

Certification Standards for Wilderness Advanced First Aid Courses

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Introduction

The Wilderness Medicine Education Collaborative ([WMEC](#)) formed in 2010 to provide a forum for discussing trends and issues in wilderness medicine and to develop consensus-driven scope of practice documents and de facto standards for Wilderness First Aid (WFA), Wilderness Advanced First Aid (WAFA), and Wilderness First Responder (WFR) certifications. In 2022, the WMEC expanded its work to include related white papers and position statements. Our mission is to elevate wilderness medicine education and set standards for common field certifications. Collectively, the WMEC schools have over two hundred years of experience teaching wilderness medicine and have trained over 750,000 students in the past four decades.

The Wilderness Advanced First Aid course (WAFA and is sometimes referred to as Advanced Wilderness First Aid or AWFA) is an intermediate course that focuses on basic assessment and treatment skills, and raises awareness of environmental illnesses and common life threatening medical problems. This certification is designed for people on half-, full-, or short multi-day trips, those traveling with reliable cell or satellite phone service, and where outside assistance may be delayed for up to twelve hours. WAFA graduates are often employed as assistant trip leaders in college outdoor programs and residential camps or as guides or instructors in low- to moderate-risk activities and environments.

First aid requirements in a remote setting often differ from the scope of first aiders in a front-country environment. Over time, course content has evolved based on the growing body of medical literature on first aid and wilderness medicine and our experience as practitioners and educators of wilderness medicine. This process has led to a consensus about content and scope of practice (SOP) for wilderness medicine certification within the recreational and professional outdoor industry. For more information about certification, licensure, curriculum, scope of practice, and accreditation and why the WMEC documents provide practical standards for industry-wide medical certifications, view this [document](#).

This document and its companion documents—Certification Standards for Wilderness First Aid Courses and Certification Standards for Wilderness First Responder Courses—are intended to set clear standards for wilderness medicine certifications for the outdoor industry. We recommend the recreational public, outdoor program administrators, and other consumers of wilderness medicine courses refer to these documents and recommendations when choosing an appropriate course and credential level for themselves, their program, or their service. Users are encouraged to compare the standards documents to an individual provider's course curriculum to ensure their course meets the minimum standards. Because the needs of students and organizations vary by location, population, and experience, some educational institutions may choose to exceed these standards. While schools that teach wilderness medicine are not legally bound to conform to these standards, they have a professional obligation to consider them. Failing to follow an industry standard may dilute the quality and value of the WAFA certification and compromise the care of wilderness participants.

While the educational approach to meeting the standards is left to the discretion of the course provider, we recommend that instructors who teach wilderness medicine are skilled educators and medical providers who utilize hands-on practice, case studies, and realistic simulations as the prominent delivery style for their courses. We recommend that a minimum of 50% of the in-person course time is dedicated to practical hands-on learning. This document is not a curriculum. Detailed information on the topics, including signs and symptoms, can be found in the first aid and wilderness medicine literature. Neither

the WMEC nor the approving parties are legally responsible for a loss arising from the use or misuse of this document by a WAFA provider. Outdoor programs may benefit from working with a medical advisor to identify any predisposing terrain, environmental, and clinical conditions that may contribute to program-related accidents, injuries, and illnesses and suggest risk management strategies designed to prevent them. For more information on medical advisors, standing orders, and protocols view this [document](#).

Focus and Content Overview

The WMEC recommends a minimum of 36 hours of in-person class time is required to cover the WAFA core topics and skills in a standard course and 18 hours of in-person class time for a hybrid course. *Topics* may be added to a hybrid course without additional in-person time; however, additional *skills* require additional training and practice, and therefore increased in-person time beyond the minimum requirement.

We do not recommend WAFA courses that are taught entirely online (e.g. synchronous, asynchronous, or a combination of each). We recommend that WAFA graduates be certified in adult and child CPR and AED use based on the American Heart Association (AHA) or International Liaison Committee on Resuscitation (ILCOR) guidelines and their skills practiced and verified through in-person training; depending on your provider, formal certification may or may not be included in a WAFA course. The WMEC believes that the in-person hours of all wilderness medicine courses are an essential element of each training. For more information about in-person versus online only, view this [document](#).

