



Wilderness Herbal First Aid

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Wilderness first aid encompasses a wide range of first aid circumstances from skinned knees to hypothermia. This class will focus on the below conditions

- 1) PAIN and TRAUMA**
- 2) FOOD and WATER-BOURNE ILLNESS**
- 3) ANIMAL BITES and SCRATCHES**

PAIN and TRAUMA

Pain is perhaps the most constant and immediate aspect in treating medical emergencies. It is imperative that the first aid herbalist knows a range of pain remedies to cover an array of situations. Pain is a highly idiopathic response and the herbal therapies must not only differentiate between the specific categories necessary to alleviate pain but also take into account the patients individual reaction to the medicines proffered. Sensitivities vary widely and once a practitioner has a sense of the subtleties of a specific plant, starting with small dosages and then gradually increasing the dosage may be a prudent way to judge an individuals reaction. There is a continuum between the pain-relieving categories where dosing may be one of the most important criteria of how to administer an individual herb.

Nervine-----Sedative-----Hypnotic

In the above statement, the same herb can be applied in differing amounts to achieve either the nourishing nerve-tonifying effects of a nervine, the relaxing, tranquilizing effects of sedatives or the sleep-inducing results of the hypnotics. A pertinent herbal example would be Valeriana (excluding those persons who have contra-affects). In small regular doses Valeriana can help repair damaged nerves from prior injuries. Larger doses can bring on its sedating effects, useful at the time of injury, but may cause some impairment of mental acuity (often a plus in these painful moments). And in yet larger doses it may produce sleep. The individual responses to Valeriana vary extensively. For some people large doses have very little effect while for others, small amounts may put them into a deep drugged-like sleep. So it is up to the practitioner to understand the characteristic properties of the 'pain herbs'.

Equally important is an awareness of the various categories pertaining to the diminution of pain. They encompass such divergent avenues as the quelling of mental anguish to the relaxation of skeletal muscles to the reduction of inflammation. These are frequently interconnected, though it is important to decide which of these categories is a priority.

Trauma for this paper pertains to the psychological distress associated with medical emergencies. Herbal medicines that lessen trauma often work in diverse modes to help reduce the acute emotional stress that accompanies many first aid situations, particularly those in which patients have been attacked, as with dog bites. This group of herbs includes nervines, sedatives and a few plants that have unusual properties especially adapted to dealing with traumatic situations. And naturally any relief of pain will also relieve the accompanying trauma.

An in-depth understanding of how the below categories function will help the practitioner ameliorate pain and speed recovery.

