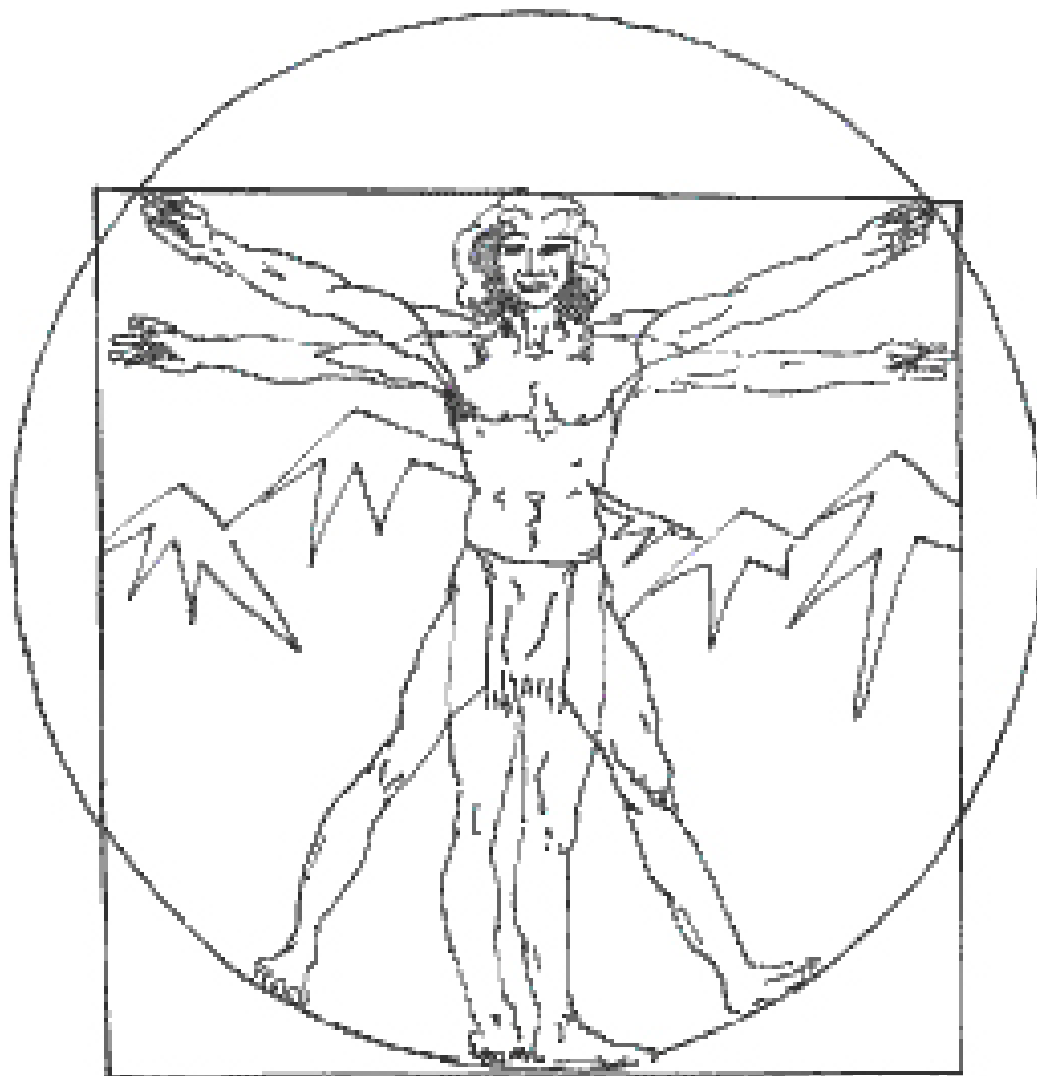


# First Aid Kits



© 2011 by Paul Nicolazzo  
the Wilderness Medicine Training Center  
[wildmedcenter.com](http://wildmedcenter.com)

# *First Aid Kits*

## *Introduction*

Whether you are traveling alone, taking part in an expedition, or responding as a member of a search & rescue (SAR) team, you will need a first aid kit. What you should take and how you should package it depends on many things. ***There is no generic first aid kit.*** Here are a few basic concepts that you will need to know in order to begin building a first aid kit that will meet your needs.

### *Size & Weight*

The type of activity or expedition defines the amount of weight and space available for your kit (e.g.: a sailboat can carry more than a raft and a raft can carry more than a climber etc.). The longer you are from “help” generally the bigger your first aid kit will be; consider resupply(s). The level of training of the medical “officer” will limit how much invasive equipment or Rx drugs you can carry. Have each expedition or team member complete a thorough medical form; you may need to add special equipment or drugs to your kit. Pay attention to any allergies. If your experience in wilderness medicine is limited, consider carrying our Wilderness Medicine Handbook. Also consider carrying our Weatherproof Patient SOAP Notes to thoroughly document your assessment and treatment.

