

# Holistic Disaster Preparation:

## Herbs & First Aid For a Community Based Response



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## ✕ Acknowledgments ✕

*It is most important to acknowledge the first nations peoples whose land we're on. The following information could not have been possible without their wisdom & knowledge. A vast amount of information on plant medicines stems from the wisdom & knowledge of the indigenous peoples of these lands. Indigenous societies have always known that individual & community health is not separate from environmental health. It's vital that we understand these connections. The world's last remaining resources and pristine areas where many of these medicines thrive are also where indigenous communities live. It's not enough to simply make an acknowledgement. These communities are on the front lines & are being targeted for the last dregs of resources. Indigenous peoples are still here and are building a broad movement to protect sacred sites and their homelands from desecration and environmental degradation.*

*It is also important to acknowledge the many in New Orleans who gave health care volunteers and others working at the Common Ground Health Clinic insight into the true meaning of self determination and community health.*

*Victory in reclaiming the earth will require a broad movement that can help bridge cultures, issues, and nations. It is more critical than ever to bring environmental justice by protecting sacred sites & the environment, defending human rights and indigenous culture.*

*This workshop is a collective endeavor and the outline is a compilation of the work that many people have done. Much of the format and content of this first aid training was made possible by the work and dedication of countless herbalists & street medic collectives across the country that seek to refine an accessible, radical, and empowering method to teaching first aid skills. A list of specific contributors & resources can be found at the end.*

## PURPOSE OF THIS WORKSHOP

Hurricane Katrina revealed massive deficiencies in the government's ability to respond to natural disasters. But the seeds of the disaster in the Gulf Coast were sowed by decades of racist and oppressive social neglect that left levees, public health, education and housing systems in shambles. The real disaster in New Orleans is occurring now almost two years after Katrina has passed. Displaced residents daily battle the governments and disaster capitalists for the right to return to their city. Neighborhoods are still struggling against gentrification and big industries to get affordable housing, functioning school and health care systems as well as access to adequate food.

THE PURPOSE OF THIS WORKSHOP IS TO ADDRESS SOME OF THESE QUESTIONS:

Is the Bay Area's social infrastructure any stronger than what existed in New Orleans before the storm? What weaknesses in our system would a natural disaster expose? Are we prepared to respond to the next major disaster in the Bay Area?

This training is for people wanting to support communities working for self-determination before, and after disasters of any kind. We offer individuals basic first aid skills useful for surviving natural disasters. This workshop is for those who are healing inclined to talk about expanding their understanding of health and healing. We emphasize herbal medicine as an accessible, and effective form of health care. Instructors will draw upon our experiences as health care advocates & practitioners, street medics, & volunteers at Common Ground Health Clinic in New Orleans.

AS CLIMATE CHANGE BRINGS ON UNPRECEDENTED NATURAL DISASTERS WILL THE BAY AREA REACH OUT TO THOSE COMMUNITIES IT HAS HISTORICALLY NEGLECTED? CAN WE STAND IN SOLIDARITY WITH THREATENED COMMUNITIES NOW SO THAT WHEN DISASTER HITS NO ONE WILL BE LEFT TO STARVE ON THEIR ROOFTOPS?

We hope that this information helps you to be safer and stronger in your communities. The skills shared here are not intended as a replacement for competent medical care when it is needed, but as a guide for appropriate action until help can be obtained.

Continuing education resources such as Wilderness First Responder and First Aid courses are listed at the end.

Wilderness First Responder, CPR and First Aid classes are good places to get more in- depth safety skills that will only be touched upon briefly in this workshop. There are many great resources to continue your education beyond the basics to more in-depth medical emergency response & herbal skills listed at the end.

## **Holistic Disaster Preparation** DEFINED:

HEALTH- The World Health Organization defines health as, " a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". In more recent years, the WHO statement has been modified to include the ability to lead a "socially and economically productive life."

HEALTH CARE-Health care is political. As Black Cross Health Collective so clearly articulates on their website, "The kind of care we do or don't receive, where and how we receive that care, who provides that care, who has access to training to provide care, and what kinds of trainings are smiled or frowned upon, all involve inherently political issues. We believe the system needs to be changed... the health care system right along with all the others."

HOLISTIC means the comprehension of the parts of something as intimately interconnected and explicable only by reference by the whole. With medicine it's characterized by the treatment of the whole person, taking into account mental and social factors, rather than just the physical symptoms of the disease. Ulcer treatment that kills bacteria. It doesn't attempt to change the tissue imbalance that led to bacterial proliferation -it isn't even interested in the fact that there might be a changed tissue condition that encouraged the proliferation in the first place.

DISASTER- A disaster is the impact of a natural or human-made hazard that negatively affects society or environment. Disasters occur when hazards strike in vulnerable areas. Hazards that occur in areas with low vulnerability do not result in a disaster.

There is no such thing as a natural disaster. Or more importantly, its not the natural disasters that we need to prepare for. Natural disasters only expose the weaknesses of a system that has been designed to fail for certain communities. When researching possible disaster scenarios, you only need to look at the disasters happening every day to understand how people will be affected.

HOLISTIC DISASTER RESPONSE- We must understand that *THERE'S NO SUCH THING AS A NATURAL DISASTER. Our social infrastructure like the school, judicial and health care systems are truly a disaster for most of the population.* To deal with disasters holistically it is crucial to address and advocate for 'social prevention,' i.e. organizing against poverty, racism, police harassment, challenging racism in order for collective liberation. It's also important for white activists seeking to do good to understand how to support communities struggling for autonomy without co-opting their movements.

*This brings us to ask, what is community-based? Group discussion is encouraged.*

## **A BRIEF OVERVIEW OF DISASTERS:**

In a weakened ecosystem, a disturbance of any kind offers the opportunity for invasive species to colonize an area. Natural disasters work in similar ways.

The nation and the world were shocked when reports emerged on the racially biased distribution of relief in New Orleans after the storm. Stories of thousands of FEMA trailers sitting unused in Alabama while thousands of mostly black displaced residents waited for temporary housing highlighted how racism played a role in the distribution of resources after the storm. A similar example is the city's attempts to turn the Lower 9<sup>th</sup> ward, a historically African-American neighborhood where over 50% of residents owned their own homes, into "green space" instead of permitting communities to rebuild.

This exploitation of a vulnerable population in the wake of disaster is not uncommon. In fact we would be ignorant not to expect the covert undercurrents of racism present in the Bay Area not to transform into overt acts of hatred and exploitation following a major event.

Looking back at the events following the 1906 earthquake can give insight into how things might play out in the future.

The Mayor at the time unlawfully ordered a shoot to kill proclamation and enlisted untrained soldiers from the Presidio to help keep the peace. Together with the ad hoc white vigilante groups, the city saw numerous (over 500) illegal shooting deaths. According to reports that Gen. Funston to the War Department, "most casualties are in the poorer districts, South of Market St.; not many killed in better portion of the city." – SF Virtual Meuseum

Like in New Orleans many of San Francisco's residents found themselves in danger of being overtaken by disaster capitalists leaping at the opportunity to make a profit. The treatment of

the Chinese-American population is an example of this. In her article, *The Relocation of Chinatown*, Gladys Hansen writes,

*"It is remarkable to think that within six days of the Great Fire, this committee was appointed and had adopted a plan to move Chinatown to Hunters Point. The idea was not new. Industrialist John Partridge proposed an "Oriental City" at Hunters Point before the earthquake"*

The plan was stopped after the Chinese embassy, with the backing of the Empress Dowager, insisted on rebuilding in its historical location in Chinatown.

There was also blatant discrimination when it came to placement of refugee camps. After spending months crowded into refugee camps in Golden Gate Park and the Presidio, African-American survivors faced threats of relocation as whites with money complained about having to share space and resources with them.

People seeking refuge across the bay in Oakland also faced discrimination as the white leadership expressed fears of Oakland becoming a "yellow city". The newly formed district of Rockridge in Oakland reflected the sentiment of the times when in its charter it specified that no blacks or mongoloids would be allowed homes in this area. (Oakland History Museum)

Events in New Orleans 99 years later, varied only in the specifics. People trapped for days in the convention center and super-dome were kept at gunpoint from the food and shelter waiting across the river. In addition to the rampant shootings by police, in the Algiers neighborhood, white residents formed vigilante groups patrolling the neighborhood and shooting indiscriminately at people of color. (I spoke to one woman who said, "Oh yes, we shot seven of them, killed four and don't know what happened to the rest.")

**Police repression** is one place to begin looking for clues about how a community will fare during an emergency. San Francisco police department arrests "African Americans for serious crime at a much higher rate" than any of California's other biggest cities. It's arresting black citizens at a rate "about five times greater than their presence in the city's population."

In addition to police brutalizing communities of color, arbitrary incarceration is also an everyday occurrence we can expect to see highlighted by a natural disaster. One of the first orders of business in the hurricane ravaged city, even while people sat on their roofs or starved at the New Orleans convention center, was to establish "Camp Greyhound". Reports of prison abuses in this emergency prison reflected an escalated version of the usual racial profiling, harsh treatment, and inadequate representation that runs rampant in the prison industry nation wide. In the Bay Area we can expect to see similar "emergency prisons" and detention facilities pop up to be filled with our non-white citizens.

Environmental hazards are already located in poor communities and communities of color. Regular toxic releases increase the risk of asthma, cancer, and other health problems in these communities.

'A new report, *Still Toxic After All These Years: Air Quality and Environmental Justice in the San Francisco Bay Area*, documents what many community residents have known for years: Bay Area residents who live closest to large toxic releases and bear the highest health risks due to air toxics are predominantly people of color. Areas with the highest exposures and risks, including: East and West Oakland, East San Jose, San Leandro, and other areas along the I-880 corridor; East Palo Alto, Eastern San Francisco, and Richmond.- from Bay Area Environmental Health Collaborative press release

Exposure can be expected to increase exponentially following a large earthquake. Many refineries, and the communities surrounding them, are located in the flatlands near the bay, also

known as the "zone of liquefaction". Here, in the event of a large earthquake, soil particles actually liquify and solid foundations become destabilized. Refinery's suggestion to shelter in place and seal off all windows and doors in the event of a large chemical release, will most likely be useless if the release is due to a massive earthquake as indoor spaces will become generally unsafe. People will be unable to protect themselves from hazardous fumes carried on the wind and will likely be unable to evacuate quickly due to damaged roadways.

Hospitals are just as likely to be damaged as any other building and will probably be operating beyond capacity soon after the event. In addition to being unable to help the newly injured, closed or over-capacity hospitals will not be able to provide care for residents with long term illnesses such as Diabetes, Kidney problems, high blood pressure and mental illness.

In the weeks following Hurricane Katrina, the Common Ground emergency first aid station set up by street medics mostly dealt with these issues. The integrated herbal and allopathic clinic was able to provide prescriptions (and pharmacy runs) for patients in need of insulin, hypertension medication, etc as well as herbal medicine to treat frazzled nerves, and boost immune systems (add more here).

### **EARTHQUAKES:**

*"All Bay Area Residents Live on an Active Plate Boundary Where Earthquakes Are Frequent Events! There is a 62% probability that at least one earthquake of magnitude 6.7 or greater will occur on a known or unknown SF Bay region fault before 2032." U.S. Geological Survey.*

### **Historical:**

#### **1906**

The 1906 earthquake occurred along the San Andreas fault and resulted in a rupture of the earth's surface that extended more than 250 miles. The shock occurred a little after 5 am and lasted about one minute. Subsequently, fires erupted in San Francisco as electrical wires were severed and gas mains exploded. The fires burned for three days over an area of almost five square miles. Unable to stem the blaze because underground water mains had been damaged in the seismic jolt, the fire department stood by as more than 28,000 commercial and residential buildings succumbed to the flames. Over 40,000 people were left without homes and lived in temporary shelters governed by the military for up to two years.

#### **Loma Prieta**

The Loma Prieta earthquake in 1989 registered a 7.1 on the Richter scale and caused 42 (check) deaths along with the collapse of portions of the Nimitz freeway and the Bay Bridge. Many homes were damaged and the earthquake motivated many communities to organize disaster preparedness trainings. Neighborhood Emergency Response Training (NERT) and Citizens of Oakland Respond to Emergencies (CORE) are two such trainings that came out of this wake up call.

### **Present:**

There are many faults in the Bay Area. The Hayward fault is more known. It runs roughly 65 miles from San Jose. From CORE 1 program workshop (Citizens Of Oakland Respond to Emergencies):

Geologists at the United States Geological Society (USGS) tell us that if there is a major earthquake on the north segment of the Hayward Fault, we will feel approximately 12 times the ground shaking we felt during the 1989 Loma Prieta earthquake. This could easily result in:

-1,500 to 4,500 deaths

-9 hospitals damaged/destroyed

-liquefaction along highway I-880 & other Bay landfill areas (where many buildings sit above).



-all four bridges closed/damaged  
-utilities out as long as three weeks  
Fires: 25-50 in Oakland  
Damage: \$40 billion  
Airports: all temporarily closed (except San Jose)  
-Sewage: inoperative for up to one month.

### **What generally happens to you during a quake?**

3 major factors determine the amount of shaking you feel:

- an earthquake's magnitude
- your proximity to the epicenter
- the condition of the soil around you

*When people are hurt during earthquakes, the injuries are almost always caused by something that falls on them.*

The amount of movement you experience during an earthquake doesn't depend just upon its magnitude. Where you're located in relation to the earthquake's epicenter also has an effect. *Three major factors* determine the amount of shaking you feel:

- an earthquake's magnitude,
  - your proximity to the epicenter and
  - the condition of the soil around you. (*you can find out what soil is in your neighborhood-listed in the resources section.*)
- As the ground shakes, tall buildings sway. Weak or loose parts crack & fall. Downtown SF 3.5 feet of glass in a big shaker! Inside, objects topple and fall from tables, desks, counters, shelves, and cabinets. Pictures drop from the walls. The longer the shaking continues and harder it shakes, the more dramatic the effects. Furniture tips over, cupboard doors open and the contents crash to the floor. windows crack or shatter. ceilings and light fixtures fall. mortar between bricks or rocks crumbles under the stress, allowing walls to collapse. toppling appliances break their utility lines and gas begins to leak & fires are ignited. lights go out as the electrical lines are snapped. elevators lurch to stop between floors. outside, glass may be falling from windows overhead loose bricks, parapets, facades, and signs may fall. chimneys may cold lapse, usually breaking at the roof line and dropping bricks either at the base. Injuries could be caused by falling objects.

### **When people are hurt during earthquakes, the injuries are almost always caused by something that falls on them.**

Facilities for the public such as dams, reservoirs, power plants, sewage treatment facilities, highways, bridges, tunnels, subways, auditoriums, stores, shopping centers, stadiums, and churches are all vulnerable to earthquake damage. Public services such as electricity, sewer lines, telephone lines, natural gas service, fire and police service, and hospitals may also be damaged. A great earthquake in a densely populated area will usually cause widespread damage and injury. Even a small to moderate quake with its epicenter in or near a city, may cause massive destruction. dams and levees could crack. anticipate after-shock. . (See page 9 from the *Putting Down Roots In Earthquake Country* guide. Page 8, 9, 13 about failures, landslides, liquefaction)

## **Other Possible disasters in the Bay Area:**

In addition to *collapsed buildings, impassable bridges & roads, no electricity, no services, ruptured water & gas lines*, there are all possible secondary catastrophic scenarios, especially after an earthquake:

**Severe Storms:** Most recently the 1998 El Nino storm caused major flooding and landslides throughout California. It shut down schools and businesses and major highways and left many communities stranded for weeks.

**Fires and Firestorms:** In 1991 Oakland hills caught fire causing 23 (check) deaths and raging for nearly two weeks (check). California is prone to wildland fires which in some cases threaten populated areas. Keeping the areas around houses and businesses clear of dry brush and eliminating the highly flammable eucalyptus trees is important for fire safety.

**Large toxic releases:** Earthquakes and accidents can cause releases of hazardous materials from refineries and other chemical storage and distribution systems, research and industrial laboratories, manufacturing plants, and railroad tank cars. We are confronted by the fearsome prospect of exposure to lethal, chemical, radiological, nuclear, and biological releases into our environment whether it's from an earthquake, a terrorist attack, or an 'accidental' release from a facility or from the many shipments being transported on the public road and railways. In an earthquake induced toxic release 'Shelter in Place' orders may be ineffective as homes may be unsealable at best and at worst dangerous to be in.

**Tsunamis:** *"Great earthquakes occurring anywhere in the Pacific Ocean may displace the ocean floor, generating tsunamis that could affect the California coast. Some coastal communities are designating Tsunami Hazard Zones and planning evacuation routes. Although the tsunami hazard in most of the Bay Area is low, coastal areas are still at risk. Shops in Half Moon Bay were ruined when they were hit by debris in the tsunami generated by the 1946 (magnitude 8) Alaska earthquake.- From USGS*

**Landslides:** There are many causes of landslides and mudslides. Correct as many of these causes as possible.

- prolonged rainfall that saturates the ground
- clogged storm drains (call the City's Public Works Agency. Support Adopt-a-drain program)
- water that is not properly drained
- drainage patterns that concentrate or block the natural flow of water
- hillside construction sites with exposed piles of soil or construction materials
- undercut hillside slopes
- inadequate retaining wall structures
- areas of uncompacted fill on a hillside.

**Disease Outbreak:** Communicable & Diseases can spread quickly under normal conditions and is accelerated when people are cramped in close quarters (like shelters or tent cities which could happen following an earthquake). Some germs, like those causing malaria, are passed to humans by animals. Other germs, like those that cause botulism, are carried to people by contaminated food or water. Still others, like the ones causing measles, are passed directly from person to person. These diseases are called "contagious."

**Martial law & state repression:** State & Federal Bay Area Response plans include martial law and the use of 'less than lethal' weapons...: There is a history of racist state and federal repression in the Bay Area. The way that the state and federal first responders will respond is by using a heirarchical system of chain of command. FEMA, Homeland Security, martial law is likely to be imposed more-so in some neighborhoods than others. **Also see: [White House Revises Post-Disaster Protocol by Charlie Savage June 2, 2007 by the Boston Globe](#)**

<http://www.commondreams.org/archive/2007/06/02/1623/>

## **Prepare!**

**Before a Disaster:**

Preventing accidents and injuries is always easier than responding to them. Here are some basic immediate steps you can take for yourself and your home.

- Get to know your neighbors. Find out who in your neighborhood is organizing.
- build cross cultural relationships, learn Spanish etc.
- be an advocate and ally to marginalized communities; seek out mentors to support you in this
- Create a disaster plan. Know the location of all possible exits from each room & where escape ladders & ropes are.
- Figure out a phone number outside of the Bay Area that can be a central number for your friends and family to call.
- Make a reunification plan with your friends and family, include alternate routes to account for road closures.
- Find your water and gas shut-off valves.
- Make a disaster kit with enough food, water, medication, and first aid supplies to support your household for up to 3 days. Store a mini kit in your vehicle.
- Get a hand crank radio
- Know where the hospitals and fire departments are. - In Oakland 1061 MLK is the CENTRAL COMMAND UNIT!
- Enroll in a NERT, CERT, CORE or other community emergency response training for more disaster preparedness information
- Talk with Your Children what might occur: Involve them in developing your disaster plan, preparing disaster supplies kits (ask them what game or toy they want to include), and practicing "drop, cover, and hold on."

