

## Go-Bag

*A bag packed with essential items, kept ready for use in the event of an emergency evacuation of one's home.*

### I. General Discussion

There are many types of potential emergencies and disasters that could strike someday in the far distant future or maybe even tomorrow. Some of these are truly catastrophic and beyond words to describe. They can affect the entire infrastructure that we rely on for our survival. In general, I consider one's home to be the best place to hunker down in the event of an emergency or disaster. But there are exceptions. Without electricity, without water, without sanitation, without access to food resupplies, without heat in the winter, without safety; our modern homes may become unlivable. Sometimes our homes are threatened with total destruction. Some disasters may require evacuating quickly from one's home and relocating to another destination. This is where a *go-bag* or *bug-out bag* is useful.

Since I am very opinionated and because I scratch my head when I see what others define as necessities when it comes to a go-bag, I thought I would put my two cents into this discussion. So consider the following advice and guidance as you make your decisions on what to include.

Let me start by giving two general rules:

Expect to walk.

Minimizing weight is critical. Every ounce is very precious in a go bag.

The best plan is to get as far along on your journey using whatever transportation mode(s) you have available (public transportation, automobiles, motorcycles, bicycles, train, airplane, horseback, etc.) and then when due to traffic gridlock or transportation infrastructure breakdown; shift to Plan B – rely on your own two feet.

Walking is the most basic form of transportation. It is also one of the most flexible. It is not constrained by roads or obstructions, stoplights, or terrain. When all else fails, this is the method of transportation that you should be prepared for.

### II. Traffic Gridlock or Transportation Infrastructure Breakdown

An evacuation plan that relies solely on the availability of public/private transportation may be unrealistic. This is a couple of real world examples.

In many types of disaster, traffic will come to a grinding halt, because of gridlock. I was near the epicenter of the 6.6 magnitude earthquake that struck the San Fernando Valley near Los Angeles, California in 1971. It caused great devastation and horrendous traffic jams. After the earthquake, I drove around and surveyed the damage. As an example, it took me over an hour to get through one intersection because power was cut to a stoplight. I would have been stuck there much longer except some private citizens got involved and directed traffic through the stoplight. And that was only one intersection! There were thousands of

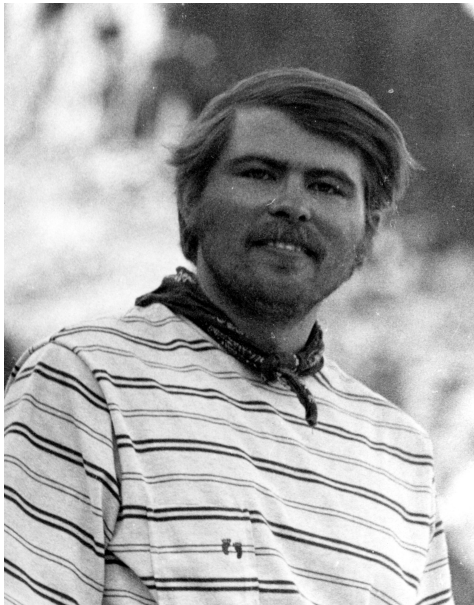
stoplights without power. Without power many stoplights are useless pieces of road decoration.

Due to the earthquake, some bridges and highway overpasses collapsed and debris blocked some streets. There were gas main breaks and fires. A large dam at the Van Norman reservoir showed signs that it might break and flood the valley, spilling 3.6 billion gallons of water into many tens of thousands of Granada and Mission hills homes. As a result, more than 80,000 people were evacuated. Many freeways were gridlocked. But some were open with few cars as many people avoided them and many people wisely stayed home. Besides it takes a certain skill set to drive on a freeway during earthquakes or the constant series of aftershocks that followed because the road becomes a little like the ocean swaying back and forth. You have a tendency to overcorrect and swerve as the ground shifts, which can quickly lead you to a car crash. It is almost like you have to close your eyes for a split second in the middle of an aftershock because your eyes can deceive you.

Let us look at another type of disaster, the 9/11 terrorist's attack on the World Trade Center towers. After the attack, public/private transportation came to a grinding halt. Multitudes of people walked home from Manhattan, some walking over 160-city blocks. Hundreds of thousands were trapped on the southern tip of the island unable to escape by walking over the Brooklyn Bridge. The U.S. Coast Guard led a water evacuation. Tugboats, ferries, fireboats, work boats and private pleasure boats came to the aid of its citizens and over the course of a day evacuated more than a half a million people from Lower Manhattan.