### *Expedition versus SAR team Kits*

First aid kits used by expeditions are conceptually very different from those used by Search & Rescue teams. Expeditions hope that they will NOT use their first aid kits and adhere to the principles of improvisation: they limit specialized items, focus on multipurpose equipment, and adapt expedition gear for medical uses (splints or litters). As your ability to improvise increases, the size of your expedition first aid kit decreases. Rescue teams know they WILL use their equipment and often carry specialized gear with them rather than scavenging their personal gear for improvisation.

### *Packaging*

Packaging is extremely important. Well thought out organized packaging protects valuable and irreplaceable equipment. It permits fast and easy access to emergency gear without “vomiting” kit contents everywhere. Critical concepts to organization and

packaging are:

- Use different colored compartments or packs. DO NOT use plastic bags as pack or compartment substitutes.
- Clearly label each compartment or pack: In many expeditions each expedition member carries their own personal care kit (blisters, sun screen, OTC meds, personal Rx meds, minor cuts & scrapes, etc.) leaving the expedition first aid kit for emergencies and minor trauma (more serious wounds and unstable injuries). This helps ensure that the expedition first aid kit is complete when it is needed.
- Laminate a contents list for each pack and indicate the intended use for each item.
- Seal soft goods in plastic to protect them from moisture. Use individual mini zip-locks or “Seal-a-Meal” freezer type packages.
- Tubes break. Repackage ointments into one and two ounce—or larger depending on group size—wide mouth Nalgene® bottles.
- Liquids leak. Package liquids in one and two ounce—or larger depending on group size—narrow mouth Nalgene® bottles.
- Use a weatherproof drug log for ALL medications so that you know who is using them and why. The log should include space for the patient’s name, drug name, administration route, dose, time, and reason/diagnosis.

### *Training*

Train your expedition or team members to use your kit. Until they are trained only you know why you assembled the kit as you did. Without specific training most people will not know how to use the equipment you have so thoughtfully assembled. Restrict access to compartments or packs that members are not trained to use.

### *Compiling a Possible Problem List*

An effective first aid kit is built from a comprehensive possible problem list. Divide your list into Basic Life Support or Major Trauma, Minor Trauma, Environmental, and Medical problems. Choose the problems that you will likely encounter and prioritize them. Once you are satisfied with your possible problem list, compile a list of first aid supplies needed to treat them; carry more of the stuff that

you WILL need. A basic check list for many possible problems and first aid supplies follows; use it as a guide. In remote areas where urgent evacuation is difficult or simply not possible, you may need ad-

ditional assessment and treatment supplies. *Within the United States a physician consultation and prescription is required for all Rx drugs.*

## Basic Life Support & Major Trauma

Possible Problem	First Aid Supplies
Respiratory Distress & Arrest	~ Simple Face Mask or Face Shield (or commit to mouth-to-mouth rescue breathing) ~ Pulse oximeter
Cardiac Arrest	~ AED (useful only if ALS & transport are available)
Severe Bleeding	~ Trauma scissors ~ Trauma gloves ~ Trauma dressings (maxi-pads, bladder control pads) ~ Elastic wrap or self-adhering bandage for pressure bandages
Vomiting	~ 60 cc suction syringe & tube
Unstable Spine	~ Safety pin for spine assessment ~ SAM splint (for improvised C-collar) ~ Improvise a backboard or litter from expedition equipment.
Urgent Evacuation	~ Detailed Emergency Action Plan ~ Cell phone, radio or satellite phone

## Minor Trauma

Possible Problem	First Aid Supplies
Stable & Unstable Extremity Injuries	~ Improvise splint from expedition equipment. ~ SAM splint & self-adhering bandage ~ Pain & anti-inflammatory drugs & herbs
Friction Blisters	~ Tincture of Benzoin ~ Cloth or flexible medical tape ~ Second Skin for treating blisters ~ ENGO for blister prevention & treatment
Superficial & Partial-thickness Wounds	~ Aloe Vera gel & Vitamin E gel for superficial wounds ~ White/light petroleum jelly for partial thickness wounds
Full-thickness Wounds	~ Irrigation syringe ~ Scalpel & blades and/or surgical scissors (Leatherman, Swiss Army) ~ Forceps or tweezers ~ Exam gloves ~ Povidone Iodine solution ~ Steri-strips, super glue, skin adhesive, suture kit or wound staples ~ Local analgesic for infiltrating wound prior to cleaning ~ Topical & Oral Herbs & Antibiotics (Rx) ~ Tegaderm micro thin film dressing ~ Roller gauze for cleaning, packing and dressing ~ Self-adhering bandage for holding dressing in place