**When the sirens are activated the public should tune into 530 AM, (Oakland's Emergency Broadcast Radio Station), KCBS AM, KNBR 688 AM, or KGO 810 AM for updated safety information & instructions.**

Basic supplies you should have in the event of an emergency (Read more from USGS & CORE):

- Water is the most important life-saving supply you can store. At least two gallons per person per day. Keep at least a three day supply.
  - Food -At least a three day supply of non-perishable food. Items that do not require water, refrigeration, cooking. canned foods, energy bars.
  - First aid supplies -see below
  - Tools -battery operated radio, flashlight, fire extinguisher, shut-off tools for gas and water, duct tape, map of area, shovels, crowbars, matches, garbage bags, etc.
  - clothing & bedding
  - Special items- prescription drugs, dental needs, contact lenses, hearing aid batteries, personal hygiene, etc.
- Mini-survival kits -for car & work.



## **During an Earthquake:**

If you are able to, duck, cover, & hold.

If you're outside, careful of falling buildings, objects, snapped power lines, trees, rocks, etc. If you're in a car, pull over and come to a stop. In downtown San Francisco it is important to take cover indoors....

When the earthquake has subsided, do a visual scan of yourself. Adrenaline running through your body may cause you to not notice injuries. Careful of weak buildings and other infrastructure, snapped power and gas lines, & possible after-shocks. Check your house & your block for fire, gas leaks, and water leaks. Do not light a match, smoke, or even use your cell phone or battery-operated flashlight! The spark inside can cause an explosion. You can learn more in further detail at your local, free workshops that each city offers.

**FIRST 72 HOURS** DEPENDING ON THE SCALE OF THE DISASTER, FOR AT LEAST THE FIRST 72 HOURS WE'RE ON OUR OWN!

- Locate your emergency supplies.
- Listen to your radio for emergency information but careful of mis-information.
- Establish Communications network: Rumors will be widespread, double check facts. FM/AM, HAM, and walkie talkie radios will be helpful. Being able to disseminate accurate information will be a critical disaster response tool. Likely centers of information can be pre-identified; churches, schools, community centers, bars, grocery stores etc.
- Identify areas and communities at greater risk and mobilize to act as allies. Do not assume you know what is best for anyone, always check in to see what people determine they need for themselves.
- Pay extra attention to emotional and physical stress. Eat and rest often.

## **FIRST AID:**

Wilderness medicine. For an emergency in urban areas we usually have access to a nice comfy ambulance ride to the hospital, but if we're in a disaster or if we're back-country we may be hours or days away from the ER. If we are greater than 1 hour away from medical care, we use extended protocols; We have to take ER care into the field and use wilderness medicine. It's a new game because there is longer time spent with the patient. Must take into account warmth, food, water, bowel care, and other factors. *Maintaining a proper fluid intake is often one of the most important things you can do for the sick person who is far from help.*

-One of the most fundamental codes of practicing medicine is to DO NO HARM. Treat only within your skill level and know when to GET HELP. Always treat within your skill level: never use supplies or practices that you have not properly been trained to use.

-At this level we are not trained to diagnose. Rather we can only "suspect" certain injuries.

-Be sure to take time to rest and eat well. If you're not taking care of yourself the best you can given the situation, then you won't be able to take care of anyone else very well.

## **PRACTICAL & SAFETY CONSIDERATIONS:**

### **What to wear, to the extent possible:**

- Wear what is comfortable, and emphasize mobility and safety. Wear layers in preparation for varying weather conditions. Wear well-fitting, closed shoes or boots.

- “Cotton kills” in cold/wet weather; Wear other materials like polypro, silk, or wool under-layers, insulating middle layers (wool, fleece), and wind/waterproof outer layers. NOTE: Wool and fleece wick chemicals—avoid wearing them as your outer layer!
- “Cotton saves” in hot weather; wear loose-fitting, light-colored cotton/linen/hemp clothing; cover up; wear a hat with a brim.
- Have extra clothes in a sealed plastic bag in case of contamination.

### **Safety Tips:**

- Know your limits; respect each other’s limits.
- Take charge. Volunteer people.
- Remain calm & walk, especially in crowded areas. Panic is contagious.
- Rumor control
- Be aware of at most risk or even targeted identities within your community.
- Maintain confidentiality
- Bring only necessary items with you.

**Getting help:** Treat only within your skill level and know when to GET HELP. DO NO HARM. Never use supplies or practices that you have not properly been trained to use.

*When to get help:* Anytime you’re unsure, and often even when you think you are sure, get help! Help from other community members, 1st aid stations & clinics, EMS, police.

About calling 911: If the phones do work, the 911 system may reject calls that are from cell phones. In a disaster, we are encouraged to *only* call 911 to report life-threatening situations.

**When to get help:** It’s important to recognize when you have a patient who is beyond your skill level to treat. Anytime you’re unsure, and often even when you think you are sure, get help!

*Who can you get help from?*

- Other community members or bystanders who may or may not have first aid or higher medical training.
- First aid stations and clinics.
- Emergency Medical Services- 911, which may or may not be in service or is sometimes unavailable in “insecure” areas.
- Police. Although not everyone feels safe around them, many know CPR, are certified first responders, some EMTs. Even though it might be against your principles to get help from police, sometimes our patient may be safer behind police lines than with her affinity group or in your care. Portland police cars carry AEDs for heart patients.

-Send pairs of runners to find medics in the meantime before help or the ambulance arrives.  
**ASK ONE PERSON OR A BUDDY PAIR, ESTABLISH EYE CONTACT, AND ASK THEM TO CONFIRM THAT THEY DID SO.**

About calling 911: If the phones do work, the 911 system may reject calls that are from cell phones. In a disaster, we are encouraged to *only* call 911 to report life-threatening situations

-cardiac/respiratory problems, severed arteries or limbs, major burns, structure or wild-land fire, structure collapse.

### **Buddy system:**

Don’t go around the streets alone if you can help it. It is best to go with a buddy or some friends, someone you trust and will watch your back. This person needs no first aid training, just a cool head.

Buddies provide:

- safety and security: someone who has your back at all times.

- emotional support & help making decisions
- share skills, knowledge, gear
- complementary roles while treating a patient.
- debriefing and aftercare

Decide before-hand which one of you will be the primary person to assess the patient. While one person assesses a patient, their buddy should:

- Call 911 or send someone to find more highly trained medics.
- Spread calm, give dispatcher your location, and then pass phone to medic.
- For attending to a patient in group situations, enlist bystanders to make a ring around you, facing outwards and to continue to survey the scene to make sure that it is safe.. This will give your patient privacy, give the medics space to work in, and the people who've formed the ring can be watching for trouble. You have to control the scene and this means telling people what to do, firmly and politely.
- Enlist two volunteers who are CPR certified to stand by in case medic decides rescue breathing and/or CPR is necessary.
- Plan for how to re-contact your buddy if separated.

Know your fellow health care workers. Learn each other's strengths. Work cooperatively.

**Good Samaritan laws:** This set of U.S. laws provides limited legal protection from liability of non-professional first aiders. These laws vary from state to state, but generally allow you to help someone, as long as you:

- provide free, voluntary care.
- gain consent
- act within the scope of your training & knowledge.

You are not covered if:

- you give someone an over-the-counter drug (like aspirin or Advil), or someone else's prescription medicine (like an inhaler or heart medication); This is legally called *prescribing*. There are many specific laws about who can prescribe and under what circumstances. (someone with a medical license like RN or MD or Licensed medical professionals often have a "duty to act" that does not apply to lay first-aiders.)
- you commit gross negligence, willful harm, or abandonment.

### **Consent/refusal:**

Always get the person's permission *before you touch them* or treat them in any way. They have the right to refuse all or any part of care at any time. Give them time, space, and information so they can make an informed choice.

- If the person refuses to engage with you, it's ok to continue to try to convince them that they need care and find someone more suitable (someone they can relate to better, other gender?, or someone with higher training). If the patient refuses, you can tell their friends or family to try to convince the patient and/or to keep an eye on them. Also, if the person refuses to go, educating their friends is key.
- Consent is implied when the person is unconscious or is clearly unable to make good decisions on their own,: it is assumed that they would want qualified treatment if they could say so.
- Consent is implied with unaccompanied minors.
- If unresponsive, GET HELP! Tap and shout: "Hello!! Hello!! I'm so and so and here to help you!" Do they make sounds or respond? Do they respond to being pinched? If unconscious, check for medical alert bracelets

**Stay with the person until:**

- your treatment is done and the person knows your treatment is done **or**
- you transfer care to someone with a higher skill level, more knowledge, or more experience **or**
- the person refuses your care **or**
- your safety is threatened.

**Primary Assessment** is a system for identifying life-threatening emergencies and for making decisions in which you need to get help; a process that can take only seconds to do. *It is absolutely crucial that you assess a scene to make sure it's safe before you even approach the patient.*

*A basic overview of primary assessment is:* ground or center yourself, protect yourself and patients by using gloves (and other protective gear if necessary), be sure that the environment is safe, do a scan for how many injured there may be prior to approaching someone, try to determine the cause of the accident or mechanism of injury, decipher if back-up with special equipment is required, and decide if you need to take spinal precautions.

**Grounding:** Rescuer panic! It's a natural first reaction to a sudden and unexpected serious injury or any frightening event. EXPECT it to happen to you & prepare for it.

Herbs & Flower Essences for calming & centering the mind which we'll go over when covering Herbs for Stress & Emotional 1st Aid.

**BENAMES: Body Substance Isolation, Environmental Concerns, Number of Patients, Additional Resources?, Mechanism of Injury, Extrication, Spinal Precautions.** It may seem like a lot to remember but there's a helpful acronym called BENAMES that many first responders are trained to use. It will help you form a general impression of the scene *before* even reaching the person in need of medical help.

- 1) BSI-**Body Substance Isolation or Universal precautions - a necessity at all levels of medical care to protect both the victim and the caregiver. Put on disposable gloves (latex, plastic, nitrile gloves, or improvise with a plastic bag) and other protective barriers if necessary.
- 2) Environmental concerns** -Check that the scene, or environment, is safe for rescuers, bystanders, and injured. Survey the scene for hazards. Never create another victim!
- 3) Numbers of patients-** more than one, two?
- 4) Additional Resources Necessary?** Will you need back-up or special equipment such as fire extinguishers, or additional first responders? Get help immediately.
- 5) Mechanism of Injury--**start forming a general impression of what happened, what you might be dealing with. (Is the cause trauma? Medical? Environmental?)
- 6) Extrication?** Will you need special equipment to extricate a person from a stuck car or building? A fire department & possibly a neighborhood block will have this equipment.
- 7) Spinal Precautions.** Protect the spine if there is any reason to suspect spinal trauma. *Act as if* the cervical spine is injured if there has been any injury that leaves the person unconscious, a serious fall, a car accident, or blow to the head, neck, or back.

A first aid, WFR, or EMT class can teach you how to stabilize the persons head and neck as well as a number of rolls, lifts & carries for moving a patient out of harms way.

**Approaching the person in need of help-**

- Being nice may be all you can do until other help arrives. Introduce yourself & tell them your skill level.
- Find out the person's name, and use it frequently.

- Remember to treat the patient not the problems.
- Ask them what they need. Approach them at a 45-degree angle, & so that they don't have to twist their neck. bring yourself to their level (sitting down, etc.). Maintain an arms-length away initially. If the person doesn't improve, gets worse, or exhibits emergency symptoms, get help.
- If you can rule out the possibility of a spinal injury move them from the source of stress and find a "safe space".
- Make plans to solve the problem. Don't leave the person until you've implemented these plans.

**Critical interventions: Identify & treat any immediate threats to life.** A Wilderness First Responder or Emergency Medical Technician course trains you to check the injured or sick person's ABCs. This is a process for how to review the potential life-threats to a person before moving on to focus on one particular problem. Always assess and treat body systems in their order of priority. A comes before B, before C.... Immediate loss of life would be from:

- **Airway**- closed or blocked Airway. If they're talking with you, they're airway is open.
- **Breathing** -inadequate Breathing.
- **Circulation** -loss of adequate Circulation because the heart has stopped or the person has lost too much blood.
- **Disability** -extensive Disability due to cervical spine injury
- **Exposure** - exposure to Environmental extremes and also that you must sometimes expose parts of the patient's body in order to assess the extent of the damage. The patient may need to be examined from head to toe so no that any injury remains undiscovered.

*We encourage you to look into taking a Wilderness First Responder course or you can take an EMT course for further info. A CPR class will also teach you some of these skills. See resources listed at the end.*

## **HERBAL FIRST AID:**

### **INTRODUCTION TO WESTERN HERBALISM:**

**GUIDELINES:** The following herbal suggestions are generally safe, however consult an experienced herbalist if someone you are treating is pregnant, has a serious medical condition, or are on medications. Discontinue if you have any negative or allergic reaction, symptoms get worse or the condition does not improve.

Always ask the person you are treating if they have any allergies, is on any medications, or suffers from any medical conditions so that you can relay this info to medical personnel should the person lose consciousness.

Consider choosing herbs that are local, that meet specific needs. If you know 5 or 10 herbs really well, this is all you need.

The use of high-quality, organically grown herbs are strongly encouraged. Though they may cost a little more, it will be far better medicines and better for our planet.

### **PRACTICAL & SAFETY CONSIDERATIONS:**

The following selections are re-printed with permission from 7Song's handouts on Herbal First Aid for Large Groups & Herbs & First Aid: Trauma & Wound Care. (For the full handouts see the contact info listed in Resources for Northeast School of Botanical Medicine)

- Label everything carefully
- Be cautious using remedies with infants, children and with pregnant and nursing women



- Know herbs for pain
- Avoid powdered herbs in deep cuts
- Check for allergies, sensitivities and current medications before administering any treatments
- Before administering any internal medicines, initially check patients for any reactions by trying very small amounts.
- After initially testing a remedy and finding it acceptable, increase dosage cautiously while supervising their condition and tolerance.
- Before administering any tinctures containing ethanol, ask the patient if they have any allergies/strong reactions to alcohol. If they cannot consume alcohol in any volume figure out other ways to administer medicines.
- Test remedies for acute pain situations with the a one-drop dosage. It is possible to see a subtle shift in patients after trying one drop.
- If possible, ask the patient if they have any herbal medicine preferences and if they have allergies or strong reactions to any medicines.
- Individual adverse reactions to pain relieving herbs are common. When initially administering herbs internally start with a one-drop dosage and check for reactions.
- Discriminate between acute and chronic disorders
- Learn and practice wound wrapping techniques

###

- Store herbs in a cool, dark place. airtight glass jars

### **FORMS OF HERBS:**

- For digestive issues, use tea if possible. For skin, use tea for washes and compresses.
- Tinctures are convenient and have a long shelf life.
- Capsules? Rarely
- salves and oils
- Tablets? No...
- powders

### **PREPARATION:**

- Boil roots for 10 - 20 minutes.
- 1 tsp of herbs to a cup of boiling water; steep for 5-10 minutes.
- poultices- excellent way to apply to skin to accelerate healing process. vulnerary herbs make good compresses as do others.

**DOSAGE:** Suggested dosages are generalized and peoples' reaction to herbal medicines can vary greatly. Use our suggestions only as a basic guideline. Practice with low doses. More is not always better! A drop dose means just that: one or several drops at a time. With some plants medicines, taking larger amounts than what is recommended can act as an emetic, (induce vomiting) Medicinal plants work! They are powerful. Plants are beings, like you and I. Not to be abused. Practice sustainability.

**HERBS:** The herbs & herbal actions listed herein are not a comprehensive list but they are remedies that are more specific to the Pacific Coast, can be grown locally, or found right in our very own kitchens, and herbs that we have experience with using them ourselves and discovering what's been most useful. Herbs that cannot be cultivated or face the threat of being endangered may not be mentioned.

**YOUR KITCHEN AS A RESOURCE:** Many medicinal plants that are respected throughout the ages are camouflaged as culinary spices. Much of the following has been gathered from Rosemary Gladstar's Herbs For The Home Medicine Chest and various other places.

Apple Cider Vinegar-tonic, cleansing and detoxifying, nutritive, good for arthritis, taking a tsp in a half cup of water two or three times a day when a cold is coming on, can help rebalance pH levels, warding off the cold. Helps with some headaches, lessens pains of burns, digestive aid.

Basil: basil's antispasmodic properties make it useful for headaches. It is commonly used to treat stress-induced insomnia and tension, low spirits, nervous indigestion, and is a well-known aphrodisiac.

Bay- (California Bay Laurel grows here) antioxidant, cleanses free radicals from rancid oils, meats; clears sinuses, anti-catarrhal, do a steam; astringent, helps headaches but careful -too much and you get a headache! Topically a rubifacient. Good for arthritis, athletes foot.

Black Pepper- warming, stimulating. colds, flus, coughs, colds, slow circulation, and poor digestion. some people find it an irritant.

Cardamom- belongs to same family as ginger. it stimulates the mind and arouses the senses. long considered an aphrodisiac, digestive aid. often combined as an anticatarrhal in formulas for the lungs.

Cayenne-for colds and flus used to increase circulation to the extremities, and to improve digestion and sluggish bowels. used internally and externally to stop bleeding.

Chives - same antiseptic properties as garlic, though not as potent.

Cilantro- pulls heavy metals out of the environment and our bodies. Be sure to use organic only.

Cinnamon- digestive aid, warming. Helps with blood sugar. aphrodisiac.

Cloves -clove oil is most famous as an analgesic herb for toothaches, but the entire clove bud, powdered & then applied directly to the gum, is as effective. it is also stimulating, warming, and uplifting; used for sluggish digestion & nausea.

Coffee- stimulant; treating some headaches, acute constipation

Fennel - stomachaches, asthma.

Garlic- herb of choice for colds, flus, sore throats, and poor digestion. it stimulates immune activity, improves circulation, and lowers cholesterol. good for lungs. garlic mullein oil for earaches. anti-microbial.

Ginger-warming, used for nausea, poor circulation, sore throats, colds, flus, and congestion.

Honey- anti-microbial, good for burns, a vulnerary, sore throats

Horseradish- the root is rich in minerals, including silica, rich in vitamins. it's warming antiseptic properties make it the herb of choice for asthma, catarrh, lung infections. digestive aid.

Salt - good for soaking cuts & scrapes with other herbs, for detoxing & sore muscles in baths.

Marjoram & Oregano -used for nervousness, irritability, and insomnia due to tension & anxiety. great to drink as a tea. in combo or singly. antispasmodic properties that can be used for digestive and muscular spasms. Marjoram is Anti-catarrhal – use strong tea for cough with a cold.