### III. Backpack

In my younger years, I did a fair amount of backpacking. I would hike out into the wilderness and sleep under the stars. Everything I needed to survive for days at a time, I carried on my back. An efficient backpack is very similar to a good go-bag, one that would keep you alive during the worst of disasters, and get you to your final destination.



During the summer of 1973, I went on a 2-week rubber raft trip down the Grand Canyon. All in all it was one of the easier trips I went on, a fun trip. We had 6 rubber rafts. Each raft had 1 oarsman and 4 passengers. The major thrill was the rapids. They were spaced about an hour apart. This is a photo of myself and another photo of one of the rafts going through a rapid.

As a goal, I would want a bug-out bag that would keep me alive for over 30 days. [A typical walking speed for a hiker is 2 miles per hour.] On a good day, I hiked over 20 miles, carrying a 50-pound backpack. The extra weight will slow you down a bit. But even with this weight, one would have an effective range of approximately 500 miles to reach their final destination. [Wow! Did he say a 30-day bug out bag! Can that even be done?] It would

really be pushing the effective envelope even for experienced backpacker, but I think it can be done.



So let me lay out the approach for an adult go-bag.

**Backpack:** A backpack is more than just an empty bag. A backpack provides a very efficient means of transporting all the gear for backpacking including your food, water, sleeping bag, insulation pad, small cook stove, etc. It should be very lightweight. It should distribute the weight properly, spreading the weight load across the shoulder, hips and back. It has a suspension system, a weight distribution system. These qualities are very important for this mission. In a long duration march, we will tap into every ounce of these features. There are very few backpacks on the market today that can meet the volume and weight capacity requirements of this mission.

One example is the Osprey Xenith 105. It is designed to handle large loads on extended trips. It is rated by volume from 105 Liters [Medium size] to 113 Liters [Extra Large] carrying capacity. It has custom-moldable, anatomically contoured BioForm4 CM™ hip belt and shoulder straps balancing firmness and cushioning for optimal support and comfort. In other words, this backpack can be molded to your individual body contour. The design keeps the load stable when moving through rugged terrain. [I am not endorsing this particular backpack but I am endorsing the design and features contained in this backpack.] But if you select this particular backpack make sure you obtain the Osprey certified custom molding designed to fit the contour of your body. With the amount of weight you will need to carry, this feature is very desirable.

**Water:** An adult who exerts nominal activity needs around 64-84 ounces of fluid per day. Backpacking is considered a vigorous activity and as a result an individual will need more water in order to prevent dehydration. As a general rule of thumb, this might be around 8 ounces for every half hour of sustained physical activity. If you hike from sunrise to sunset, your fluid requirement might be around 200 ounces per day. Water can be one of the heaviest things in your backpack unless you plan accordingly. If you were packing bottled water, this would work out to around 47 gallons for a 30-day hike or around 400 pounds.

The secret is that you need to take advantages of existing water sources such as water from rivers, streams, lakes, and aqueducts; rainwater or during the winter - snow melt. In all my years of hiking I carried only a quart size canteen and primarily drank from available water sources along the way. Generally I never encountered any problems from drinking water from mountain streams or even large rivers such as the Colorado River when I went rubber rafting down the Grand Canyon. But depending on the disaster or emergency, it is the best approach to plan on contaminated water.

There are three methods one might use to purify water. These are water purification tablets, boiling water, ceramic filters. Generally when I went camping, I carried a small bottle of water purification tablets along with me. These I used if the water quality was questionable. Another method for purifying water is boiling the water before you drink it. For generations people used boiling water in the form of coffee or tea to quench their thirst. The third method was to use a ceramic filter to filter out the contaminants.

I purchased this Katadyn Pocket Filter in 1985. It has a 0.2 micron micro-porous ceramic filter element that can filter water from rivers, streams, lakes or ponds and make it bacteriologically acceptable drinking water. This item is still in production today. I think it says something for the quality of a product to survive the test of time. The filter will produce about a quart per minute of drinking water. This portable ceramic filter can produce about 13,000 gallons before it needs replacement.



