Fastest Way To Prepare

DAVID MORRIS

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by David Morris

Warning – Disclaimer

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Table of Contents

Introduction

Welcome to Fastest Way to Prepare!

This is the written version of the six module video course designed to prepare you and your family for 40 days of empty store shelves and breakdowns in civil order after natural, manmade, or economic disasters.

The course will include descriptions and photographs of supplies that my family personally owns, that I've tested, that we're counting on in a disaster, and that we're recommending to friends and loved ones. It should be assumed, but I'll say it anyhow—"testing" means that, in most cases, we tried several potential solutions that didn't work as well as the ones I'll tell you about or didn't work at all.

Something that's important to remember is that the emphasis of this course is SPEED and the ability for people across a large spectrum to be able to implement the ideas as fast as possible. As an example, for security, what you *really* want to do is to hire a team of former Secret Service agents or start your own private military contracting company and set them up on a ranch. That actually IS a solution for some of the people I've worked and planned with, but it's not a solution that will work for the majority of the population. As a result, the strategies and tactics laid out in this course are intended to be able to be put into place as fast as possible across a wide range of budgets and skill levels.

I want to quickly remind you what you're going to get, and give you your first assignment.

You've made a wise decision and throughout this course, we're going to get you and your family ready to survive a broad range of disasters lasting up to and beyond 40 days and 40 nights.

Why 40 Days?

A 40 day plan would allow you survive a repeat of ANY natural or man-made disaster that has happened in the history of the US, as well as most global disasters, including the quarantines that happened in cities across the US during the 1918 flu pandemic.

Moving forward, a plan to survive for 40 days will allow you to easily survive short-term disasters and transition to primitive living for medium to long term disasters, if necessary.

Buying the items required to survive for 40 days without the ability to resupply from stores is affordable for most families – Food isn't the only concern, but as an example, you can buy in quantities that get your food for about $2 per day.

Figure 1 - Forty day food supply in three storage bins in less than 30 minutes for under $200.

In fact, in the second chapter, I'm going to show you how to get a 40 day food supply with a wide variety of foods for 2 people that will fit in **3 storage bins** in **less than 30 minutes for under $200. That's less than $100 per person!**

And I'll even show you a *SIMPLE* strategy so that you won't have to take an additional dime out of your pocket to do it.

A 40 day plan is easy to scale up.

Once you have the core items and plans in place for 40 days, it's very easy to scale your preparations up to 6 months or a year. One of the things that you'll find is that once you've got the basics taken care of, it's much less expensive (per day) to scale up. I'll restate a well-used example: 1 year of food costs approximately twice as much as 3 months of food, even though it's 4x as much food.

A 40 day plan will give you peace of mind for when "life" happens...like job loss, a decline in business, death, disability, or sickness in the family. There's no reason why you should have to wait for an End-Of-The-World situation to benefit from your preparations. You're going to learn how put a plan into effect that you'll benefit from on a daily basis.

Perhaps, most importantly, 40 days gives you a Specific, Measurable, Achievable, Realistic, and Tangible (SMART) goal.

Put another way, you'll know when you have "enough" for this particular goal.

You won't end up with 6 months of one item and 3 days of another.

Your preparations will be balanced and you'll sleep better at night knowing that you're COMPLETELY prepared for a 40 day disaster.

As I said, we'll get started soon, but I have a few housekeeping items that I need to go over with you right now...

First, this course was designed with the unique needs of law enforcement, military, and first responders in mind.

When disasters happen, these guys leave their families to take care of business. I'm part of this group, and have particular concerns about how my wife and sons will get along without me.

Because of that, the course is designed to work even if your family is missing one or more key people when disaster strikes.

That's a factor that almost every "expert" glosses over, but one that's VITAL if someone in your family is likely to be fully engaged and not present after a disaster.

If your family doesn't include a first responder, than the fact that this course was designed for first responders provides one more layer of redundancy, security, and peace of mind that this course will

provide you. And the fact is, it's likely that one or more people won't be fully engaged in a disaster situation at any given time…either because of illness, injury, caring for others, exhaustion, or mental fatigue…so it's vital that your plans take that into account.

Second, preparedness works best as a group. A neighborhood of 100 houses will be much more resilient with 10 or 20 prepared families than 1 or 2...but 1 or 2 are better than none.

I'll share some ideas with you for getting your neighbors on board, but I want you to start thinking about who you might want to have on your team in a survival situation and how you might approach them.

Third is discretion. While you want to have as many neighbors on board as possible with preparedness, you don't want to make yourself a target either. I don't want to be overly dramatic about this fact, but if people know that you have food and their loved ones get hungry, they're going to ask you for food. I believe in charity and plan on being charitable, but there's a camel's-nose-under-the-tent truism that shows itself after a disaster and once you give one person/family food, you'd better expect that they'll tell others about your generosity. Unless you've got enough food to feed your entire neighborhood, you need to have a plan for how to handle those first people who ask you for assistance, when and how you will be charitable, and how you will turn people away without creating a violent backlash.

You'll probably want to encourage your closest friends to go through this training as well, but as a general rule, it's a good idea to only tell people who you WANT to show up at your door after a disaster that you're preparing for disasters.

Here's what I want you to do between now and reading the first chapter:

First: Sometimes, you absolutely MUST evacuate your house due to fires, flooding, chemical leaks, spills, etc.

If you got a knock at the door saying you had 10 minutes to safely evacuate and you may not be able to come back, what documents would you get?

To start with, I want you to fill out the following forms that are adopted from FEMA. I'm not a fan of bureaucratic solutions and FEMA is definitely a bureaucratic organization. That being said, a lot of their first responders are great people who are held back by cumbersome procedures and red tape. These forms are an example of something that they have done right. They're for your use only and FEMA will never have a need to see them, but you should only put down the information that you're comfortable putting down.

Fastest Way to Prepare
Family Emergency Plan

Make sure your family has a plan in case of an emergency. Before an emergency happens, sit down together and decide how you will get in contact with each other, where you will go and what you will do in an emergency. Keep a copy of this plan in your emergency supply kit or another safe place where you can access it in the event of a disaster.

Out-of-Town Contact Name: Telephone Number:

Email:

Neighborhood Meeting Place: Telephone Number:

Regional Meeting Place: Telephone Number:

Evacuation Location: Telephone Number:

Fill out the following information for each family member and keep it up to date.

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
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Date of Birth: Important Medical Information:

Write down where your family spends the most time: work, school and other places you frequent. Schools, daycare providers, workplaces and apartment buildings should all have site-specific emergency plans that you and your family need to know about.

Work Location One
Address:
Phone Number:
Evacuation Location:

School Location One
Address:
Phone Number:
Evacuation Location:

Work Location Two
Address:
Phone Number:
Evacuation Location:

School Location Two
Address:
Phone Number:
Evacuation Location:

Work Location Three
Address:
Phone Number:
Evacuation Location:

School Location Three
Address:
Phone Number:
Evacuation Location:

Other place you frequent
Address:
Phone Number:
Evacuation Location:

Other place you frequent
Address:
Phone Number:
Evacuation Location:

Important Information	Name	Telephone Number	Policy Number
Doctor(s):			
Other:			
Pharmacist:			
Medical Insurance:			
Homeowners/Rental Insurance:			
Veterinarian/Kennel (for pets):			

Dial 911 for Emergencies

Adopted From FEMA

Figure 2 - Family Emergency Plan Form

Fastest Way to Prepare Wallet Cards

Make sure your family has a plan in case of an emergency. Fill out these cards and give one to each member of your family to make sure they know who to call and where to meet in case of an emergency.

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

< FOLD HERE >

Family Emergency Plan

EMERGENCY CONTACT NAME:
TELEPHONE:

OUT-OF-TOWN CONTACT NAME:
TELEPHONE:

NEIGHBORHOOD MEETING PLACE:
TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

< FOLD HERE >

Family Emergency Plan

EMERGENCY CONTACT NAME:
TELEPHONE:

OUT-OF-TOWN CONTACT NAME:
TELEPHONE:

NEIGHBORHOOD MEETING PLACE:
TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

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Family Emergency Plan

EMERGENCY CONTACT NAME:
TELEPHONE:

OUT-OF-TOWN CONTACT NAME:
TELEPHONE:

NEIGHBORHOOD MEETING PLACE:
TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

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Family Emergency Plan

EMERGENCY CONTACT NAME:
TELEPHONE:

OUT-OF-TOWN CONTACT NAME:
TELEPHONE:

NEIGHBORHOOD MEETING PLACE:
TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

Adopted From FEMA

Figure 3 - Family Emergency Plan Wallet Cards

Next, you'll want papers showing what you own, insurance, identification papers, and family pictures. In particular, you want to have pictures that show you and your family together to use as proof that you are, indeed family. You'll also want to have individual pictures that you can use for a "missing" poster, if necessary. If you have pets, you may want to have pictures of them as well.

You will also want your medical records (including blood type), prescriptions, and a list of phone numbers and email addresses of critical people (which you should already have on the form). If you have unique medical issues, you should also have informational articles about your condition that you could give to someone to get them up to speed quickly, Physicians' Desk Reference entries on unique medication that you take, and the names, contact information, and specialties of any medical professionals you're seeing.

Here are 3 levels of preparedness you can aim for, depending on your particular situation:

> **Level 1**: Get all of these documents gathered up in one place so you can easily grab-n-go.
>
> **Level 2**: Copy/scan/photograph the documents
> so you've got backups. (Ideally you want to have both physical and digital backups)
>
> **Level 3**: If you scanned/photographed your documents, put them on a USB drive, burn them to a disc, or store them online.
>
> If you know how to encrypt/password protect the files, do so.

Second: Go through your GO Bags, 72 Hour Kits, Get Home Bags, GOOD Kit, SCRAM bag, Car Emergency Kits, INCH kits, or whatever you happen to call them. (Even First Aid Kits)

Look for expired items, compromised packaging, and missing items and make a list of items you need to replace.

Third: Write down the top 3 goals that you have for the course and send them to me in an email (David@FastestWayToPrepare.com)

We've got a lot to cover to get you ready for a 40 day and 40 night survival situation, but I've got a step by step plan that YOU can follow to get it done.

So, hold on tight...we're going to move FAST to get you ready.

Have questions? ASK!! Shoot me an email at David@FastestWayToPrepare.com

Threats and Kits

Right now, we are going to cover the 25 threats that I monitor on an ongoing basis and how I still manage to sleep at night. I'll cover essential topics such as preserving your identity and wealth after a disaster, as well as how to prepare a 72-hour kit loaded with "ninja" secrets, like how to keep chocolate from melting in a 120-degree car, and more.

Before we get started, I want to point out that people reading this book are going to be at all ends of the spectrum when it comes to preparedness. Some of you have been preparing for your entire lives, and some of you are just getting started. Some of you have a lot of money, some very little. Some of you have a lot of time to invest, while others among you are always pressed for time.

In any case, I've set up these chapters so that everyone will benefit from them. If it seems like I am moving through things fairly quickly, don't worry. I've designed this training to build upon itself sequentially; circling back to reinforce the most important topics to make sure you get what you need. And if you're a lifelong survivalist, you are still going to get some very valuable golden nuggets out this – so let's get going.

We will start off with the top 25 threats to our way of life. This isn't meant to scare you … consider preparedness as a form of insurance and the list of threats as a statement of benefits. If you get a health insurance policy, you know what you're insuring against. If you get an automobile policy you know what you're insuring against. If you get a homeowner's policy, you know what you're insuring against. But when many people are preparing, they make the mistake of not examining the threats that they're insuring themselves against.

Natural Disasters

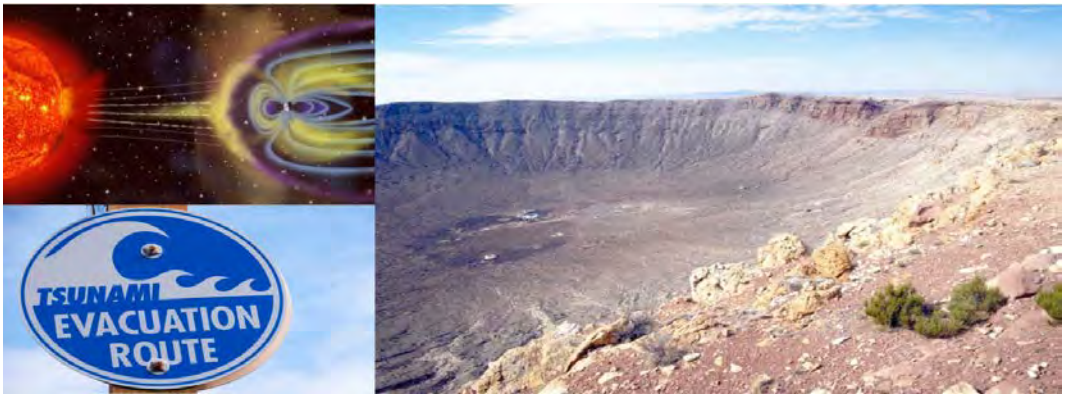


Figure 4 - Examples of potential natural disasters. Upper left: Solar Flare/Coronal Mass Injection. Lower Left: An evacuation sign for a Tsunami evacuation route, similar signs for hurricanes or other "normal" disasters. Right: Celestial object impact in Arizona.

First, we've got natural disasters. A good preparedness plan will help you in the event of normal, everyday disasters as well as the very low probability, high impact disasters. I will give you some examples of both.

We've got "normal" disasters like hurricanes, tornados, flooding, viruses, blizzards, droughts, earthquakes, and wildfires. Depending on where you live, you might experience one or more of these on a regular basis to one degree or another. Whether they're catastrophic or non-events can vary from one side of the street to the next or from one side of a neighborhood fence to another.