Mint- (peppermint, spearmint, and lemon balm)- rich in vit c, beta carotene, and chlorophyll, mints are stimulating to the mind and create "wakefulness." will improve alertness and awareness. useful during times of driving, studying, stress. it is an excellent antispasmodic remedy for nausea, tummy aches in children and adults. The flavor of mint cleanses the palate and can be used to rinse the mouth after a bout of vomiting.

Rosemary -a cerebral tonic and stimulant to the brain. powerful for those states of debility that are accompanied by loss of memory, loss of smell, poor vision, strain, and nervous tension, rosemary enhances the cellular uptake of oxygen. it is useful for relieving respiratory congestion and for maintaining liver function and digestion.

Sage - aids digestion of fatty meats, lowers cholesterol levels, and is a tonic for the liver. it has antiseptic properties and helps with colds, sore throats, and ear infections. It is one of the best remedies for laryngitis and sore throats often used as a spray or gargle.

Thyme- anti-microbial. This is the best herb we have for stimulating the thymus, a major gland of the immune system. a great pick-me-up for low energy. it's antispasmodic properties are useful for lung problems and for convulsive coughs such as whooping cough. It's an excellent remedy for sore throats (combined with sage), head colds (combined with horseradish), and stiffness related to chills. thyme helps stimulate the body's natural defense and, combined with echinacea, boosts the immune system.

Turmeric - a major anti-inflammatory. is one of the best herbs for the immune health and is often over-looked because of the huge popularity of echinacea. upheld its reputation for its immune-enhancing properties for centuries and is highly regarded for its anti-tumor and antibiotic activities. a blood purifier and metabolic tonic. used to regulate menstrual cycle and relieve cramps, used as a major anti-inflammatory, to reduce fevers, improve poor circulation, and relieves skin disorders. It is highly valued as a first aid item for boils, burns, sprains, swelling, and bruises.

## **HERBAL ACTIONS:**

This is not a comprehensive list; are either more accessible to us on the Pacific Coast, can be grown locally, found in our kitchens, and are ones that we have used ourselves and we've found most useful. Herbs that cannot be cultivated or face the threat of being endangered may not be listed.

Each herb can carry out a number of actions. Each herb can play a part in the treatment of a whole range of problems. When choosing the herb, consider which herbal actions are needed for the specific ailment that you are treating. Look at actions first and then assign the plant. Be as minimalistic as you can. Keep your formulas simple, using the least amount of herbs. This way you learn how and which herbs are working. The understanding of actions and the way they may be used in combination is fundamental to a holistic approach.

**Adaptogens-** reishi mushroom; siberian ginseng provides fortification against physical and psychological stressors. schizandra preserves vitality and protects lung and nourishes the heart. ashwaganda. astragalus, aralia (California Spikenard)

**Alteratives-** gradually restores the body's functions and increases health & vitality. Alteratives were at one time known as 'blood cleansers'.  
bladderwrack, burdock, cleavers, echinacea, garlic, nettles, red clover, yellow dock.

**anaesthetics** - Produces a partial or complete loss of nerve sensation cayenne, clove bud essential oil, heat, yarrow.

**analgesic, anodyne** -relieves pain. Depending on case, may be applied internally or externally. california poppy, kava kava, marijuana, silk tassel, (cramps) wild lettuce, passion flower, skullcap, valerian, st johns wort

**anti-catarrhal** -herbs help the body remove excess catarrhal buildups in sinus or other areas in the body. boneset, cayenne, echinacea, elder, elecampane, garlic, golden rod, marshmallow, mullein, peppermint, sage, thyme, yarrow.

**Anti-Inflammatory-** helps body reduce inflamed skin or tissue. Herbs mentioned under demulcents, emollients, and vulneraries will often act as an anti-inflammatory. Chamomile, chickweed, mallow, calendula, echinacea, hypericum, witchhazel, meadowsweet, willow bark, yerba mansa, licorice root, stachys (hedgenettle), aloe, arnica, chickweed, ginger, turmeric.

**anti-fungal** - calendula, creosote bush, tea tree, juniper

**Anti-infectives** -(includes antiseptics & antimicrobials) Calendula, Creosote Bush, Echinacea, Garlic, Myrrh, Oregon Graperoot, Propolis, St. Johnswort, Tea Tree essential oil, Tree resins, Witch hazel, Yarrow

**anti-microbial-** Helps the body to kill or resist pathogenic micro-organisms. Great for cleaning & disinfecting wounds. calendula, chaparral, myrrh, & all Essential Oils. cayenne, clove, coriander, echinacea (septicemia), elecampane, garlic, juniper, marigold, marjoram, peppermint, plantain, rosemary, sage, thyme, yarrow -anti-septic, eucalyptus, sagebrushes

**antiseptic** -Inhibits putrefaction by destroying microorganisms. Doesn't kill microbes but reduces microbe population and does not help body's immune system to fight an infection. eucalyptus, yarrow, alcohol.

**anti-viral herbs-** licorice, lemon balm, tea tree, bergamot, hypericum, calendula, lomatium, osha, astragalus, and elderberry.

**antis-pasmodics** -Can prevent or ease muscle spasms or cramps in the body. black cohosh, boneset, chamomile, cramp bark, lobelia, marijuana, motherwort, passion flower, pedicularis, silk tassel, skullcap, skunk cabbage, thyme, valerian, wild lettuce

**Astringents-** Tightens and tones tissue, reduces secretions and discharges. Astringents contain tannins. Use to stop bleeding, diarrhea, urinary tract infections. Also great in various skin salves. Bee stings, poison oak, weepy burns. Oak bark (twigs), plantain, blackberry (root for adults; or leaf for kids), comfrey, aloe vera, agrimony, elecampane, eyebright, golden rod, meadowsweet, mullein, rose, rosemary, hypericum, self-heal wild cherry, Uva ursi (or manzanitas/madrone), witch hazel, yarrow.

**bitter** -stimulates digestive system through a reflex via the taste buds. Take a few drops of tincture (or tea if you wish) just prior to meals. Chamomile, gentian, hops, oregon grape, wormwood, yellowdock, agrimony, & artichoke are a few.

**carminative** -rich in volatile oils and by their action to stimulate the peristalsis of the digestive system and relax the stomach, thereby supporting the digestion and helping against gas in the digestive tract. angelica, caraway, cardamon, cayenne, cinnamon, chamomile, coriander, dill, fennel, galangal, garlic, ginger, mustard, peppermint, sage, thyme, valerian.

**cold remedies** -anti-viral, anti-microbial, stimulate immune function. echinacea, lomatium, anemopsis, california spikenard or aralia,

**demulcents** Soothes irritated tissue; are rich in mucilage and can smooth irritated & inflamed internal tissue. They have a soothing effect on the mucous membranes. Good for kidney stones, digestive upset, for relaxing hoarse coughs. licorice root, marshmallow root, comfrey, flaxseed (must be fresh! keep in fridge or freezer), mullein, oatmeal, plantain

**Diuretics** - Diuretics encourage urination. Nettle, celery seed, cleavers, dandelion, asparagus

**Diaphoretic**--aid the skin in the elimination of toxins and promotes perspiration; for fever and symptoms of cold. angelica, black cohosh, boneset, cayenne, chamomile, elder, fennel, garlic, ginger, golden rod, sage, peppermint, prickly ash, thuja, thyme, yarrow.

**Expectorant** - The expectorants support the body in the removal of excess amounts of mucus from the respiratory system. aniseed, elder, elecampane, garlic, licorice, lobelia, mullein, skunk cabbage, thuja, thyme, vervain, white horehound.

**lymphatics**- echinacea, cleavers, red root, ocotillo,

**laxatives** - promote the evacuation of the bowels. There are a range of herbs that can have a laxative effect. Some are safe and some may cause severe cramping or if taken regularly, your body can get dependent them to have a bowel movement. In general, it is useful to take laxative herbs, whether teas, tinctures or other preparations, before going to bed. It gives them a chance to work while your body is in a more relaxed state. Safer laxatives include Psyllium seed (*Plantago psyllium*), Aloe vera juice, burdock, cleavers, dandelion, flaxseed, yellow dock root. Coffee is also a laxative but can also be dehydrating so careful.

**muscle relaxants** - help relax smooth and skeletal muscles when suffering from cramps, back-pulls, sprains: cramp-bark, valerian, wild yam, pedicularis, hypericum, skullcap, wild lettuce

**nervines** tones and strengthens the nervous system. *Nourishes* and treats nervous system disorders. black cohosh, california poppy, catnip, (-gentle, good for kids); chamomile, hypericum (-uplifting); lavender, lemon balm (-a spirit lifter, good as extract, yummy tea); oats (not oatmeal but milky oats -*avena sativa*, a nourishing tonic, soothes ragged edges); passion flower, skullcap, valerian (-calms relaxes mind in muscles and aids sleep in most people. test first); vervain, wild lettuce.

**sedatives** *Calms* and allays excitability; sedatives range from mild relaxing agents to stronger sedating action california poppy, hops, kava kava, marijuana, passion flower skullcap, valerian wild lettuce

**styptics** -reduce or stop external bleeding by their astringent action to the blood vessels. Yarrow not only stops the bleed but is anti-microbial. cayenne powder, shepherd's purse, yunnan paiyao

**tonic**- strengthen and enliven either specific organs or the whole body. Tonics are generally safe to take over long term. black cohosh, boneset, burdock, cayenne, chamomile, cleavers, colts-foot, damiana, dandelion, echinacea, elecampane, eyebright, garlic, ginseng, grindelia, hawthorn, horesechestnut (which for the Bay Area is California Buckeye) licorice, marigold, motherwort, mugwort, nettle, oats, raspberry, red clover, self-heal, skullcap, vervain, wormwood, yarrow, yellow dock.



**vulnerable**- applied externally and aids the body in the healing of wounds and cuts. Aloe, shtimony, arnica, burdock, chickweed, cleavers, comfrey, elder, elecampane, fenugreek, marigold, myrrh, plantain, self-heal, shepherds purse, hypericum--excellent for nerve pain -a trauma medicine; witch hazel, yarrow. Calendula Castor oil Marshmallow

**General Pain Remedies** (Take into account which action is needed. These are listed in the above categories.)

Black cohosh, California poppy, Ethanol, Hops, Kava kava, Marijuana, Passionflower, Silk tassel, Skullcap, St. Johnswort (Hypericum), Valerian, Wild lettuce

## **COMMON MEDICAL CONDITIONS & TREATMENT:**

Medical conditions take on a whole other meaning when you may would be dealing with longer term care options--days, week, weeks, month. Imagine if there were to be no sewage for three months, no utilities for three weeks, hospitals closed, and other public needs, then you may would be dealing with longer term care options.

Most of the conditions seen in NOLA weren't hurricane related issues but rather long-term illnesses. (hypertension, diabetes and stress management—all chronic poverty-related conditions.)

*Herbs have an important role not only in supporting recovery from trauma but in bringing our bodies back into a state of balance.*

## **STRESS & EMOTIONAL FIRST AID:**

The physical and emotional effects of intense emergency situations may stick around in our bodies long after the actual events have ended. longer lasting effects can persist. can show up as disturbed sleep, nightmares, anxiety, fear or depression. Emotional first aid is a significant part of care-giving.

Someone who is stressed out, emotionally shaken, or having an anxiety attack may exhibit the following **signs/symptoms:**

- increased breathing rate, difficulty breathing
- elevated heart rate, blood pressure
- tensed up, dilated pupils, perspiring, shaking hands
- either very vocal or very quiet
- scared, angry, confused, and/or overwhelmed
- loss of appetite, nausea
- loses ability to regulate emotions

Signs/symptoms of an emotional emergency:

- total personality change
- hallucinations (visual, smell, taste)
- suicidal or homicidal
- hyperventilation that can't be de-escalated
- heart palpitations
- “out of body” experiences
- disassociation; immobility; unresponsiveness

These are times to GET HELP.

## **Treatment for stress, anxiety, trauma, & insomnia related to traumatic events:**

**Flower essences:** Work well in stressful situations as well as long after a traumatic event.

- Rescue Remedy & other equivalent flower essences such as Five Flower Essence or Desert Alchemy Desert Crisis formula are basically homeopathic preparations made from a number of flower essences.

- Five-Flower Formula by Flower Essence Society or Rescue Remedy -for overall recovery from shock & trauma, especially for immediate use. (a dropper, in your water bottle, or spray.)
- Red Clover: Self-aware behavior, calm & steady presence, especially in emergency situations. (good for mass hysteria & anxiety, if one is easily influenced by panic or other forms of group thought.)
- Indian Pink- Remaining centered & focused, even under stress; managing and coordinating diverse forms of activity. Good if you have an inability to stay centered during intense activity.
- Oregon Grape when one is feeling paranoid or self protective; unfair projection or expectation of hostility from others. Helps with an ability to trust & loving inclusion of others.
- Bleeding Heart -whole plant spirit dose for mass hysteria;
- Whole milky oats in tea or tincture helps sooth and nourish the nervous system. It is also an excellent food, as oatmeal or cookies (no chocolate!). If you eat oats for a week, you will feel better.
- Arnica for maintaining connection with Higher Self during trauma or for healing past shock or trauma.
- coral bean tones ptsd
- gold alaska essence for personal power; person with PTSD, been holding him back his whole life, old issues wold come up.
- california pitcher plant. snake medicine. 1-2 drops once a day to turn what's holding one back into your power.
- Borage for courage.

### **Herbs:**

- Nervines- As a tonic during and/or after times of stress to help keep you calm. Feel it out- 5-15 drops drops taken with a small amount of water. 3 times a day, or drink 1-2 cups of tea (about 1 teaspoon- Tablespoons per cup).
- Anemone (Western Pasque Flower) - Calms and centers the mind CAUTION: LOW DOSE, use 1-5 drops only!!! shock, ungroundedness,
- Chamomile- soothing to the nerves and digestion
- Skullcap – For stress and anxiety. as for chinese skullcap.also transforms the PMS to a positive state, usually before ovulation.
- Valerian-for stress, a sleep aid and muscle relaxant. Approximately 5-10% of people get the opposite effect, causing a stimulant effect.
- Kava kava- relaxes muscles, reduces anxiety, helps some people “talk it out.”
- California Poppy- in small doses, helpful for acute anxiety. In larger doses (up to 1 tsp), aids sleep.
- Passionflower- calms irritability, stops the “slideshow” or “hamster wheel” thoughts often common during insomnia.
- Wild lettuce tincture- sedative, relaxant, anodyne. For pain, stress, trauma, & anxiety.
- Lavender, Oatstraw

### **After the Crisis is Over - Post Traumatic Stress Disorder & Aftercare:**

Herbal medicine treats the entire person- body, mind, and spirit -both during and after a traumatic event. Expect emotional trauma. Some people will hold this experience in their body, and it might manifest itself in disturbed sleep, nightmares, anxiety, fear, or depression. It can also trigger underlying stress from past events.

One of the hardest parts of being in intense situations may be what comes afterwards. The following are common responses to stressful or traumatic events:

- anxiety, irritability
- feelings of fear, grief, rage, shame, guilt, or sadness
- difficulty concentrating or completing everyday tasks,

- Flashbacks and can't stop thinking about event.
- Vivid dreams or nightmares
- Feelings of fear, grief, rage, shame, guilt, or sadness
- Irritability
- Changes in normal sleep patterns (insomnia or sleeping all the time)
- Changes in appetite, digestive problems.
- changes in sexual desire
- Increased dependency on drugs, alcohol, tobacco

Steps to help with recovery physically and emotionally. If symptoms persist, however, you may decide to seek counseling or medical care.

- Rest! Try to maintain a healthy sleep schedule.
- See the above herbs & flower essences.
- Lifestyle: Drink plenty of water, eat nutritious food and avoid or lower intake of sugar, fried foods, meat, & dairy. Avoid alcohol, tobacco, and drugs. Get exercise regularly.
- Try to reduce other sources of stress in life where possible.
- Make time for creative expression (writing, art, playing music, etc.) and for sunsets, etc.
- Get bodywork. we hold everything in our body memories.
- Talk about what happened as soon as possible after the incident, especially with others who may have shared the experience. Establish a support network.
- Try not to become isolated from family & friends who didn't share the experience.
- Consult an herbalist about herbs for reducing stress, treating depression, or helping sleep.
- Seek medical help if physical symptoms persist or worsen.
- Tonics, alteratives for long term use - milky oats, nettles, red clover tea, others, are great.
- Any of the adaptogens are amazing- Can be taken long-term. Good for stress and run-down immune systems. Siberian ginseng for instance provides fortification against physical and psychological stressors. Slows world down to see how it works; puts a blanket around you so world is not as scary. Is performance enhancing; Person becomes clearer in face, endurance, clear head; Quiets and tones nervous system.

### **Children:**

In the days after a crisis, kids need extra contact and support. They may be frightened and under great stress. Parents may have to leave children with others in order to deal with the emergency, and this can be scary. Whenever possible, include your children in the earthquake recovery process.

Catnip, chamomile, & skullcap teas. Homeopathics & flower essences (lightweight, easy to carry in pockets, easy to have a full spectrum and still be able to be on the move if necessary). If you put together your own kit, make sure you include a 3X5 card with quick reference in indelible marker. For example: HOLLY (for rage, bouts of ill humor in children) or ELM (to help the strong in weak moments) or OAK.

**Animal care:** flower essences work so well to help after trauma).

**For great information on Trauma:** [www.healingtrauma.pscap.org](http://www.healingtrauma.pscap.org)  
[www.starhawk.org/activism/trainer-resources/traumaoverview.html](http://www.starhawk.org/activism/trainer-resources/traumaoverview.html)  
 & [www.activist-trauma.net](http://www.activist-trauma.net)

**ASTHMA:** Asthma is inflammation and constriction of the lung passages, accompanied by fluid production in the lung tissue. A very serious condition.

Find out the cause and duration of asthma. There are many causes of chronic asthma, and individuals experience different symptoms. Some causes of an acute attack could be due to allergens, cold weather, or it could be stress or exercise induced. Knowing the cause may influence your treatment. If stress brought on the asthma attack then a nervine may be helpful here. Find out their history with asthma & determine severity of distress.

### **Signs and symptoms:**

- Wheezing, shortness of breath, chest tightness and/or squeezing sensation, cough, may not be thinking clearly, irritable.

*Seek immediate medical attention if the individual is showing signs of cyanosis, including bluish lips and nail beds, pale skin color.*

### **Treatment:**

- Calm and assurance!  
- Assist with administration of their medications. This person needs an inhaler or bronchodilator. You can ask the person if they have one and encourage them to use it. Send for a medic.  
- Have the person sit straight up in a chair or assist with position of comfort. Then ask them to lean forward and rest their forearms on a table.