In determining what to include in the bug-out bag, I feel this type of portable ceramic is the best approach. One might be dealing with more than only biological contamination. Think of the floodwaters in New Orleans after the hurricane Katrina. Boiling water might be good but one cannot stop every couple hours to boil a pot of water. So in the bag, I included a portable ceramic filter and four water bottles (32 ounce each). One of these is reserved as a meal hydration bottle, leaving 3 reserved as water bottles. Generally, one need only carry one full water bottle. But there will be times when water sources may be few and far between, so the extra water bottles allow an extra cushion if you need it.

I like a cup of tea with lemon. So I included this option in my planning. I would boil a pot of water and brew a cup of Lipton tea, add a packet of stevia and then part of a tube of Crystal Light lemonade. Using Crystal Light lemonade comes the closest to packing my favorite cup



of tea in the bush. But if you are a coffee drinker, coffee now comes packaged in little packets (such as Folgers Instant Coffee Crystals 0.07 ounces)

**Electrolytes:** As an individual sweats, their body will lose electrolytes (sodium, chloride, potassium, calcium, magnesium, phosphate, bicarbonate,) and this can throw their body out of balance. Therefore the backpack contains a multivitamin with a good mineral supplement. Also the backpack contains a little extra salt (in the form of garlic salt) for seasoning for the soup. This garlic salt will help to replenish a little extra sodium and chloride to the diet.

**Food:** The main challenge with food is the same as with water – excessive weight. It would be impossible to plan a 30-day hiking trip with normal food packaging, such as soup cans, Meals Ready to Eat (MRE's) etc. because of the weight. But there is a solution in the form of freeze-dried foods.

Freeze dried food is ultra lightweight. It also has a long shelf life of approximately 30 years, assuming it was packaged properly, remains sealed within its original container and stored in a benign temperature environment. This makes it one of the ideal foods to store in a bug-out bag. The freeze-dried and dehydrated foods do not need to undergo yearly food rotations to keep the food fresh and usable. The cans should remain unopened until the bug-out bag is needed.

Approximately 50% of the pack weight is set aside for food and water. Sixty pounds is an awful lot to backpack. I think I would use the term grueling and that may be an understatement. But as you eat through the food, the weight of the pack will get lighter daily.

Protein was the primary focus in constructing the meal plan. Protein is extremely important because its main job is to build, repair and maintain tissues including your body's major organs and skeletal muscles. Protein deficiency, when continued over a long period of time can cause a disease known as protein calorie malnutrition (PCM). Common symptoms are poor healing, fatigue, hair loss and muscle wasting.

The freeze-dried foods will be used to make a high protein soup. The minimum requirement for adults is around 75-90 grams of protein per day with minimal activity level. But this requirement can increase significantly under strenuous activity level such as hiking.

#### High Protein Chicken Soup Recipe

- 1 cup of Freeze-Dried White Chicken Dices (Cooked)
- 1/8 cup of Dehydrated Carrot Dices
- 1/8 cup of Freeze-Dried White Onion Flakes
- 1/8 cup of Freeze-Dried Potato Dices
- 1/8 cup of Freeze-Dried Green Peas
- 1 Chicken Bouillon Cube
- Garlic Salt Seasoning

Each cup of soup will provide 38 grams of protein. Three cups of soup combined with one protein bar will provide 135 grams of protein daily. [I know many people may find it unappetizing to eat the same meal for breakfast, lunch and dinner, but when you compare it

with starvation, this is a much better option. There can be many other combinations of meal preparations. But remember to always put protein first into your formulation.]

I have included two other items in the meal plan. These are one protein bar per day and freeze dried blueberries. The protein bars should be low in sugar (less than 3 grams per bar) and high in protein (greater than 20 grams per bar). Quest makes a good protein bar. Two-thirds of a cup of freeze-dried blueberry dices can be munched along the trail daily as a snack.

One of the drawbacks in using freeze-dried food for backpacking is that it must first be rehydrated before it can be used. Whenever I stopped to eat along the hiking trail, I was hungry and ready to eat. I lacked the patience to wait for the food to rehydrate before I began to eat it. As a result it was more like eating cardboard. Now I am older and wiser. One of the 32-ounce water bottles is reserved as a meal rehydration bottle. After a meal is consumed, the next meal is measured out and placed inside the bottle and the rest of the bottle is filled with water, and shaken. Thus when it is time to stop and make the next meal, it is rehydrated and ready to put in a pot and heat up.

