

Wilderness First Aid Basics — Workbook

This workbook accompanies the Wilderness First Aid Basics course. Each section pairs with a course module and gives you structured exercises, worksheets, and checklists to move from reading to applied skill. Complete the exercises in the field or in a practice scenario — the goal is to build muscle memory for the assessment frameworks before you need them for real.

Patient Assessment in Remote Settings

Practice running the full WEMS assessment sequence — scene size-up through evacuation decision — so the order becomes automatic under stress.

Exercise: Rapid Assessment Role-Play

Find a partner and take turns playing patient and rescuer. The rescuer must verbalise every step of the scene size-up, Primary Survey (ABCDE), and Secondary Survey (DOTS/SAMPLE) out loud. Run at least two scenarios: one with high-energy trauma MOI and one with a medical MOI. Time each run — target under 4 minutes for a full assessment.

- What hazards did you identify during scene size-up, and how did they change your approach?

- At which ABCDE step did you find the first problem, and how did you correct it before continuing?

- What SAMPLE history did your patient give you, and which piece was most clinically significant?

- What evacuation category (routine / urgent / emergent) did you assign, and what single finding drove that decision?

Worksheet: SOAP Note Practice Sheet

After each scenario (practice or real), complete this SOAP note within 5 minutes while memory is fresh. Use abbreviated language. Hand a copy to your trip leader and keep one with the patient.

Date and time of assessment

Patient age, sex, and weight (estimated)

Chief complaint (patient's own words)

Mechanism of injury or illness

Subjective — symptoms reported by patient

Objective — vital signs (pulse rate, respiratory rate, level of consciousness, skin colour and temperature, cap refill)

Objective — physical exam findings (DOTS by region)

Assessment — problem list (up to 3 working diagnoses)

Plan — treatments applied (with times)

Plan — evacuation decision and rationale

Reassessment times and findings

Rescuer name and contact

Checklist: Pre-Trip Patient Assessment Readiness

- Review the ABCDE sequence verbally the morning before the trip
- Confirm gloves are accessible in the top pocket of your pack, not buried
- Carry a waterproof notepad and two pencils for SOAP notes
- Identify the group's designated first-aider before leaving the trailhead
- Brief all group members on the location of the group first aid kit
- Confirm everyone's medical history and allergy status is recorded on the trip plan
- Establish a check-in schedule and emergency contact with someone off-trail

Section

Build technique for irrigation, closure, and infection monitoring through deliberate practice exercises and a tracking worksheet for multi-day wound management.

Exercise: Irrigation Pressure Test

Fill a 20 mL syringe with water. Hold it over a white bowl at arm's length and depress the plunger briskly with your palm, directing the stream into the bowl. Measure the spread of the impact point on the bowl surface — at correct technique (8 psi) the stream should produce a sharp, focused impact approximately 3–4 cm in diameter. Compare results with a pinhole-pierced Nalgene lid. Repeat until you can reliably produce consistent pressure across 5 consecutive attempts.

- How much volume did you use before the wound model appeared clean?

- Which delivery method (syringe vs Nalgene lid) felt more controllable, and why?

- What improvised tools in your current kit could substitute if your syringe was lost?

- At what point would you stop irrigating and assess whether the wound can be closed?

Worksheet: Multi-Day Wound Monitoring Log

Record an entry for each dressing change. One completed row per change. At any dressing change where two or more infection warning signs are present, escalate the evacuation plan.

Wound ID (location and brief description)

Date and time of dressing change

Wound appearance (colour, granulation, discharge — type and amount)

Erythema — width of spreading redness from wound edge (cm)

Swelling — present / absent / increasing

Heat — warm to touch beyond normal skin / absent

Odour — none / mild / foul

Patient pain score at wound (0–10)

Patient temperature estimate (forehead hot/normal/cold)

Irrigation volume applied (mL)

Closure strips — intact / replaced / removed

Antibiotic ointment — applied yes/no

Next dressing change scheduled (time)

Infection warning signs triggered (list)

Evacuation plan update

Checklist: Wound Care Kit Audit

- 20 mL syringe (or 35 mL) with splash guard or 19-gauge tip
- 1 litre minimum of clean water or saline reserved for irrigation only
- Non-adherent dressings (Telfa pads, minimum 6)
- Steri-strips or wound closure strips in two widths
- Tincture of benzoin compound swabs
- Moleskin and Leukotape K (minimum 1 m each)
- Medical-grade nitrile gloves (minimum 4 pairs)
- Antibiotic ointment (Polysporin or Bacitracin) single-use packets
- Triangular bandages (minimum 2)
- Cohesive bandage (Coban) 5 cm and 10 cm rolls
- Tweezers (splinter-tip forceps)
- SAM splint (large and finger-size)
- Prescribed oral antibiotics if WFR scope permits (note expiry date)

Environmental Emergencies: Cold and Heat

Sharpen your ability to stage hypothermia and heat illness in simulated conditions, and practise the improvised interventions that buy time until evacuation.

Exercise: Hypothermia Wrap Build

Using your actual gear (sleeping pad, sleeping bag, tarp), build a complete Hypothermia Wrap on a willing partner following the sequence: ground pad, opened sleeping bag, vapour barrier, patient placement, chemical heat pack positions, bag closure, tarp wrap. The entire process should take under 8 minutes. Time yourself 3 times across a practice day until you are consistently under 8 minutes.

- Which step took longest, and how would you pre-stage your gear to save time?

- Where did you position the heat packs, and how did you prevent direct skin contact?

- How would you modify the wrap if you only had one sleeping bag for two people?