We've also got low probability/high impact events like pandemics, volcanoes/super volcanoes, tsunami's, solar events like solar flares/coronal mass ejections, and celestial object impact like the one shown in the right hand picture in Arizona(here is a photo issue). These events don't happen very often at all; but when they do, the impact is huge. All of these natural events that have the potential to change our lives dramatically, either on a household level, a regional level, or even a national level.

Man-made Disasters

On the other side of the coin, we've got man-made disasters. For example, we've got electromagnetic pulses caused by nuclear detonations in the upper atmosphere that knock out electronics. (Nuclear EMPs and coronal mass ejection EMPs both affect electronics and are different sides of the same coin) We've got numerous forms of terrorist attacks, including explosions, cyber-attacks, attacks on currencies, and infrastructure attacks. Threats to our infrastructure include attacks on the electrical grid, food supply, fuel supply, or on water-treatment centers.

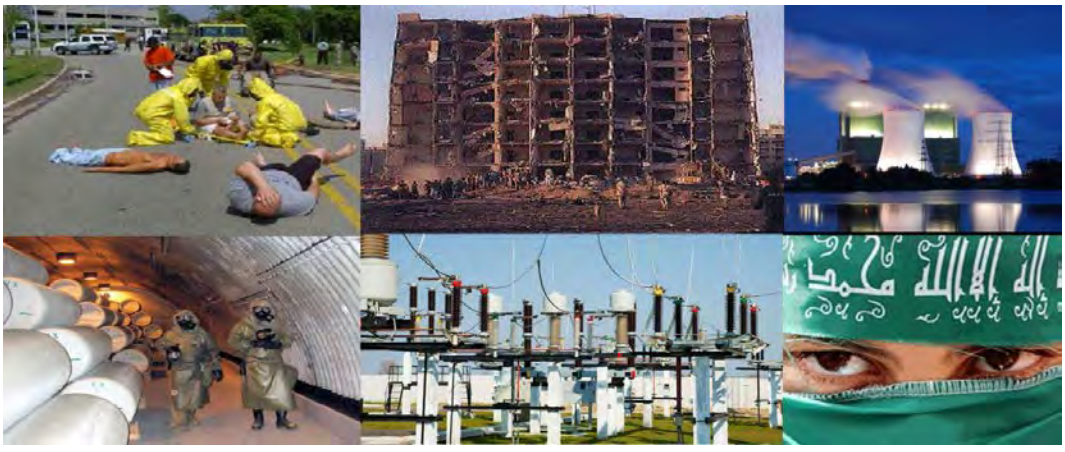


Figure 5 - Examples of Man-Made disasters. Top Left to Right: Biological disaster on a workplace; Beirut Marine Barracks after bombing; Nuclear power plant. Bottom Left to Right: Chemical warfare; Electrical substation; Extremist Terrorists.

Then there's the large swath of our public infrastructure that's on the brink of failure. For example, a lot of our critical infrastructure – our roads, levies, some parts of our power grid, and even communications -- are getting to the end of their useful life. At some point, this infrastructure will face catastrophic failure. Hopefully, most of them will be replaced before these failures can occur, but we just don't know if it's going to happen, or whether government revenues are going to be large enough to replace bridges, roads, levies, and other infrastructure before these failures happen.

Another seemingly obscure manmade threat is simple fire in the form of wildfire attacks. Japan tried to use incendiary balloons during World War II to cause wildfires because they knew they couldn't attack us directly in the United States. Various other terrorists groups have talked openly about the potential effectiveness of wildfire attacks in the U.S., tying up our first responders. Not to mention, there's a host of ancillary problems that can accompany wildfires, with air quality, with transportation, and even with electrical grids.

Next, we have to consider chemical and biological attacks, or even engineered viruses unleashed on an unsuspecting population. Then, of course, we've got nuclear attacks, which aren't incredibly probable, but would be catastrophic…both physically and psychologically. A much more likely scenario is a dirty bomb or a radiological attack at a traffic choke point, such as an airport, Wall Street, or a crowded bridge, similar to what happened on September 11.

There are several different nodes in our society that if they were attacked it would have huge-huge ramifications, way beyond a basic attack. A good preparedness plan will insure you or your way of life against all these problems.

Economic Disasters

Figure 6 - Examples of Economic disasters. Left: Devaluation and Loss of confidence in the dollar; Middle: Currency collapse do to decision making by politicians; Right: Attacks on our Economic system through the use of various cyber attacks.

Another often-overlooked class of catastrophe is the economic disaster. We are seeing some of this right now as investors around the world lose confidence in the dollar, driving the value of

the currency down. This is not a new or unique occurrence… some recent examples of catastrophic currency collapses are: East Berlin, Beirut, Argentina, Zimbabwe, Somalia, Rwanda, Yugoslavia, and the Weimar Republic.

Currency collapses can be due to politicians simply making bad decisions over a number of years, but it can also be a result of willful maliciousness. In the book *Unrestricted Warfare* two colonels in the Chinese army talk about how to attack an enemy that's superior militarily. One of the methods they discuss is economic warfare. Here's a little taste of the methods they talk about – hacking, computer viruses, drugs, propaganda, and media control. Soft attacks like these don't require boots on the ground or people firing guns to break down an enemy from the inside. If done in combination with derivatives trades, they can be and have been quite profitable as well when stocks/commodities related to the target attacked drop in value.

The tactics laid out in the book weren't necessarily aimed at the United States, even though the English translation makes it seem like it was. With that having been said, it is written with the idea of attacking an enemy who is superior militarily and there just aren't that many countries that are superior militarily to China. So it's a fair jump to say that the book was written for how to destroy America.

Cascading Consequences

The common thread throughout all of these scenarios is that they produce cascading consequences. As you start to analyze these disasters in depth, you see that to a large extent, even though they are very different, they cause similar breakdowns. They cause power outages, communication outages, breakdowns in commerce, fuel shortages, food shortages, and even drinkable water shortages. All of these systems, in the end, are maintained by people…people who have families and who may or may not go to work to fix downed infrastructure if they make the logical decision that their family needs them more than their job does.

What you end up with are hungry, tired, thirsty, scared people in withdrawal from both legal and illegal substances, not to mention a form of withdrawal from their normal way of life, which is a form of psychological withdrawal.

All of this leads to a breakdown in civil order. We have seen this throughout history; desperate people do desperate things in order to maintain their way of life and protect their family, just to keep the status quo.

The Value of Preparedness

It's important to point out that these are all very low probability events. Even the higher probability events aren't that likely to have a catastrophic impact on you in any given year. The

chance of a volcano erupting tomorrow and wiping out the United States or whatever country you're in is fairly small. The chance of Iran and Israel attacking each other tomorrow is relatively small compared to getting hit by a car walking down the street. But here's the big takeaway: If you add up all these low probability events, then it's incredibly likely you will be affected by at least one of these in the next few years and almost certainly during your lifetime.

That's why we must be prepared, and why it's so important we have a plan of self-support after disasters. Being prepared is broad-based, practical, and pragmatic, something that you can embrace and leverage to increase your level of security in an uncertain world. That's because the solutions that we will explore will work in a broad range of disasters.

How do you sleep at night knowing all this? It's a valid question; I just threw a lot of disasters at you. Internally, you knew about all of them, but you may not have seen big lists like that all together at one time.

The Anatomy of a Disaster

It's important to understand there are two components to a disaster. You've got the actual disaster itself, and you've got people's reaction to the disaster, most importantly yours. What I want you to do is focus on what you can control and spend your time productively thinking about factors that are within your control. You can't control what cyber-hackers in Russia and China do any more than you can control the weather. But you can sleep soundly knowing that you are making forward progress on getting yourself prepared. You've got to just shut out everything you can't control.

It may seem funny to say not to focus on disasters in a preparedness book, but you really shouldn't become fixated on disasters. It's more important and productive to enjoy the journey, enjoy life, and make decisions you'll be happy about, whether or not you ever face a major disaster.

Along this line of thinking, you should choose preparedness activities and items you can incorporate into your daily life first. Everyone eats, everyone drinks water; why not take care of your food and water needs in the event of a disaster? Not everyone has a passion for ham radio, so that may not be one of the first things that you cover. You may want to first look into the areas that are going to go away after a disaster that also happen to be areas you are very passionate about.

If you are a big bike person, maybe you want to create or buy a bicycle that's attached to an alternator for an electrical generator so you can generate power by riding your bike in a stationary position. That's just an example, but you get the point—plan your preparedness

activities and purchases around your strengths, what you already do and know, and what you're already passionate about.

The Identity Dilemma

Shifting gears, I've got a funny question for you; how do you prove who you are after a disaster? If I were to ask you right now who you are, where you live, what you own, and what you are qualified to do, you could probably provide documentation of all these things. If I asked you to prove it, you could either shoot me a photograph of a driver's license, or you could email me documents, or send me a login to a website. But after a disaster you may not be able to do that.

If you had to leave your house suddenly because of a wildfire, and had no document saying who you are, where you live, what you own, or what you're qualified to do, then you are kind of out of luck. Police or other first responders manning roadblocks may not let you back into your own neighborhood or house if you can't prove who you are and where you live.

As a result, you need to have secure copies of important documents in multiple places. Although it's practical and everyone can admit that it's important, it's not fun to do. I will be the first to say that. If you want my honest opinion, I think it's kind of a pain in the butt, but it's necessary, and here's a trick for how to get it done.

First, I want you to set aside 30 minutes that you can devote to this. Go to the (probably need a Resources page on the site and put the list from the course in the book…both here and as an appendix)*****Members' Area and download the list of important documents you need backup copies of. Next, put a dot next to every item you know the location of, this could be in physical form or digital form. If it's online, just put the URL at which it can be found, and/or maybe a bank name. If it's on your computer, then just write down the directory that it's in or go ahead and print out a copy of it.

Next, do a 30 minute blitz and get as many of the items together as possible, starting with the items that have dots next to them. When you get to the end of the 30 minutes, you are free to stop. Don't feel like you have to complete the task right away. The goal is to get some of it done completely and not everything part way done.

The reason for that is, let's say in 30 minutes you get half of your documents together, and the other half is going to take eight hours because you don't know where stuff is. If you can take the 30 minutes and find half of the documents, make backups, and store them in a safe place, then if something were to happen you at least have half of your stuff backed up, rather than having none at all.

This is a very important step, but go ahead and allow yourself to stop before you're completely done if you need to. Is it perfect? No, but it is done – and done is important. You can always come back and do more later. In preparedness, preparations in 20 different areas that are half done won't help nearly as much as preparations in 3-5 areas that are 100% finished, functional, and ready to bet your life on.

Put another way, "done pays." In business, 50 ideas that are 80% implemented makes $0 and helps nobody. Alternatively, 49 ideas on the drawing board and 1 idea finished will actually make money for a company.

In preparedness, it's even more important to have fewer projects completed to a natural completion point rather than dozens of half-done projects…especially if you truly believe that your life might someday depend on the preparations you're making today. If you're just having fun and going through the motions of being a prepper, then start a bunch of projects and don't finish any of them…otherwise, get 'er done before moving on to the next coolest thing.

Back to rounding up critical documents, if you own a digital camera or camera phone, use it to photograph your documents. Even though is an 'old-school James Bond' strategy, it will get the job done.

What do you do with physical copies? This is one time when I think it's okay to use bank safe deposit boxes. I am not a big fan of safe deposit boxes, because if there's a banking holiday you don't want to have restricted access to things that are valuable. But the chance of the same disaster knocking out your access to your home and knocking out your bank at the same time is not highly likely, so this is a good place to put physical copies of important documents.

Another option is to put the documents in a fire safe with friends or relatives. You might even think about swapping important documents, where you keep yours at their house they keep theirs at yours. Of course, there's a security risk there, but in many cases it's going to be worth it. You could go so far as allowing each other to bolt a small fire safe to the floor at each other's house.

Another idea is to have a fire safe hidden in an attic or crawl space. That way, if burglars were to steal your primary safe while you're away on vacation, you've still got copies of your important documents in your other fire safe.

What do you do with these digital copies? Well, once you've got everything together that an identity thief would need to completely steal your identity, you need to make sure they can't access it. One of the easiest ways to do that is to encrypt your data. I like a program called SafeHouseExplorer; there are both free and paid versions of the software and it's very powerful. It has some vulnerabilities, as do ALL encryption solutions, but not enough to bother

me and I don't think they would be enough to bother you. If they are enough to bother you, then there are other options and I will get into those. But for 99.9 percent of the people out there, Safe House Explorer is going to be a very good solution for you.

I am not worried about NSA level hackers getting my information. What I am worried about is Joe Identity Thief getting my information. So it has to do with the threat level. If you're in a situation where you are concerned about NSA level hackers getting your information then I've got a solution down below.

So what do you do with this information once you've got your files encrypted? Where do you put them? You want them to be accessible, yet you want to keep them remote; and you also want them disparate. Most of all, you want them to be safe in the event of a disaster.

Here are some options. First, you can email them to yourself. This sounds incredibly simple because it is. Just attach the encrypted file that you made with SafeHouseExplorer and email it to yourself. It will use up space, so you may have to switch over to a paid plan with MSN, Yahoo, Hotmail, Gmail, etc, but in most cases it's going to be well worth it.

Keep in mind that you want to upload the encrypted version of your files and not the originals. Almost all of these free services (and Google in particular) "read" every document that you upload or email through their "free" service.