MATERIA MEDICA CROSS-REFERENCE LIST

Aconite — *Aconitum* spp.
Aloe — *Aloe* spp.
Anemone — *Anemone* spp.
Arnica — *Arnica* spp.
Barberry — *Berberis* spp.
Belladonna — *Atropa belladonna*
Black cohosh — *Cimicifuga racemosa*
Blue vervain — *Verbena hastata*
Calendula — *Calendula officinalis*
California poppy — *Eschscholtzia californica*/E. spp.
Canadian fleabane — *Conyza canadensis*
Catnip — *Nepeta cataria*
Cattail — *Typha latifolia*
Cayenne — *Capsicum* spp.
Chaparral — *Larrea* spp.
Chickweed — *Stellaria media*
Cinquefoil — *Potentilla* spp.
Comfrey — *Symphytum* spp.
Conifer resins — various
Cow parsnip — *Heracleum* spp.
Datura — *Datura* spp.
Echinacea — *Echinacea* spp.
Epipactis — *Epipactis helleborine*
Garlic — *Allium sativum*
German chamomile — *Matricaria recutita*
Ghost pipe — *Monotropa uniflora*
Ginger — *Zingiber officinalis*
Goldenseal — *Hydrastis canadensis*
Henbane — *Hyoscyamus niger*
Jamaican dogwood — *Piscidia piscipula*
Kava kava — *Piper methysticum*
Lemon balm — *Melissa officinalis*
Licorice — *Glycyrrhiza glabra*/G. *uralensis*
Mallow — *Malva* spp.
Lobelia — *Lobelia inflata*
Lousewort — *Pedicularis* spp.
Marijuana — *Cannabis* spp.
Marshmallow — *Althaea officinalis*
Meadowsweet — *Filipendula ulmaria*
Motherwort — *Leonurus cardiaca*
Myrrh — *Commiphora* spp.
Nettles — *Urtica dioica*
Oak — *Quercus* spp.
Onion — *Allium cepa*
Oregon graperoot — *Berberis* spp.
Osha — *Ligusticum porteri*
Passionflower — *Passiflora incarnata*
Pine — *Pinus* spp.
Plantain — *Plantago* spp.
Prickly poppy — *Argemone* spp.
Propolis — Bee resin
Pussytoes — *Antennaria* spp.
Ragweed — *Ambrosia artemisiifolia*/A. spp.
Rose — *Rosa* spp.
Sage — *Salvia* spp.
Sagebrush — *Artemisia* spp.
St. Johnswort — *Hypericum perforatum*
Shepherd's purse — *Capsella bursa-pastoris*
Silk tassel — *Garrya* spp.
Skullcap — *Scutellaria lateriflora*
Slippery elm — *Ulmus fulva*
Spiraea — *Spiraea* spp.
Tobacco — *Nicotiana rustica*/N. *tabacum*
Turmeric — *Curcuma domestica*
Valerian — *Valeriana officinalis*/V. spp.
Vervain — *Verbena officinalis*
Wild indigo — *Baptisia tinctoria*
Wild lettuce — *Lactuca* spp.
Wild oats — *Avena sativa*/A. *fatua*
Willow bark — *Salix* spp.
Witch hazel — *Hamamelis virginiana*
Yarrow — *Achillea millefolium*
Yerba mansa — *Anemopsis californica*
Yunnan Paiyao — Chinese patent medicine

GENERAL PAIN REMEDIES

| | | |
|------------------|-----------|---------------|
| Aconite | Gelsemium | Passionflower |
| Alcohol | Henbane | St. Johnswort |
| Belladonna | Hops | Silk tassel |
| Black cohosh | Kava kava | Skullcap |
| California poppy | Lobelia | Valerian |
| Epipactis | Lousewort | Wild lettuce |
| Ethanol | Marijuana | Wild oats |

ADSORBENTS — Capable of attracting and holding onto foreign material

| | |
|--------------------|-------|
| Activated charcoal | Clay |
| Charcoal | Gauze |

ANESTHETICS — Produces a partial or complete loss of nerve sensation

| | | |
|---------|-------------------------|---------|
| Alcohol | Clove bud essential oil | Tobacco |
| Cayenne | Heat | Yarrow |

ANTISPASMODICS — Relieves smooth muscle spasms

| | | |
|------------|-------------|----------|
| Belladonna | Henbane | Skullcap |
| Black haw | Marijuana | Valerian |
| Crampbark | Silk tassel | |

ANTIINFECTIVES (includes antiseptics and antimicrobials) — Helps prevent infection

| | | |
|------------|-------------------|------------------------|
| Calendula | Myrrh | Tea tree essential oil |
| Chaparral | Oak | Tree resins |
| Charcoal | Oregon grape root | Urine |
| Echinacea | Osha | Witch hazel |
| Garlic | Propolis | Yarrow |
| Goldenseal | St. Johnswort | |

ANTIINFLAMMATORIES — Counteracts or reduces inflammation

| | | |
|------------------|-------------|---------------|
| Aloe | Ginger | St. Johnswort |
| Arnica | Licorice | Spiraea |
| Calendula | Meadowsweet | Turmeric |
| Chickweed | Poplar | Willow |
| German chamomile | Pussytoes | Yarrow |

ASTRINGENTS — Contracts tissue and reduces discharge

| | | |
|-----------------|------------|-------------|
| Agrimony | Oak | Witch hazel |
| Blackberry root | Potentilla | Yerba mansa |
| Canaigre | Rhatany | Yellow dock |
| Geranium | Rose | |
| Lady's mantle | Tea | |