The scope of practice for a WAFA is to identify and treat basic life threats, treat common environmental illnesses and common life threatening medical problems, and initiate communication with online medical support and emergency resources as soon as possible for further assistance.

WAFA core topics and skills are discussed at an intermediate level, covering basic concepts and terminology, with a focus on building foundational knowledge about wilderness medicine. Students are expected to demonstrate basic patient assessments skills, recognize and treat life threats, and know how to call for emergency assistance.

WAFA certification standards focus on the following proficiencies:

- Rescuer and patient safety and protection, a physical exam to identify apparent injuries or abnormalities, assessing signs, symptoms, and vital sign patterns, and obtaining a patient history.
- Stabilize basic emergencies, initiation of specific and appropriate medical treatments (e.g., splints, wound care, managing environmental threats, etc.), and assisting patients with their medications.
- Awareness of environmental illnesses and common life threatening medical problems.
- Recognize life threatening medical problems with the use of a digital or print field manual *and* in conjunction with online medical professionals.
- Make informed decisions regarding the need and urgency of an evacuation *with* the assistance of online medical and rescue professionals.

Treatment & Evacuation

We recommend treatment guidelines and evacuation parameters based on injuries and illness. Due to the dynamic nature of the wilderness environment and the unique variables of each situation, some treatments may not be available and a prompt evacuation may not be a viable option. In the standards documents, we provide a generic recommendation to assess the need and urgency of the evacuation. In general, we recommend an urgent evacuation for all potentially life-threatening problems. However, we understand that in some cases, the associated risk may be too high to attempt an evacuation, or an evacuation is not possible. Most WAFAs graduates do not have the training or experience to conduct a risk/benefit analysis that accurately weighs the risks to all parties involved in the treatment and evacuation of a patient and should consult medical and rescue professionals before initiating an evacuation.

Student Evaluation

To receive certification, students must demonstrate a basic understanding of core topics and practical skills via in-person skill training and simulations.

WAFAs certifications must be renewed every two to three years depending on the provider via an in-person or hybrid renewal/recertification course containing a minimum of 16 in-person hours focusing on practical skills, case studies, and simulations.

Wilderness medicine schools, employers, and students share the responsibility for knowledge acquisition and skill retention. Practical skills are perishable if not practiced regularly. We recommend employers update and review critical wilderness medicine information and current practices related to their trips with staff before each season. We recommend that graduates actively maintain their skills through study, case study review, and simulation practice. We also suggest both employers and graduates carefully assess each trip's hazards and take steps to mitigate them before starting a trip or expedition.

Content Hyperlinks

Core Topics

Medical Legal

Patient Assessment

[Scene Survey](#)
[Primary Survey](#)
[Secondary Survey](#)
[Plan](#)

Core Traumatic Problems

[Hypovolemic Shock](#)
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[Chest Trauma](#)
[Spine Injury](#)
[Soft Tissue Injury](#) (including burns & infection)
[Musculoskeletal Injury](#)

Core Environmental Problems

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Core Medical Problems

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Core Skills

Core Basic Life Support Skills

[Manually open and clear airway](#)
[Perform rescue breathing](#)
[Assess pulse at carotid artery](#)
[Perform Cardio Pulmonary Resuscitation \(CPR\)](#)
[Apply direct pressure](#)
[Apply pressure bandage](#)
[Maintain body temperature](#)
[Understand commercial tourniquet use](#)
[Understand spinal cord protection](#)

Core Secondary Survey Skills

[Count pulse rate \(HR\) at radial artery](#)
[Count respirations \(RR\) & note quality](#)
[Assess skin condition](#)
[Assess mental status/LOR](#)
[Take SAMPLE history](#)
[Complete head-to-toe physical exam](#)
[Complete patient SOAP notes](#)

Core Spine Management Skills

[Use FSA to rule out potential spine injuries](#)
[Know how to lift & move spine-injured patients](#)
[Know how to protect spine-injured patients](#)