For mild attacks of asthma, or for wheezing or general congestion of the airway, there are several simple remedies that can be useful:

- The 1st course of action is to get anti-inflammatories in them.  
- Antispasmodics for asthma: **Lobelia** stimulates the respiratory system and helps stop lung spasms. Lobelia is a broncho-dilator and relaxes the lungs and the person as a whole (it is also a nervine). CAUTION: You may want to start with 2 drops and wait 10 minutes. You don't need a lot. This is a drop dose herb! Meaning, only give one to several drops. Anything higher than 7 drops and it can become an emetic. (You will throw up!).  
- Administer nervines to calm the person.  
- Important for long-term care of asthma: mast cell stabilization. Evening primrose oil, fish oil, borage seed oil, flax.  
- **Ginger** can help increase circulation to the lungs- have the individual chew on a piece of candied ginger or apply a towel soaked in ginger tea to the chest or back. If the person feels up to eating, garlicky or spicy foods can help dilate constricted airways.  
- **Fenugreek** will help mucus and subdue inflammation of respiratory system.  
- **Osha** root may help reduce mucus and improve oxygen uptake in the aftermath of an attack.  
- **Ma huang (ephedra)** is a fast-acting bronchodilator for asthma attacks. Careful! It contains ephedrine, and has some amphetamine-like effects on the body, lasting up to 8 hours. So don't double up! It raises blood pressure. Do no harm.  
- **Garlic** Blend a clove of garlic into a cup of hot water and sip.  
- Rest. Asthma can be stimulated by exercise or nervous tension.  
- If the asthmatic is a child, may need to calm the parents.  
- Allergens- Dairy, wheat, and citrus are three main allergens. Stay away from these 3 main allergens for 6 weeks. If allergic stay off these. Give body a break. Always look at digestive problems; usually have low stomach acid. To work with asthma -digestive, respiratory, eliminate triggers.  
- Inhalers dry out tissue and bronchiole tubes. Inhalers shouldn't be over-used. Impairs liver function. Consider milk thistle for improving liver function.  
- Cortisone and prednisol, commonly prescribed drugs for asthma, decrease immune function.  
- Encourage the patient to see an herbalist for other herbal treatments and for longer term support and treatment.  
**skunk cabbage**- an anti-spasmodic & expectorant; will relax and ease irritable coughs.

**BLISTERS:** Friction burns. Most blisters do not need to be ruptured; for blisters that have been broken, the most important thing is to keep the area clean and dry.

-Prevent blisters by wearing well-fitting shoes/boots and double-layer socks, no cotton.

-Treat "hot spots" early, with tape, Band-Aids, or moleskin.

-Relieve any pressure on the blister & leave it unbroken. If the blister is firm, cover with band-aid, tape, or moleskin. Force blister down.

-If this is not possible because blister is about to pop anyways, use sterile pinhole to drain. Wash the area gently with soap & water.

-If the blister is broken, treat it like a wound and clean it. Bandage wound with band-aid or non-adherent dressing. Use moleskin around the area for extra cushion.

-Apply a few drops of lavender oil or another anti-microbial/anti-septic. For painful or sensitive blisters, soak affected area in warm water with several drops of anti-microbial/septic herbs and Hypericum (St. Johnswort) for sensitive nerve endings.

**BRUISES:** (see Wounds, closed)

### **BURNS:**

Damaged tissue caused by fire, sun, or chemicals.

Burns are not only painful, but can lead to dehydration, hypothermia, and infection if not treated appropriately.

#### **Seek immediate medical attention if:**

- More than 10 % in a child or 15% in adult of the body has been burned.
- The burned area develops blisters or swelling.
- The burn has resulted from severe electrical shock.
- High risk areas include face, hands, and airway. If the airway is at all threatened from smoke inhalation, heat, or chemical. If there are any burns to hands, feet face, upper airway, genitals.
- The eyes are burned.
- Burns that increase in pain more than two days after incident, discharge pus, or cause problems with movement;
- fever develops

#### **Depth:**

- Superficial or first degree burns:
- Partial-Thickness or second degree burns:
- Full-Thickness or third degree burns:

**Standard Treatment for 1st & 2nd degree burns:** First and second degree burns can generally be treated effectively at home, but you must be certain to keep the area clean to avoid infection.

- Wear gloves
- Remove the source of the burn (fire, sun, chemicals, etc.). Stop, drop and roll if necessary. Brush off dry chemicals and then flush with copious amounts of water. If wet chemicals, wash with copious amounts of water. For all other burns flush with cool water, thus "putting out the fire" & preventing further damage.
- Remove constrictive clothing or jewelry near the burn since they may be difficult to remove if swelling occurs.
- Give a trauma remedy. (essence: five flower, rescue remedy 2 - 4 drops in mouth if possible)
- Be very careful about getting any germs into burn sites. Be sterile!



- Any of the following treatments works well:
- You can apply a diluted apple cider vinegar compress to the damaged area for at least a half hour. eases pain.
- Lavender essential oil works right away as well.
- Two to three drops of peppermint oil added to 1/4 cup of honey (the peppermint needs to be diluted) makes a cooling disinfectant poultice for burns; eases the pain. anti-microbial.
- Apply aloe vera gel which is cooling, disinfecting, and promotes healing. Great for relieving pain & infection.
- Calendula helps reduce inflammation, speed tissue healing, and prevents scarring. It can be applied as a poultice (crushed up fresh flowers), compress or cool tea wash, or homeopathic gel (Califlora by Boiron).
- Poultices or washes made of comfrey, chickweed, elder, plantain, or raw potato or cucumber can help cool inflammation and promote healing.
- Wrap seaweed around the burn, which is molecularly similar to our skin; helps healing.
- Apply Chin Wan Hun, a Chinese burn cream.
- Do not break blisters. If broken, treat as open wounds.
- Cover burn with a dry, sterile dressing. If burned fingers or toes, wrap separately.
- Administer pain alleviating herbs internally -valerian, etc.
  - If not open to anti-inflammatory herbs, consider Ibuprofen to reduce swelling and deal with pain.
  - Elevate burned area if possible, to help alleviate pain and swelling.
  - If the face is burned, keep the injured person sitting or propped up and observe carefully for breathing difficulty. CAUTION. Monitor for signs of airway impairment.
  - Monitor for signs and symptoms of infection or hypothermia if burns are extensive & treat for shock.
  - Hydrate patient aggressively to prevent dehydration. Provide electrolytes.
  - Follow-up with st. johns/joan's wort (hypericum). Hypericum salve or oil applied topically for healing burns and for any damaged nerve endings. Minor burns only.

#### EYES:

- If the eyes have been burned by fire, flush with cold water.
- If the eyes have been burned by chemicals, flush with cool water for a full five minutes. Do not rub. If just one eye is contaminated, make sure the victim's head is tilted with the contaminated eye down so you do not wash chemicals into the unaffected eye.
- After rinsing, cover the eyes with a clean, bandage or cloth. If the burn was by heat, then cover eyes with a cold compress.

#### CAUTION:

- Avoid ointments, lotions, or antiseptics on extensive partial-thickness or on any full-thickness burns.
- Do not apply cold water or ice if it is a large area burned or this can induce shock. In this case, help the burned person lie down on a sheet or rug, then cover the burned area with a clean sheet or material that will not stick to burn.
- In case of white, charred burns, do not apply water or try to remove clothing. Wrap the area in cold, wet cloth.
- Always use cool water, NOT freezing water.

**COLDS & FLUS: COLDS & FLUS:** Every year there are new flu strains cross the globe. Often more dangerous for the elderly, the very young, and those with weak immune systems. Is spread through sneezing and coughing, when water droplets carrying the virus become airborne and are breathed in by others. And passed on through the spread of germs due to poor hand-washing hygiene.

**Signs & Symptoms:** May cause fever, muscle aches, headaches, and tightness of chest. Influenza more serious, can last six weeks! With a bacterial infection, you will have lots of mucus, likely yellow, green, or brown, with swollen glands. For a virus – heat the body to get rid of it. Soups, teas, baths, diaphoretics to push a fever up and out. Example, polio virus is killed at 104 degrees. When you use aspirin for a symptom, like fever –this suppresses; it doesn't allow the body to heal; If a fever is suppressed, suppression drags the sickness out longer. Only time want to suppress is when fever is too high.

**Treatment:** Get the immune system working. Hit it hard as soon as possible. It is not uncommon to go through an ounce of extract for an acute condition. Keep immune system strong. Herbs are not a magic bullet! Dietary and lifestyle considerations are crucial.

***Herbal medicines have a long history of easing flu symptoms & preventing potentially fatal complications. Addressing viruses and bacteria in the body requires one to strengthen and support the balance while at the same time sending in some firepower.***

- **Flu shots** don't give protection from all types of flu, just the ones the makers guess will be active this winter. Prefer not to use shots or drugs. Flu virus vaccines are biotechnology, not from live virus. If there is a choice and you choose to take a vaccine, take the kind that you sniff – it is the better of the two kinds – between the shot or the sniff kind.
- **Bed rest.** Protect back and neck; keep kidney area warm.
- **Stay hydrated** by sipping on water and herbal teas throughout the day. This will also expel toxins and keep the respiratory tract from drying out. If a fever, it's critical to **fast** completely from the time of the onset of the fever. Nothing more than **lemon water** till the fever is back below 99.
- **Foods** should be simple and warming. Especially for fever and chills: Eat a diet based on broths, soups, and teas. Make immune-strengthening soups; if feverish, keep it more like a broth. Add immune-strengthening herbs like a few sticks of astragalus. Cooking herbs and vegetables together for a long time extracts minerals, activates immune-strengthening phytochemicals, and increases the levels of available antioxidants. Raw foods weaken and stress the immune system. Use seasonal *vegetables* such as: carrots, cabbage, celery, corn, burdock, turnips, potatoes, tomatoes, parsnips, and ginger, onions, and garlic!
- Mix traditional curry blends including turmeric, cayenne, which stimulate and activate the immune system. Add ginger, garlic, onions to boost immunity and help the respiratory tract heal. Garlic is one of the best immune-system helpers; anti-bacterial; awesome for lungs; nourishes & supports immune system. Herbalists in the middle ages relied on it to prevent infection from the plague, so it just might keep us safe from the flu. 1 or more cloves-if tolerated, of raw garlic per day, or up to a teaspoon of garlic powder. Put into recipes. whole grains are good too.
- **Seaweeds** build powerful immunity. Kombu and wakame are excellent in soups. Cut them small; they swell to 5-7 times their dried size when cooked.
- **Most mushrooms** strengthen the immune system. Fresh or dried shitake. Reishii, maitake, etc.
- **Kitchen spices:** thyme, oregano, basil, marjoram, and sage - are loaded with antioxidants. Don't just season the soup with them, Add them by the handful for the greatest impact on immune strength. Marjoram is Anti-catarrhal – use strong tea for cough with a cold.
- **Avoid:** solid foods if there is no appetite for them. Eliminate foods that weaken the immune system and cause mucus -sugar, (including orange juice), carbs, processed foods, dairy, and junk foods, which suppress your immune system.
- **Drink nourishing cups of herbal teas daily;** Gives great nourishment for the immune system and the entire body. They are full of antioxidant vitamins, minerals, proteins, phytoestro-

gens, and hundreds of protective phytochemicals that work to help you ward off the flu and colds too. All of these remedies will help you sweat out the cold or flu:

- Drink several cups a day of yarrow, peppermint (an old gypsy formula that herbalist Rosemary Gladstar recommends). Add Boneset tea or tincture for aches and pains and fevers.
- Hot ginger lemonade: Fresh grated ginger with some honey and lemon, and to really get things moving, add a pinch of cayenne. Drop the echinacea in.
- **Vit C** several times a day to support immune. vit c 1,000, even 2,000 milligrams daily when sick.
- **Fire Cider:** cheap and easy to make. Apple cider, fresh ginger, horseradish, ginger, drip echinacea or some other herbs in.
- Go to the area where they've been weakened and think of herbal actions. If a virus, usually that is breathed in. Lungs. give an expectorant for bronchial tubes. For moisture in the lung, use stimulating expectorants. You don't want to dry the sinus, you want to encourage it, the mucus.
- Immune system breakdowns in times of stress. stress-modulating herbs; adaptogenics, nervines and the like. nervines -also scutellaria baicalensis or huang qin, it is one of the "four yellows" containing berberine and is used to fight "damp heat" type infections in the chest as well as in the GI and urinary tract.
- **Anti-Viral Herbs and others included in formula or used separately to alleviate symptoms.** Anti-infective herbs can help us prevent the flu and assist us if we do get sick. Colds and the flu are caused by viruses which are more vital than bacteria and harder to kill. There are many anti-bacterial herbs but few that are anti-viral. St. Joan's/John's wort.
- **Echinacea** The tincture of echinacea root is a well-known anti-infective. When I feel an infection brewing, I use large doses of echinacea to build white blood cells and encourage T-helper cells. I tend to use the root. I make a quart of echinacea tincture in fall. Echinacea to stimulate the immune system, elderberry tincture or elder flowers is helpful in fighting viral infections. Yarrow induces a sweat to help break a fever. Use Echinacea to prevent secondary bacterial infection. If you get a cough when you have the flu – that is a secondary infection. -Give echinacea with a stimulating herb like vit C/rose hips, ginger, cayenne to move it. In order for echinacea to ward off a cold, you must take 1/2 tsp every half hour at the first sign of infection.
- **Elecampane** The tincture of this root is a favorite for clearing lung infections and countering the flu. The usual dose is 10-15 drops 2-3 times a day, but I would increase the dose to 6 times a day in an acute situation. take elecampane if you've gotten an infection;
- **Elder** Elder flowers are a nice remedy for those with a feverish cold or flu. Elderberry prevents the influenza virus from replicating. 1tbsp four times a day for adults. Cordial is taken as a preventative from viruses. Elder berry syrup also eases coughs and lung congestion. CATARRH – Elder has long been used as a remedy for any condition where large amounts of mucus are produced. Infuse a tsp of elder flowers in a cup of water for 10 mins. Drink the tea three to five times a day, or take 3 tbsp of elder syrup daily.
- **Boneset:** Strong diaphoretic, promotes sweat. Must be drunk hot. Does not taste pleasant. Use as an extract or dry leaf tea – you can add honey or Stevia or sweetener, but still bitter. Boneset has aspirin quality in it; is *analgesic*, eases aches & pains accompanied with flu, and reduces cold & flu symptoms. 50-50 *boneset tincture in elderberry syrup*, taken a dropper or two per two hours with other herbs individualized. Marion mentioned Joe Pye Weed is our version. Use 1/2 ounce of dry herb to one cup of hot water for medicinal tea. Brew 10-15 minutes.
- **Lomatium dissectum** has strong anti-microbial & anti-viral activity and is traditionally used by herbalists for flu. Lomatium is our local plant to use; expectorant; great for lungs. a mild immune stimulant. increases scavenging activity of our white blood cells cleaning of our bodies of viruses, bacteria. diaphoretic- so take warm. good for sore throats. Some people get a rash on

- their skin which may be the toxins coming out too fast—a healing crisis. Check for reaction; Use Lomatium with dandelion root tea or alterative for less reaction –Burdock, Nettle, Red Clover.
- **Licorice root** pieces or extract: Besides having great adaptogenic qualities, it protects the stomach and digestive tract from the harsh effects of very bitter herbs. Helps inflammatory internal mucosal conditions. antiinflammatory, moistening. For allergies, asthma, dehydration, diarrhea, food poisoning, indigestion, pain, sun overexposure.
  - **Peppermint** is anti-catarrhal and diaphoretic. (know that it is cooling too. Anti-inflammatories are often cold or cooling, so you may want to give with a warming plant.)
  - **Eyebright** astringent, expectorant, decongestant, and anti-inflammatory properties, eye-bright decreases profuse discharge esp from nasal and sinus passages. Infuse in water or tincture.
  - **Nasal congestion** -yerba mansa. Use nettie pot to irrigate nasals, warms lungs and opens them up. relaxing and stimulating quality.
  - **For dry cough**, get it to secrete. Anti-inflammatories with demulcants. Licorice for hoarse, dry cough.
  - **For wet cough**, anti-catarrhal and astringent. need drying expectorants -grindelia, thyme, etc. over-production, move it up and out.
  - **Sinus-** Thyme and Eucalyptus steam – for menthol.
  - HOREHOUND IS IMPORTANT! -
  - **Tips to Avoid the Flu:**
  - Wash your hands; this is the single best way to avoid the flu.
  - Cough or sneeze into your elbow, not your hand. Viral particles are easily passed from hands to eyes and nose even if you use a tissue.
  - If the flu is active in your area, avoid public places.
  - PROMOTE IMMUNITY -To promote a good immune system, you need a good overall lifestyle that includes your overall energy, good food, exercise, wilderness time, watching sunsets – herbs cannot take the place of a Zero Lifestyle spent in concrete and man-made boxes.
  - Vitamin C., tonics -teas such as nettle, oatstraw, red clover.

**CONTAMINATION:** see below.

### **DIABETIC EMERGENCIES:**

A disease process that affects the body's ability to metabolize sugar. Type II Diabetes is more common, usually arising in adulthood, and may be managed with proper diet and exercise. Type 1 diabetics are dependent on insulin injections to control blood sugar.

Most of the time people with diabetes know what they should do to take care of themselves - backing off of carbohydrates and other sugars, and other dietary and lifestyle concerns. However there are diabetic emergencies to watch for, especially during an emergency when diabetics may not have access to insulin. What happened in New Orleans was that people were not able to get their prescriptions for insulin renewed.

- Symptoms include disorientation, restlessness, combativeness, fatigue, slurred speech (people experiencing a diabetic emergency have often been mistaken for drunk), unconsciousness, coma
- Get a medic.
- If the person is conscious and coherent, get them a little something sweet to eat or drink (i.e. small amount of juice, honey, piece of candy). If the crisis is due to low blood sugar this small quantity of sugar might bring them out of it. If it is due to high blood sugar, the small additional amount of sugar is not going to worsen the situation. Try to have them administer it themselves.

- Ask them when it started, have they taken their blood sugar recently? Any decrease or increase in exercise? Ask them when they've last eaten. (Proteins help stabilize blood sugar.)
- Remember, Do No Harm. Diabetics really sensitive to alcohol. Extracts in boiling hot water.
- Cinnamon for blood sugar. Can maintain their meds longer.
- Blackberry, stevia, fenugreek – all blood sugar stabilizers.
- Long term: Nopales or prickly pear or cactus. used as a food. cut up and pickle cactus for a pickle salad. 1/4 cup a day. Or juice and drink 1/4 cup in the AM. Brings blood sugar down. (keeps from kidney damage. )
- Diabetes I is an auto-immune. huckleberry tea in A.M. May help insulin last longer.
- See an herbalist for long-term care options.

**DIGESTIVE PROBLEMS:** stress, traveling, and any disruption of the rhythm of daily routine are common circumstances under which digestive problems arise. Changes in diet and eating schedule, unhygienic conditions, and exposure to new pathogens may cause minor discomfort, or pose life threats. In many situations determining the exact cause of the digestive issue may not be possible, but alleviating minor symptoms and identifying more serious emergencies is within the scope of herbal first aid.