Other options include Google Docs, Dropbox, or Drive.net. These are called cloud drives, where you can store your information remotely and access it from anywhere. Another option is to burn it to a DVD or store it on a thumb-drive. Once you have these, then of course you can store them anywhere you are storing your physical files.

Figure 7 - Ironkey encrypted thumb drive.

As long as your data is encrypted, the more places you keep it, the more likely that you'll be able to access it in an emergency.

If you are really concerned about the encryption security, consider an Ironkey encrypted thumb-drive; these things are absolutely incredible. They have very strong encryption on them, and they're password protected. If someone enters the wrong password ten times, then there's an option to delete the information and make the drive unusable ever again. It's secure physically, you can't get into it. The chips are covered in epoxy, so identity thieves can't hook up alligator clips to the drive and get the information off of it. These also have the ability to do VPN through a tor network. What this means is that you can be at basically any computer or internet

café in the world, stick this thing in a computer and have semi-secure communications. Is it fool-proof? No. But it will take care of a lot of problems.

One of the pressing problems an Ironkey encrypted thumb drive takes care of very well is that if you ever use your computer at Starbucks, or any other unsecured wireless hot spot; your information is relatively vulnerable. By using the Ironkey VPN feature you can get around a lot of that vulnerability.

On the note of VPNs, I also regularly use Strong VPN and Hide Your Ass VPN. HYA is cheaper and easier to use, but Strong has consistently been more robust for me over the last couple of years of head-to-head testing.

Like I said, you can store the digital copies on a thumbdrive anywhere you've got physical copies and you can keep them in vehicles, go bags, 72 hour kits, or in safes--the options are endless. I have seen thumb drives embedded in mortar between bricks, so that only the part that plugs into the computer is sticking out and you stick your computer up to the wall or stick a USB extension up to it to get into the data. There are lots and lots of options here.

You are going to want to update these as your situation changes, as accounts change, as you add complexity to your life, as you simplify your life and get rid of complexity. For example, as your medical records change you are going to want to update them on your thumbdrives.

One more level of security is to have separate passwords, and/or separate thumb drives for medical records than you have for financial and identity records. The reason for this is if, let's say you're traveling or it's after a disaster and communications are down but computers are working, you've got access to your medical history. If you have a medical problem, and you go to a hospital, you can give them a thumb drive and they can get your medical records off of it, but they won't get your financial and other records.

The way to do this is to have two folders with different passwords, one folder has medical records and one folder has everything else. You could also just use two completely separate thumb drives.

Another trick I want to tell you about is using a camera phone to make your wallet thinner. Basically, what you're going to do is, if you've got items in your wallet that you need to keep track of, but that you don't need all of the time, take a picture of them with your camera phone and then you've always got the information with you. You can access the info or show it to people if necessary without having to carry it around.

This may or may not work for you depending on how high security the items are that you're carrying. Obviously, this strategy works best with items that aren't high security. I've done it

with my driver's license and certifications so that in a pinch I've at least got something, some proof that I've got a driver's license, who I am, what my driver's license number is if I don't remember it for some reason. The downside of this is that when you take pictures of everything that's in your wallet, losing your phone becomes like losing your wallet. I personally get around this by password protecting my photos on my phone with an app called PhotoMgrPro.

So, back to encryption, you need to encrypt or at least password protect the important data on your phone. Two solutions that I really like are RoboForm and OnePassword for the iPhone. Depending on your phone there are all sorts of options, so it's something you're going to need to look into depending on your particular model.

Bug Out Bags

Next, we are going to get into Go Bags, SCRAM kits, 72-hour kits, GOOD Bags, Get Home Bags, Car Kits, Grab-n-Go Bags, and whatever else you want to call them. For the most part these are the same thing; they're bags that are going to have the basics of survival in them and help you survive for some set amount of time, in most cases 72 hours to seven days.

There are differences, however. Go Bags are normally at home, and they are going to have a place in them for important documents or your USB drive. These are designed to get you away from home.

72-hour kits and Car Kits are often made to help you survive if you get into a survival situation that involves your car.

Get Home Bags are typically going to be used if you are away from home, helping to sustain you as you get back to your home.

In all of these cases, these aren't long-term solutions. They are a bridge to get you from where you are to somewhere with a higher level of food, water, shelter, fire, medications, and trauma supplies. It's important to understand that these are all different flavors of the same treat, and they are a core item of preparedness. That's because, if you get the right foundational items in your 72-hour kits, you can use them in longer disasters.

Here are some general guidelines to keep in mind. A lot of people talk about the greatest, fanciest water filter to carry in your 72-hour kit, and that's great; I do that too. However, I also just simply carry water. And the reason is that you may not be able to find water that you can filter or purify. There just might not be any water where you happen to be when a disaster hits, or it could be so polluted or you could be so pressed for time that you need ready-to-drink water. The down side is that water is heavy, bulky, and it doesn't compact; you can't dehydrate it. In that sense, it is what it is; so you may have to get over it.

One of the things I like to strongly suggest is to carry more water – if your pack or your 72-hour kit is close to the maximum that you can carry, overload it with water. In a worst-case scenario, you can always chug some water and leave some behind, but once a disaster happens you can't really add water to your 72-hour kit. It's better to have extra before the disaster and dump it if you need to.

Another thing to pack is food that doesn't require preparation. We have some canned goods in our 72-hour kits, but for the most part we have ridiculously simple ready-to-eat food. It doesn't taste the greatest, it isn't the best nutritionally, and I definitely wouldn't want to live on it long term, but it will help us survive a 72-hour disaster. It will help us get from point A to point B, and it will help us get to higher quality food.

Along those lines you want to make sure that the food you have for a disaster is proven to work with your body, make sure your body can digest it and it's not going to cause internal explosions or a lot of pain and discomfort. You want food that's efficient, that your body can handle and that your body can get the nutrients from.

Everyone in our family has done blood draws for food allergy testing. We all have food allergies and have noticeable changes in mood, energy levels, and performance depending on whether we're eating foods that we're allergic to or not. This is a test that a medical professional can order for you.

If you live in a climate where you've got extremes of heat and cold, you're going to want to check your food at least every 6-12 months. If you're carrying food that you actually eat, you're going to be able to rotate the items out of your 72-hour kit and simply eat them. I know that's a crazy concept, but if you actually eat the foods that are in your 72-hour kits, just be sure to replace them.

As far as GO bags/72 hour kits go, I want to suggest, at a minimum, that you put 6,000 calories per person in or near whatever container you keep your medications in. The reason for this is that, if a disaster happens, most of the stuff you're going to need is going to be all together in one place, and you can throw it in a container and go. It's not perfect, but at least you have some semblance of a plan that will give you a little bit of a leg up if you are panicked and running short on time. It just keeps your most vital things organized and together.

Again, this is not a perfect or complete solution, but it's one that you should be able to complete VERY fast. As time allows, improve on it…in the meantime, know that you have something that's workable and that you can use if you need to evacuate quickly.

Figure 8 - Examples of 72 Hour kits. Left: Go Bag Backpack; Right: Inexpensive plastic storage bin.

Most 72-hour kits and Go Bags are literally bags, duffle bags, backpacks, etc. Some people use pillowcases, sewn flannel shirts, or other "hobo" solutions for their kids or themselves and these work fine as well, although they will fall short in the performance and comfort departments.

However, there are other ways to store and carry these kits that, in some cases, are quite superior. One strategy that I use and recommend is to put your 72 hour kit supplies in a plastic storage bin(s). A lot of what we keep in our home is in plastic storage bins, because they are so easy to use. I even keep 72-hour kit materials in a plastic bin in our trucks, especially the things I use and cycle through on a regular basis like snacks, water, diapers, wet wipes, etc.

Plastic bins are easy to open and easy to find things in. Once you start using them, you'll find that they are superior to bags if you are using them on a regular basis.

Bins aren't perfect--you can't easily carry these bins for long distances. So if your kit is in a bin like this, you may want to have an empty backpack ready to put the stuff in should you need to hoof it. Another big advantage of bins is price. The storage bins I show are $5/$10 a piece, and most high quality backpacks or duffle bags are considerably more expensive for the same volume.

If you want to go BIG with plastic bins, I'm a fan of the "Stanley" brand rolling bins that you can buy at Home Depot and Lowes. They ARE pricy…running $50-$100, but they're solid and hold a LOT of gear. As a note, I originally put ammo in one of these bins and quickly found out that they'll hold a lot more weight than I can lift or maneuver easily.

Another alternative 72 hour kit option is buckets, specifically plastic 5-gallon buckets. They make a great choice especially for a survive in place option in the event of chemical leak where you have to seal up your windows and other openings to your house. One of the reasons why

buckets work so well is because you can use the bucket as a toilet. You can either just sit on the rim, or you can put a toilet seat on it. Some people choose to line the bucket with a trash bag and go and simply empty out the trash bag occasionally.

Coolers as 72 Hour Kits

This alternative to using bags for 72 hour kits, I have to say, is simply genius. It was shared with me by a friend in Texas and I immediately started trying to figure out how to refine it and make it better. Basically, what you do is keep the temperature sensitive items from your 72-hour kit in a cooler. It sounds ridiculously simple, but once you start doing this you're going to love it.

Heat and heat fluctuation are the enemy of foods, medications, and a lot of other preparedness items. You can get into a situation where you've got basically 70 to 80 percent of the nutrients of a food leached out in just a few short years because of heat and heat fluctuation, so it's a big deal. Some of the things that we keep in our coolers in our vehicles are chocolate, non-prescription medicines, (we don't take any prescription medications), and food. You can use all sorts of different coolers for this. I tried every seven-day cooler you can get at major sporting goods stores and they worked, but not near as well as the one I am going to share with you.

This is a pricy cooler, but it's one of the very best on the market. It's called the Yeti and you can get it at YETIcoolers.com. They are not literally bullet proof, but they are literally bear proof. I guess they take salmon and stick them in there and then throw the cooler into a bear pen and see if the bear can get into it. On the lower hand corner of the cooler there you can see that I'm not joking—the sticker is a certification from a bear proof rating agency.

Figure 9 -Inside of a Yeti cooler with 2 gallons of water to act as thermal mass.

There's a secret to this strategy. The cooler in and of itself will work, but if you add a couple gallons of water or more, this setup is absolutely amazing. In my testing, when it's been 106 to 110 outside and 130 in the car, the highest the temperature got in the cooler was 109. When it was only 100 outside and only 120 in the car the highest the cooler got up to was 98 degrees; and 98 degrees is kind of an important temperature because chocolate melts between 92 and 98 degrees, depending on what type of chocolate it is.

While it's great to have chocolate bars that stay in one piece and aren't completely melted when you open them, I also use chocolate as a maximum temperature indicator. If my chocolate bars are all melted when I open them, then I know that they've hit temperatures over 98 degrees. The messier they are, the more time they've spent over 98 degrees.

Why's that important?

A lot of medications are relatively stable up until 98 degrees as well. However, once you get over 100 degrees, the life expectancy just completely tanks. This cooler tactic can help with insulin and other medications, with foods, and basically everything that we've talked about that is sensitive to temperature.

If you want to make it so that the temperature doesn't go even as high as 98 or 109, add more water. While that means you're going to lose storage space, you're going to add stability. I tested this by placing a remote thermometer in the cooler and stuck in the back of my truck for a week. I did this a couple of times and with the remote thermometer I was able to tell how it was performing without opening the cooler. Like I said, it performed quite well.

I said these were expensive, I will tell you how expensive, they run from $200 to $800 and there are two different series. There's the Tundra Series which has a rope handle on the side and a Roadie Series which just has a metal handle that goes over the top. We have the Tundra series, and it proved to be easier to carry and big enough to hold water and worked better for us. The Tundras range in size from 35 quart up to their 420 quart body sized coolers.

If you don't want to go with a Yeti, get one of the seven day coolers from a sporting goods store and either add more water or put yet another cooler, a little soft sided cooler, inside the big cooler. Then put water in the big cooler and water in the soft-sided cooler.

Depending on what part of the country you're in, you may be interested to know what kind of water bottles I use. Currently, I'm using heavy duty stackable bottles from Ozark, and they work great. I've actually frozen them without breaking. I haven't opened them in between freeze/thaw cycles, nor have I dumped any water out. All I have done is stick them in the freezer, stick them in the cooler, stick them in the freezer, stick them in the cooler. When we've

got a trip or something planned, we swap out a couple bottles that are full of ice from the freezer and put them in there.

One thing to note—the testing I did with temperatures inside the cooler was done with water and not ice.

Water Filters for Cars

Here are a few more car specific tips. First, make sure that your water filter can be stored in your car. As an example, my favorite water purifier is the Sawyer .02 micron purifier, and we are going to cover it a little bit later. The internal membranes can't handle temperatures over 110 degrees without the risk of compromising the .02 micron rating. Your purifier or filter may be the same and you need to check on that to make sure you store it in the proper conditions, or when you need it most, it may not work.

Just as high temperatures can damage filters/purifiers, expanding water from freezing temperatures can quickly destroy filters. If your vehicle is going to be in sub-freezing temperatures for extended periods of time, it will be worth finding out if you need to blow out your filter before storing or what you'll need to do to insure that it will work when you need it.

Boots/Shoes: The next item that we always carry in our vehicles are shoes/boots and socks. This is because I like wearing sandals, and sandals are really bad for a survival situation. On that note, so are dress shoes, so I keep good walking/hiking shoes in the car. "Good shoes" is a relative term, when I'm saying good shoes I either mean boots or shoes that I can hike in, wear to push the car, and that will protect my feet in inclement weather.