One question to ask is "Will it all fit?" The combined volume of the 14 Number 10 cans is 49 liters. The backpack is rated at 109-liter capacity. But there are also a lot of bulky items such as sleeping bags that must fit inside/outside of the backpack. So it will probably be close.

**Cooking Stove:** Building a campfire and using it to cook a meal is romantic but not practical during a long march. It just takes too much time to gather dead branches to make a fire and start a fire and then let the fire burn down to the point that you can use the hot burning coals to cook a meal. That is where a portable cooking stove comes in. It is easy to set up and use. Optimus Nova cook stove is a very fine multi-fuel expedition stove. It runs off from white gasoline, kerosene, diesel fuel, jet fuel and even rapeseed fuel. One fueling of 15.5 ounces will last approximately 2½ hours. It is highly portable and lightweight. It collapses down very nicely fitting into a small pouch. Two metal fuel canisters with a total of 54 ounces of fuel are included in the backpack.



**Tent/Sleeping Bag:** The backpack contains four items required for sleeping. These are: sleeping bag, tube tent, insulation pad, and a spool of thin nylon rope.

A tube tent is an inexpensive simple cylindrical piece of plastic. It is normally used as groundcover. But when it rains, the sleeping bag fits inside the tube to provide a waterproof barrier to keep you dry and warm while you sleep. When used as a tent, the thin nylon rope hung down the middle will give the tent a triangular structure. The ends of the rope can be tied to trees, limbs, branches, poles or even rocks for support. It is very important to tie a knot at the edge of each end of the tube tent. This will produce a drip line for the rainwater that collects on the rope. Otherwise this water will find its way to the lowest point, the inside center of the tent and drip right in the middle of the sleeping bag and you will wake up in the middle of the night cold, shivering and soaked. I learned this the hard way from experience.

An insulation pad provides thermal insulation between the ground and the sleeping bag. It rolls up into a spool when transporting. In general, the tube tent is placed on the ground, the insulation pad is placed next and the sleeping bag is placed on top. A very simple means of sleeping under the stars.

I recommend a down sleeping bag because it is very light weight and compresses tightly. Select a sleeping bag rated for the typical minimum winter temperatures one might encounter during the night in the area that you expect to travel. This is one of my sleeping bags, a North Face "DarkStar". It is rated for -40° F temperature. That is probably a bit too extreme for most environments. The normal sleeping bag that I used when hiking was rated around +20° F.



**Fire:** One of the necessities to include is a means of starting fire. For me this is very simple. Wooden matches stored in a small waterproof container. It seems like there are many methods that can be used for fire starting (such as flint and steel, magnesium bar, solar tinderbox with parabolic reflector, bow drills, etc.) Simple is best here – a box of matches.

The backpack contains a box of wooden matches in a Ziploc bag. There is a trick to using matches. The normal instinct is to strike a match and light a fire. But this can waste matches. The better approach is to strike a match, pause, and then light a fire. During the

pause, you need to protect the flame from the wind. During the pause orient the match tip, the flame, slightly downward so that it can start the wood of the match on fire.

**Communications:** It is important in decision making to know as much about the disaster as possible. Therefore a small compact radio with short wave capability is included in the backpack.

**Sanitation:** Human waste should be buried. A lightweight shovel is included for that purpose. The backpack also includes toilet paper. Removing the cardboard spool in the center will allow the toilet paper to be easily compressed.

**Clothing:** I went on a grueling 5-day march in Baja California. We drove south along the ocean about 200 miles below the U.S. border and then went inland a bit. This march had no trails; it was strictly follow the leader. The first day we hike straight up the entire day to reach a high plateau. I was completely exhausted when I reached the top. There were around 50 of us. This included around 4 young women. That night the girls gathered together near the campfire and burned every ounce of extra clothing they brought with them. It just added too much weight to their pack. So the lesson here is travel light.

**Machete:** A machete is a dual use item. I recommend a normal full-length 18-inch machete. It can be used to clear a path through the wilderness and gather burnable wood for a fire and it can be used for personal protection. The best device for removing small branches up to an inch and a half in diameter from a tree is a machete. They are ideal tool. The machete should be kept sharp. It is good to also have a pair of gloves, otherwise expect blisters. For transportation it is probably a good idea to have a sheath for the blade.

A good type of machete is called a U.S. Ontario Knife. These machetes have been manufactured under U.S. Government specifications by the Ontario Knife Company for 60 years. They are made of 1095 carbon steel, which has been hardened to 50-55 HRC on the Rockwell scale. Generally, it is important to have some weight at the tip, a strong steel blade but one that flexes a little as it strikes but absolutely does not break.