CIRCULATORY STIMULANTS — Excites circulation

| | | |
|----------|-------------|-------------|
| Bayberry | Ginger | Rosemary |
| Cayenne | Prickly ash | Wild ginger |

HEMOSTATICS — Arrests the flow of blood

| | | |
|-------------------|------------------|---------------|
| Canadian fleabane | Cinnamon | Yarrow |
| Cayenne | Shepherd's purse | Yunnan Paiyao |

RUBEFACIENT — Stimulates localized blood flow and reddening of the skin

| | | |
|----------|--------------|--------------|
| Camphor | Mustard seed | Topical heat |
| Cayenne | Po som on | |
| Friction | Tiger balm | |

SEDATIVES — Calms and allays excitement

| | | |
|------------------|---------------|--------------|
| Alcohol | Kava kava | Skullcap |
| California poppy | Lobelia | Valerian |
| Epipactis | Marijuana | Wild lettuce |
| Hops | Passionflower | |

SKELETAL MUSCLE RELAXANTS — Relaxes muscles of the musculo-skeletal system

| | | |
|--------------|-----------|--------------|
| Black cohosh | Lousewort | Skullcap |
| Kava kava | Marijuana | Wild lettuce |

TRAUMA AIDS — Aids in recovery of psychic/emotional balance after trauma

| | | |
|------------------|------------------------|---------|
| Anemone | Lavender essential oil | Vervain |
| Blue vervain | Lobelia | |
| California poppy | St. Johnswort | |

VULNERARIES (includes Emollients) — Aids recovery of tissue from wounds

| | | |
|-----------|-------------|---------------|
| Aloe | Comfrey | Plantain |
| Arnica | Mallow | St. Johnswort |
| Calendula | Marshmallow | Slippery elm |

FOOD AND WATER-BOURNE ILLNESS

Many organisms can cause food and water-bourne sicknesses. Instead of naming the causative organisms here I will cover some of the practical treatments for a variety of infectious digestive tract organisms including Giardia, Shigella, Cryptosporidium, and mild cases of Escherichia coli (E. coli). The integrative approach of combating these organisms is to use a variety of the categories listed below. This line of attack includes using adsorbents to remove the parasite, antimicrobials to kill the invading microorganism, antispasmodics and antinauseants for the attendant discomfort and gut restoratives for recovery. These parasites are a mixed bag of bacteria, viruses, protozoa as well as other organisms, so until a positive identification of the offending organism is known (they are not always identifiable, even with lab tests) a broad array of antimicrobials is suggested. It is often helpful to switch around the specific medicines every few days as the organisms have less of a chance to adapt.

Categories for treating food poisoning- for individual herbs see the above charts

1. **Adsorbents-** bonds with and carries out pathogens
2. **Antibacterials-** kill or inhibit bacteria
3. **Anticholinergics-** strong agents that reduce smooth muscle cramping
4. **Antiinflammatories-** reduce inflammation
5. **Antiparasitics-** broad category of agents that destroy invading pathogens
6. **Antispasmodics-** reduce smooth muscle cramping
7. **Astringents-** tighten tissues
8. **Bitters-** increase gastric and intestinal secretions
9. **Carminatives-** allay general gut pain associated with flatus and bloating
10. **Carriers-** help deliver the medicine to a specific site
11. **Digestive anesthetics-** decrease gut sensitivity and pain
12. **Flavorings-** improve the taste of other medicines
13. **General pain relievers-** a variety of agents that relieve a broad array of pain
14. **Gut restoratives-** hasten recovery of the digestive tract after illness or damage
15. **Nervines-** nourish nerves
16. **Skeletal muscle relaxants-** reduce skeletal muscle excitability and pain
17. **Vulneraries-** aid tissue recovery after injury

SELECTED REMEDIES

Activated Charcoal

Charcoal has a strong affinity for adsorbing a diversity of toxins from the digestive tract including many of the pathogens associated with food and water sickness. It forms a strong bond with these organisms and then they are carried out with the charcoal during a bowel movement. Activated charcoal has a much stronger affinity than charcoal from burnt wood or food though these can work in a pinch. To prepare charcoal to be taken internally, it is probably easiest to mix some powdered activated charcoal with water. Also, burnt food or wood can be (unhappily) chewed up and swallowed. Or capsules or tablets can be bought or made and used. Activated charcoal is a lot less expensive when purchased in bulk, and since copious amounts may be needed in large group situations, bulk may be a wise choice if one is considering doing first aid work often.