Coveralls: Another thing that we keep in the car is coveralls. This is because it seems like a lot of problems with cars, or even hooking up trailers, can get your clothes dirty. And if you've got on dress pants, nice jeans, shorts, or you happen to be in a situation where you need to kneel down or lay down on the ground to get under a car, it helps to have something that you can put on so you can keep your clothes clean so you can get back in your car and be relatively clean. Coveralls have worked great for that through the years. In the winter, of course, it's very nice to be able to hop in the car wearing whatever I want knowing that if I run into a problem, all I need to do is throw on my insulated coveralls and I'll be able to stay warm.

Cover: The next essential item is a hat. I like booney-hats because they keep not just your face, but your ears and the back of your neck shaded.

Gloves: Gloves are another essential, and they're an area where people often skimp. I like nice high quality leather gloves. They don't have to be fancy gloves, they can be $10 ones from Home Depot, but you just want some good rugged gloves in your car or truck.

72-Hour Kit Essentials

Here are some of the specific items I keep in our kits. I'm going to start off by showing you what I carry as a multi-layered shelter solution.

In the picture below, I show a shelter system I use that has worked very well for me down to around 20 degrees. I haven't gone out under 20 degrees with this setup, but it's been fine down to 20 degrees. In fact, I've been hot in it.

Figure 10 – Left: SOL emergency bivvy from Adventure Medical Kits; Middle: Bag Liner; Right: GI Poncho;

On the left we have the SOL emergency bivvy from Adventure Medical Kits. Many 72 hour kits come with Mylar bags, but Mylar tends to crinkle and tear. I oftentimes wonder how many people selling 72 hour kits with traditional mylar blankets have actually spent a night outside using one to keep warm. Of those who have and made it through the night, I wonder how many had a blanked that was still holding together enough to use for a second night. If you doubt my assessment of traditional mylar, pull out one of your mylar blankets/bags and see how it performs.

They ARE functional, WAY better than nothing, and provide more heat retention per ounce/dollar than almost anything else you can buy, but they do have serious shortcomings. If you know them and are comfortable with them, you won't be disappointed by them in a survival situation.

The SOL bivvies that I show above are flexible, don't tear, and they still reflect about the same amount of heat as Mylar. They are great tools. In addition, they're a lot quieter than Mylar. If you're a light sleeper, like I am, this makes a huge difference in quality of sleep.

In the middle bag in the picture is a bag liner. A bag liner like this one will add 10 or 20 more degrees of temperature rating to your sleeping bag, regardless of whether it's a bivvy or a full fledged sleeping bag. These will allow you to use the same 30 or 40-degree sleeping bag year round by letting you simply add a liner for three and four season camping.

A big reason to use bag liners is that if you've ever backpacked for a week or two, your bag can get to smelling pretty funky. A bag liner allows you to take the bag liner out and rinse it off in a stream every day, giving you a much-much cleaner smelling sleeping bag.

Another practical use for these is to carry them while traveling to avoid bed bugs in hotels.

In any case, what I do is use the bag liner close to my body, and the bivvy outside of that, and the reason I did that was for flexibility. On a very warm evening I can just use the bag liner or nothing at all, but I like the bag liner because it gives some instant protection, and on a little bit cooler evening, I can use just the bivvy or a combination of the two.

In a rain situation, it's hard to beat a GI Poncho like the one shown on the right (photo), and specifically a poncho with grommets on the corners so you can make it into a tent. The "tent" doesn't have a bottom, it doesn't have walls all it has is an A-frame roof, but with the combination of these three items you can have shelter in most situations.

Next, I want to show you a few other items that you might want to consider for your 72 hour kits.

Figure 11 - Left: Cool-Max bag Liner; Middle: Two person SOL Emergency blanket from Adventure Medical Kits; Right: First Aid Instructions inside the SOL Emergency blanket.

On the left is something that I haven't used because my bag liner takes care of it, but it's a Cool-Max bag liner that has been treated with promethean so that bugs won't bother you. If that's a concern for you where you're at, then that might be something to look at. They are a little bit pricey, so that's a hit or miss one.

In the middle, we've got a really neat item that I think should be in every 72-hour kit. Again it's from Adventure Medical Kits, and it's an SOL emergency blanket and it's a two-person blanket.

One of the problems with traditional Mylar blankets is that they're really not big enough for even one person, and this one is big enough for two people. Again, it's flexible, it's quiet so it's not crinkling all over the place, and it's tear resistant. I haven't had any problems using or reusing this line of products. Another bonus is it has first aid instructions written on the blanket, so it serves a dual purpose.

Water Filtration

Figure 12 – Water Filtration items. Left: Sawyer . 02 micron purifier bag; Middle: Katadyn MyBottle 24 oz. Right: Iodine tablets from Portable Aqua.

The next major component of our kit is, of course, water. On the left in the picture above, we've got the Sawyer .02 micron purifier bag that I mentioned earlier. Something that's important to note is that the difference between a purifier and a filter is what they take out of the water. A filter will take out bacteria and protozoa--normally both. Some filters will only take one, not both out of your water; and filters that contain activated charcoal will improve the taste. In addition to taking bacteria and protozoa out of the water, a purifier will also remove viruses.

The way the Sawyer purifiers and filters work is that you start by filling the gray bag with any water you can find, within reason. Any water you think has a bacteria, virus, or protozoa issue, put it in the gray bag, then hang up the gray bag. Gravity will pull the water through the filter/purifier and into the blue bag, and when it's done you can pour water out of the blue bag into whatever you want to drink it from. You can also directly fill bladders and hydration systems or water bottles. It's a great system, and it's guaranteed up to a million gallons. You clean it by backwashing. It has been a rock-solid system for me; I have used it for a few years now.

The one down side of the Sawyer purifier is that it's a $200 set up. It will last you the rest of your life, but it's a $200 set up. If you want something that's less expensive and possibly a little bit simpler, the First Need Excel is also a great filter and purifier and the set up costs $100-$120 right now at REI.

In the middle we've got the Katadyn My-Bottle. This 24 oz. bottle has a filter/purifier straw in it that's rated for somewhere between 25 and 30 gallons. The Katadyn will take out not only bacteria and protozoa, but also filter out viruses and improve taste with a carbon-charcoal filter.

Don't confuse the Katadyn with a Camel Back Groove, which is just a carbon-charcoal filter. The Groove will improve taste but it won't filter creepy crawlies from your water.

Backups are vital and that's why I've included the Potable Aqua bottle on the right. These are simple iodine tablets. You use these by sticking a tablet in your water, shake it up, and wait 30 minutes; then you're good to go. There are also chlorine-dioxide tablets, but those take up to four hours to work, so I'm a much bigger fan of the Iodine.

As a final backup, of course, you've got backup plan of just boiling the water over a fire.

One thing to note is that all of these methods assume that you aren't trying to filter out chemical contaminants from your water, like salt, petroleum, herbicides, pesticides, etc. This is a much more involved topic than we can cover here. It's so involved, in fact, that I wrote an entire book on urban water purification in disaster situations that you can find at http://www.UrbanDisasterWaterPurification.com.

Best Food for Your Kit

That brings us to food. What I want to suggest for your kits is that you pick food that is quick to prepare or takes no preparation at all. You want something that is compact, edible, temperature tolerant, and shelf-stable. Keep in mind; it doesn't all have to be high speed.

In the following picture, I show both: On the left, we've got some high-speed stuff and on the right, we've got some very low speed stuff.

Figure 13 – Food for your Kit. Left: SOS and Datrex emergency rations; Right: Simple ordinary food bars for emergency rations such as Larabar, Jammy Sammy and Nature Valley Granola and trail mix bars.

On the left, we've got emergency rations and these normally come in 1200, 2400, and 3600 calorie bars. There are several manufacturers, and none of them taste incredibly good, but they are all tolerable for my digestive system. I highly suggest that you go this route because of how compact and shelf stable these bars are, but you might want to sample bars from every manufacturer you can find, so you can determine whether you can tolerate the taste and that your body can handle it.

In the picture on the left, I've got SOS and Datrex rations. The reason I suggest purchasing a variety is that, if you get all SOS bars and you need to survive on them for ten days, that's 30 meals of the exact same taste and texture. It's not going to be a gourmet meal, but if you can switch back and forth between Datrex, SOS, ER, and Mainstay, then at least you are going to have some variety. It's always kind of nice to pick a favorite because then you've got one to look forward to, even though it's only every fourth meal.

You also want to take into account the size of the group that you're going to be with. Like I said, these come in 1200, 2400 and 3600 calorie packs. If you've got several people, go ahead and get the 3600 calorie packs. If you've just got yourself then I'd suggest getting the 1200-calorie packs.

These aren't expensive; in fact they are pretty darn reasonable. For $65 right now on Amazon, you can get ten of the 3600 calorie bars from Mainstay. That's enough for one person for 18 days. It works out to about $3 a day, which is a fairly good deal. If you are spending more than $3 a day on food right now, which I would assume that you are, you can cut back a little bit and buy up as much of these as you want. Again, these aren't a long-term solution; they are a short-term solution only, but a very good one.

The food in your 72-hour kits doesn't have to be high speed at all. On the right, this is some of the stuff we keep in ours. We have the emergency rations, but we also have just plain simple ordinary food that we like to eat on a regular basis. If you've got kids, you're probably familiar with the Jammy Sammy. If you don't have kids, you may not recognize the little ridiculously expensive sandwiches that our kids just love. We don't live off of them by any means, but we try to keep a few of them around for treats, and we also keep them in our cars.

All of these are options that we have no hesitation eating on a regular basis if we're hungry. If we're driving down the road and one of us gets hungry, we don't have any problem getting into our kits and pulling one or more of these out and eating them. Then we just replace them. By doing that, we are rotating the food in our kits fairly frequently.

Figure 14 - Left: 4 D-cell MagLight Flashlight; Petzl Zipka Light with retractable headband.

Flashlights and Head Lamps

Next on our list is lighting. Besides being valuable in a dark disaster situation, or just a dark situation, I think flashlights are fun, quite a bit of fun actually. I've got a lot of them.

Amazingly enough my primary light has stayed pretty much constant for 15 years, maybe longer. I have rotated through different lights because I have actually worn out many Mag-Lights, but I love the big old honking 4 D-cell Mag-Light. These are made with LED bulbs now so they last forever. But the large Mag Light is part flashlight, part nightstick; they're 1/3-1/5 the price of "tactical" lights, it's a tank and they are wonderful. We carry them in our cars and they are work horses.

Don't get me wrong, I've carried a Surefire Backup in my pocket for several years and I love Surefire lights, as well as other tactical lights, but we also carry big, stout, tire thumping lights in our cars.

On the right is the Petzl Zipka. We own several of these and use them every single night. The Zipkas come equipped with a retractable headband in the back and it's small enough to hide in your hand. With the retractable headband you can secure it to your wrist or your head—actually, you can really secure it to anything, within reason.

These are great, I have used them for night trail running and we use them a lot around the house at night for reading and checking on the kids. The Zipka's got five lighting modes: bright white, dim white, and blinking white, red, and blinking red.

Then of course, as a backup to all of these, you can keep shake lights, crank lights, cyalume lightsticks, or flares so you don't have to worry about batteries.

Multi Tools

On multi tools, I can't really suggest a particular model, because it depends on what your needs are and what your skill level is. If you've got a car that takes a certain type of bit, you want to make sure your multi tool has those bits. If you have a complete medical kit then you may not need a Leatherman that has medical tools built in. Tailor your choice to your needs. What I would suggest is that you get either a Leatherman or a Gerber. If you stray away from those, just make really sure that you're getting a high-quality material. You want good steel and you want a tool you can open and close easily without hurting yourself.

Self-Defense

Self-defense in a Go Bag or 72-hour or Car kit is a tricky proposition, because there's always the chance it's going to get stolen. Here are some suggestions for you. Number one, I think every emergency kit should have a fixed blade knife in it. The one in particular that I'm showing here on the top is the Gerber LMF II, and it is a tank of a knife. I have beat the snot out of mine trying to destroy it to prove to myself it is as tough as I think it is, and it has performed very-very well.

Figure 15 - Gerber LMF II knife.

This is not the "best" knife that I own, by a long shot. It's not the hardest steel, it won't take the finest edge, it's not as long as my pure fighting knives and it's not as short and stubby as my pure survival knives. It's just a solid knife that performs very well in a wide range or roles. One of the biggest reasons that I am recommending this knife is that it delivers all of that performance for under $100. You CAN pay upwards of $120, but more and more local and online Gerber retailers are selling it for under $100.

Figure 16 - Pepper Spray and Bear Spray.

To the left, I've included pepper spray and bear spray. These are different sides of the same coin with a little exception; the pepper spray that you carry in your pocket is a much "kinder" concentration of Oleoresin Capsicum (OC) than the bear spray. OC, in it's simplest sense, is the component of peppers that makes them hot. It is completely different than mace.

The bear spray is truly nasty-nasty stuff and is a much higher concentration of OC than normal pocket pepper sprays. Keep in mind that buying and keeping bear spray with the intent of using it on people is illegal in many areas and you should only use it on another human as a last resort.

OC will work on most people most of the time, but it won't work on everyone all the time, so just be aware of that. It's predictable enough that I carry it on a daily basis and we keep it in our cars, but its part of a self defense strategy and system, not a one-size-fits-all answer.

Firearm locks: A lot of people want to carry a fire-arm in their emergency kits. This isn't always the best idea, because again, if your 72 hour kit gets stolen somebody's going to have your weapon. There are two major problems with this to this. Problem one is they can use your weapon on you, and problem two is that they can use it to commit a crime and/or hurt someone else.

Figure 17 - Firearm Locks. Left: Titan gun vault; Right: Smart Lock.