Assessment:

- Gather a general impression by skin color, temp, and moisture; (A flushed and hot face may indicate a fever.) facial expression and their general posture.
- Ask thorough questions: when did the problems start, how fast/slow was the onset. When was the last food and beverage consumed, consistency of stools, frequency of urination. How severe is the sensation/pain, what makes it better/worse? Has the person ever had this problem before? Are others around them sick? Are they on medications? Any allergies?
- Examine the abdomen (when appropriate, especially if pain is present.) Look for redness, bruising, distention. feel for tenderness, rigidity, distention.

**Abdominal pain-** pain accompanying any digestive problem is a big red flag. Pain in the abdomen not associated with trauma may also indicate a number of other serious conditions. If severe pain persists, get help.

Carminatives for pain accompanied by gas. Peppermint, chamomile, ginger and cardamom are good for tummy-aches.

Demulcents for abdominal pain due to irritated stomach or intestinal lining. Marshmallow Root lines the surface of the stomach, stops irritation that causes pain. It is just for the symptom, it is not the "cure."

**Constipation:** If you don't have a regular bowel movement at least once a day, consider constipation a problem. Causes can be change in diet or lifestyle, stress, lack of sleep. Constipation can cause discomfort, irritability, and fecal impaction leading to infection and chronic bowel problems.

Treatment:

- Diet: Eliminate foods that may be binding or contributing to the problem: processed foods, cheese, pasta, bananas, and bread are some items.
- Hydration! Drink 6 - 8 cups of water a daily. Often dehydration is a cause of constipation.
- Rest & exercise are important.
- Massage abdomen in clockwise motion. Talk with person about bathroom habits.
- Dietary fiber is important: often whole grains and fresh veggies will provide enough fiber to keep bowels moving. fresh flax and psyllium sprinkled on salads & other foods, aloe, olive oil;
- Herbs work great for constipation. Stimulating herbs like yellow dock, rhubarb root, mugwort. Safer laxatives include Psyllium seed (Plantago psyllium), Aloe vera gel, burdock, buckeye,



cleavers, dandelion, flaxseed, yellow dock root. Coffee is also a laxative but can also be dehydrating so careful.

Alteratives like dandelion root help get the system working right.

-Avoid Senna, Cascara sagrada: they work in 6-12 hours, but they can create dependence; In 2-3 months the nerves stop working. "Ex-Lax" contains Senna.

**Diarrhea** is often your body's natural way of eliminating something that should not be in your body. It is important to find out the reason why someone may have diarrhea. Possible causes include:

-bacterial infections -contaminated food or water (salmonella, e.coli);

-viral infections ("stomach flu," Norwalk virus, viral hepatitis)

-parasites (giardia, worms)

-food intolerance, allergy, or imbalanced diet.

-stress

-reaction or side effects to medications

-chronic intestinal disorders.

-overuse of laxatives

Depending on the cause, the treatment may be different and you may want to see an herbalist.

You will want to investigate food or water contamination. Red flags are acute diarrhea continues for more than 3 days, fever, blood in the stools, abdominal pain. Bloating, cramping, and sulfury flatulence are symptoms of giardia. Failure to aggressively treat infections and parasites can lead to latent infection (typhoid fever, giardia), chronic malnutrition, anemia.

-Diarrhea can cause dehydration (the leading cause of death in children world-wide!)

#### TREATMENT:

-HYDRATION! With diarrhea it is easy to become dehydrated and ill. Increase the individual's fluid intake by giving small sips of water. (dehydration is the leading cause of death in children world-wide!) You can add electrolyte mix due to possible mineral loss.

#### ELECTROLYTE RE-HYDRATION SOLUTION

1/4 tsp of baking soda

1/4 tsp of sea salt

a little honey or sweetener for taste

1 qt. of water

-1 tsp of carob powder blended into 1 cup of water is an excellent remedy that can be used in children as well.

-All astringents can be used for diarrhea but some work better than others. Start small with dosage and continue to slowly take more --10 drops every 20 minutes until symptoms subside or rebound diarrhea. -Blackberry-- use leaves for children; blackberry root for adults. Careful, especially in children for rebound diarrhea. For adults take 20 drops (about 1/2 tsp) every 20-30 minutes until symptoms subside. (less for children). Blackberry JELLY can also be used (not jam - seeds are a laxative). Other astringents include meadowsweet, agrimony, geranium.

-Agrimony.

-black tea also works in a pinch

-Eat simple, bland, binding foods: (BRAT: bananas, rice, applesauce, toast), potatoes are good too. No caffeine or dairy. Other beneficial foods include yogurt with acidophilus, miso soup, oatmeal.

- Antispasmodics for diarrhea accompanied by cramping.
- Anti-microbials: garlic, oregon grape, echinacea, if bacterial infection is suspected.
- Charcoal absorbs toxins. take two 500 mg charcoal caps every 2 hours while awake.
- If giardia is suspected, eat raw garlic to the extent possible. Antibiotic treatment is the definitive care to avoid dormancy and carrying the parasite long-term.

**Indigestion:** gas and poor assimilation of nutrients. Often a result of poor eating habits, stress, & low quality foods. eat calmly and slowly, chew well. combine food well. Drink chamomile or peppermint teas 1/2 hour before and/or after meals. Add ginger or cayenne to your food or make a tea.

**Nausea/vomiting:** Red flags- blood in the vomit, fever, accompanied by diarrhea or pain. Careful of dehydration.

Treatment: patient should be in comfortable position. Rest. Rehydration with re-hydration mix. Clear vegetable broths.

Candied or fresh ginger tea, peppermint, chamomile, fennel, meadowsweet.

### **HEADACHES:**

Headaches are a symptom and are often an indication that something is out of balance somewhere else in the body. A headache can occur for a variety of reasons: they can be triggered by being overtired, feeling stressed; watching tv, sitting in front of the computer for a long period of time; constipation; allergies, eating wrong types of foods or missing a meal altogether; lack of food, stopping coffee cold turkey; red wine, depression, high altitude, colds, flu, hormonal, sinusitis, dehydration, sunstroke, brain tumor, head injury. If you have ruled out a head injury, herbs can be helpful in treating various types of headaches. It is important to find out the underlying cause.

- Is there a history of headaches, migraines? Ask how often and if it is similar to past ones. Or is this the first bad headache (if so, this is a concern).
- Has the person had sufficient food and water intake? (Low blood sugar and dehydration are common causes of headaches).
- Alcohol or drug use? Withdrawal from a caffeine, nicotine, or other drugs?
- Have they been either emotional or stressed out?
- Has there been any injury to the head?
- Altitude?

### **Treatment:**

-WATER & Electrolytes (Rehydration Solution). If the person is dehydrated, careful not to rehydrate too fast. Small sips to avoid nausea and vomiting.

-Ask what has helped in the past. What medicines or techniques such as massage, pressure points, coffee, cannabis, hot & cold therapy on back of neck, lavender oil, sleep, chiropractic, reducing sensory stimulation, eating, etc. Ask what makes it worse.

-Depending on the headache, consider the various actions: anti-histamines, antiinflammatories, nervines, sedatives, skeletal muscle relaxants.

-anti-inflammatories: if at the onset, stachey's. Willow-bark, meadowsweet.

sedatives: ca poppy, valerian is good for stress headaches. 1/4 tsp extract every 1/2 hour

-antispasmodic/skeletal muscle relaxants: skullcap, pedicularis

-analgesics: corydalis, wild lettuce

-If the headache is of the vascular type caused by a rich diet, too much sugar, or a highly charged emotional state rather than stress factors, try eating Japanese salted plums or a cup of miso soup. This will alkalize the blood quickly, changing the pH and often will diminish the headache. (Gladstar)

-cool the hands off to move energy. better to do once you notice headache coming on.

migraines- causes of migraines can be rancid oils, chocolate, dairy, junk food. Tone up the blood vessels in the brain with herbs like feverfew and ginko. Feverfew tones vessels taken over time; for every year you've had a problem, one month of usage (tonic herbs may need 3 months before they start to have an effect). Feverfew is best in vinegar, 1--15 drops 3x a day.

tension headaches-neck shoulders, jaw are constricted and tight. Hot and cold applications Consider anti-spasmodics, nervines, essential oils.. Skullcap, black cohosh, lavender, feverfew, yellow jasmine, blue vervain.

liver headaches- pain in frontal area, often felt as a hangover. Drink mugwort tea. Take liver herbs such as turmeric, dandelion, milk thistle. Ceanothus (red root) may help when it's due to crappy diet.

sinus headaches -hot rags with lavender on them. Sushi with wasabi!! Bayberry 15 drops for acute problems. Yerba mansa is astringent, decongestant, tightens up sinus tissue. Nettie pot with saline solution, maybe with a couple drops of peppermint oil in it; use it 4 times a day.

Other herbs to consider

- Eyebright is for headaches associated with allergies.
- Meadowsweet tincture and/or tea- is a safe useful all- purpose antiinflammatory.
- Chamomile is a safe, pleasant-enough tasting tea and tincture with stress reducing and gut-appeasing properties.
- Willowbark when the headache pain is not too intense and it's hard to pinpoint its source.
- Skullcap tincture- quieting effect on the nervous system. Helpful when nervousness and stress play a role in causing the headache pain. Is also a muscle relaxant.
- Valerian is a valuable and unpredictable sedative hypnotic. Use caution and determine how the person reacts to this herb, as it may aggravate some people.

## **HEAD INJURIES:**

### **Minor Head Injuries:**

Serious damage is rare if the skull is intact and the brain relatively undamaged. There may be a goose-egg bump or heavy bleeding from a wound on the scalp, where there are lots of blood vessels. Even small cuts bleed a lot. It may be a mild injury if the patient may have lost consciousness but responded immediately to loud shouts, pinches, etc.

### **Treatment:**

See wound protocol. Apply light pressure from a bulky dressing on the wound to stop the bleeding and an ice pack on the goose-egg.

-Watch the patient for the next 24 hours, waking them every couple hours during the night to check that their mental status is normal for them.

### **Severe Head Injuries:**

With severe head injuries, always suspect spinal injuries, and take spinal precautions! If the patient does not respond to shouts and pinches, this may indicate serious brain damage. GET HELP! Injuries to the brain/central nervous system (CNS) are often hard to assess. At first a person may seem fine, so don't be fooled. Internal bleeding and brain swelling can happen slowly, so symptoms of a serious life-threatening injury may appear gradually.

**SIGNS & SYMPTOMS OF BRAIN INJURY:** (Person may have all or some of the following. Get help!):

- Level of consciousness deteriorates; altered level of responsiveness; DIC-head (disoriented, irritable, combative)
- Headache

- Repetitive questioning, doesn't remember what happened (person forgets where he/she is, what they are doing there, etc.)
- Seeing stars, split or blurry vision
- Lethargy
- Nausea, projectile vomiting
- Seizures
- Unequal pupils
- Blood or CSF from ears or nose
- Posturing-involuntary flexing of muscles
- Bruising around the eyes or behind the ears (raccoon eyes) or behind ears (battle signs)
- Changes in vital signs: heart rate decreases, Blood pressure increases, breathing patterns are erratic.

**Treatment:** Get help! Get them to professional care.

- If you know how, maintain their airway (jaw thrust; clear vomit, other objects).
- If unconscious, assume spinal injury, if you know how, Check ABC's and hold spinal stabilization. Maintain airway with jaw-thrust. If the person is on the ground, don't move them. Clear the area to prevent the injured person from further harm.
- Anticipate vomiting and have a "puke plan."
- Control bleeding/fluids with light bulky dressing, NO direct pressure
- If you can, try to locate someone who knows the injured person. They may be able to help you figure out if they are acting like their normal self.
- Keep conscious patient alert, "with" you. Keep talking to them so that you can tell if there is a change in their mental function over time.
- Even if unconscious, keep talking and reassuring
- Try to get a medical history so that the information will be available if they should lose consciousness.

FLOWER ESSENCE:

Bach's Rescue Remedy or FES Five Flower Essence Trauma formula.

Note: Treatment does NOT include administering herbs, pain meds, etc. It is very important to not mask symptoms of a head injury, so you can continue to assess the situation. For people with mild head injuries who are alert, give small amounts of food and water as the person will tolerate, but monitor for nausea and vomiting.

### **MUSCULO-SKELETAL INJURIES:**

- Strain -over-stretched muscle & /or tendon (connects muscle to bone).
- Sprain-joint injury, over-stretching or tearing of ligament (a strong band of tissue that connects bone to bone). The ankle and wrist are particularly vulnerable. Can be recurring the rest of your life especially if treated improperly.
- Fracture -broken bone. open (breaks through skin) or closed (hard to distinguish from a sprain w/o X-ray)
- Dislocation -a bone displaces from the joint with which it articulates. May involve fracture.

**Assessment:** Strain -over-stretched muscle & /or tendon (connects muscle to bone).

- Sprain-joint injury, over-stretching or tearing of ligament (a strong band of tissue that connects bone to bone). The ankle and wrist are particularly vulnerable. Can become a chronic problem if treated improperly and not allowed to heal.
- Fracture -broken bone. Open (breaks through skin) or closed (hard to distinguish from a sprain w/o X-ray).
- Dislocation -a bone displaces from the joint with which it articulates. May involve fracture.

**Assessment:** The definitive assessment of injuries to the bones and muscles is difficult without extensive medical training and radiography. However, simple assessment skills can help guide the treatment of musculo-skeletal injuries to reduce pain and prevent long-term damage. The patient may need to use their injured extremity to move to another location but try to stay off the injury unless necessary. Determine if injury is usable or not.

- Mechanism of injury --How did it happen?
- Patient history -has this happened before?
- Physical exam. Get the patient relaxed & look at the injury.
- Expose the area. Assess if mid-bone or near a joint. Look for discoloration, deformities, swelling, open wounds. Compare to the other side of the body. Does it look strange?
- Check circulation distal to the injury, skin temperature, sensation.
- Feel gently along long bone for crunchy sound (crepitus), point tenderness, stability.
- Range of motion: have patient move the injury if possible. Do not move if too painful. Can the person hold weight on it? Otherwise, splint it (which a WFR course can show you).

### **Treatment:**

-LAF AT THEM! Look, Ask, Feel. Take their boot off. If not broken, it can go back on. If it is broken, the boot will stay off. Was there a snap or crack? Is there a prior history?

-Move the person as little as possible & **RICEM** to lower swelling, decrease pain, and prevent further injury.

-For closed fractures and/or sprains, treat as a fracture:

**Rest**—Stay off the injured extremity! Rest decreases bleeding to allow clots to form. Eat nutritious food and drink plenty of water too.

**Ice**—Causes blood vessels to constrict, reducing bleeding and swelling. Apply ice for 20-40 minutes every 2-4 hours. Never apply ice on skin; careful of freezing/frostbite. Listen to your body.

**Compression**—Use Ace wrap, tight enough to stop swelling but not enough compression to shut off circulation. Monitor distal pulse once, then every 20 - 30 minutes first couple hours then every couple hours thereafter. Splint for fractures and dislocation.

**Elevation**—Reduce the swelling. Above the heart if possible.

**Medication**— Arnica gel or oil applied topically (for a closed wound only), or 6-30C homeopathic orally.

-Anti-inflammatory herbs (arnica, turmeric, meadowsweet & willow bark).

-Muscle relaxants (Pedicularis, etc.)

-Nervines/Herbs for pain: Valerian, Kava Kava, California Poppy, wild lettuce, etc.

**Splinting**—to immobilize the injured extremity. A WFR course can give you splinting skills.

Treat any other wounds on the extremity first.

Gently palpate injured area to check for point tenderness (site of fracture). Check capillary refill, sensation, and movement (CSM) beyond the injury. Continue to monitor.

Splint area in position of function, unless resistance when moved.

Immobilize above and below injured area (joints above and below bone, or bones above and below joint).

Secure splint w/sling or otherwise to prevent further movement.

Reassess Circulation, Sensation, Movement.

Get help when:

- The individual is in a lot of pain.
- You or the injured person heard a bone snap.
- An injury is swollen, misshapen, or discolored
- There is a loss of sensation anywhere in the body.

-For open fractures, treat it as an open wound, and GET HELP! Don't attempt to push it back into place.

### **Herbal:**

- Anti-inflammatories--especially good for bruises & crushing injuries is echinacea. Drink a whole ounce then 1/2 oz 2 hours later. Shouldn't swell. St. Johnswort and calendula are also excellent.
- Pain alleviating herbs.
- Blood moving herbs- cayenne, tobacco. Apply topically as a liniment (in ethanol, rubbing alcohol, or vinegar), to closed injuries only.
- Skeletal muscle relaxants
- Herbs that promote healing--help rebuild bone and connective tissue. Apply Comfrey daily as a poultice or salve. Cover with a hot, moist towel and leave on for 30 minutes.
- Help your body rebuild bone and strengthen tissue. Eat well-balanced meals. Get protein, calcium citrate, & magnesium, and essential fatty acid in your diet or as a supplement. Nettles, milky oats, horsetail, and raspberry leaf are great...

### **SHOCK:**

This is physical shock, not emotional! Shock is inadequate perfusion of oxygen to organs. We can't fix it, so we've got to do our best to head it off at the pass. life-threatening; It requires emergency medical treatment. person is experiencing fluid or blood loss & the body starts shutting down. Shock can be due to injury or illness.

### **Signs & Symptoms:**

- dehydration is common
- general restlessness, anxious, or combative behavior
- skin turns cool, pale, & clammy, that can later become blue around the mouth.
- thirst
- nausea and/or vomiting
- heart rates increase and grow weaker ( to load up on oxygenated blood)
- breathing maybe shallow & rapid, labored, or irregular.
- decreased level of consciousness, leading to unconscious or coma
- dilated pupils, eyes "recede," don't focus

**Standard Treatment for Shock:** Get blood into them! With a severe injury presume shock and prevent it. Recognition and management is critical. Treatment given in anticipation of shock is more effective than if treatment is instituted after shock has developed. Remind people about environmental considerations.

- If shock is suspected, GET HELP! This person may need evacuation.
- Keep the person calm, reassure and comfort. Keep them "with" you mentally.
- If you can, monitor their airway, breathing, and circulation. Keep track to see if they are declining.
- Keep them lying down & prevent loss of body heat by padding under them as well as blankets on top.

*Shock position:* Have the patient lie down on their back. Keep warm and dry, padded underneath --important! Place their feet elevated about 1 foot above the level of their head so that their legs are slightly above the heart. (If having trouble breathing, or with head injury, elevate torso 45 degrees). Loosen constrictive clothing.

(Warning! Do not do shock position if the patient has a spine, pelvic, or head injury.)

- Watch for vomiting. Have a "puke plan." Roll the person to their side to puke into something.
- Stop any obvious bleeding by applying firm pressure directly over the wound.