Core Musculoskeletal Treatment Skills

[Splint long bone and joint injuries](#)

Core Hypothermia Treatment Skills

[Improvise a hypothermia wrap](#)

Core Anaphylaxis Treatment Skills

[Use an epinephrine auto-injector](#)

Core Plan/Evacuation skills

[Basic improvised carries](#)

Detailed Core Topics & Skills

Medical-Legal

Medical-Legal

Understand the following legal concepts as they apply to wilderness medicine:

- Duty to Act and Good Samaritan Laws.
- Scope of practice.
- Consent and confidentiality.
- Understand the function of:
 - Certification.
 - Licensure.
 - Guidelines.
 - Standing orders.
 - Protocols.
 - Authorization (from a Medical Advisor).

Patient Assessment

Scene Survey

- Evaluate the scene and assess for safety and causes, including the need for personal protection equipment (PPE).
- Identify the obvious mechanism(s) of injury.
- Identify environmental and scene threats.
- Quickly evaluate resources.
- Consider the number of patients, the number of rescuers and their training, first aid/medical equipment, etc.

Primary Survey

- Stabilize life-threats.
- Assess the need and urgency of an evacuation.

Respiratory System

Assess:

- Patient's ability to breathe on their own.
- Quality of ventilation.
- Airway for foreign bodies or fluids.

Treatment:

- Manually open, maintain and protect the airway with standard BLS techniques and the recovery position.
- Clear airway.
- Provide rescue breathing when indicated.
- Monitor and maintain airway control and breathing for people with an impaired Level of Responsiveness (LOR).

Circulatory System

Assess:

- Presence of patient's pulse at carotid artery.
- For life threatening bleeding/wounds.
- Likelihood of shock.

Treatment:

- Perform CPR when indicated.
- Understand start/stop considerations for CPR in the remote context.
- Control bleeding with well-aimed direct pressure, wound packing, pressure bandage, or commercial tourniquet.

Nervous System

Assess:

- Level of Responsiveness (LOR). Know the common causes and signs and symptoms for traumatic, environmental, and medical mechanisms

Treatment:

- If LOR is depressed, attempt to identify and treat the underlying cause.
- Provide rescue breathing when indicated.
- Identify a potential mechanism for a spine injury, and, if needed, protect the patient's spinal cord.

Core Basic Life Support skills:

- Practice and confirm practical skills via realistic simulations for adults and children:
 - Manually open and clear airway.
 - Perform rescue breathing.
 - Assess pulse at carotid artery.
 - Perform cardiopulmonary resuscitation (CPR).
 - Apply direct pressure.
 - Apply pressure bandage.
 - Maintain body temperature.
 - Understand commercial tourniquet use.
 - Understand spinal cord protection.

Secondary Survey

- Perform a physical exam to identify obvious injuries or abnormalities.
- Measure and monitor vital signs: Level of Responsiveness (LOR), Heart Rate (HR), Respiratory Rate (RR), and Skin (circulation/color, temperature, wet/dry).
- Obtain a patient history.

Core secondary survey skills:

Practice and confirm practical skills via skills practice and realistic simulations

- Count pulse rate (HR) at radial artery
- Count respirations (RR) and note quality
- Assess skin condition.
- Assess mental status/LOR
- Take SAMPLE history
- Complete head-to-toe physical exam.
- Complete multiple patient SOAP notes on case-study or simulated patients

Plan

- Document scene, primary, secondary survey findings, and patient information in a SOAP note.
- Develop a current and anticipated problem list.
- Develop and prioritize a treatment plan.
- Assess the need and urgency of evacuation.
- Deliver a basic verbal patient report to an outside agency if requesting assistance or additional resources.
- Monitor a patient for changes over time.
- Continually reevaluate treatment and evacuation plans.

Core Plan & Evacuation skills:

- Basic improvised carries

Core Traumatic Problems

Traumatic Brain Injury

- Assessment:
 - Recognize the signs and symptoms of a minor traumatic brain injury (mTBI).
 - Recognize the signs and symptoms of increasing intracranial pressure.
- Treatment:
 - Protect the airway.
 - Protect the spinal cord.
 - Protect from environmental extremes.
 - Monitor for changes in mental status, decreased LOR and vomiting.
 - Assess the need and urgency of evacuation.