I want to share two solutions with you that I use. They are not foolproof, because there is no such thing as a foolproof gun safe. But on the left on the bottom we've got the Titan gun vault, a great setup. I've got a few of these and they are very good safes. They've got a simplex style 5-button lock on the top, and it's mechanical so you don't have to worry about batteries going out or EMPs or a delay if you enter the wrong code or anything--they just work. And when you enter the code and turn the knob to open the lid, it causes the gun to actually come out to you,

which is just a brilliant design feature, so you can reach down and immediately get a proper grip on your firearm.

The last item is 1/10 the price of the Titan Gun Vault and a very good lock. It's a SmartLock and you can get them at SmartLock.com. It's a push-button trigger guard, or trigger lock, and there are nine buttons and you push the buttons that you want to disengage the lock, press the button and the lock comes off of the gun, very simple, very-very good design. You do need to be careful with this particular lock so that you don't experience a negligent discharge when putting the lock on or taking it off. Not to be cute, but as long as you're not negligent, you won't have a problem. In short, never put this lock on a loaded weapon.

Fire Starting Materials

Obviously, a reliable source of fire is essential for any 72-Hour Kit. There are a lot of high-speed options out there. After trying lots of high-speed stuff and going around and around, I've decided that I just like plain, old-fashioned lighters. Lighters are cheap, small, and lightweight. And I'm not even talking about the fancy windproof lighters here--just the $.79, $.99, $1.19 lighters that you get in checkout lines. You may even find lighters on sale for 10/$1 at local smoke shops.

Even when a lighter runs out of fuel, you still have the sparker, which you can use to light a tinder bundle. I cannot tell you the number of survival matches I have tried after they have been in storage for five/ten years that don't work, or they light and fizzle out. It's just incredibly frustrating. So, it doesn't hurt to have matches in your kits, but throw a couple lighters in there too; they are very cheap and they just work…even when they're out of fuel.

Next on the list are Chapstick and Vaseline, and of course these are multi-use items. Chapstick and Vaseline can be used as an accelerant for lighting fires and getting tinder bundles to catch, which is basically a good way to cheat when making fires.

Figure 18 – Jetboil System.

If you are going the stove route, I like the Jetboil system—especially when you're storing it in a vehicle. One of the reasons why I really like the Jetboil is how efficient it is. The fins that you see between the black part on the bottom and the black part on the top funnel the maximum amount of heat from the flame up into the container. This way, you'll boil water faster and get to eat or drink faster too. Whatever it is that you're doing, you'll do it faster and with less fuel.

Another reason I like the Jetboil is that I don't like carrying liquid fuel canisters in my car. I don't mind carrying isobutane and propane combinations, but I don't like carrying liquid camp fuel in my car unless it's just for a camping trip. I have had too many spills and fuel loss issues through the years.

If you do want to go with a regular fuel stove, I can highly recommend the Primus Omnifuel, it will burn basically any fuel that you put in it. I've used it as my primary cooking source for 50+ bag-night years and have used the one that I have now since 2003.

One more thing before we move past the topic of fire; skill is incredibly important, not so much with a camp stove, but if you are making primitive fire or even lighting a fire with a lighter or matches, basic fire skills are very important. I can't emphasize enough how important it is to get good at making a fire. Get to know how to take a spark to a tinder bundle to kindling to lumber and turn a spark into a roaring flame.

If time allows, I'd practice making fire on a regular basis. One thing that I do is that, instead of using newspaper or lighter fluid to light charcoal for our grill, I make a small wood & debris tinder/kindling pile to light our charcoal. With as much fire making experience as I have, this process still humbles me on a regular basis.

Medical and Trauma Supplies

The topic of medical and trauma is hard to talk about, in large part because people have very different skill sets and comfort levels. You've got people who haven't ever taken first aid or CPR and don't have any medical training or knowledge and who faint or vomit at the sight of any bodily fluid that's outside of where it's supposed to be. At the other end of the spectrum, you've got paramedics who have seen bodies and body parts in every configuration possible.

As a result, there is no single list of things that everyone should have in their kits. That's because list of things that you should have with you is going to be based on your comfort level, budget and training. The other thing you need to keep in mind is whom your medical kit is for. Is it for yourself, is it for your family, is it for friends or is it for complete strangers?

This is an important question to ask, and I will give you an example. If I were to roll up on an accident today, I would have no hesitation using up every single piece of material that I have in my trauma kit trying to save or help a complete stranger. After a disaster, however, that's just not going to happen. I will use improvised items, I will use things that they have on them, but I will be – I hate to use the word stingy -- but I would be relatively stingy with my materials.

The reason for that is, if I have medical items that can't be restocked or replaced and I use them on someone else, then when something happens to my family or me, I won't be able to apply

as high of a level of care as possible and may become just one more burden on the system. So when and how much of your medical supplies you use on others is going to be a judgment call that you're going to have to make and everyone is going to make a different one.

Emotion, compassion and empathy in the heat of the moment are probably going to trump whatever rational decisions you make right now, but it's still important to think things through and decide what you would do. When it comes down to it--after a disaster, I don't know if I could not use my medical supplies if I saw someone I knew I could help. It's probably going to be a balance between improvising as much as I can and using my supplies, but using them sparingly.

As far as what to put in the medical portion of your 72 hour kits, here is a BASIC list of items.

- First aid book
- Various sizes of band aids
- Medical tape
- Alcohol wipes
- Antibiotic cream
- Burn cream
- Gauze pads (various sizes)
- Iodine wipes
- Nitrile gloves (We don't use latex because of allergy concerns and the speed at which latex breaks down when exposed to extreme temperature fluctuations.)
- Cold/hot pack
- Ipecac syrup (induces vomiting)
- Activated carbon charcoal
- Medical shears
- Eye rinse

Of course, you can carry A LOT more than that, depending on your skill level, weight/size considerations, and budget. As an example, the medical kits in each of our cars have several hundred dollars of items but, when I fly, I carry a mini-first aid kit that is small enough to fit in a cargo pocket.

With that in mind, I want to let you know some of the first aid items that are somewhat non-traditional, but that I consider to be must-have items.

The very first non-traditional item that I want to recommend that you carry for medical trauma is duct tape. I love duct tape; you can use duct tape to make a pressure dressing, butterfly

bandages, splints, and you can even apply traction using duct tape. There are a million and one trauma uses for duct tape depending on what your skill level is and how creative you are.

There are a handful of medical and trauma items that everyone should have in their kits: Benadryl for allergic reactions; Imodium or other anti-diarrhea medication; and pain medication of various types. I like carrying multiple kinds including Tylenol, Ibuprofen, and Aleve, because the mechanisms that they use to help with pain are different. That's one side of it; the other side is that almost all over the counter pain medication is hard on your filter organs like the kidneys and liver. By rotating between them, you kind of even out the damage that they do to your body. If you've got a favorite, or if a medical professional recommends one in particular, then by all means—go with that particular one.

Dental pain is bad during the best of times—and if you find yourself days or weeks away from dental care with a dental emergency, you're going to want to do anything that you can to mitigate pain in the meantime. That is why I also STRONGLY recommend carrying dental "cement" like Dentemp. You can use it in case you have a crown that gets dislocated or other dental emergencies.

Other basics to include are a toothbrush or toothbrushes, hand sanitizer, wet wipes, and super-glue. I like crazy-glue and I have used this several times for stitching up myself, dogs, and helping other people stitch themselves up. Now I say helping other people stitch themselves up, because I don't have the formal certifications to legally stitch someone else up with a non-medical product on my own. I can tell them what's worked for me, and even demonstrate, but I can't really do it for them unless it's a family member.

Another must have item for burns is aloe and/or aloe+benzocaine. Aloe does a great job of helping with burns and aloe+benzocaine has meant the difference between a solid night of sleep and a fitful, annoying night after getting too much sun.

Here is an interesting one that a lot of people don't think about, but Anbesol or Hemorrhoid cream with benzocaine in it works really well for pain relief. I have used it (Anbesol) on bad burns on my hands. When oral pain medicine, like ibuprofen, isn't cutting it on its own, Anbesol can help tremendously. It's a very weak application of benzocaine, but it does help. If you're looking for a cream with a stronger concentration of benzocaine, try "Americaine."

As I'm writing this, I actually broke out my Americane this morning to help out a contractor who is doing work at my house and hit his finger with a hammer last night. It's swelled up under his fingernail and he can't bring himself to lance it. His pain level went from a 6-7 to non-existent within a few seconds of using the spray version of Americaine.

There's one more trauma item that I would put in the must-have category: tweezers. Why? Because when you need tweezers, you need tweezers. There aren't a whole lot of substitutes for them.

Hygiene Supplies for Your 72 Hour Kits

Toilet paper: I put toilet paper in pretty much every kit we've got. You can go without and use other things but whenever possible, toilet paper is great.

Maxi pads: Besides their intended use, you can use them for pressure dressing wounds. They are not sterile, but they are clean and fit for use in an emergency.

Here is an interesting idea; if you've got disposal diapers for a baby, you can stretch the use of your diapers by putting a maxi pad in the front. In other words, you place a maxi pad in the front of the diaper and when the baby goes potty you take out the maxi pad and replace it with a new one. This way you can cut down on the bulk of your diapers and still get a lot of the same effect.

Unfortunately, some people don't change their baby's diaper more than once a day, and so the diaper manufacturers make them so they can handle that kind of volume. (I've been that dad…more recently than I care to admit, and received the wrath of both my son and my wife that evening.) The end result is that maxi pads can cut down on the bulk of what you need to carry if you've got kids in diapers.

Of course when they soil their diaper, you are going to need to replace it. The maxi pad trick will not work here, as you put the maxi pad in front of the diaper, not in the back. But for those of you who have little ones, I can tell you from experience, this is a golden piece of advice.

The next thing is Zip-lock bags. The reason I carry zip-lock bags in my medical kits is to hold stuff that I've used with patients that has bodily fluid on it. I actually store my gloves in a zip-lock bag so that when I reach in my kit I don't look for two gloves; I look for a single bag. I pull out the bag, open it up, set it on the ground, and put on the gloves. When I'm done with the gloves they go in the bag, then I zip up the bag and it goes in the trash. If I use band-aids, the wrappers go in the bag too. If I'm replacing any bandages they go in the zip-lock bag. It's just a nice clean little trash bag that makes working on patients (or yourself) cleaner and easier.

Other 72-hour kits must-have items include contractor bags. Contractor bags are basically heavy duty trash bags, which you can use for making a solar still, gathering water, or even as a substitute if your backpack breaks. You can poke a hole in a contractor bag and make a waterproof shirt. You can also make a cover for your bag to keep water out of it. You can make pants out of these bags, all sorts of different things. At winter football games, we used put a

trash bag over our top and a trash bag around our waist; it's amazing how much heat that helps you retain, just another use for contractor bags.

Assorted Kit Essentials

The next thing is a **NOAA radio** for weather and emergency broadcasts. Ideally an AM/FM shortwave radio as well, like the Kaito Voyager with a crank and solar and 20 ways to power it. That way you can get communications and find out what's going on after a disaster. You won't be able to communicate with the Voyager

After a radio, you'll want a set of **walkie-talkies** so you can talk with other people that you know. We are going to get into that in more detail later.

Paracord, also called 550 or 551 cord, is the cord that is used on parachutes, and it's designed to hold 550 lbs. of weight while also being very thin. It's about the same size as a computer cable, like a USB cable.

There are several grades of paracord, as well as non-graded paracord. I strongly suggest that you get paracord that is rated for 550 pounds or more and that has internal strands enclosed in an outer sheath.

The cheap stuff that you find at your local hardware or sporting goods store probably will not be 550 cord unless it says "550 cord" or "rated for 550 pounds".

Figure 19 - Nylon Paracord, which may be rated for significantly more or less than 550 pounds.

Bandanas: They have several uses from cooling off your head, keeping sun off of you, and being used as bandages, to filtering water and pulling traction… the list goes on and on.

I consider **DEET insect repellant** to be another essential, although this is somewhat controversial. Personally, we try to use natural skin products as much as possible. That includes bug spray. Sometimes, all of our lotions and potions just don't work, so we use DEET. It's a cost benefit analysis, and a lot of times we decide we'd rather get the chemicals that are in DEET in our body than get eaten up by mosquitoes, but that's a judgment call you're going to have to make for yourself. In my opinion though, DEET is the only insect repellent that I have ever used that has always worked and never failed. If bugs and diseases that use mosquitoes as a vector are an issue in your area then it's important to have something that always works.

Chemical warmers and coolers: You can use them to warm and cool stuff, but for the most part it's to warm and cool people. Warm up people when they are hypothermic and cool them down when they've got heat exhaustion or heat stroke. When they're not in short supply, I'll even

use them to simply calm someone down. It's amazing the psychological impact that hot/cold packs can have on someone who's freaking out about a minor injury.

The next thing is utensils and a can-opener. This should be obvious, but I include it because of the simple fact that I've pulled canned food out of backpacks before only to find that I didn't have any purpose built can openers.

A shovel or trowel: they are for possibly extracting yourself, leveling a sleeping area, placing or retrieving caches, and finding food or bait, but one of the biggest reasons is for burying waste.

Next, we've got **aluminum foil**, which is good not only for sealing stuff but also for solar applications, purifying water, cooking food, etc. We will get into that more later.

Duct tape: We have covered duct tape a little bit, but besides medical uses there are a million and one uses for it. If you have room to carry more duct tape, do so.