-If the victim is alert and can swallow, provide small sips of water to prevent dehydration. Patient must be able to accept and drink from container.

#### **HERBAL TREATMENT:**

- drop dose of anemone
- rescue remedy
- homeopathic arnica

**Weapons: Chemical & 'Less-Lethal'** police weapons are increasingly seen throughout the country. If deployed on susceptible individuals (children, the elderly, people with asthma or heart conditions, etc), serious injury or death may occur. Developed by military, police, and private weapons manufacturers, they have been used against non-combatants in war zones, poor people of color in urban areas, protesters at demonstrations for 'crowd control'. Below is a partial list, as there are many new weapons out on the market that are being planned for domestic use ostensibly to maintain public order. One of the new weapons is the Active Denial System that uses millimeter waves to create pain in targeted individuals may be of particular relevance. Not much is known about that weapon at this time.

Projectiles: rubber or plastic bullets, wooden dowels, bean bags. Meant to be shot at the ground, though often fired directly at people, even above the waist. May cause bruising, lacerations, or even fractures. Very dangerous if they hit head, neck, ribs, hands, or kidneys. Treatment specific to the type of injury.

Noise makers: concussion grenades, "flash-bang" grenades. May sound like gunshots. Frightening, disorienting, ear-ringing, instills fear and panic. Try to remain calm!

Tasers: Actually refers to two kinds of weapons. Newer "electro-muscular disruption" (EMD) tasers, projectiles that imbed into skin with electrode attached by a long wire. Barb can pierce through 2 inches of clothing. Higher charge may knock a person to the ground, reaction similar to seizures. "Not recommended" for use on individuals with history of heart problems or tasers.

Treatment:

- for stun guns, provide calm and reassurance to person in pain and freaked out; not much else you can do.
- for projectiles, treat as an imbedded object. clip the wire (it will get in the way), but don't remove the barb. Apply ice to spasming muscles. Fluids and electrolytes may help, but no evidence. Homeopathic Arnica 6-30C may help for general body trauma.
- ask about any history of heart problems or epilepsy.

#### **Chemical Weapons:**

##### **Tear Gas (CS, CN)**

- deployed by: hand-held dispensers; fire-extinguisher-sized dispensers; canisters fired into crowds (high velocity, very hot)
- usually mixed with smoke; if not, tear gas is invisible, and very confusing to crowds.
- irritates the skin and mucous membranes in the eyes, nose, throat, and lungs
- immediate effects: chemical burn on skin; nausea, gagging, vomiting; rage, panic, confusion; stinging, tearing eyes, and impaired vision (hence the name); rapid heartbeat; difficulty breathing/respiratory distress (especially with asthma).
- long term effects: second-degree/partial thickness burns from extended exposure; menstrual cycle disruption; damage to eyesight (especially if contact lenses are left intact); possible carcinogen.



## **Pepper Spray (olio capsicum OC)**

- deployed by: foam or liquid spray; directly by cotton swab or gloved hands; "sting balls" that explode on contact; squirt guns; in solution by water cannons; or MIXED with tear gas.
- irritates the skin and mucous membranes.
- immediate effects: painful superficial burn to skin (like sunburn); excruciating pain to eyes or genitals; rage, panic, confusion; rapid heartbeat.
- long term effects: partial-thickness burns; damage to eyesight (especially if contact lenses are left intact); possible carcinogen.

### **Protection:**

#### **Clothing**

- Water-resistant outer layer, closed snugly around neck/head, wrists and ankles.
- Don't wear wicking outer layers (wool, fleece).

#### **Contact lenses**

- Don't wear contact lenses!!! If chemical weapons are being deployed, inform the crowd to REMOVE CONTACT LENSES. Before treating anyone, even if they are wearing glasses, ask "Are you wearing contact lenses?" If so, have them remove them (give them gloves if necessary).

#### **Eye protection**

- goggles: swim, ski, carpentry, welding
- make sure they seal tight against the face

#### **Respiratory protection**

- vinegar-soaked bandana (apple cider vinegar is less harsh to skin); re-wet with more vinegar or water to maintain effectiveness. (store in zip-lock baggie)
- disposable face mask (best if covered with a vinegar bandana)
- organic particle respirator with replaceable filters (available at any hardware store)
- gas mask: US, Canadian, or German makes. Do NOT use Israeli gas masks—these were designed for use in concrete bunkers, and have glass lenses that can shatter, causing major eye and face trauma. Make sure you remove plugs before putting on—they are tightly sealed, and can cause asphyxiation.
- a note about choosing protective gear: while gas masks offer the most comprehensive protection, they also create a very militant-looking image and may make you a target. Respirators and goggles are quite effective in heavily gassed areas.

## **Immediate Treatment:**

#### **Eye Flushes**

- the primary treatment for chemical weapons contamination of the eyes. Repeat until pain subsides.
- this should be a DO NO HARM protocol (unless practiced inaccurately).
- practice BSI (gloves & other precautions)
- no matter what, ask "Are you wearing contact lenses?" (even if they're wearing glasses), and remove.
- have the patient hold their glasses or put in their pocket (not on the ground!)
- position the person kneeling or squatting, head forward, hands on their knees for balance and to keep them from rubbing the eyes.
- lift the upper eyelid with the inner part of the thumb of your non-flushing hand, being careful not to push in on the eyeball.
- hold the water bottle as if it were a football, at a 45 degree angle above the face, and direct a forceful stream of water from the inside to the outside of the eye (the natural flow of tears) with a flick of the wrist.

- avoid soaking the injured person (to prevent discomfort and even hypothermia); cover their chest and knees with a rain jacket or plastic bag if necessary.
- flexible bike bottles work best. Designate a specific bottle for eye flushes, separate from your personal drinking water.

#### **LAW (*Liquid Antacid & Water*)**

- a 1:1 solution of liquid antacid and water in a pop-top squirt bottle
  - use regular flavor, regular strength liquid antacid (Maalox, Mylanta, or generic equivalent). Check ingredients to make sure doesn't contain peroxide or mineral oil (do NOT use milk of magnesia!).
  - may provide relief to sensitive skin that cannot be treated with MOFIBA (see below), such as around the eyes, nose, mouth, and genitals.
  - gargling with LAW after breathing tear gas or pepper spray helps clear the mucous membranes in the mouth, and soothes rage and nausea. Spit it out, do not swallow, to prevent ingestion of chemicals.
  - use a white label, tape, or bottle for coding LAW
- DO NOT: use other remedies such as "Seattle Solution," eggs, toothpaste, soap, anything oil-based, or *MOFIBA* (Mineral Oil Followed Immediately By Alcohol). If not completely removed immediately by alcohol, the oil traps the oil-based chemicals onto the skin, and can cause more serious burns than the initial injury!
- DO NOT use recipes for "barriers," esp. if they contain oil-based ingredients, as these may trap chemicals and be yet another thing to remove from your skin. Don't wear contact lenses!

#### **SEE INFO BELOW ON DECONTAMINATION & DETOXIFICATION.**

#### **WEATHER-RELATED ILLNESSES:**

Watching for early signs of illness are the best preventative measures. Be prepared to meet rapidly changing weather conditions during emergency situations, as well as temperature fluctuations from day to night.

##### **Heat:**

Dehydration: Occurs when the body does not get enough fluids, whether from insufficient intake, heavy exertion, sweating, or vomiting or diarrhea. Dehydration can also occur in cold conditions. Dehydration exacerbates most health problems, especially heat- and cold-related illnesses.

-Prevention: Drink lots of water, careful not to re-hydrate too fast. Avoid diuretics such as caffeine or alcohol. Take breaks from heat and sun. Pee should be clear and copious.

-Signs/Symptoms: Thirst; less than normal and/or dark pee; headache; disorientation, irritability, confusion; dizziness; elevated heart rate and breathing; skin loses elasticity.

-Treatment: If alert and oriented, replace fluids by SLOWLY sipping (1/2 cup every 15 minutes) cool (not iced) water or diluted electrolyte powder or sports drink (too much sugar exacerbates dehydration). Do not use salt tablets. Eat a snack and rest. If severely disoriented or unconscious, do not administer anything orally, and GET HELP.

Sunburn—a first degree/superficial burn

Prevention: wear layers, hat, sunscreen (oil-free), stay out of direct sunlight

Treatment: Treat as any first degree/superficial burn. Get out of the sun. Cool the skin with damp cloths or spray with cool water. Apply aloe vera gel, calendula gel and/or lavender essential oil. Hydrate internally by sipping cool water or diluted electrolyte mix. Do not apply oil-based creams or moisturizers until the next day, or until skin feels cool to the touch.

See BURNS above for more herbal treatment.

### Heat cramps:

- Signs/symptoms: muscle pain and spasms caused by extreme exertion in high temperatures
- Treatment: Rest in the shade, remove restrictive clothing. Rehydrate with sips of cool water or diluted electrolyte mix.

### Heat exhaustion:

- Signs/symptoms: heavy sweating, weakness, fatigue, headache, crankiness, thirst, dizziness, nausea, vomiting.
- Treatment: Get into the shade, remove excess clothing, splash with cool water, fan. Have the person rest, lying flat with legs elevated. If alert and oriented, rehydrate with sips of cool water or diluted electrolyte mix (see above).

### Heat stroke

- A very serious condition! It can be fatal, seek help!
- Signs/symptoms: progresses from heat exhaustion to delirious, comatose, rapid pulse, rapid breathing, very high temp. Skin may be moist OR dry.
- Treatment: GET HELP! Treat same as heat exhaustion, plus actively cool with wet towels or cold packs to neck, groin, armpit, until help arrives.

In general, the best medicine is prevention!

- Get into the shade. Make a spritzer of water, add two tsp of witch hazel, several drops of lavender. Spray or sprinkle over yourself. Great in crowds too.
- Drink a lot of water. Keep hydrated. If you're thirsty, you're already dehydrated. Your pee should be clear.
- Don't forget to eat — even a snack provides some of the nutrients you need
- Avoid excessive exposure to the sun with water- or alcohol- based sunscreen, clothing that covers your skin, and a wide-brimmed hat.
- Avoid caffeinated drinks.
- Peppermint, hibiscus, lemon balm are cooling, even better served chilled!
- Watermelon and white flesh of the rind are very cooling.
- Pay special attention to kids, older folks, people who are sick, and also people who have been drinking alcohol. They can more easily be made sick by the heat.

### **Cold:**

- The sick and injured are more vulnerable to cold. Cold weather is almost always a factor in wilderness medicine. Add heat: insulate. Wear layers! Wicking (Polypro, silk) on the inside, insulating (wool, fleece, down) in the middle, wind/waterproof on the outside. Cover the head.
- Signs/symptoms of *mild to moderate hypothermia*:
  - Mental—cranky, uncooperative, poor decision-making, apathetic, lethargic, slurred speech.
  - Muscular—shivering, loss of fine motor function to gross stumbling, stiffness, inability to move.
- Get dry, and out of wind and wet. Remove damp or wet clothing ASAP. Get a pad under the person and dry/insulating layers on top (inside a sleeping bag, etc). Massage to re-warm the body.
- If possible heat water. Hold an insulated hot water bottle against the groin, armpits, belly.
- Eat/drink warming foods/liquids (chocolate, nuts, ginger, fire-cider, miso, non-caffeinated teas).
- Avoid caffeine and tobacco.

### **WOUND CARE:**

- Open- Involves a break in the skin;
- Closed- skin remains intact.

**A note about blood:** Bleeding can be scary and distracting from other injuries or illnesses. Bleeding may also be the primary life-threatening injury! In these cases, once you've stopped the bleed you've ended the emergency.

**Remember to complete a thorough patient assessment.** Check the individual from head to toe by feeling and looking at the patient and your hands for blood. Arterial bleeding is faster, brighter red, and may pulse with the beating of the heart; harder to control. Venous bleeding is slower, darker red /purplish; typically more manageable.

### **Types of Open Wounds**

- abrasion: scrape, "road rash"; bleeds little but painful, may be contaminated with debris
- laceration: cut made by a sharp object, may be straight or jagged, shallow or deep.
- puncture: made by a sharp object, small opening. Get tetanus shot if not current.
- impaled object: keep in place, stabilize with dressings. Do not remove it! The object may be preventing a more serious bleed by compressing blood vessels or plugging holes in organs.
- avulsion: small flap of skin to near amputation. Clean, reposition, butterfly.
- amputation: completely severed body part. After stopping the bleed on the patient, rinse the amputated part in water, wrap in moist sterile gauze, place in sealed baggie, and put in cold water on ice. Make sure it stays with the patient on the way to the hospital.
- crush injuries: smashed, both internal and external damage.
- evisceration: disembowelment. Wash off with copious water very gently replace if not perforated; if perforated then use moist dressing, plastic, tape.

### *Identify high-risk wounds:*

- looks deep
- bites -animal or human
- very dirty or highly contaminated
- caused by a rusty object that may carry tetanus toxin.
- was caused by an object that is still embedded.
- wounds involving or exposing bones, tendons, joints, or on the face, feet or hands
- deep puncture wounds or long lacerations
- caused by crushing
- any wounds that cause numbness, weakness, or impaired movement.

### **GET HELP for the following:**

- Heavy bleeding.
- Nausea or vomiting.
- Discoloration of urine, stool, vomit, or sputum.
- Swelling.

For severe bleeding, GET HELP! Do not apply a tourniquet!!! Instead, apply well-aimed, direct pressure on the wound, and apply pressure on the brachial or femoral artery pressure points if bleeding is severe, and GET help.

**Standard Open Wound Treatment:** If the wound does not require immediate medical care, remember these four goals: 1) stop serious bleeding 2) prevent infection 3) promote healing 4) Return to function.

- BSI -Gloves are essential; consider goggles, mask, protective clothes if messy.
- Expose wound, removing /cutting clothing as necessary.

**Stop the bleed.** Most bleeding can be stopped by applying direct pressure and elevation above the heart. Apply direct pressure to the wound with clean gauze or other available material and a gloved hand. Use styptic herbs such as cayenne, yarrow, shepherds purse, and gauze or the cleanest cloth you can find (10 min uninterrupted). If the cloth gets soaked through, add more cloths and continue to press firmly. If bleeding continues, apply more gauze and continue direct pressure. Don't take off gauze to examine the wound, as this will break up any clots that have already formed and can get germs in the wound. Maintain continuous pressure until the bleeding has ceased.

- Unless you suspect a fracture and if possible, raise the bleeding area above the heart.
- If bleeding continues at this point, get help. DO NOT use a tourniquet!!!
- Try to keep the person calm. Panic can elevate heart rate and thus increase blood loss.
- Apply pressure to the main arteries. Stop pressing once bleeding is stopped.
- When bleeding is controlled, apply a *pressure bandage*. Check capillary refill time below the bandage to make sure it's not too tight. A pressure bandage is made by placing more gauze and wrap with roll gauze, ACE bandage, cloth strips. Check the extremity below for sufficient circulation.
- Treat for shock. Keep your patient warm.

### **Clean the Wound:**

- If bleeding is not severe (small abrasion or laceration) and controlled within 15-30 minutes (not soaking through bandages), clean the wound. Flush out debris to prevent infection, wash the wound well with soap and water.

Note: Use soap and water, which is standard protocol used by hospitals as well. Anti-bacterial soap leads to resistant strains of bacteria. Hydrogen peroxide, rubbing alcohol, and Betadine not only sting a lot, they kill tissues and can slow the healing process.

It is crucial that you clean the wound thoroughly. A good technique is to use a sterile pressure syringe (with the needle taken out) filled with water and flush the wound repeatedly with clean water.

- For deep wounds, abrasions and uneven lacerations with debris: Take care to remove any debris inside the wound by gently flushing it out with water, using a pressure syringe, or by using sterile fine tweezers.
- Plantain pulls out debris such as dirt, splinters, bee stingers, infection. Use as poultice, tincture, in salve, or tea. To make a poultice, pick some leaves, wash and shred them, mix with warm water until well saturated. Apply under the bandage.

### **Wound Care points:**

While tinctures with alcohol they contain, are often admirable antiseptics, they discourage tissue repair.

Do not apply Comfrey initially to a wound, especially if it is deep or liable to infect. The superficial skin growth that Comfrey initiates can allow infection to proliferate underneath.

### **Apply A Bandage:**

- Apply a non-adherent dressing and secure with adhesive tape. Place a small amount of herbal antibiotic salve on the dressing before application. Any herbal salves containing infection-fighting herbs such as echinacea, calendula, chaparral, lavender, plantain, yarrow, bee propolis may aid healing and prevent infection. Use sterile, individually wrapped tongue depressors to keep salves from getting contaminated.
- Avoid applying salves to deep cuts or puncture wounds; use instead dilute tinctures or teas.
- DO NOT use comfrey on a deep wound, as it causes surface tissue to heal faster than deep inside the cut, sealing it over and possibly leading to infection.

**Monitor for infection:**

Signs/Symptoms of infection (in progression from local/mild to systemic/severe):

- increased redness, tenderness, or heat around the wound
- pus in wound
- swelling & pain beyond the wound site (from here on GET HELP!)
- swollen lymph nodes in neck, armpits, or groin;
- fever, chills or elevated heart rate
- red streaks leading from the wound towards the direction of the heart;
- nausea/vomiting, weakness
- signs and symptoms of shock (sepsis)

Infection Control (for mild cases):

- Soaking crusty or infected wounds in a bowl or tub of warm water with antibacterial herbal extracts added in is very effective in preventing and stopping infection. Echinacea, calendula, hypericum, yarrow, chaparral, plantain, thyme, rosemary, eucalyptus, lavender essential oil, etc.
- Take internally: echinacea and other lymphatics, immune-stimulating, and anti-bacterial herbs may help fend off infection when taken internally.

**Promote healing and prevent scarring:**

Herbal oils and salves can help speed the healing process and prevent scarring.

- Calendula, comfrey, plantain, st. johnswort, vit e, chickweed, prunella (self-heal).

**Types of Closed Wounds:**

- contusion (bruise)
- hematoma \* (goose egg)

Bruises occur when the skin is struck with such force that blood vessels break and leak, and blood fills the damaged tissues below the surface of the skin, yet the skin is unbroken. A large, deeply discolored area may indicate underlying injuries and should be examined by a health-care professional. Keep in mind that some injuries may not be immediately apparent. If pain from a bruise gets worse rather than better during the 24 hours following the injury, see a doctor.

**Standard Closed Wound Treatment:**

- Treat like a sprain & RICEM (rest, ice, compression, elevation, medication)
- Comfrey--A poultice made from comfrey will help relieve the pain and swelling.
- With major hematoma on the head, suspect head injury. With severe bruising evident on abdomen, suspect internal injury, treat for shock, and GET HELP.

**CONTAMINATION FROM EXPOSURE TO TOXIC MATERIALS:**

Exposure to toxic materials is a fairly common emergency. Toxins are hard on our body systems: hepatic (liver), renal (kidneys), lymphatic, digestive, and respiratory. Supporting the natural eliminative functions of these body systems can help to speed the process of detoxification and return to normal function.