Hypovolemic Shock

- Assessment:
 - Evaluate for hypovolemic shock due to internal or external bleeding.
 - Recognize signs, symptoms, and vital sign patterns of hypovolemic shock and differentiate them from an acute stress reaction.
- Treatment:
 - Identify and manage the cause of hypovolemia
 - Keep the patient warm and protect from adverse environmental conditions
 - In the early stages of hypovolemic shock, allow the patient to take small sips of fluid if they have a patent airway and fluid is tolerable.
 - Stabilize musculoskeletal injuries.
 - Minimize physical exertion.
 - Assess the need and urgency of evacuation.

Chest Trauma

- Assessment:
 - Evaluate and recognize the signs and symptoms of respiratory distress and respiratory failure due to chest trauma and subsequent lung injury.
 - Differentiate between open and closed chest injuries
- Treatment:
 - Maintain a position that supports breathing.
 - Maintain a patent airway and support ventilation.
 - Stabilize/support injuries to the chest wall.
 - Seal an open chest wound; use a vented chest seal if feasible. Monitor.
 - Assess the need and urgency of evacuation.

Spine Injury

- Assessment:
 - Recognize a high-risk mechanism of injury for spinal cord damage.
 - Consider neurogenic/vascular shock.
 - Assess for potential spine injury via acceptable Focused Spine Assessment (FSA): Canadian C-spine Rule, modified NEXUS criteria, or Wilderness Medical Society FSA.
- Treatment:
 - Protect the airway.
 - Protect the spinal cord.
 - Use rolls, lifts, and extrication as needed to facilitate patient examination and protection.
 - Consider self-evacuation for ambulatory patients who fail the FSA due to low-risk column injuries.

- Stabilize/protect and evacuate non-ambulatory patients who fail the FSA on a commercial litter, vacuum splint, or stretcher.
- Assess the need and urgency of evacuation. Indicate required resources.

Core spine management skills:

- Conduct FSA and evaluate the type of evacuation needed.
- Lifting and moving spine-injured patients.
- Protect the spine and keep the patient warm.
- Understand how to package a patient for transport.

Soft Tissue Injury

Wounds

- Assessment:
 - Recognize life-threatening bleeding.
 - Assess and document tetanus vaccination.
 - Assess and communicate the need for post-exposure prophylaxis (PEP) for animal bites.
 - Distinguish simple versus high-risk wounds.
- Treatment:
 - Control bleeding with direct pressure, pressure/clot enhancing bandage, or commercial tourniquet.
 - Clean wounds by removing debris and pressure irrigation/debridement.
 - Dress and bandage wounds. For large wounds, deep puncture wounds, consider wet-to-dry dressings. Dress abdominal eviscerations with moist gauze and keep the patient warm.
 - Manage blisters, splinters, and fish hook injuries.
 - Remove impaled objects unless met with increased bleeding, pain, or resistance. Do not remove objects impaled in the globe of the eye, neck, or torso.
 - Understand how to treat amputations.
 - Assess the need and urgency of evacuation.

Infections

- Assessment:
 - Recognize signs and symptoms of local versus systemic infection.
- Treatment:
 - Hot compresses (avoid scalding the patient) promote drainage, and monitor.
 - Assess the need and urgency of evacuation. Begin an urgent evacuation for patients with signs and symptoms of a systemic infection.
- Awareness:
 - Understand prevention: drug-resistant infections and bloodborne pathogen awareness. Wound cleaning is preemptive.

Burns

- Assessment:
 - Recognise the common causes of wilderness burns—hot water burns, grease burns, etc.—and take steps to mitigate them.
 - Assess depth: superficial, partial, or full thickness.
 - Approximate percent of body surface area involved.
 - Identify high-risk anatomical areas (e.g., airway, face, hands, feet, and genitals).
- Treatment:
 - Cool burns and protect with a clean, non-adherent bandage.
 - Understand that most burns are evacuated due to patient comfort, inability to travel or participate, or lack of appropriate dressing.
 - Assess the need and urgency of evacuation.