Chaparro amargosa (*Castela emoryi*)

Chaparro is one of the stronger acting gut antiparasitics to kill or inhibit a number of digestive parasites. The plant is found sparingly in the Southwest US and is more common in Mexico. It can be taken as tea or more commonly as a tincture. Its taste is north of wretched and so its flavor is not so easily brooked. And yet it is a mainstay for many travelers sojourning in habitats with mysterious and malevolent bacteria.

Peppermint Spirits

Peppermint spirits is a combination of peppermint essential oil and ethanol. The ratio is generally around 1:15 (peppermint spirits:ethanol) with the final product at approximately 50% ethanol. It is used in small doses, one to three *drops* per dosage. While it has an agreeable minty flavor, it has a strong bite. It can also be added to some water to offset this sharp taste. The small dose needed is a big plus for its benefits which are to allay nausea and painful 'tight' gastric episodes as with the nausea and stomach pain in *Shigella* and various food poisonings. With an actively vomiting person, a drop can be smeared on the their lips to avoid the swallowing gag reflex.

Neutralizing Cordial

This is an old formula with many variations. This one was lifted from Michael Moore. It is particularly effective for nausea and queasiness. Due to the sugar content it is well tolerated by children and other hard-to-please types. It is useful for quelling upset stomachs rather than acting as an antimicrobial. Doses can vary from 5-10 drops for a child to a teaspoon or more for an adult. It should be a regular standby in one's first aid kits due to its beneficial and predictable qualities.

Neutralizing Cordial

- **Turkey rhubarb tincture**-*Rheum* spp.
- **Cinnamon tincture** -*Cinnamomum* spp
- **Goldenseal tincture** -*Hydrastis canadensis*
- **Peppermint spirits** (see above)-*Mentha piperita*
- **Potassium carbonate**
- **Simple syrup**
- **Dilute alcohol (50%)**

Gut Restorative Tea

This is a reasonably tasty tea from some commonly found plants. Since I generally make this tea in outdoor situations, I usually just throw these ingredients in some conscripted vessel (often a cleaned out coffee can) , place on fire and cook for about 15-20 minutes. This is a first-rate tea for after the infection has begun to ebb. One to three cups may do the trick.

Gut Restorative Tea

- **Filipendula or Salix**- antiinflammatories
- **Achillea**- antimicrobial
- **Foeniculum or Elettaria**- flavoring
- **Antennaria or Gnaphalium**- demulcent antiinflammatory
- **Potentilla**- astringent
- **Rubus root**- astringent

ANIMAL BITES AND SCRATCHES

The bites and scratches of animals should be treated promptly and aggressively, especially if they are deep enough to draw blood, as bacteria are often deposited into these wounds leading to secondary bacterial infection. A multicategorical herbal approach should be instituted to add wound recovery, reduce pain and prevent infection

Categories for treating animal bites and scratches

1. **Adsorbents**- bind with infectious organisms. Activated charcoal, Clay, Toothpaste
2. **Antiinflammatories**- reduces inflammation- Filipendula, Salix, Achillea
3. **Antimicrobials**-kill infectious agents- Berberis, Ligusticum, Echinacea, Achillea
4. **Antiseptics**- cleanse wounds. Achillea, Larrea, Propolis, Hydrastis
5. **Astringents**- tighten tissues. Rubus, Potentilla, Quercus, Hamamelis
6. **Immunostimulants**- stimulates immunity. Echinacea, Calendula, Commiphora

7. **General pain relievers**- Valeriana, Eschscholtzia, Cannabis
8. **Hemostatics**- arrests bleeding. Achillea, Yunnan paiyao, Capsella
9. **Trauma aids**- reduces emotional shock and helps restore mental balance. Anemone, Hypericum, Lobelia
10. **Vulneraries**- aids tissue recovery after injury. Symphytum, Calendula, Plantago