*Individual preparedness is an important element* for dealing with a toxic release into our environment. have to rely on ourselves to protect our own health and safety. be able to respond on your own, without knowing whether or not a deadly toxin is present. **Listen to an emergency broadcast radio station (such as Radio Oakland 530 AM, KCBS AM, KNBR AM, or KGO 810 AM) to know if you should "shelter in place" or evacuate.**

If there were a toxic release or explosion outdoors & you are outside, take shelter inside the nearest undamaged building; if you are inside an undamaged and un-threatened building, stay there. If an explosion or release occurs inside your building, get out.

"Shelter In Place" means to stay inside and to seal the premise.

If you're told to evacuate, take your first aid kit and other crucial items. Cover your mouth and nose with a wet dish towel or cloth.

**CHEMICAL CONTAMINATION:** Chemicals act very quickly, often within a few seconds. Individuals must act almost instantly  
Chemical agents are poisonous vapors, aerosols, liquids, or solids. Individuals are affected by inhaling these or being exposed through their eyes and skin. signs and symptoms: nauseous, have blurred vision, and have difficulty breathing or because you see many sick or dead animals.

**What you should do:** *It's essential to find clean air very quickly however possible.*

It is critical to know whether the release or explosion has occurred outdoors or inside a building and to take action according to where you are in relation to that release. If possible use a hoodie over your head and cinched snug around your neck to keep the chemicals out.

Once you have obtained a reliable source of clean air, decontaminate as soon as possible. Given the range of possible medical effects of chemical agents, anyone potentially exposed should seek medical care, when conditions are safe to move about freely.

--See info below about decontamination and detoxification with diet, herbal, & lifestyle support.

### **RADIATION & NUCLEAR CONTAMINATION:**

Beyond the risk of immediate injury from an explosion itself, the primary initial danger is inhaling the radioactive material that is suspended within the dust and smoke, carried by wind, water, people, or animals, or from it seeping into ground water. Radiation can cause weakness, nausea, and vomiting as well as cancer, birth defects, and death. elevated risk of cancer.

Contamination of nuclear materials may or may not be readily apparent. A nuclear detonation however would be unmistakable the moment it occurs: It will be marked by blast effects strong enough to knock over buildings, a brilliant flash of light, high-energy radiation, and extreme heat. The explosion will produce a characteristic mushroom cloud, from which radioactive material will begin to fall after about 10 to 15 minutes. The area affected by this fallout will be long (extending tens of miles downwind) and narrow (spreading a few miles). Radiation can cause weakness, nausea, and vomiting as well as cancer, birth defects, and death.

**How to respond:** -Avoid inhaling dust that could be radioactive. Leave the area.

- If an explosion occurs outdoors or you are informed of an outside release of radiation and you are outside, cover nose and mouth and seek indoor shelter. If you are inside an undamaged building, stay there. Close windows and doors and shut down ventilation systems. Exit shelter when told it is safe.

If a nuclear bomb & *there is radioactive fallout, avoid it:* evacuate the fallout zone quickly or, if not possible, seek best available shelter. Cover your nose, eyes, and mouth with a damp cloth to prevent contact between radioactive particles and your mucous membranes.

If it is not possible to move out of the path of the radioactive fallout cloud, take shelter as far underground as possible. if an underground shelter is not available, seek shelter in the upper floors of a multistory building. Even those who are located outside the fallout zone should take shelter, given the uncertainties about exactly where the radioactive cloud will travel and due to radiation.



-Stay protected indoor shelter for as long as possible. Stock food and water. Venture outside only when absolutely necessary. If that is not possible, middle or ground floors are safer than top floors. Choose rooms with the least number of outside walls. Shut off the water main so contaminated water does not enter your area. Even boiled water that has been exposed will not be safe.

-Decontaminate as quickly as possible (if you've been exposed, wash your entire body with clean water. If water is not available, rub soil on your body and clothing, and then throw it out. See decontamination below), and listen to the radio for warnings to evacuate, & find medical care.

- Relocate outside the contaminated zone and don't always trust authorities if they say it is safe. Research it for yourself.

- Eat miso and seaweed. The iodine in seaweed draws the radiation. Kelp helps the body avoid damage from radiation. (tablets are fine too)

-Roots and underground foods will be safer than above-ground.

-If available, soak in a bathtub with 1 lb of sea salt ( or epsom salt) and baking soda.

-Drink aloe vera juice for internal treatment. Aloe vera gel can also be applied to radiation burns.

-Daikon- A Dr. learned about this originally from some hibaksha (A Bomb Survivors) in 1962. It is used for all exposures to irradiation. It has the effect of helping to remove the radiation from ones body. Have Daikon /Hijiki salad and/or drink Daikon Juice daily as well. Hijiki, Kombu, etc are also useful in this way. He said his patients who use this while going through Radiation Tx are much better off during and after than those who do not.

- See the suggestions below for diet, herbal, & lifestyle considerations.

### **BIOLOGICAL:**

a release of viruses, bacteria, or other germs (agents) used to cause illness or death in people, animals, or plants. Biological agents can involve either contagious (smallpox) or noncontagious agents (anthrax). Some agents (possibly anthrax) can survive in the environment for a very long time. It may take days or even a couple weeks for biological agents to be recognized and to be identified.

can be spread through the air, through water, or in food.

see the CDC website for a complete overview and a comprehensive guide of resources.

The government will be quarantining populations

### **How to respond:**

- Act first to ensure your own survival. Minimize further exposure to agents. Decontaminate yourself. Help others if it is safe to do so. Monitor for symptoms. For contagious diseases, minimize contact with others. Go to a medical provider immediately for medical treatment.

- If informed by public health officials of being potentially exposed, & listen to their suggestions. For contagious diseases, expect to receive medical evaluation, surveillance, or quarantine. If "in contact" with persons symptomatic with smallpox, the authorities will encourage you to obtain vaccination immediately.

For noncontagious diseases, expect to receive medical evaluation. Leave anthrax-affected area once on antibiotics if advised to do so by public health officials.

### **Decontamination:**

-After safely finding shelter, anyone who might have been exposed to the radioactive material should begin to decontaminate themselves immediately. Entering an enclosed space after exposure to any of the above toxins will contaminate the area, discomforting and/or endangering others (esp. babies and elders). As soon as possible after contamination, and before en-

tering an uncontaminated area, remove clothes (and other contaminated items such as backpacks) and place in a sealed plastic bag. Try not to bring contaminated clothing indoors unless it is wrapped up in a plastic bag. As soon as you can, wash your hair and all contaminated clothing in a strong detergent.

If there are chemicals on you, dust yourself off prior to washing and careful so you do not inhale them. You should also seek medical attention after it is safe to do so.

-Shower in the COLDEST water you can stand. Hot water will irritate the burn. Do NOT take a bath. Scrub with castile soap, including hair. It may sting!!!

-Wash contaminated items in a harsh detergent (Tide, etc. to cut the chemicals.) Wearing gloves, bring sealed bag directly to washing machine, open, and dump into machine, trying not to breath in chemicals (you may want to wear a mask).

### **Detoxification with diet & herbal support:**

All of the above agents are toxic and likely to be carcinogenic. As long as they remain in your body, they continue to evoke physical and emotional symptoms. It is important to help your body to eliminate the toxins as quickly and effectively as possible, in order to minimize long term effects. The following is a list of things you can do to help detoxify and support your body's systems following chemical exposure. Some of these steps need to be taken as soon as possible following exposure and others are tonifying and should be done regularly over the weeks after exposure.

- As much as possible support and nourish your body; lifestyle considerations; rest, diet, & herbs.
- Drink at least 8 glasses of water a day to support your body flushing out toxins.
- High fiber diet: Whole grains or psyllium husk can help clean out your colon. It is important to have regular bowel movements.
- Eat whole grains and lots of fresh organic fruits and vegetables— especially seasonal foods that are the color of the rainbow (blueberries, strawberries, squash, oranges, dark-leafy greens, beets etc.) These foods are high in antioxidants (cancer-fighting nutrients).
- Eat plenty of pectin-rich foods, such as apples and carrots, & organic cilantro is excellent, as they will bind with toxins, and help flush them out of the body. Be sure the cilantro is organic because just like in your body, it attracts & pulls out the toxins in the environment. When non-organic, it will be concentrated in pesticides.
- green tea.
- Avoid foods that are hard on your body to process.
- Epsom salt rub: A hot shower, followed by a thorough scrubbing with epsom salts which are then left on the skin for 10-15 minutes before a thorough follow-up wash can help draw toxins from the body. Be sure to accompany this with much water consumption.
- Nettle tea: Nettles are the perfect all around support plants. Their high mineral content and mild cleansing action supports many body functions. boost your immune system, calm you down and support your body in returning to its regular, strong self.
- Dandelion root, red clover, burdock, sarsaparilla, echinacea, and beet root improves the blood with high nutrition and are kind to the liver. Also supporting are sarsaparilla, orange peel, dandelion root, burdock rt.
- Any Alterative herbs like echinacea, cleavers, red clover, etc.
- Miso is a basic medicinal food; alkalizing, neutralizes pollutants, provides immune-enhancing environment.
- Reishi, turkey tails (side effects are lessened. shiitake supports immune function, echinacea, maitake supports liver, chaga prevents carcinogenesis and inhibits the growth of cancerous tumors.
- Lymphatics helps move and drain the lymph system.
- Yarrow environmental essence formula.

- Astragalus -a handful of organic astragalus as you are cooking rice and soups. tonic, strengthens digestion & immune, promotes healing of wounds & injuries.
- Use chlorophyll as a supplement to aid in detoxifying.
- For nausea, fennel, ginger, peppermint.
- Use other herbal remedies with the advice of an herbalist.
- **Learn more about these active organ systems such as the liver, kidneys and the lymphatic system to help remove bloodstream impurities and the herbs to support them.** For starters, here are excellent excerpts about the Liver, from 7Song's article on *Cleansing and Herbal Medicine An Herbalists' Philosophical and Practical Approach* (In quotations; December 15, 2006) :

**The Liver.** "The liver is the largest organ of detoxification as well as performing a number of other vital functions. And it is one of the organs that continually takes the largest 'hit' from all the cumulative waste products in our bloodstream (including the breakdown of drugs), and its health is vital. Fortunately, it is a very regenerative organ. A liver cleanse of this sort may be an occasionally good idea for most folks".

"The most common herb for this type of liver cleanse is Milk thistle seed (*Silybum marianum*). A good way to use these seeds, is to take about 1 teaspoon (buy in bulk) and put them in a coffee grinder, powder them up, and stir into water and drink. Some people get loose stools from this, so cut down the amount if this happens." (You can also sprinkle these yummy seeds on your salads, oatmeal, and many other dishes or just eat them plain. You can also get them pre-encapsulated.) "Other useful liver cleanses include Turmeric (*Curcuma* sp.), Artichoke leaves (*Cynara scolymus*), Burdock root (*Arctium* spp) and Oregon grape root (*Berberis* spp). These are all relatively safe and can be taken as teas, tinctures or added to one's diet".

###

- Also adaptogens, schizandra; alteratives such as burdock, cleavers, nettle. (Use these bitter, liver tonic herbs for about two weeks following exposure. Dandelion root is another good herb to use. The burdock root and dandelion root can be used as tea, 1- 4 cups a day, or as a tincture 1 dropper-ful 2-3 times a day.)
- Herbs that have a lemon flavor usually work on the liver.
- Digestive: laxatives (see Digestive issues above) bitter herbs (yarrow, yellowdock, oregon grape, artichoke leaf, gentian). Plain yogurt and other cultured foods to support your digestion with friendly intestinal flora.
- Dandelion Root is the best tonic. Anti-hepatic toxicity. \
- Milk Thistle protects the liver from pollution; RNA rebuilds cells. 1 Tablespoon three times a day. Watch blood tests, then for maintenance use 1 teaspoon.
- Anti-oxidants. Berry fruits with deep color for anti-oxidants. Also green leafy vegetables and the aerial parts of herbs. -Rosemary is the best. -Also Blueberry Paste.

**Respiratory:** The largest organ for eliminating toxins are the lungs, as we breathe in and out. Herbs can aid the activity of the mucous membranes to ensure that gas exchange occurs. They can activate secretion of lung tissue so that the air is sufficiently moistened and membranes protected. They can augment neurological responses regulating breath, and can tone up circulation and ensure that blood bathes the tissues properly.

"Your lungs and sinuses can get gunked-up after being exposed to a number of airborne particles and pollutants. These irritants can cause coughing or breathing difficulties. First, it is important to rule out other problems (such as pneumonia and asthma). The therapeutic category for helping clear stuff from the lungs is called expectorants. And like the diuretics for the urinary tract, they are often more useful combined with demulcent herbs, as the lungs also have a mu-

cosal membrane and expectorant herbs are often drying. Expectorant herbs include; Yerba santa (Eriodictyon sp.), Grindelia (Grindelia sp.), Wild cherry (Prunus serotina), Mullein (Verbascum thapsus), and Coltsfoot (Tussilago farfara). A useful tool to help cleanse the sinuses is the netti pot. This device (that looks like an long tea pot) is useful for helping put fluids into the sinuses which in turn helps them drain. Directions for use are easy to find. Herbs can be added into the water in the netti pot (there are other ways to pour water in your nose as well), help clear the sinuses. These include; Bayberry (Myrica sp.), Eyebright (Euphrasia sp.), and Pine needle (Pinus sp.) tea. Demulcents can be used for irritated sinuses. Horseradish and Wasabi can also be eaten to clear the sinuses."

These mucilaginous herbs all soothe and coat mucous membranes. These are especially important if you have a dry cough: Licorice root is also very helpful for your lungs, and Marshmallow root tea (which is best made as a cold infusion, or cold tea).

- Plantain pulls out particulates in lungs.

**The Lymphatic System.** "One of its main jobs is to filter out substances that cannot be effectively filtered out by the vascular system (veins and arteries), and to present this material to the immune system to decide what it is and what to do about it. Chronic swollen glands can be a sign of sluggish lymph, as well as susceptibility to illness. Lymphagogues are the category of herbs that help 'move' the lymph. These include; Cleavers (Galium aparine), Astragalus (Astragalus sp.), Redroot..."

- Alteratives, red root, cleavers, echinacea, All for swollen glands and following exposure to toxins. Many of the above mentioned herbs benefit or tonify our renal (kidneys and urinary tract). diuretic, nutritive.

#### **Other considerations:**

- a N95-rated particulate filter can help protect against radiological dust and fallout, as well as biological agents. inexpensive, readily available
- duct tape and plastic sheeting would be useful for sealing openings
- For official responses to toxic contamination: CDC: [www.bt.cdc.gov](http://www.bt.cdc.gov)

## **PANDEMIC: TREATMENT – ABOUT HERBAL ALLIES IN DEALING WITH VIRUSES:**

WHAT: The Influenza virus is constantly changing and mutating. That being the reason that flu shots if you choose to get them are supposed to be yearly, and that being why different strains of influenza, particularly the HN51 avian strain right now, are cause for so much concern. These different strains react differently or not at all to vaccines not meant for that particular strain.

From the ACTION-MEDICAL list-serve:

Would the herbs used in 1918 still be effective, even though the strain that is worrying many people right now is different? Also, were the herbs used in 1918 used to treat and alleve symptoms, or were they used to treat the virus itself?

Greta Montagne: ***Viruses will never adapt to anti-viral herbs for the same reason that bacteria haven't adapted to thousands of years of use of Myrrh and Coptis as anti-bacterials.***

Two reasons. One is that unlike western medicines, herbs are not a single chemical component but a complex of hundreds of different chemicals which may synergize with each other to have the ultimate effect. Second is that many of these herbs are doing as much to stimulate and

modify the immune response as they are attacking the viruses. So even though we may call many herbs anti-virals, the mechanism of action is often one of stimulating cytokines like interferon, activating T-cells, or other ways of stimulating innate or acquired immunity.

**HERBS: Lets look at what worked well in the world-wide flu pandemic of 1918 and 1889 in which 40% of the US population came down with the flu.**

Herbs used in 1918 are still effective, such as lomatium, boneset, black cohosh, pleurisy. But some of the symptoms may be/probably are different because our bodies are different, because our diets are much different, because the atmosphere & chemical pollution load is different, because the viruses are trying different tactics to storm the castle. Basically any herb that will help increase immune response and effectively deal with the cytokine storm caused by invading viruses will be effective. I believe the herbs used in 1918 were used much like they are today; in formula, with a few being specific anti-virals and others included in formula or used separately to alleviate symptoms.

Turmeric/Barberry Root (choice for combating viral spread). PROPER HANDWASHING IS PERHAPS ONE OF THE SIMPLEST YET MOST EFFECTIVE WAYS TO CONTROL DISEASE TRANSMISSION!

###

See Colds & Flus section and read Kathy Abascal's book Herbs & Influenza -How herbs used in the 1918 Flu Pandemic can be effective today.

**Contagious Disease Emergencies:** A contagious disease emergency could affect many people. It could cause mild illness, hospitalization, or death in rare cases. In the event of an infectious disease emergency, the San Francisco Department of Public Health will provide up-to-date information and instructions to the public through media and public outreach sources.

**Group safety (in tent cities and emergency shelters)-**

- HYGEINE Hand Washing. know how to wash hands with little water (spray bottle w/ liquid soap & H2O in it), Shitter Basics. How to set up shitters, Importance of lime or wood ash for pit toilets, etc. Sanitation-At the Headwaters Base camp someone built a killer no-touch hand washing station with a 5 gallon bucket you could tip over with foot pedal and the water came out a small surgical tube.
- Communicable Diseases
- External parasites-Signs, symptoms, remedies ( like scabies, lice, etc. prevalent in disaster stitches because of proximity of people in tent wards. How to treat, how to avoid, etc.)
- Internal parasites-Signs, symptoms, remedies
- In a firm but friendly manner, let people know if they have communicable or contagious vectors (i.e. staph, lice). Make efforts to minimize these problems spreading as early as possible.