Fifty years of social science research on disasters has shown that panic is rare even when people feel excessive fear. Human nature tends to shine brightest in adversity. People are naturally social. In a disaster, even a global catastrophe, individuals will help those nearby, even complete strangers, before saving themselves. But I am not naive. There are always



those that will look at a disaster as a golden opportunity to cause mischief. Therefore, I feel it is important for an individual to be prepared to defend themselves and their families.

I have not included a firearm in the backpack because of the weight. A shotgun is probably the best weapon for close range. You do not need to be an expert marksman to use this weapon. A high power rifle is good for distance. It should be a larger caliber weapon with a scope.

**Upscaling:** If you are traveling as a group, then every person does not have to take every item. For example, everyone does not need to pack a portable stove, nor a ceramic water filter, nor a machete. Children and the elderly may not be able to carry a full loaded pack, so some of this weight savings will be used here. But backpacking as a group allows upscaling, allowing the group to bring along some extra needed gear.

**Table 1: Contents of Backpack**

<u>Item</u>	<u>Description</u>	<u>Weight</u>
Backpack	Osprey Xenith 105 Pack [109 liter capacity]	92 ounces
Sleeping Bag (Down)	North Face "Dark Star" rated for -40°F	62 ounces
Self Inflating Mattress	Thermarest BaseCamp R5.8	57 ounces
Tube Tent (with nylon cord)	Emergency Shelter Tube Tent	8 ounces
Water Bottle (Qty 4)	Nalgene Wide Mouth Tritan Bottle 32 oz	25 ounces
Water	for two bottle (32 ounce)	64 ounces
Portable Ceramic Water Filter	Katadyn Pocket Water Filter	20 ounces
Protein Bars	Quest Nutrition Protein Bars [3 boxes of 12 each]	84 ounces
Freeze Dried Chicken (Qty: 8 large #10 Cans)	BePrepared.com Essentials Freeze-Dried White Chicken Dices (Cooked)	160 ounces
Dehydrated Carrot Dices (Qty: 1 large #10 Cans)	BePrepared.com Essentials Dehydrated Carrot Dices	40 ounces
Freeze Dried Onions (Qty: 1 large #10 Cans)	BePrepared.com Essentials Freeze-Dried White Onion Flakes	12 ounces
Freeze Dried Potato Dices (Qty: 1 large #10 Cans)	BePrepared.com Essentials Freeze-Dried Potato Dices	14 ounces
Freeze Dried Green Peas (Qty: 1 large #10 Cans)	BePrepared.com Essentials Freeze-Dried Green Peas	18 ounces
Freeze Dried Blueberry Dices (Qty: 2 large #10 Cans)	BePrepared.com Essentials Freeze-Dried Blueberry Dices	18 ounces
Chicken Bouillon Cubes	Tone's (one bottle of approximately 227 cubes)	32 ounces
Garlic Salt [4 tins]	Kroger's Garlic Salt Seasoning	15 ounces
Lightweight Stove	Optimus Nova	16 ounces
Metal Fuel Canister	Brunton 0.6L with plunger attachment for Optimus Stove (with fuel)	31 ounces
Metal Fuel Canister	Brunton 1.0 L (with fuel)	34 ounces
Lightweight Cookset	Snow Peak Titanium Multi-Compact Cookset	12 ounces
3 Piece Cutlery Set	GSI Outdoors Glacier Stainless Steel	3 ounces
Plastic Measuring Cup	¼ Cup	1 ounce
Lightweight Mini Can Opener	P38 - Military Grade, Used Military Surplus	1 ounce
1/2 box Tea [52 tea bags]	Lipton Tea	4 ounces
Stevia [80 packets]	Pure Via - Stevia	3 ounces
Lemonade Drink Mix (12 packets)	Crystal Light	6 ounces
Pocket Knife		4 ounces
Multivitamin Supplement	GNC Ultra Mega Gold 90 Caplets	6 ounces
Box of Matches in Ziploc bag	Diamond, 300 large kitchen matches	3 ounces
Bar of Laundry Soap	Fels-Naptha	6 ounces
Compass	Military Spec Prismatic Sighting Compass	1 ounce
Area Maps (Qty 3)		6 ounces
Machete	18" long Ontario Knife	26 ounces
Emergency Short Wave Radio	Eton Grundig Traveler III	18 ounces
Small LED Flashlight	Mini Maglite LED AA	6 ounces
Toilet Paper (4 Rolls)	Scott Bath Tissues (Septic Safe)	28 ounces
Lightweight small shovel	U-Dig-It Stainless Steel Hand Shovel	5 ounces
Valved Respirators (Qty 5)	3M N95 Respirators	3 ounces
First Aid Kit	Custom Made	39 ounces
	TOTAL WEIGHT - 983 ounces	61 pounds 7 ounces