THERAPEUTIC APPROACHES

- 1) Treat obvious symptoms such as excessive bleeding (hemostatics) and pain
- 2) Administer immunostimulating and antimicrobial internal medicines.
- 3) Soak affected part for up to 20 minutes in a warm to hot antiseptic herbal wash once or twice daily, for up to three or four days.
- 4) Prepare and apply an activated charcoal poultice. Wrap snugly in place.
- 5) When applying bandages, take the pressure of further inflammation into account
- 6) Internal antibiotics and immunostimulating herbal medicines should be taken every two to four hours, lessening dosage over time.
- 7) Unwrap and check wound for signs of infection at least once a day until the wound is well healed. Apply fresh poultices when rewrapping.

Look for the following signs that indicate possible localized infection

- | | |
|-----------|--------------|
| • Pain | • Swelling |
| • Pus | • Tenderness |
| • Redness | • Warmth |

Signs for systemic (internal) infection include

- | | |
|-----------------|-----------|
| • Fever | • Nausea |
| • Swollen lymph | • Malaise |
| • Headache | |

GENERAL FIRST AID STRATEGY

- 1) Obtain a quick history. What bit them, location(s) and felt depth of bite. Is the animal known (personal or friend's pet)?
- 2) Current situation of biting animal. Are others in danger? Could the animal be rabid or otherwise unsafe?
- 3) Check for damage. Cleanse and irrigate the wound (wear gloves when probing and coming into direct contact). Is there any collateral damage to nerve, muscle, joint, or tendons? Did the bite penetrate the bone? Did the person receive any other injury while escaping the primary encounter?
- 4) Debride (surgically remove) any damaged devitalized tissue to reduce the possibility of infection and promote wound repair.
- 5) Probe and remove any foreign material
- 6) Clean and irrigate the wound again thoroughly.
- 7) Bite wounds should be checked carefully for three to four days as infections may not take hold until then. Continue to debride devitalized skin and keep clean.

SELECTED REMEDIES

Anemone (Anemone spp.)- Anemone holds an unusual place in the herbal apothecary. It is distinct in its ability to reduce the emotional trauma associated with many medical emergencies. Anemone, in the right person, in the right situation, can placate unraveled distraught nerves and help ground the person in need. Small doses work well, approximately 1-5 drops as needed. Large doses are no more effective than

smaller doses. A number of Anemone species work well, particularly the Rocky Mountain species. These include *A. patens*, *A. tuberosa* and *A. multifida*. It is also one of the few herbs effective in 'bringing down' an individual having a bad reaction to a hallucinogenic drug. Anemone is a singular tincture that every first kit should contain.

Yarrow (*Achillea millefolium*)- Yarrow is a superb first aid plant as its actions fit into a few important categories. And it is commonly found, a boon for the first aid herbalist. Yarrow makes a strong antiseptic wound soak, effective for the insidious bacterial infections that often follow animal bites. It also has antiinflammatory and hemostatic activity making it a good all around wound-repairing plant. To prepare it for a wound soak, gather about 20-30 flowering stalk or a large handful of basal leaves and steep or cook them (see tea making notes under 'gut restorative tea' above) for approximately 15 minutes. Have the injured person soak for at least 10-20 minutes occasionally changing or reheating the soak water if possible. I tend to not carry it in my first aid bag since it ages fast, it is commonly found, and other plants can be found and used if there is no Yarrow around.

Propolis- Propolis is a resinous product prepared from bees whom gather this viscid secretion from various+ trees for hive repair and maintenance. The tincture of propolis is used, as it is not water-soluble. It is a fine topical antiseptic. It is especially efficacious due its resinous sticky quality. This allows it to be painted onto a wound where it will adhere and prevent invasive pathogens from entering. It can also be used to increase the tackiness of band-aids to stick to skin (akin to tincture of benzoin). It should generally be applied to scratches and shallow wounds as its presence in a deep wound may make it difficult for the skin to re-grow. One drawback is that anything that it comes into contact with it will stick, making for a messy situation. It is also a useful spray for infected sore throats.