions.
- Look for an object. If you see an object, perform a finger sweep.

- Give 2 rescue breaths.
- Continue cycles of chest compressions, object check/removal and rescue breaths until the breaths go in.

### Stroke

- Think FAST and give nothing to eat or drink.
  - **F** = **F**acial Droop
  - **A** = **A**rm Drop
  - **S** = **S**lurred **S**peech
  - **T** = **T**ime of Onset
- Help the patient remain calm.
- Continue to monitor vital signs.