- At what hypothermia stage (HT I / II / III) would you apply this wrap vs attempting field rewarming with warm fluids?

Worksheet: Environmental Emergency Decision Sheet

For each patient scenario, record your assessment findings and treatment decision. Use during practice drills or real events.

Scenario date and environment conditions (temperature, humidity, wind, sun/shade)

Patient presentation on arrival (behaviour, speech, responsiveness)

Skin condition (colour, moisture, temperature by zone: core/extremities)

Estimated core temperature stage (HT I–IV or Heat Cramps / Exhaustion / Stroke)

Key clinical sign that determined the stage

Shivering present / absent

Mental status (AVPU level and specific finding)

Pulse rate and quality

Respiratory rate

Intervention applied (list with times)

Reassessment at 15 min — changes noted

Reassessment at 30 min — changes noted

Evacuation decision and category

Estimated time to evacuation / rescue

Checklist: Environmental Emergency Prevention Checklist

- Check forecast for temperature extremes before departure and pack accordingly
- Pack a vapour barrier (large contractor garbage bags) in every group member's kit
- Carry a minimum of 2 chemical heat packs per person on cold-weather trips
- Establish a buddy check every 2 hours in cold conditions to assess shivering and confusion
- Pre-mix oral rehydration solution ingredients and store in a labelled container
- Carry a lightweight umbrella or reflective tarp for shade in desert environments
- Ensure all group members know the heat stroke cooling protocol before departure
- Schedule rest stops in shade during peak heat hours (11:00–15:00)

Musculoskeletal Injuries and Emergency Communication

Practise splinting and litter-building techniques with your actual gear, and run a full emergency communication drill so activation is second nature.

Exercise: Improvised Splint and Litter Drill

In two groups: Group A builds a trekking pole forearm splint on a volunteer (position of function, padded, PMS checked). Group B builds a trekking pole sleeping bag litter. Both groups should be complete within 12 minutes. Load the volunteer onto the litter and carry 100 metres over varied terrain, rotating rescuers at 50 metres. Debrief on pad placement, pole separation, and tilt control.

- What padding did you use, and was it sufficient over the bony prominences (malleolus, olecranon)?

- Did you check PMS before and after splint application, and what did you find?

- How did litter tilt change on the sloped section of the carry, and what adjustments did the team make?

- What would you do differently if you had only 3 rescuers instead of 6?

Worksheet: Emergency Communication Drill Record

Complete this sheet during a simulated emergency communication drill. Treat it as a real activation. After the drill, review the recording (if possible) and score each element.

Device used (satellite messenger model / PLB model / VHF radio / cell phone)

Registration status confirmed before drill (yes / no / N/A)

Battery level at start of drill (%)

Time to first transmission from incident recognition (seconds)

GPS coordinates transmitted (latitude / longitude in decimal degrees)

Patient count transmitted

Mechanism of injury transmitted

Injuries and vital signs transmitted

Number of people in party transmitted

Planned route and destination transmitted

Confirmation of receipt obtained (yes / no / one-way only)

Message format used (MEND / free text / voice)

Elements missed on first transmission (list)

Time to complete transmission (seconds)

Post-drill improvements identified

Checklist: Emergency Communication Device Readiness

- PLB or satellite messenger registered with national authority (NOAA / CANSar)
- Device battery fully charged within 7 days of departure
- Spare batteries or charging cable packed and accessible
- GPS coordinates for trailhead and key waypoints pre-loaded
- Emergency contact named and briefed on check-in schedule and SAR call threshold
- Trip plan filed with park service or designated off-trail contact
- All group members know the location of the communication device in the pack
- PLB antenna deployment practised until the motion is automatic
- MEND message format memorised and written on laminated card in first aid kit
- Local SAR phone number and VHF channel stored in contacts

Exercise: Ottawa Ankle Rules Field Application

Using a healthy volunteer, simulate a lateral ankle sprain scenario. Your partner plays a patient who reports twisting their ankle on a root. Apply the Ottawa Ankle Rules: palpate the posterior edge and tip of both malleoli, the navicular, and the 5th metatarsal base. Record your finding (fracture possible vs sprain likely). Then apply the stirrup tape method and assess whether the patient can bear weight. Swap roles.

- Which landmark was hardest to palpate accurately, and how did you confirm you were on the right structure?

- Did your patient test Ottawa-positive or Ottawa-negative, and what management decision followed?

- How many strips of tape did you use, and did cap refill remain under 2 seconds after taping?

- At what grade of sprain would you switch from taping-for-ambulation to immobilise-and-carry?

Your Action Plan

1. Take a certified WFA (2-day) or WFR (8-day) hands-on course to pair with this knowledge — book within 60 days
2. Assemble a personal wilderness first aid kit using the Wound Care Kit Audit checklist as your build guide
3. Register your PLB or satellite messenger with your national authority before your next backcountry trip
4. File a trip plan for every trip longer than 4 hours from the trailhead, naming an emergency contact and check-in schedule
5. Practice the Hypothermia Wrap build until you can complete it under 8 minutes using your own gear
6. Run the Improvised Splint and Litter Drill with your regular trail group at least once per season
7. Memorise the MEND emergency communication format and write it on a laminated card for your kit
8. Review the WEMS patient assessment sequence (ABCDE, DOTS, SAMPLE, evacuation matrix) verbally before each trip
9. Confirm your Td/Tdap booster is current and schedule one if it has been more than 10 years
10. Complete the Environmental Emergency Decision Sheet during a practice drill in both hot and cold conditions