**FIRST AID KITS:**

- *Personalize your kits and keep them where they can easily be reached-*
- *Sewing boxes, small suitcases, travel pouches, cosmetic bags, and fishing tackle boxes make great containers for first-aid kits. Be sure that everything is clearly labeled.*
- *Replace perishable items like water, food, medications, and batteries on a yearly basis.*
- *Pick and choose those items that make sense to you, and match your skill level.*
- *Include a 3X5 card with quick reference in indelible marker.*

**POSSIBLE SUGGESTIONS FOR YOUR FIRST AID KIT:**

**1st aid supplies:**

- Band-Aids of various sizes
- Steri-strips
- Irrigation syringe
- Surgical tape
- Non-adhesive dressing
- Gauze pads & rolls- some in sterile packaging, & some stored in plastic baggie)
- gauze pads non-sterile
- Non-adhesive dressing
- moleskin
- "Second skin" gel bandages for blisters or burns
- Ace bandage
- Plain soap (anti-bacterial soap not necessary!)
- Several pairs of disposable gloves in zip-lock bags (Nitrile, latex, )
- aftercare cards/sheets

- splints
- Scissors -EMT/ to cut clothes
- Scissors, surgical & trauma
- Tweezers
- Razor blades (Lancet)
- Stethoscope
- Blood Pressure cuff
- Instant hot & cold packs
- ace bandage
- magnifier
- Various kinds of tape
- Alcohol/Antiseptic wipes
- Q-tips
- Clean cloth (rags)
- Clean applicators
- Respiratory masks
- Rope/String
- Safety pins
- -CPR micromask
- water
- -LAW in a water bottle
- 

**Your favorite 1st Aid Herbs!**

- Aloe Vera gel
- herbs for pain
- Arnica liniment
- Charcoal
- Electrolyte replacement
- Rescue Remedy or Five Flower Essence
- arnica tablets
- herbal anti-microbial salve (one without comfrey, one with)

- burn treatments - gels, creams
- Herbal throat lozenges
- Cloth tea bags
- 

**Snacks:**

- Emergen-C
- Power Bar x 2 or high energy foods
- Black tea/Instant coffee
- 

**Personal Supplies:**

- flashlight
- Head lamp
- handBook/maps
- phone #s
- spare clothes
- two-way radio
- cell phone (txt mob)
- Water-based sun block
- Lighter Matches
- small notebook, pens & marker
- Plastic bags
- whistle
- empty plastic bags for biohazard waste
- 

**Handy items for a clinical setting or wellness area:**

- Labels
- Candles
- Knife &/or Multi-use pocket tool
- 'Disposable' cups
- Extra batteries
- Honey
- Hot water bottle
- Instant cold pack
- Jars to infuse tea
- Paper towels
- Pots to cook tea
- Small containers
- Stretcher
- String/rope
- Tampons/Sanitary pads
- condomns
- Towel for hot compress
- Trash bags-heavy duty (medical waste)
- A dust mask (one with an N95-rated particulate filter--easy to obtain, cheap.)
- contact lense container
- BP cuff
- other splinting gear
- flares
- battery-operated radio

### **suggestions for 1st aid gear:**

[www.galls.com](http://www.galls.com)

[www.baproducts.com/sar.htm](http://www.baproducts.com/sar.htm)

[www.firstrespondersupplies.com/mm53692.htm](http://www.firstrespondersupplies.com/mm53692.htm)

### **other considerations:**

- *Medications, a list of prescriptions, copies of medical insurance cards, doctors' names and contact information.*
  - *Medical consent forms for dependents.*
  - *Spare eyeglasses, personal hygiene supplies, and sturdy shoes*
  - *Bottled water.*
  - *Emergency cash.*
  - *Personal identification & other vital documents, photos, etc.*
  - *List of emergency contact phone numbers.*
  - *Emergency lighting—a working flashlight with extra batteries and light bulbs or better, hand-powered flashlights, headlamp frees your hands, candles.*
  - *Comfort items, such as games, crayons, writing materials, and teddy bears.*
- cars are generators with an inverter. can run energy off of it. A battery-operated radio, which could be a critical tool for receiving information about disasters.
- Water in a plastic bottle with sport-top, Add Rescue Remedy or any other of your favorite flower essences or nervines.
  - Electrolytes
  - Identification and/or emergency contact information; .
  - A watch, paper, pen, and/or camera (even disposable) to record events.
  - Water- or alcohol-based sunscreen. (Not oil if there is a chance of chemicals getting trapped on your skin.)
  - Personal medical supplies. All medicine should be clearly labeled .
  - Cell phone or other communication device.

The American Red Cross and Centers for Disease Control & Prevention has additional suggestions for your Disaster Supplies Kit: [http://www.redcross.org/preparedness/cdc\\_english/kit.asp](http://www.redcross.org/preparedness/cdc_english/kit.asp)

## **URBAN GROWING YOUR OWN- Top herbs for surviving disasters.**

### **ALTERNATIVE INFRASTRUCTURE:**

is not necessarily disconnected from the main stream infrastructure as a while. It is the informal and formal networks of people who recognize that the mainstream system at best doesn't work for everyone, and at worst actively works against some people. It is everything from word of mouth, and the 'black market', to church groups, free clinics, bike collectives, and law collectives. Examples of alternative infrastructure are:

- Black Panthers food distribution program
- Zapatista autonomous society
- rainbow gatherings
- herbal & integrative medicine clinics. herbalists.
- rallies, street clinics, & activist base camps
- street demonstrations & street protests.
- low-power radio stations & other communications
- Social networks, church groups
- Food, water, and supply distribution



- Cop-watch/ vigilante watch
- community gardens
- Legal support
- bio-remediation to clean up toxic or contaminated soil and water.

*An alternative infrastructure is fed by creativity and inspiration. It is fed by the belief that another world is possible.*

## **SOME HELPFUL BAY AREA-CENTRIC RESOURCES:**

### **FURTHER MEDICAL TRAINING:**

The American Heart Association. (Find your local chapter & learn life-saving techniques, the heimlich maneuver, CPR certification, & more) [www.americanheart.org](http://www.americanheart.org)

Red Cross First Aid -health and safety services, handouts, & more: <http://www.redcross.org>

Citizens of Oakland Respond to Emergencies (CORE):  
[www.oaklandnet.com/fire/core/schedule.html](http://www.oaklandnet.com/fire/core/schedule.html)

Neighborhood Emergency Response Training (NERT), in San Francisco:

[www.sfgov.org/sffdnert](http://www.sfgov.org/sffdnert)

Community Emergency Response Training (CERT) -Berkeley[www.ci.berkeley.ca.us/fire/oes.html](http://www.ci.berkeley.ca.us/fire/oes.html)

Bandup- email list-serve in the Bay Area for workshops and event announcements related to Earthquake/Disaster Preparation. [bandup@lists.riseup.net](mailto:bandup@lists.riseup.net)

Typical earthquake safety issues in the home and what it takes to fix them (detailed):  
[www.ibhs.org/publications/view.asp?cat=74&id=126](http://www.ibhs.org/publications/view.asp?cat=74&id=126)

Foster Calm is dedicated to providing quality, low-cost first aid and leadership classes to individuals and groups, especially non-profits. Wilderness First Aid , Wilderness First Responder, WFR Re-certification/Refresher, Urban First Aid, Adult CPR , Adult CPR & First Aid , CPR for the Professional Rescuer [www.fostercalm.com](http://www.fostercalm.com) Foster Calm 530-265-0997

WFR Courses:Check out First Lead's 9 day, 76 hour Wilderness First Responder Training  
<http://www.firstlead.com/>

EMT Training: Chabot College has an EXCELLENT Emergency Medical Technician Program:[www.chabotfire.com/EMTcert.htm](http://www.chabotfire.com/EMTcert.htm)

Earth Activist Trainings: a rich array of solutions, tools, and strategies to redesign our world.  
[www.earthactivisttraining.org](http://www.earthactivisttraining.org)

### **MEDICAL:**

Action Medical. is an online resource for street medics everywhere, with a good deal of information as well as articles related to radical health care.  
[www.action-medical.net](http://www.action-medical.net)

Bay Area Radical Health Collective: [www.barhc.w2c.net](http://www.barhc.w2c.net) \*THE BARHC WEBSITE ALSO HAS POSTED A FULL LIST OF HOSPITALS LOCATED THROUGHOUT THE BAY AREA!

**CLINICS & HEALTH CENTERS:**

Berkeley Free Clinic  
2339 Durant Avenue, Berkeley  
[www.berkeleyfreeclinic.org](http://www.berkeleyfreeclinic.org)

West Oakland Health Center  
700 Adeline Street, Oakland  
[www.wohc.org/LeftFrame.htm](http://www.wohc.org/LeftFrame.htm)

San Francisco Free Clinic  
4900 California Street, San Francisco  
[www.sffc.org](http://www.sffc.org)

Ohlone Center Of Herbal Studies -Student Community Clinic, Faculty clinic & herbal school.

**GREAT ON-LINE HERBAL RESOURCES:**

-Herbal Highway with Karyn Sanders at 1PM on Thursdays or years of shows archived on KPFA.  
<http://www.kpfa.org/archives/index.php?show=15>

-United Plant Savers (UPS) mission is to protect native medicinal plants of the United States and Canada and their native habitat while ensuring an abundant renewable supply of medicinal plants for generations to come. [www.unitedplantsavers.org](http://www.unitedplantsavers.org)

SW School Of Botanical Medicine with Michael Moore -A comprehensive website on botanical medicine maintained by the school director Michael Moore [www.swsbm.com](http://www.swsbm.com)

Henriette's Herbal "One of the oldest and largest herbal information sites on the net."  
[www.henriettesherbal.com](http://www.henriettesherbal.com)

**BAY AREA HERBALISTS:**

-Bay Area Clinical Herbalists Association (BACHA) is a collective of qualified western herbalists gathered to promote health, to prevent illness, to restore health and to alleviate suffering as well as to provide public awareness to the profession of clinical western herbal practice.  
[www.bayareaherbalists.net](http://www.bayareaherbalists.net)

**HERBAL SCHOOLS:**

Ohlone Center of Herbal Studies-The Ohlone Center of Herbal Studies is an earth-centered, herbal medicine school. The mission of the herbal classes is to keep Western Herbal knowledge available by teaching the medicinal benefit of plants to people, thereby enhancing a person's ability to heal through plant use. A variety of herbal classes are offered, from herb walks to a formal clinical herbalist training program. [ohlonecenter.org](http://ohlonecenter.org) 510-540-8010

American School of Herbalism in Santa Cruz, CA. [www.americanschoolofherbalism.com](http://www.americanschoolofherbalism.com)  
Phone #: (831) 334-5177 (Darren Huckle L.Ac., Director) or (831)420-0124 (Benjamim Zappin L.Ac., Director) Email: [asherbalism@hotmail.com](mailto:asherbalism@hotmail.com)

The Blue Otter School of Herbal Medicine is dedicated to the understanding of energetic herbalism, uniting the spirit of the plants and the individual person. In order to attain balance, the mind, body, spirit, family, community and the greater connection to all must be in harmony.  
<http://www.karynsanders.com/blueotter.html>

The Northeast School of Botanical Medicine offers two programs and a traditional styled apprenticeship to help students gain a comprehensive understanding of the clinical application of herbal medicine along with an informed respect of the plants vital to this medicine. There are great on-line resouces listed here. [www.7song.com](http://www.7song.com)

### **SEEDS, GARDENS, & GROWING YOUR OWN:**

Horizon Herbs - [www.horizonherbs.com](http://www.horizonherbs.com)

Spiral Gardens -Community Food Security Project- [www.spiralgardens.org](http://www.spiralgardens.org)

Sonoma County Herb Exchange-

Phone: 707-824-1447 Fax 707-824-1577 Email: [herbexch@sonic.net](mailto:herbexch@sonic.net)

[www.altrue.net/site/scha/](http://www.altrue.net/site/scha/)

### **LEGAL SUPPORT/KNOW YOUR RIGHTS:**

The Midnight Special Law Collective is an independent non-profit organization dedicated to providing legal trainings and accessible, relevant, democratic and accountable legal support to a wide range of activists participating in the struggle for social change.

[www.midnightspecial.net](http://www.midnightspecial.net)

-A Legal Guide For Transgendered, Transsexual, Intersexed and Genderqueer Activists <http://www.ocap.ca/archive/legalguide/translegal.htm>

-The Ella Baker Center for Human Rights is a strategy and action center working for justice, opportunity and peace in urban America. Based in Oakland, California, we promote positive alternatives to violence and incarceration through our four cutting-edge campaigns:

-Books Not Bars Campaigning to reform California's abusive & costly youth prison system.

-Reclaim the Future Creating opportunities in the "green" economy for poor communities and communities of color. A new, multi-billion dollar economic sector is emerging, bringing new opportunities in green construction, clean technology, urban agriculture and energy. Our goal: ensure that this green economy is strong enough to lift people out of poverty. Reclaim the Future creates opportunities in the green economy for poor people and people of color through policy advocacy, public outreach, and an employment pipeline - the Green Jobs Corps.

-Bay Area PoliceWatch Supporting victims and survivors of police abuse and their families.

-Silence the Violence Uplifting young people and addressing Bay Area violence with a mix of social activism and street culture.

-<http://ellabakercenter.org>

### **Resources for building "sustainability literacy" :**

-Union of Concerned Scientists

-Sustainable Table

-The Cloud Institute for Sustainability Education

-The Center for Ecoliteracy

Found at: <http://ellabakercenter.org/page.php?pageid=29&contentid=28>

*Bay Localize: We work to catalyze a shift from a globalized, fossil fuel-based economy that enriches a few and weakens most, to a localized green economy that strengthens all Bay Area communities. Our growing dependence on declining fossil fuels coupled with mounting climate instability are converging to a crisis stage that imperils the long-term viability of the Bay Area's economy, infrastructure, and natural environment.*



In response, we believe that vibrant local economies and healthy communities are the answer. They are the best guard against global insecurity, an essential part of achieving social equity, and a vital way to enrich our day-to-day lives.

**OUR GOAL:** *To increase community livability and local resilience while decreasing fossil fuel use.*

Ingrid Severson Project Organizer, Rooftop Resource Project

Bay Localize 436 14th Street, Suite 1218; Oakland, CA 94612

510.834.0420 ingrid@baylocalize.org www.baylocalize.org

### **ANTI-RACIST AND ANTI-OPPRESSION RESOURCES:**

The following can all be found at: <http://ellabakercenter.org/page.php?pageid=29&contentid=28>

- Check out this great summary of white privilege
- Challenging White Supremacy has great articles available for download on their website
- Read Peggy McIntosh's "White Privilege: Unpacking the Invisible Knapsack"

### **Great organizations offering workshops / trainings**

- The People's Institute
- The Untraining
- The National Coalition Building Institute  
Found at: <http://ellabakercenter.org/page.php?pageid=29&contentid=28>
- Catalyst as a training resource [www.collectiveliberation.org](http://www.collectiveliberation.org) Catalyst Project is a center for political education and movement building based in the San Francisco Bay Area.
- The Heads Up Collective is a white anti-racist, anti-imperialist project. We are rooted in the global justice and anti-war movements. We work from the foundation that all people have the right to housing, food, health care, meaningful work, and healthy communities. In short, we believe in the need for revolutionary change and the liberation of all people from the systems of white supremacy, patriarchy, capitalism, heterosexism, the gender binary system, and imperialism. To know about cool events in the Bay Area, get on the Heads Up outreach list, an on-line Racial & Economic Justice Calendar: [headsup\\_outreach@lists.riseup.net](mailto:headsup_outreach@lists.riseup.net) Also: <http://headsupcollective.blogspot.com/>
- Further reading resources: Colours of Resistance [www.colours.mahost.org](http://www.colours.mahost.org).

### **MEDIA & NEWS:**

- [www.indybay.org](http://www.indybay.org) -Bay Area; <http://indymedia.org> -main
- Oakland's Emergency Broadcast Radio Station: 530 AM

### **EARTH QUAKE INFO FROM STATE & FEDERAL LINKS:**

- United States Geological Survey (USGS) Earthquake Hazards Program Northern California has published handbooks and scenario earthquake studies for most major California faults. The USGS has developed earthquake scenarios for 34 possible future earthquakes in the SF Bay Area region. USGS also provides *Real-Time* Earthquake Maps, Shaking Maps, Forecast of Earthquake Hazards: <http://quake.usgs.gov>
- The Governor's Office of Emergency Services has the responsibility for coordinating state resources in response to major events where public safety and health are an issue. [www.oes.ca.gov](http://www.oes.ca.gov)
- USGS Earthquake Preparedness Handbook -AN EXCELLENT RESOURCE:  
<http://pubs.usgs.gov/gip/2005/15/>
- For more information on making your home safer in earthquakes go to:  
<http://quake.abag.ca.gov/fixit/>  
<http://quakeinfo.org/>
- Telephone book: The front section of your local phone book also is a resource.

- Resources for kids to learn about disaster preparedness:  
<http://www.abag.ca.gov/bayarea/eqmaps/kids.html>  
[www.fema.gov/kids/](http://www.fema.gov/kids/)  
<http://earthquake.usgs.gov/4kids/>
- American Red Cross - Disaster services: [www.redcross.org/services/disaster/](http://www.redcross.org/services/disaster/) & <http://www.redcross.org/services/disaster/beprepared/http://redcrossshop.org/>
- Pacific Gas & Electric: [http://www.pge.com/education\\_training/](http://www.pge.com/education_training/)
- Federal Emergency Management Agency FEMA- [www.fema.gov](http://www.fema.gov)
- GREAT BAY AREA RESOURCE: Learn about hazards in your county: the liquifaction susceptibility, potential, shaking potential, landslide areas, wildfire threat, FEMA flood zones are, and how many hospital/health care facilities, hospice, schools, critical infrastructure, bridges and interchanges are at risk: <http://quake.abag.ca.gov/mitigation/pickcrit.html>).
- MAPS Alameda County tax assessors office. parcel # (Better than the City of Oakland maps) Census info. US Dept (red #). Need to know your 'track'

Emergency Operations Centers:

-1605 MLK, Oakland

-1011 Turk Street, San Francisco (with a backup location at the Moscone center)

**An incomplete list of contributors & resources to this workshop would include:** *RESQ "Health and Safety Training" compiled by Bounce, Ace, and Bee (June 2002); Bay Area Radical Health Collective "First Aid Training For Activists 2003; "Health and Safety for Activists" by Liz Highleyman and Lysa Samuels (November 2002); "Basic Street Medic Training" compiled by Bounce and Ace (September 2002); National Outdoor Leadership School's Wilderness First Aid by Tod Schmelpfenig and Linda Lindsey (NOLS, Lander 1991); Wilderness 911 by Eric A. Weiss, M.D. (Mountaineers, Seattle 1998); First Lead's "Wilderness First Responder Training Manual" (Norwood, CO 2003); Emergency Care and Transportation of the Sick and Injured, Seventh Edition by Bruce D. Browner et al, eds (American Academy of Orthopedic Surgeons 1999). Medicine for Activists Seeking Health and Healing (MASHH), Black Cross, and other Portland medics, Greta Montagne, 7Song, Pam Fischer, Karyn Sanders, Rosemary Gladstar, and many others for sharing their knowledge. Citizens of Oakland Respond to Emergencies.*

If you have any questions or comments you can contact us at:

Aislyn Colgan [a.dolphinprincess@gmail.com](mailto:a.dolphinprincess@gmail.com)

Dixie Block [dixieb@riseup.net](mailto:dixieb@riseup.net)

Ingrid Bauer [Ingrid@coincidence.net](mailto:Ingrid@coincidence.net)

This document will be posted on the Bay Area Radical Health Collective web site:

<http://barhc.w2c.net>