Musculoskeletal Injury

- Assessment:
 - Recognize signs and symptoms of musculoskeletal injury.
 - Differentiate between stable and unstable extremity injuries.
 - Recognize signs and symptoms of high-risk problems associated with musculoskeletal injuries (e.g., fractures of the femur or pelvis and open fractures).
- Treatment:
 - Treat stable extremity injuries with supportive and anti-inflammatory treatment.
 - Treat unstable and angulated long-bone extremity injuries with gentle traction into anatomical position.
 - Treat unstable long-bone and joint injuries with gentle traction towards anatomical position. Note: *This does not include specific techniques for the reduction of joint dislocations.*
 - Splint unstable extremity injuries. Splints should provide adequate stabilization, be comfortable during extended evacuations, and allow for ongoing assessment of CSM.
 - Irrigate the wound and clean bone ends before applying traction to and splinting an open fracture.
 - Assess the need and urgency of evacuation.

Core musculoskeletal injury treatment skills:

- Understand the principles and practice improvised long bone and joint splints.

Core Environmental Problems

Contact Allergic Reactions (Poison Ivy, Oak, Sumac, etc.)

- Recognize signs and symptoms of contact allergic dermatitis.
- Treatment:
 - Wash affected area with soap and cool water to remove oily plant resin (urushiol)
 - Manage itching with cool compresses and topical corticosteroids.
 - Monitor for anaphylaxis.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Ability to identify and avoid poisonous plants.

Dehydration

- Assessment:
 - Recognize common causes and spectrum of signs and symptoms for mild to severe dehydration.
- Treatment:
 - Provide oral fluids and electrolytes to satisfy thirst. Know how to improvise an effective oral electrolyte solution.
 - Identify and treat the underlying cause.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental conditions and prevention strategies. Consider fitness for the activity, hydration status, environmental temperatures, exertion levels, altitude, etc.

Exercise Associated Hyponatremia

- Assessment:
 - Recognize the spectrum of signs and symptoms for mild to severe exercise associated (exertional) hyponatremia
- Treatment:
 - Provide sodium and initiate fluid restriction.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental conditions and prevention strategies. Consider hydration status and amount of water consumed relative to sodium consumption.
 -
- **Heat Exhaustion**
- Assessment:
 - Recognize signs and symptoms of heat exhaustion.
- Treatment:
 - Stop activity, remove insulative clothing, and find a cooler area.
 - Provide oral fluids to satisfy thirst.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Consider fitness, environmental temperatures, exertion levels, work/ rest ratios, hydration status, underlying medical conditions, physical conditioning, and predisposing medications (e.g., prescriptions, OTC, herbs, and dietary supplements)

Heat Stroke

- Assessment:
 - Recognize signs and symptoms of heat stroke.
- Treatment:
 - Aggressive, immediate core cooling as per available resources: Consider cool/cold water immersion, misting, fanning, shade, etc.
 - Assess the need and urgency of evacuation.
- Awareness:

- Consider environmental temperatures, exertion levels, hydration status, underlying medical conditions, physical conditioning, and predisposing medications (e.g., prescriptions, OTC, herbs, dietary supplements/ stimulants).

Hypothermia

- Assessment:
 - Recognize the spectrum of signs and symptoms for mild to severe hypothermia.
- Treatment:
 - Mild Hypothermia:
 - Give oral fluids and calories and protect from the environment. Consider a hypothermia wrap.
 - Moderate Hypothermia:
 - Handle gently and place supine in hypothermia wrap ± added heat.
 - Severe Hypothermia:
 - Handle gently and place supine in hypothermia wrap with added heat.
 - Assess the need and urgency of evacuation.
 - Perform rescue breathing or CPR when indicated.
- Awareness:
 - Consider environmental temperatures, wind, rain or snow, exertion levels (exhaustion), hydration status, available calories, shelter, and clothing.