Note: This list is not intended to endorse certain manufacturers or products, but rather to identify items to be included in the go-bag in order to ascertain the combined weight.

#### IV. First Aid Kit



I consider many generic first aid kits to be next to useless for an extended hiking trip. A first aid kit should be tailored for the specific region of the country and the potential threats one might encounter. So I made up a custom first aid kit tailored for the American Midwest where I reside.

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**Sunburn:** Hiking for 12 hours each day can expose your body to significant damage from the sun, which can cause major sunburn. In my younger days, I had sunburn so severe that large 12-inch wide blisters formed on my back (second-degree burns). Therefore a first aid kit should include sunscreen lotion rated at 50 SPF or higher. SPF 50 rated sunscreen is estimated to block 98% of the sun's burning rays. The kit also contains small packets of burn cream and aloe vera gel for treating burns.

**Blisters:** Blisters are generally formed due to friction with the skin. Sometimes they are preventable. For example it is important to break-in a pair of hiking boots and also important to wear gloves when using a machete. Generally when I see a blister forming I attach a moleskin padding to protect the area. If I catch it soon enough, the puss will sometimes dissolve away over a few hours. Otherwise the blister will rupture. If it ruptures, after wiping away the puss, I apply a disinfectant, such as hydrogen peroxide, to clean the wound. Then I apply a triple antibiotic and cover it with a bandage to prevent the area from becoming infected.

**Bees/Wasps/Hornets:** The sting from bees, wasps, hornets can be quite painful. Generally, the first indications that you are in trouble is when you feel the pain from the first sting, then another, then you see the swam, and begin to run for your life. So once you reach safety and knock off the last of the bees, what is the next step as you get your panic under control. What we do is crush an aspirin and mix it with water and spread it over the individual stings. If you do this fast enough it goes a long ways toward reducing the swelling and the pain. Some bees will leave their stinger behind after they sting. Therefore you need to remove these individual stingers from your body first, by using a pair of tweezers, before you try and treat them. Otherwise they will continue to pump venom into your body. Then we take an antihistamine such as Benadryl Allergy tablet.

**Chiggers:** Chiggers are a family of mites that are almost invisible to the naked eye. They live in the grasslands. They burrow into your skin and produce a nasty red rash that itches big time and can spread. The first step is to avoid them by making sure your skin is well covered, by wearing shoes, pants and stockings when you are walking through the grasses. They will generally appear in clusters bites around exposed skin or at seam lines at the stockings or belt line. It takes about 15 minutes from contact before you feel the itching begin. If you wash the exposed area with water or alcohol, within that time that will generally kill them. But after that it becomes significantly more difficult. Fels-Naptha laundry soap can provide some itch relief. Wet the bar of soap and spread it over the affected area several times a day.

**Poison Ivy/Poison Oak:** Living in the woods, I come in contact with poison ivy and poison oak quite often. It can be difficult to treat. It causes itching and blisters. When the blisters break, the oozing fluids are released and the rash can spread to cover a larger part of the body. The best solution I found to treat poison ivy and poison oak is to use Tecnu. This is a two-part solution. I apply Tecnu Skin Cleanser and rub it into the affected area to neutralize the poison. Then after a few minutes, I wash this off with water. Then I apply Calagel Anti-Itch Gel to reduce the itching. Generally this process takes several treatments.