Another item kit essential is **cash**, and I like small bills. ($20s or smaller) The reason for having cash and change should be obvious. After a disaster you don't know whether or not the internet, phones or electricity are going to work. Therefore, you can't rely on credit cards.

You better have a backup way to either buy yourself out of trouble, purchase items that you need, pay for transportation, or whatever. You don't have to have a ton of cash with you, just enough to last you for 72-hours. So depending on where you are and what kinds of items or favors you need to pay for, that's going to dictate how much you carry with you.

Don't make the mistake of thinking that economies are going to run on junk silver, gold, and .22 bullets immediately after a disaster. Using history as a guide, societies will gravitate towards using the most fluid, efficient, and stable currency available. Regardless of the fiat nature of currency, cash is the most accepted way to convey value from one person to another.

If you REALLY don't like cash, carry it anyhow…and carry some junk silver, silver/gold rounds, or whatever other alternative currency you like as well.

The next thing is **medications**: I would suggest keeping at least 72-hours of critical prescription medications with you at all times, if possible. If you've got any medications that are incredibly critical, you might want to go ahead and place six or seven days in your 72-hour kit, just because that's such a critical point. Be mindful when storing medication, as some requires refrigeration. Depending on the medication and your climate, you may need to cycle through this medication as often as every month or week.

The next thing is **spare socks and underwear**. I don't carry spare shirts, pants, etc., but I do carry spare socks and underwear, because those are going to make a huge difference in comfort and hygiene and you really don't want those areas wet for a long period of time. If you are only able to change a couple of items of clothing, those are at the top of the list.

Specifically, I carry quickdry underwear and wool socks. Quickdry underwear because of how fast they dry and wool socks because of their ability to retain their insulating properties, even when wet.

Wet wipes are another extremely useful kit item. There are so many uses for wet wipes. While alcohol or sanitizer is great and we use it a lot, it takes care of viruses and bacteria, but it doesn't remove dirt, food, or even bodily substances from the skin. Keep in mind; wet wipes are not for medical purposes, just for cleaning your hands/body. When you use sanitizer you are basically rubbing stuff around on your skin and hoping that the alcohol or other chemicals in the gel will kill it. With a wet wipe you are physically removing viruses, bacteria, parasites, etc. from your skin. It's amazing how much that little bit of moisture and friction does to help getting rid of stuff.

Another very nice-to-have is **Urban Survival Playing Cards**. If you are not familiar with them, it is actually a product that I created and sell. You can get them at UrbanSurvivalPlayingCards.com and what they are is a deck of playing cards with 52 survival tips, tricks and secrets that you are probably going to forget under stress. So they serve a dual purpose, instruction and entertainment.

Next are a couple of low-tech communication items: A **mirror** for signaling, and **whistles**. The reason I say "whistles," plural is because, since it's a signal whistle and since there's a good chance you may have multiple people in your vehicle at one time, it's a good idea to have as many whistles as you think you will have people. The same is true with walkie-talkies. But if you've got two walkie-talkies and four people, you can give walkie-talkies to two people and whistles to the other two.

The next two items are going to depend on where you're at in your skill level, but I like carrying a fold up **slingshot** as well as **hooks** and **fishing line**. Again, there are lots of uses with the hooks and fishing line--from traps and snares, to early warning devices to actually fishing. A slingshot will allow you to take down game, and you can also use it for defense, though a slingshot is a fairly poor defense weapon unless you practice with it a lot.

To be fair, you need to practice a lot with ANY tool that you intend to use as a defensive weapon, but firearms and knives are a little more forgiving if your strike placement is less than perfect. With a slingshot against a violent attacker, you've got to have all of your ducks in a row to stop them.

A Word of Advice

Keep in mind that everyone prepares at different speeds. I talked about this a little at the beginning, but depending on where you're at in your preparedness journey, where you're at financially, and how much time you can dedicate to preparing, everyone preparedness journey is different. That is just something you've got to accept. My best advice is to find your own pace and embrace it.

Also, needs change with the seasons, both figuratively in your life and literally with the seasons of the year. I suggest that every time you change your clocks--or if you are in what I consider to be one of the smart places that don't recognize daylight savings time, the first day of spring and first day of fall--check your kits. Make sure they've got the right materials in there for the upcoming season.

Larder of Food

In this chapter I'm going to talk all about some fast, yummy, and affordable food options for 40 days and 40 nights. Then I'm going to show you how to take care of it in a single 30-minute trip to a big box store for about $2 per person, per day. Keep in mind that with food prices shooting up like a rocket, chances are very good that any delay in buying your food storage is going to mean that it will cost you more. And if $2 per person, per day is not good enough, I will show you how to do it with no out-of-pocket costs.

After that, we are going to cover how to stockpile enough water for 40 days and 40 nights. I am going to show you a few tricks for hiding it, which is particularly important if you have nosy neighbors or you simply want to keep your preparations under wraps. Also, I'll discuss what to do about waste when toilets don't work, because you'll still have to be mindful of disease and smells in a post-disaster survival situation.

Figure 20 - Forty day food kit.

Survival Food

Let's start off with 40 days of yummy survival food. On the right, you'll see a picture of one of our 40-day food kits. We are going to go over all the contents of this 40-day supply. You'll be surprised to see what a wide variety of foods it contains—probably mainly foods that you like. These are everyday foods that require little or no preparation, which makes them very convenient.

The idea with this particular kit is to get the job done NOW. It's not a five star restaurant menu, or the healthiest, most comprehensive diet plan known to man. It's designed to allow you to hop in your car on your way home from work and spend 30 minutes at Costco or Sam's or another big box store like that, and get it done. That way, you can get a good night's sleep knowing that you've got 40 days' worth of food taken care of.

If you've been PLANNING on buying food storage for weeks, or months, or years, but either haven't found the "perfect" food storage at the "perfect" price or have simply been spending hours researching your options, STOP AIMING AND PULL THE DARN TRIGGER! Go out, spend the money and the 30 minutes necessary to get the food, and sleep soundly tonight with the

peace of mind that you have 40 days of food in place. If/when you want to improve on it, do so…but in the meantime, if anything happens, you'll have 40 days of food.

It's not going to be perfectly balanced, but it will sustain you. Keep in mind that this is a *survival* plan; if it was delicious and perfectly balanced, it would be primitive living. ***Survival is a stopgap measure to carry you through, from one time of stability to another time of stability and that's what this food plan is designed for.***

Granted, the foods that I am going to share with you are going to be healthier and tastier than what a lot of people eat on a daily basis. That's sad, but its reality and it's the truth. The foods that I am going to recommend are not fresh and they are not organic. You can do the same thing with organic canned foods, but I have chosen not to for this example because of the simple fact that it doesn't fit into the idea of getting all of your food for 40 days in a single trip to Costco. If you have the ability to get canned organic foods and want to pay the premium to do so, more power to you. (we do)

Of course, you are also going to want to tweak this plan for your particular diet needs and concerns. For example, if you've got a salt sensitivity, if you don't have your gall bladder, if you've got diabetes, food allergies, or any number of things, you are going to want to tailor your plan to your particular situation. Remember this is a stopgap; this is to help you go from one time of stability to another, or to transition from everyday life to primitive living. This isn't an end-all-be-all diet; it's temporary.

Figure 21 - Food for forty days in a single trip to Costco.

What are the big problems with getting a food supply in place? When I ask people it's one or all three of these:

1. No Time
2. No Money
3. No Space

It's very common that one of these excuses, reasons, or obstacles is what has kept you from getting your food storage in place. Don't worry about it; everyone is in the same boat. So how do you take care of it? In short, you improvise, adapt, and overcome.

Here is the quick and easy, stupid-simple plan to get 'er done.

You'll need to spend 30 minutes in the store, buy three plastic stackable bins and spend about $2 per person per day. That's all. To give you an idea of how good of a deal this is, freeze dried food costs about $8 per meal, and that's if you get a good deal and if you include some textured vegetable protein or TVP in there.

According to the USDA, the average family spends $7 to $12 a day per person on food. I personally think that's a little bit low, but it depends on several factors. Some people are spending significantly less while others are spending significantly more than that. It depends on how much fresh food, how much organic food, and of course how often you eat out. I've had stages in my life where my food budget was under $1 per day. And, as a point of comparison, two dollars per person per day is cheaper than dog food.

On that note, a lot of people buy extra dog food, thinking that if things get REALLY bad, that they could live on dog food. But when you look at the number of calories that's in dog food and how much it would cost to live on dog food, it's not that good of a deal. You could feed the food in your 40-day supply to your dog and actually save money. Now I don't know how nutritionally balanced it is for a dog, and I don't know if you could do it long-term, but just from a calorie and vitamins and minerals perspective, the plan I'm sharing with you is cheaper than dog food. It's definitely better tasting. It's stuff that I like to eat on a regular basis.

Perhaps most importantly you don't need a wheat grinder, you don't need to bake bread, and you don't need primitive skills to use this plan. I love the "basic four" plan, where you get honey, oatmeal, wheat, and salt and you live on it. The problem is, it's not exciting. I know people have figured out ways to spruce it up and make it tolerable, but it doesn't excite me at all. I like a variety of textures and consistencies. I also like different tastes. I like different things with every meal. If I have to eat bland gunk meal after meal, I can… but since I have the option, I will go with variety.

Let's go over the nutritional assumptions that I used to build this plan. The average person needs between 1200 and 1500 calories per day to stay out of starvation mode. For a lot of people, being in starvation mode for a while wouldn't be the worst thing in the world. Most people want to lose weight and, while you don't want to starve your body, a reduced caloric intake for a time isn't a bad thing.

This plan, depending on whether you go with $2 per day or $200 for two people for 40 days, it's going to provide somewhere between 1500 and 2000 calories. It's really up to you to choose your priorities. What you want to do is aim for 60,000 and 80,000 calories per person for the 40 days. This is in addition to what you've got in your fridge, freezer, and cupboards. So in reality, depending on what you've got in your house already, this will sustain you for more than 40 days; possibly a lot longer than 40 days.

When it comes to balance, I was shooting to get 50 to 60 percent of the calories for the day from carbs, 20 to 30 percent for protein, and 20 to 25 percent from fats. This isn't something you need to get hung up on here, because again this is a survival plan; it's not perfect nutrition forever plan. This is a plan to help you survive during a time of instability between stable times, not a plan to help you live to increase your life expectancy from 82 to 88. If you're a body builder, if you're a distance runner, or if you have particular allergies, you're going to see some things in here that you'll want to change. But this breakdown is what we're going to shoot for--a relatively balanced plan. Not every meal or day will hit these guidelines, but over a two, three, or four-day period, we are going to have a good combination of carbs, proteins and fats to keep you healthy.

Protein requirements

I mentioned body builders earlier; protein requirements vary vastly depending on who you talk to. In general, you're going to want 50 to 150 grams of protein per day. That's the benchmark we're shooting for, but if all else fails, feed your body what it's hungry for...as long as it's not low nutrient food-like substances like Twinkies and Cheetos.

One thing that a lot of people talk about is how much additional food you need when you're under stress. That's true. If you let stress take control of your life, it can completely throw your hormones out of whack. In that case, you can burn a heck of a lot of calories per day, as much as 4000 additional calories.

The answer isn't to stockpile 4000 extra calories per day; the answer is to learn how to control your stress. Pragmatically, if you're under the type of stress that is going to cause you to burn 4000 extra calories per day, you're not going to survive for 40 days; it's just that simple. Unless you're in your 20s and in Olympic level fitness, your body is going to crash and burn.

You've just got to learn how to control your stress, and we are going to talk about that in the survival psychology section. It's a topic in and of itself, but it is absolutely vital. If you can control your stress you're going to sleep better. If you can sleep better, your mental state is going to be better. If you are burning fewer calories, you don't have to store as much food. If you're not eating as much because you're not burning as much, you don't have as much waste to take care of. All this stuff is inter-related; so learning stress control techniques is essential.

The other thing to consider is how active you are. If you are just surviving and sitting in your house doing a self-quarantine for 40 days, and maybe doing some aerobic exercises, then you're not going to use many calories. If you're out chopping down trees that have fallen across the middle of the roads or other strenuous physical labor, you're going to need lots of nutrition.

This plan allows you to survive for 40 days in and of itself. When you add in the stuff you've got in your cupboard, freezers and fridge, and you're going to have more calories to burn each day. If you are overweight, you're going to be carrying around additional calories that you can burn for energy. Basically what I'm saying is--don't get incredibly hung up on calorie counts. They are important, and this plan will provide you with plenty, but calorie requirements will vary greatly from person to person; you're going to have to make some modifications for yourself here.

Supplements, Spices, and Condiments

I've tried to take care of the all the vital vitamins in with this plan. It's not a perfect solution, but it is a solution. If you have a very good multivitamin, I suggest you keep 40 days on hand at a time. We like to keep three to six months worth of vitamins on hand at a given time, and we do this for a couple of reasons. One is so we never run out. This allows us to buy them online and get them at a significant discount to what they cost in stores; and we always have a supply. You can also take advantage of sales as they happen, which is usually quarterly or semi-annually, and it's saved us a considerable amount of money.