Core hypothermia treatment skills:

- Practice and demonstrate how to build and move a patient into a hypothermia wrap.

Drowning

- Assessment:
 - Recognize the spectrum of signs and symptoms for fatal and non-fatal drowning.
- Treatment:
 - When indicated, removal from the water should include practical respiratory support and spinal protection. When possible, maintain potentially severely hypothermic patients in a horizontal position during removal from the cold water as well as immediately after extrication from the water.
 - Provide rescue breathing or CPR as needed; if present, breathe through any foam exuding from the patient's mouth or nose.
 - Treat for hypothermia as necessary.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Know the factors that contribute to drowning. For example, alcohol, not wearing a personal floatation device, cold water, group think, altered mental status (due to trauma, substances that alter mental status, medical problem, etc.), lack of skill, etc.
 - Recognize and manage high-risk environmental conditions designed to prevent extended immersion and submersion times.

Lightning

- Assessment:
 - Know the common mechanisms of lightning injury and common presentation of injury (cardiovascular, neurological, burns, and potential for traumatic injuries).
- Treatment:
 - Prioritize treating apneic and pulseless patients.
 - Perform rescue breathing or CPR when indicated.
 - Triage and treat any traumatic injuries.
- Awareness:
 - Recognize high-risk locations and weather conditions to minimize the risk of lightning strikes.

Arthropods Bites & Stings (insects, arachnids e.g., scorpions, spiders)

- Assessment:
 - Recognize the signs and symptoms of common arthropod bites and stings.
- Treatment:
 - Clean bites. Monitor for infection and necrosis.
 - Monitor for respiratory distress or failure and provide rescue breathing as needed.
 - Remove embedded ticks.
 - Assess the need and urgency of evacuation. If signs and symptoms of a tick-borne illness appear, evacuate.
- Awareness:
 - Understand the role and importance of avoidance, clothing, netting, repellents, and insecticides in the prevention of disease transmission.

Snakebite

- Assessment:
 - Recognize the signs and symptoms of cytotoxic, hemotoxic, and neurotoxic envenomations.
- Treatment:
 - Evacuate all suspected venomous snake bites.
 - Follow locally medically endorsed treatment practices for regional snakes.
- Awareness:
 - Identify common human behaviors that are factors in snakebite incidents.
 - Research snake behavior and habitat before entering venomous snake territory.

Core Medical Problems

The scope of practice for a Wafa graduate includes the prevention and initiation of reasonable and prudent field treatment for minor medical problems and the rapid recognition of signs and symptoms requiring evacuation for potentially life-threatening ones.

Toxic Reactions

- Assessment:
 - Recognize the signs and symptoms of toxic reactions and poisons commonly encountered in a wilderness environment.
 - Understand general principles of ingested, inhaled, and absorbed poison management.
- Treatment:
 - If possible, consult with a local poison control center (PCC) with the type of toxin/chemical, how much, when (time), where, and the patient's weight.
 - Treat for anaphylaxis if present.
 - Perform rescue breathing or CPR when indicated.
 - Ingested Poisons:
 - Supportive care and evacuation.
 - Inhaled Poisons: (commonly carbon monoxide, occasionally other gasses e.g., volcanic fumes, smoke, carbon dioxide, etc.)
 - Scene safety. Remove from exposure.
 - Absorbed Poisons:
 - Remove contaminated clothing.
 - Flush the area with water and wash with soap.
 - Suspected opioid overdose:
 - Administer naloxone. Repeat as necessary.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental and prevention strategies. Prior to the trip, research potential wilderness toxins; avoidance equals prevention.

Local and Mild Allergic Reactions

- Assessment:
 - Recognize signs and symptoms of local and mild allergic reactions.
- Initiate treatment:
 - Identify and remove the allergen or trigger when possible.
 - Treat local allergic reactions with cool compresses, a topical corticosteroid, and an oral antihistamine.
 - Monitor for anaphylaxis.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental and clinical conditions and prevention strategies. Consider patient history, triggers, and individual management plans.