## Environmental Problems

Possible Problem	First Aid Supplies
Hypothermia	~ Hypothermia thermometer (digital preferred) ~ Mylar space bag for inner vapor barrier of hypothermia package ~ Improvise hypothermia package & heat packs (hydropacks, water bottles, etc.) from expedition equipment
Heat Illnesses	~ Mist bottle for cooling in arid climates ~ Digital thermometer ~ Oral Rehydration Solution/Salts
Sun Exposure	~ Sun block ~ Aloe Vera gel & Vitamin E gel for superficial wounds
Allergic Reactions	~ Epinephrine (Rx) for anaphylaxis ~ Oral antihistamine
Poison Ivy, Oak & Sumac	~ Pre-exposure lotion ~ Post-exposure soap (Technu Oak & Ivy Cleanser®, Goop®) ~ Post-exposure treatment (Technu Extreme Gel®)
Acute Mountain Sickness	~ Herbs: Ginko biloba ~ AMS (Rx) Drugs ~ Portable hyperbaric chamber
Sea & Motion Sickness	~ Scopolamine tablets or patch (Rx) ~ Herb: Ginger root ~ Wrist Bands (acupressure) ~ OTC and Rx Antihistamines ~ Hypodermoclysis (HDC) infusion set for dehydration (Rx)

## Medical Problems

Possible Problem	First Aid Supplies
Disease	~ Disease specific (Rx) drugs ~ Disease specific herbs
Angina & Heart Attack	~ Baby aspirin ~ Nitroglycerin (Rx) ~ AED (if ALS and rapid evacuation are possible)
Diabetes	~ OTC Glucose tablets & paste ~ Glucagon Kit (Rx) ~ Urine test strips for ketones
Asthma	~ Asthma medication (Rx oral, inhalers) ~ Epinephrine (Rx)
Pain	~ NSAIDs ~ Rx codeine-based pain meds
Nosebleed Broken Nose	~ Vasoconstricting nasal spray or drops ~ Gauze, small tampons, or commercial nasal tampons ~ Petroleum jelly, saline gel, or aloe vera gel for moisturizing dry nasal passages

## Medical Problems continued

Possible Problem	First Aid Supplies
Foreign Body Corneal Abrasion Corneal Ulcer Chemicals Photokeratitis Conjunctivitis	<ul style="list-style-type: none"> <li>~ Synthetic wetting solution (artificial tears)</li> <li>~ Cotton-tipped applicators to invert eyelids</li> <li>~ Fluorescein strips/solution &amp; Cobalt blue light for assessment</li> <li>~ Ophthalmic anesthetic to control pain during assessment</li> <li>~ Sterile saline and/or irrigation syringe for flushing eye</li> <li>~ Ophthalmic antibiotic ointment/solution to prevent and treat bacterial infections</li> <li>~ Ophthalmic NSAID solution to control pain during healing</li> <li>~ Rx pain meds to control severe pain during evacuation</li> </ul>
External Ear Infection Middle/Inner Ear Infection Ruptured Ear Drum	<ul style="list-style-type: none"> <li>~ Otoscope (for assessment)</li> <li>~ Vinegar or GSE for Tx of external ear infections</li> <li>~ Rx antibiotic drops for Tx of external ear infections</li> <li>~ Rx antibiotics for Tx of middle or inner ear infections</li> <li>~ Mineral oil, alcohol, and irrigation syringe for removing ear wax</li> <li>~ Ear plugs to prevent or Tx external ear infections and ruptured ear drums in a wet environment</li> </ul>
Broken Teeth Avulsed Teeth Lost fillings and Crowns Infected Teeth and Gums	<ul style="list-style-type: none"> <li>~ Cavit® is a dental putty/cement without oil of clove</li> <li>~ Dentemp® is a dental putty/cement with oil of clove</li> <li>~ Oil of clove topical analgesic</li> <li>~ Cavity varnish to seal &amp; protect tooth repairs (paint on)</li> <li>~ NSAIDS &amp; Rx analgesics for pain</li> <li>~ Dental mirror &amp; probe/forceps to see/work in patient's mouth</li> </ul>
Vaginitis	<ul style="list-style-type: none"> <li>~ Supplemental bacteria (yogurt, acidophilus capsules, etc.) for women taking antibiotics to help prevent yeast infections</li> <li>~ OTC vaginal suppositories or creams for yeast infections</li> <li>~ Rx vaginal suppositories or creams for bacterial infections</li> <li>~ Rx oral antimicrobials for protozoal infections</li> </ul>
Urinary Tract Infection	<ul style="list-style-type: none"> <li>~ Urine test strips for nitrites</li> <li>~ Rx antibiotics</li> </ul>
Tinea Fungal Infections	<ul style="list-style-type: none"> <li>~ OTC creams, lotions, &amp; powders</li> <li>~ Rx oral antifungal meds, creams, &amp; lotions</li> </ul>
Ectopic Pregnancy	<ul style="list-style-type: none"> <li>~ Early pregnancy test (EPT)</li> </ul>
Seizures/Epilepsy	<ul style="list-style-type: none"> <li>~ Rectal Diazepam for stopping continuous seizures</li> </ul>

If size, weight, and space restrictions, and medical training permit, consider carrying: a blood pressure cuff and stethoscope, advanced airways, Foley catheter kit, and chest tube set.