**Ticks:** Ticks are round bloodsucking insects and parasites. I come in contact with two types of ticks in the woods. The normal size ticks and the very small ticks called deer ticks. Deer ticks are a greater danger because they can transmit Lyme disease. Generally I can detect the normal size ticks when they are crawling on my skin and remove them before they imbed. If they are not imbedded, I can easily pull them off with my fingernails. The best way I have found to kill them is to grind them between two rocks. Otherwise they will try and crawl back on you. Deer ticks are harder to detect because they are much smaller. Normally I cannot feel them crawling on me. And once a deer tick imbeds itself, it can be even difficult to determine that it is a tick and not a bump on the skin. Over the years I have removed over 100 normal imbedded ticks on my dogs and a half dozen on others or myself. I have removed a few deer ticks. The method I use to remove a tick is to soak them in alcohol using a cotton ball or cotton pad for a few minutes. This seems to make them groggy and release their vice-like grip and then I use a fine tweezers and pull slowly, taking my time. If you pull too hard, you can pull the tick out leaving parts of the head still imbedded in your skin and this can get infected.

**Mosquitoes and Biting Flies:** Mosquitoes and biting flies are pests. During one of my extended hikes in Baja, I noticed that my sweat mixed with the trail dust produced a layer of grim on my exposed body. This grime is somewhat permanent. I tried unsuccessfully to wash it off by just using water from a mountain stream. It takes soap. But the most



interesting point is that once the grime formed, mosquitoes and biting flies seemed like they wanted nothing further to do with me. It was a natural insect repellent. Several things in the Backpack and First Aid Kit are useful in treating the itch from bug bites. Fels-Naptha soap and Calagel Anti-Itch Gel are among them.

**Sprains:** Twisted joints and muscles can sometime produce sprains. Wrap these securely with sports tape.

**Thorns and Wood Splinter:** I use tweezers to remove them. A fine stainless steel needlepoint tweezers is best, if they are imbedded deep under the skin and you need to dig them out.

**Small Wounds:** Sometimes small wounds can become infected. I generally use a drawing ointment, to draw out the infection.

**Disaster Scenarios:** It would be foolish to try and address all the different types of disaster scenarios that might cause one to use a go-bag. I have included a few M95 respirators because they can be useful in nuclear and biological attacks, epidemics, and dealing with the dust from a super volcanic eruption.

**Plague:** I have a concern about the resurgence of the Bubonic Plague (not the strain that exists in pockets of the world today but an extremely deadly mutated strain). During the Middle Ages, the Black Death was responsible for killing one third to one half of the population of Europe. If this plague mutation should reemerge, because of our modern transportation networks, it would spread with lightning speed. When I was young I received immunization shots for both the Small Pox and for the Plague. The Plague inoculation was hands-down many times more severe. I have recently begun experimenting with the medicinal properties of essential oils. You might say that I am becoming a little New Age in my Old Age. So as a precautionary measure, I am including a bottle of Anti-Plague essential oil blend in my First Aid Kit. This is an experimental blend I developed. There are no expressed or implied guarantees. You might call it a *Hail Mary*. If this threat reappears, I will use this essential oil blend by applying a dab of the oil to my wrist and then rub my wrist together, 4 times per day. The oil blend is made as follows:

#### **Anti-Plague Formula**

take a 15 milliliters amber glass bottle and fill it with  
62 drops of Thieves of Europe essential oil blend  
62 drops of Angelica essential oil  
32 drops of Thyme (Red) essential oil  
32 drops of Lavender essential oil  
32 drops of Lemongrass essential oil  
The remainder of the bottle with Bio-Oil

*"Thieve of Europe" essential oil is sometimes called "Thieves" or "Four Thieves". It is a blend of Clove, Lemon, Cinnamon, Eucalyptus Radiata, and Rosemary essential oils.*

*"Bio-Oil" is a carrier oil. It is available at Wal-Mart, CVS and other drug stores. The primary component of Bio-Oil is PurCellin Oil, a synthetic version of the preen oil which is secreted by ducks. This oil helps duck feathers become waterproof. The oil acts as an effective delivery system speeding up absorption and improving spreadability.*