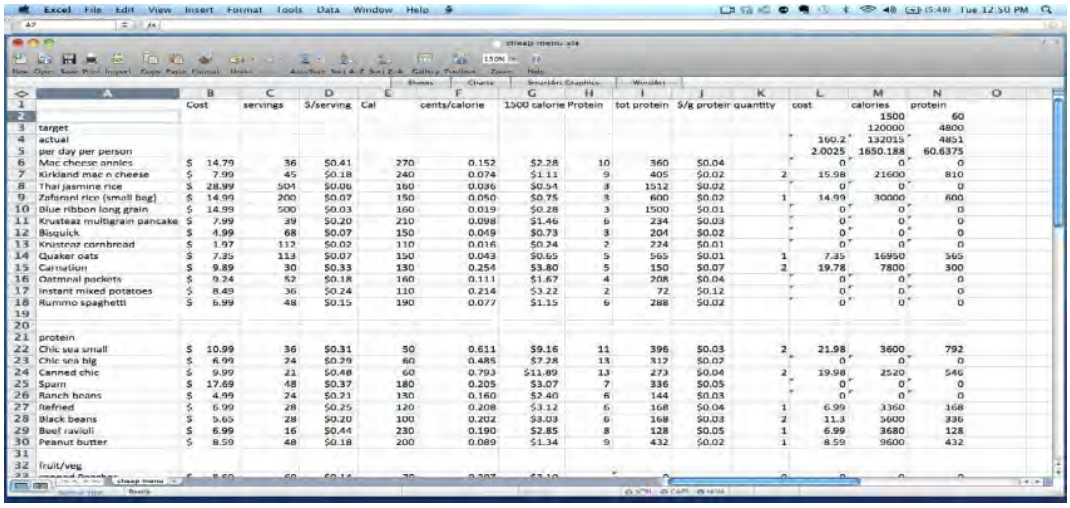
Spices and condiments: I mentioned before that I like a lot variety in my food and this plan assumes that you have spices and condiments in your house already that you use and like. If you don't, I suggest you find something you like and get some large containers of it. Not necessarily pounds of extra spices, but maybe half a pound to a pound of ones that you use often.

My original plan was to do one trip to Costco or Sam's, buy plastic bins while I was there, go through the canned and boxed food aisles and just pull one of almost every item off the shelf and see what I ended up with. Amazingly enough, my haul was very close to the requirements necessary for 40 days. In the end, it cost about $250-$300 and there were enough calories, fats, and proteins to make it work. So if you really need a simple solution that's one thing that you can do and, do again, it will be MUCH better than ANY "perfect" plan that you haven't pulled the trigger on yet.

Personally, I modified it because I really wanted to hit that $2 per person per day number, or at least $200 for two people for 40 days. Thus, I took all of the shelf stable food available at Costco and put them on a spreadsheet – I didn't do Ramen or foods with MSG or artificial sweeteners in them. I am going to share this spreadsheet with you and get into the particulars of it in a little bit.

With the spreadsheet, I calculated the nutritional and financial requirements for the plan, and from that I figured out the combinations of foods that I could use and make it work. From there, I made a list and went to the store. All I had to do was go up and down a couple of aisles and I was done. It was super quick.

Here's an example of what the $2 plan looks like. I want to stress, don't get hung up on the $200 plan versus the $2 per person per day plan. Two dollars, per person per day works out to $160. Of course, the $200 works out to $200. And what it does is provide you with a little bit more variety and a few really nice options.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		Cost	servings	$/serving	Cal	cents/calorie	1500 calorie Protein		tot protein	$/g protein	quantity	cost	calories	protein	
2													1500	60	
3	target												120000	4800	
4	actual											160.2	132015	4851	
5	per day per person											2.0025	1650.188	60.6375	
6	Mac cheese annies	$ 14.79	36	$0.41	270	0.152	$2.28	10	360	$0.04		0	0	0	
7	Kirkland mac n cheese	$ 7.99	45	$0.18	240	0.074	$1.11	9	405	$0.02	2	15.98	21600	810	
8	Thai jasmine rice	$ 28.99	504	$0.06	160	0.036	$0.54	3	1512	$0.02		0	0	0	
9	Zafarani rice (small bag)	$ 14.99	200	$0.07	150	0.050	$0.75	3	600	$0.02	1	14.99	30000	600	
10	Blue ribbon long grain	$ 14.99	500	$0.03	160	0.019	$0.28	3	1500	$0.01		0	0	0	
11	Krusteaz multigrain pancake	$ 7.99	39	$0.20	210	0.098	$1.46	6	234	$0.03		0	0	0	
12	Bisquick	$ 4.99	68	$0.07	150	0.049	$0.73	3	204	$0.02		0	0	0	
13	Krusteaz cornbread	$ 1.97	112	$0.02	110	0.016	$0.24	2	224	$0.01		0	0	0	
14	Quaker oats	$ 7.35	113	$0.07	150	0.043	$0.65	5	565	$0.01	1	7.35	16950	565	
15	Carnation	$ 9.89	30	$0.33	130	0.254	$3.80	5	150	$0.07	2	19.78	7800	300	
16	Oatmeal packets	$ 9.24	52	$0.18	160	0.111	$1.67	4	208	$0.04		0	0	0	
17	Instant mixed potatoes	$ 8.49	36	$0.24	110	0.214	$3.22	2	72	$0.12		0	0	0	
18	Rummo spaghetti	$ 6.99	48	$0.15	190	0.077	$1.15	6	288	$0.02		0	0	0	
19															
20															
21	protein														
22	Chic sea small	$ 10.99	36	$0.31	50	0.611	$9.16	11	396	$0.03	2	21.98	3600	792	
23	Chic sea big	$ 6.99	24	$0.29	60	0.485	$7.28	13	312	$0.02		0	0	0	
24	Canned chic	$ 9.99	21	$0.48	60	0.793	$11.89	13	273	$0.04	2	19.98	2520	546	
25	Spam	$ 17.69	48	$0.37	180	0.205	$3.07	7	336	$0.05		0	0	0	
26	Ranch beans	$ 4.99	24	$0.21	150	0.160	$2.40	6	144	$0.03		0	0	0	
27	Refried	$ 6.99	28	$0.25	120	0.208	$3.12	6	168	$0.04	1	6.99	3360	168	
28	Black beans	$ 5.65	28	$0.20	100	0.202	$3.03	6	168	$0.03	2	11.3	5600	336	
29	Beef ravioli	$ 6.99	16	$0.44	230	0.190	$2.85	8	128	$0.05	1	6.99	3680	128	
30	Peanut butter	$ 8.59	48	$0.18	200	0.089	$1.34	9	432	$0.02	1	8.59	9600	432	
31															
32	fruit/veg														

Figure 22 - Example of the $2 plan in an editable Excel Spreadsheet.

This is the $2 plan and as you can see there's a good variety of items here--variety as far as taste, texture, glycemic index, proteins, fats, breakfast foods, lunches, dinners, items that need preparation and items that don't need preparation; it's a great mix. You can probably look at this and see yourself living on it for 40 days, because it would be quite simple.

One of the key items on the $2 per person is the instant breakfast mix. That's where a lot of the vitamins and minerals come from. Chicken of the Sea tuna is another important cornerstone in the protein department.

Here's something to think about with canned tuna; they sell both small and big cans of tuna. The big cans are significantly cheaper per serving and per pound than the smaller ones. The problem is that if you've got two, three, or four people, you're not going to use a huge can of tuna all at once and you risk wasting some of it if you don't have refrigeration AND eat it fast. That is why I suggest the smaller cans of tuna, even though they're more expensive. At the same time, the "big tuna" dilemma illustrates how it can sometimes be easier to prep for a group than just for yourself or your family.

I've also included canned chicken and canned salmon. This is for variety. You could cut corners by getting all tuna for your meat, but the more variety you have in your food, the less likely you are to experience appetite fatigue.

Then we've got black beans, but you can also use refried beans, and I've got those in there too.

You'll notice that of all the rice choices, I picked the Zatteroni rice in a small bag. The reason I picked it was mainly because of the size of the bag. The number of calories it provided and the number of servings it provided worked out very well for 40 days. It has about 200 servings in it and, incidentally, if you get a 500-serving bag of rice it costs exactly the same amount. So that's something to keep in mind as a "free" way to scale up for more people or a longer period of time.

In this instance I got the smaller one because it allowed me to fit everything into 3 bins and it's supposedly a higher quality of rice that local restaurants use. They say it has better taste and the stickiness qualities are better.

I've also included Quaker Oats for breakfast, beef ravioli--which is a quick, easy meal in a can, peanut butter, peas, olive oil, and an assortment of snack crackers. The snack cracker assortment is where the peanut butter goes. Depending on how long you plan on storing the items, crackers and bread are going to be difficult to keep fresh. That is where what you've already got in your pantry to start with comes in.

You can add a few items and go from that $2 per person per day up to $2.25 per person per day and it makes a big difference, adding in raisins, sweet corn, green beans, and an 80 oz. container of honey as an example. I happen to love honey as a sweetener—it's got a relatively low glycemic index for a sugar.

Honey can also be used as a medical tool. You can put it on wounds and it will basically cause bacteria cells to explode and keep infections clean. It has been used on horses and animals under the name, "Sugardyine" for years and it's a great product for medicine.

Some other high impact items that you may want to include are pancake mix and cornbread mix. These aren't great as far as the glycemic index goes, but as far as comfort food that's easy to make and will make people happy and warm their hearts, it's great. You can make one or two muffins at a time with it or one or two pancakes at a time with it. Another comfort food is instant potatoes; at Costco they've got a variety of instant potato bags that have some kind of butter flavor in them. That and Spam have become one of my favorite camping meals.

On the topic of Spam, you might think it's funny that I won't include Ramen for health reasons, but I will include Spam. For some reason, Spam has a special place in my heart. It tugs at me emotionally and I absolutely love it. It reminds me of when I was guiding back country trips and we'd eat Spam half way through the week as a big treat. Spam definitely isn't the most healthy item in the world, but I happen to love it.

Another questionable item you might want to add is a Mars fun bag; These bags have 150 candy bars of various types, and that's something that you may want to add in if you've got a

sweet tooth or if you've got a neighbor who's got a sweet tooth. You want something that's good for barter.

Here are a few more notes on the $2 plan that I discovered as I was going back to Costco day after day, getting this plan worked out originally:

Prices change every day. Selection changes too, but it doesn't change every day. If they get a really good supplier, they are going to keep stuff on hand for a while or have something similar, especially with the Kirkland brands. As long as they're selling and they are making them in-house, they are going to keep them in the store.

Selection does change by store location. If you happen to live in an area that has multiple Costco's or multiple Sam's, the inventories aren't going to be the same from store to store. And of course selection also changes when you switch from Costco to Sam's or to any other store.

Allergy Update: Since I originally created this, our family got tested for food allergies. Between us, we have allergies to gluten, dairy, soy, and more. We had to make considerable changes to our food storage as a result. That being said, most people don't have the food sensitivities that we happen to have. At the time of this writing, well over 10,000 people have gone through this training and have successfully implemented the plan I outlined above.

Why do I mention this? Simply because this course comes directly from personal experience and the food items listed above WERE in our plan, but many aren't anymore. Listing what we have replaced them with would be unnecessarily cumbersome and expensive for most people, so I'm continuing to include "normal" items that most people can/do eat.

The Zero Out of Pocket Plan

I mentioned earlier that you could put this plan into place, even if you don't have any "extra money for preparing. Here is how the no out-of-pocket cost approach works.

The USDA says that the average person or the average household spends $7-$12 per person per day on food. Let's just assume it's $10 or $70 per week. If you take the $70 that you would have normally spent on food and instead go to Costco and spend $70 per person on items that I am going to suggest that you buy, that will get you 5 weeks of food.

If you eat food from the plan for a week, you've eaten a week of the five weeks and you've got four weeks of emergency food left. You spent the same amount of money as you would have--you spent $70 whether you spend it the way you normally would spend it or spend it on the plan. Except in this case, when you get to the end of the week, you've got four weeks of food left. All you've got to do is repeat this for a second week and you've got more than 40 days of survival food and you can go back to your regular diet.

One of the biggest benefits of doing this is that at the end of the 2 weeks you'll know that the food will work for you in an emergency. If you go out and buy a pallet of emergency food that's expensive and not stuff that you're used to, you really are never going to know if it's going to work for you until you use it. Again, it's expensive and it's not prepared the way you would normally prepare meals. With my method, you'll know very quickly if you need to make changes to the diet, or if it's good to go and that you can sleep soundly at night. Remember, now, and not after disaster strikes, is the time to test these things out and find what works and what doesn't.

Here's another method for building your supply for free. If it's too much for you to eat all of your meals from your emergency food supply, then what you can do is take one meal per day and, instead of going out and paying for it, just take that money and use it to buy your emergency food supply. Eat what you need to for the meal, and store the rest for an emergency. If you do that for roughly 1 month, you'll have your 40 days of food by the time you get to the end of the month.

Keep it Simple, and Cheap

Here's MORE reasons why I recommend this plan. It limits spoilage because of the size of the food containers. It's great portion size for two, three, or four people, depending on how you scale stuff up. It's also extremely easy to set this plan up. You can have this in place in a day; you don't have to order it and wait a week, six weeks, however long it's going to take for it to get to you.

You don't have to line up a truck or sort out any logistics to get this food storage plan in place. Simply go to the store, and half an hour later you've got your food. It's easy to give away which is also a big consideration.

When it comes to OPSEC, aka Operational Security, you may want to consider keeping some low-speed foods for bartering or to give away. If somebody shows up to your door after a disaster and asks for food and all you have is high speed survival food like MREs, camping meals, and "survival" food to give them, a bell is going to go off in their head that says, "they've got high speed survival food; I wonder what else they've got?" If you've got plain old, ordinary food like what they see every time they go to Costco, it doesn't give you away as somebody who has prepared. This can be a very valuable thing.

The Virtues of Canned Food

Canned foods have some serious advantages in a survival situation.