Anaphylaxis

- Assessment:
 - Recognize signs and symptoms of anaphylactic reactions.
- Treatment:
 - Administer epinephrine as the first-line treatment for all anaphylactic reactions.
 - Administer an oral antihistamine as adjunctive treatment
 - Monitor for a second phase anaphylactic reaction and treat with epinephrine as described above.
 - Take steps to avoid repeated exposure to the allergen or trigger.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental and clinical conditions and prevention strategies. Consider patient history, triggers, and individual management plans.
- *Core anaphylaxis treatment skills:*
 - Practice and demonstrate how to use an epinephrine auto-injector.

Asthma

- Assessment:
 - Recognize signs and symptoms of mild to moderate asthma flare-ups and severe reactions.
- Treatment:
 - Identify and remove triggers when possible.
 - Assist patient into a position of comfort that supports breathing. Mild to moderate flare-ups:
 - Stop activity, rest, and calm the patient.
 - Assist the patient with their personal medications (prescribed short-acting bronchodilator)
 - Provide respiratory support
 - Assess the need and urgency of evacuation.
- Awareness:
 - Identify predisposing environmental conditions and prevention strategies. Consider patient history, including prescription medications, and individual asthma management plan.
 - Be familiar with the common triggers (cold, exercise, allergy, and stress) and emergency medications (short acting bronchodilators).

Heart Disease

- Assessment:
 - Recognize signs and symptoms of a cardiac emergency.
- Treatment:
 - Stop activity. Keep the patient calm and in a position of comfort, typically sitting or semi-reclining.
 - For chest pain/pressure: administer four low-dose aspirin or one regular aspirin dissolved in water.
 - Perform CPR when indicated.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Consider patient history—including prescription medications—risk factors, and physical demands of the activity

Cerebral Vascular Accident (Stroke)

- Assessment:
 - Recognize signs and symptoms of a cerebral vascular accident (CVA) and be familiar with methods (e.g., FAST assessment) to assess a patient exhibiting these signs and symptoms.
- Treatment:
 - Keep the patient calm and offer reassurance.
 - Determine when the patient was last seen as “normal.”
 - Perform rescue breathing or CPR when indicated.
 - Aspirin is contraindicated.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Consider patient history—including prescription medications—and physical demands of the activity.

Problems with Sugar

- Assessment:
 - Recognize signs and symptoms of hypoglycemia and hyperglycemia in people with diabetes.
 - Recognize the possibility of non-life threatening hypoglycemia in people who do not have diabetes.
- Treatment for hypoglycemia:
 - Administer oral glucose tabs/sugar (honey, maple syrup, hard candy, juice) to all awake patients. Keep hydrated.
 - Consider glucagon nasal spray if prescribed to unresponsive patients. If unavailable, rub oral glucose/sugar paste—honey and maple syrup work—on the oral mucosa of all patients while they are lying on their side to protect their airway.
 - If intervention is successful, give a complex carbohydrate and protein meal.
 - Assess the need and urgency of evacuation.
- Treatment for hyperglycemia:
 - Keep the patient hydrated and assess the need and urgency of evacuation.
- Awareness:
 - Know predisposing environmental and clinical conditions and prevention strategies. Consider patient history, including prescription medications, and individual diabetes management plan.
 - Know that acute onset of illness (e.g., influenza, COVID-19) may affect glucose levels in persons with diabetes.

Abdominal Pain (including Gastrointestinal Illnesses)

- Assessment:
 - Recognize the signs and symptoms of abdominal pain commonly encountered during wilderness travel: bloating, gas, constipation, diarrhea, and nausea/vomiting.
 - Recognize signs and symptoms of an acute abdomen that require an urgent evacuation: rigid abdominal muscles, guarding, rebound pain, and generalized abdominal pain that becomes specific.
- Treatment:
 - Rest. Position of comfort.
 - Consider treating symptomatically with OTC medication. Focus on adequate hydration and adjust diet as needed.
 - Assess the need and urgency of evacuation.
- Awareness:
 - Prevention focuses on diet, camp hygiene, hand washing, food choice and preparation, and water disinfection.

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