**Table 2: Contents of First Aid Kit**

<u>Item</u>	<u>Description</u>
Plastic Pouch	Reusable Clear Zipper Bag
Alcohol	2 ounce plastic bottle with 91% Isopropyl Rubbing Alcohol first aid antiseptic
Hydrogen Peroxide	2 ounce plastic bottle with Hydrogen Peroxide tropical solution
Cotton Pads	20 Beauty 360 Premium Cotton Pillows in Zip Lock Bag.
Burn Cream	10 packets (0.9 grams each) Water Jel - First Aid Burn Cream
Aspirin	1 plastic bottle with 100 tablets of aspirin 325 mg each
Antihistamine Tablets	12 individually packaged Benadryl Allergy tablets (25 mg Diphenhydramine HCl)
Antibiotic Ointment	2 ounce tube of Triple Antibiotic Ointment (Bacitracin Zinc, Neomycin Sulfate, Polymyxin B Sulfate)
Drawing Ointment	1 ounce Ichthammol Ointment
Aloe Vera Gel	0.5 ounce jar with Aloe Vera Gel
Tecnu	2 ounce bottle of Tecnu Skin Cleanser and 6 ounce bottle of Calagel Anti-Itch Gel
Moleskin	3 strips of 4-5/8 inch by 3-3/8 inch Moleskin padding
Bandages (medium)	6 Sterile Fabric Adhesive Bandages 1" x 3"
Bandages (large)	4 Sterile Flexible Water Resistant Bandages 2" x 4.5"
Tweezers	A needle-point metal high-quality tweezers
Sports Wrap	Ace Self Adhering Elastic Bandage 4" x51.2"
Anti-Plague Essential Oils	Anti-Plague Formula of Essential Oil Blend in 15 ml amber glass bottle.
Toothpaste/Toothbrush	Travel size 1 oz. Colgate Toothpaste with Small Toothbrush
Fine Toothed Hair Comb	Plastic hair comb
Toenail Clippers	Beauty 360 Salon Straight Edge Toenail Clipper
Sunscreen Lotion	SPF 110 Neutrogena Age Shield Face Sunscreen

## V. Hiking Gear

**Hiking Boots:** Sandals, flip-flops and sneakers may be fine for the beach, sidewalks and roadways, but this is definitely not the gear to use if you get off the beaten path and into the bush. This requires a pair of good light to mid-weight hiking boots. This is a photograph of my Timberland Pro Endurance Series Boots. It is more of a work boot than a hiking boot but it will do in an emergency. The boot should have good threads on the bottom to give superior traction in all terrains. It should also provide good ankle support to prevent twists and sprains. Some of the newer boots have anti-fatigue technology that reduces shock and returns the energy to the foot. It is common during the break-in period to develop blisters. Therefore it is important that a hiking boot should see some actual use prior to bugging out.



**Jacket:** Bring along a jacket for the cold of night. During my years of backpacking, I used a down jacket. It was lightweight and warm. If the jacket is not waterproof, then include an emergency rain poncho in the event that you encounter a rainstorm. Many plastic rain ponchos weight just one ounce. A jacket can also be used as a pillow at night when you are inside your sleeping bag.

**Hat:** A hat helps keep the sun out of your face. If your hair is starting to thin because of age, a hat helps prevent sunburn on the top of your head.

**Bandana:** A large bandana can serve many uses. It can cover the mouth and nose to filter out dust. If you wet it first, it can also filter out some smoke. It comes in handy for wiping the sweat off your face. It can also be used as a potholder or a dishcloth in the camp kitchen. And if the water is very contaminated, a bandana can be used to pre-filter the water.

**Jeans:** Jeans are very functional for hiking. This is not a time to be wearing shorts. Jeans help protect your skin from plants (such as poison ivy), and from a multitude of insects.

Minimize the amount of exposed skin. Traveling through the bush is not always a pleasant walk through the park.

**Work Gloves:** If you need to use the machete, wear work gloves to prevent blisters. In general, it is important to minimize using a machete to cut through shrubs, because it takes just too much energy and significantly slow your progress. It is better to just try and go around. In a dense forest, a canopy grows that significantly filters out the sunlight. As a result in a dense forest, there is minimal grass, weeds and thorns to impede your march. It is a little similar to a well-manicured park. So sometimes all you need to do is cut a path into a dense forest and you will encounter a good walking trail.

**Extra Clothes:** Bring along one extra pair of socks and undergarments. Wear the first set for a few days until you start to get a little stinky, then switch to the other. Rinse out your dirty items in camp and let hang dry on your pack while you hike. Pack along a pair of lightweight camp shoes or sandals so you can let your feet escape your sweaty boots at the end of every hiking day.

**Miscellaneous:** There are many other items that you might include. These lists might include prescription medication, prescription glasses, insect repellent and wallet with ID and cash (or barter items).

## VI. Training

There is an old saying that “practice make perfect”. The best way to prepare for bugging out is to practice it. It will help to work out the kinks in the plan and bugs with the equipment. One way to do this is to join a local hiking group for some overnight trips.