Most canned items have already been cooked, so you can eat them cold. It's a good thing and it's a bad thing. It's a bad thing because the foods that have been cooked don't have any enzymes left in them, and that will eventually put more strain on your body unless you take enzyme supplements. On the other hand, you can eat them straight out of the can. Warming them up is great because it adds variety and comfort, and there's a psychological benefit in that. But you don't necessarily have to.

If you do need to heat something up, most canned food can be cooked in the can. Are there liners in the can that make it not ideal to cook in the can? Yes. Is there a possibility that things that aren't good for your body long-term will leach into the food? Yes. You may or may not be willing to do that. In a survival situation, I am; though I typically only eat good quality foods.

Another benefit of canned foods is the fact that they limit spoilage. If you're opening one can at a time, you won't have many leftovers to worry about.

If you live in an area where water is at a premium, which includes a lot of the country, another big benefit is that the canned food already has water in it. That is water that can go toward your daily intake and it's also water that you don't have to find to cook the food.

Here's another thing to think about; canned foods and shelf-stable items from Costco will work great for charities. What I mean by that is, let's say we go out four or five years and nothing has happened, and for some reason you haven't eaten all of the food and you haven't rotated it. You can go to your local food bank and they'll know what to do with a simple can of beans, and they'll know what to do with a can of tuna. They'll know what to do with all of this stuff, because it's normal food. It's food that they can use immediately; it doesn't take any special preparation, no special concerns to worry about.

Canned food is also easily valued for barter, if that becomes an issue; a can of beans is a can of beans. The better the label it's got, the more value it's going to have. In general, stuff from Costco has a high perceived value so it will have good barter value.

Final Considerations

One of the most important virtues of this meal plan is that it's quick to set up, easy to store, and it's scalable. If you want to scale this up, you can get an extra bag of rice, a bottle of olive oil and some tuna or meat and be able to take care of another person for 40 days for next to nothing. And again, I've talked about how important it is to do something that you can get done today.

Size matters--I talked about a big, 500-serving bag of rice being the same price as a 200-serving bag. Here's why you may want to consider the smaller size, despite the price savings:

portability. If you can't lift a 50-60 lb. bin, you may need to have more than three bins or you may need to take items out before you move the bins.

In addition, this mix of foods is fairly high in sodium because of the amount of sodium used in the canning process. Once again, this is not a lifelong diet plan; this is a 40-day plan to help you survive. And always important to remember that survival food is not ideal, it is a stopgap. Survival food helps you transition from one phase of life to another.

Spam and Ramen: Make sure and include foods that satisfy you emotionally as well as nutritionally. If they're unhealthy, simply don't put too many of them in your 40-day supply. But if you really, really enjoy dark chocolate, get some dark chocolate and include it in your kit.

Drink mixes: You may have noticed that I didn't include any drink mixes or premade drinks in my list. That's because most of them contain either too much sugar for our taste or artificial sweeteners. We don't really drink premade drink mixes at my house. If you do, that's something you're going to want to add.

Remember this is an exercise in compromise. If you want a lot of variety it's going to cost more money. If you want your plan to be inexpensive, you're not going to have as many choices. So go ahead and alter the plan however you need to. The biggest thing is act on it, to get something in place NOW. If you go to Costco or Sam's and spend 30 minutes and $200 to get three bins of food, and then a month later you decide that two or three of the items don't work for you, give them away. You can give them to a food bank and you can replace them with something that does work, but in the meantime if something happens you've got stuff in place. I said it before and I'll say it again, this simple plan, if executed, will beat a perfect food storage plan with perfect survival food that you haven't bought yet EVERY TIME. In other words, get out there and take action!

Plan for Two

Even if you live alone, it's still important that you prepare for two people. Let me explain; when you account for how much food gets wasted by one person because of portion sizes, or how much fuel it takes to cook two meals as opposed to one, or how much you lose to spoilage, then a second person costs almost nothing to prepare for. Having food for a second person may very well buy you a roommate, an extra set of eyes or ears and help in a time of need. If you have a neighbor that you get along with who has no food, all of a sudden you've got a partner. You've got someone who's going to look out for you. Could they take advantage of you? Yes, absolutely. That's always the case, but if you go ahead and prepare for two and be generous with food that probably would have been wasted anyway, 9 times out of 10, if not 99 out of 100, you're going to be better off preparing for more than yourself.

Buying extra also allows for charity--you can cook meals for families. Or if you don't team up with someone, you can make your meal and take and leave a meal for someone else. Leave it on the doorstep and knock or go up to their door and say, "I had some extra food, this is for you, I hope it helps."

Vitamins and Supplements

The next consideration is essential nutrition, including enzymes, probiotics, sprouts, and microgreens. Enzymes and probiotics, as wells as chewing your food can increase the amount of nutrients you get from the food by two to ten times. (That last statement is REALLY important)

One supplement I take on a regular basis is called Digest Gold, made by Enzymedica. It's worked well for my family. I am not a doctor or a dietician, and I can't give you specific advice on what's going work for you or not. All I can tell you is it's worked for me and I like it.

Figure 23 - Vitamins and Supplements. Left: Digest Gold digestive enzyme by Enzymedica; Middle: Sprout Garden; Right: Garden of Life Primal Defense Ultra probiotic.

The probiotic that we take is called Garden of Life, Primal Defense Ultra, and it was actually recommended to me by Dr. Joe Mercola. This was years ago before Joe had his own probiotic product, but it worked so well for me that I have continued to take it. It is another one I feel very confident sharing with you.

In the middle of this photo is a product called a Sprout Garden, a product I have and use. You can find a simpler option, but this one's really slick. It's very simple and easy to set up for sprouting seeds and legumes. These cost around $20 or $30 on Amazon. You can see the microgreens are in the middle of the image on the bottom, where you basically let them grow and then harvest them while they're tiny. With a product like this, you can get a ton of nutritional value from a very small package. And you don't have near the problems that you have with having a real garden. You don't have the complexity, the resource requirements.

You do, however, have the problem of not getting as much food per seed, and, of course, you can't collect seeds for the following season when you're done. But in a 40-day disaster that's really not a concern, what you're worried about is right here and now.

40 Days of Water

Next we are going to talk about water. Of course, water is a huge issue. You can go about three days without water in ideal circumstances before you begin to have serious biological, physiological, and psychological problems. In reality, you can become combat ineffective in a few short hours without proper hydration, so water is a HUGE deal.

The problem is that water is bulky and heavy; you can't compact it. You can't dehydrate it or freeze dry it; it is what it is. Your needs are going to range from 1-30 gallons per day depending on how you define the word "need." As far as for biological processes, if you're not exerting yourself tremendously, half a gallon to one gallon a day is going to be enough.

When you add in exertion, your water requirements will go up from there. When you add in hygiene and cleaning, dishes, laundry, flushing toilets, and anything else you happen to use water for, it shoots through the roof. What this means is, for two people for 40 days, you're looking at somewhere between 80 and 2400 gallons. It's quite a lot to store. One thing to keep in mind is that it's easier for most people to conserve the water that you have then generate or find new water.

Figure 24 - Water storage. Top: Using water from your water heater. Bottom: 55-gallon food grade water barrels.

The quickest solution for this dilemma is a combining the storage of your water heater, food grade water barrels, and/or a rain barrel. What you can do is drain off water from your water heater and get 40 to 60 gallons of water, depending on what kind of water heater you have. I suggest you purge your water heater every six months so that you can clear up any mineral buildup in there. That way, if you do need to drink it for survival, it will be clean and ready to use.

The other thing is the rain barrels, and although these shown on the right don't have a lid on them. I would definitely suggest getting a lid, and they will hold 55 gallons of water. You can get them for as low as $20 a piece on Craigslist. Make sure you know what was stored in them before you bought them and that you're comfortable with that product leaching into your drinking water.

You can buy new barrels for significantly more than $20—like in the range of $50 to $100 or even $150 depending on what kind of plastic they are made of or whether they are wood, or all sorts of other options. All you need is just plain food grade plastic and you're going to be good to go.

Even if you plan on doing rain catchment, I suggest that you fill up your rain barrel immediately instead of waiting for rain to fill it up. Fill it up with tap water unless you're expecting rain in the very near future. The reason is, there's some stuff involved with getting set up to collect rain water. You need a flexible gutter or flexible down spout and you need to have it set up and all ready to go, so that when the rain comes it collects the water. Ideally, you want to get rid of all the junk that comes off your roof first, which may or may not happen if you're not around when the rain starts falling. With your first barrel at least, just fill it up with tap water.

The important thing is to get water storage in place. If you want to get into rain catchment, then that's great. Regardless of whether you get into rain catchment now or not, I suggest you go ahead and get a flex gutter or flex down spout so that if a disaster happens, you'll be able to transition over to water catchment without having to go to a store to get the necessary materials.

Something that I love, and this works both for people with houses and people who are in apartments or condos, is plastic sheeting. It has so many uses when it comes to water and I'm going to share a few of the really high impact strategies:

One is to line your bathtub with plastic sheeting and then fill it with water. It seems very simple, and it is. There are a few covered solutions that you can buy, Water Bob and the Aqua Pod; even the Red Cross makes one. These cost between $20 and $40 apiece. During hurricane season, demand is so high that you can't even buy the Water Bob--they are sold out. And here's the thing, they don't have very many advantages over just lining your tub with plastic sheeting, duct taping it in place, and filling the tub with water.

Another idea is to dig a hole under your drain spout. Obviously, you have to make sure to do it before it rains. Then, line the hole with sheeting to catch the water as it comes off of your roof. This can be a good one if you live in an apartment or a condo after a disaster, and especially if you have a big piece of sheeting. In a multi-family setting, people are probably going to think they deserve a portion of whatever water you collect. You can make a pretty darn good sized

water catchment area, and everyone can draw off the water very quickly. To protect your plastic, put it back inside until the next storm.

The next high-impact use for plastic is for making a solar still. Keep in mind that solar stills will work, but they're not an incredibly effective method of generating water. Solar stills are kind of a last ditch effort, simply because of how inefficient they are. You are going to generate about one quart per square yard of plastic per day (one liter per square meter); and that's if it's designed well and conditions are right. You would need at least four of these per person per day, so for the most part these just aren't a good use of time if there is any other option available.

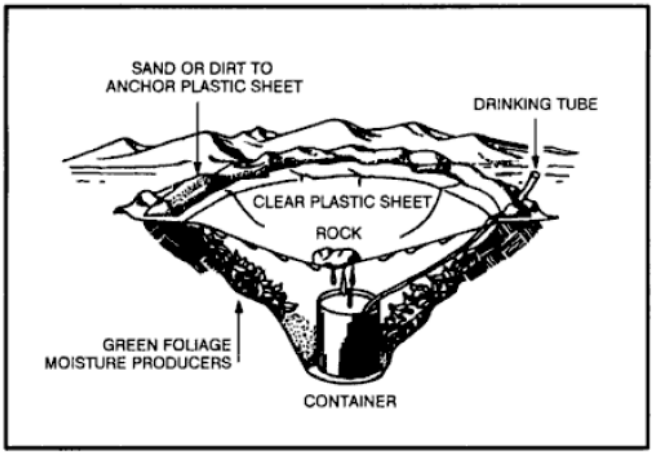


Figure 25 - Illustration of solar water still using plastic.

Another simple water collection solution is to put a kiddy pool underneath a gutter and line that with plastic. Something to keep in mind is that you can get a 10 ft. in diameter kiddy pool with hard sides off of Craigslist for $50, or brand new for $200, which will hold over a thousand gallons of water. If you're concerned about water and you live anywhere with dependable rainfall, this could just be a perfect water storage AND recreation solution for you.

Next, I want to discuss "flat" water storage. This is a pretty darn cool idea; these hard plastic water containers can be either horizontal, as they are in the illustration, where they're being stored under a porch or patio going up to a door, or they can be vertical and integrated into a fence. You can find them by running a Google search for "rainwater fences," and they come in different sizes. I believe these are 51-gallon models, and you can get them at RainWaterHog.com, Plastic-mart.com, RankTankDepot.com, and TanksForLess.

Figure 26 - Flat water storage. Hard plastic water containers to be stored under porch, patio or deck.

There are different sizes, some of them are 600 gallons or more, and they are designed as vertical fences to be put around a pool or wherever you'd want to use a fence. They are cool but they're expensive. They are $300 and up for 50 gallons and up of storage. So from a price point of view, just a plain old water barrel is going to be a better solution.

As far as hiding water goes, a simpler and less expensive solution is to use PVC. It's so simple, I felt like I got hit on the side of the head with a hammer when I heard this the first time.

Basically what you do is take a section of 6"-12" pipe, cap it off on both ends, pick how you're going to exchange air/water and seal it, push it under your deck or your porch and fill it with water. It's just that simple. You can use it along a wall in a garage, in a crawl space, under a house, in a trench that you dig, anywhere that you can fit a good sized PVC pipe.

Just as a reference, a 6" schedule 40 pipe, which is the most common white PVC pipe, will hold a gallon and a half per foot. An 8" pipe will hold 2.6 gallons per foot, and 12" pipe will hold 5.8 gallons per foot. So you can store a significant amount of water in them. If you have 10 feet of 12 inch pipe which costs $60 or $70 you can have 58 gallons of water stored. It doesn't have the same OPSEC signature as a water barrel. It could be lying innocently along the wall of your garage. If your garage is 17 feet or 20 feet long then you are looking at over 100 gallons per 12" pipe.

Filling these pipes can be kind of tricky. Depending on how it's angled, you may get into a situation where you're pushing water and you can't completely fill it because of trapped air. What I ended up having to do was, instead of trying to fill it from an end and getting fancy with

Ts and different things, is that I just drilled a hole in the top of the pipe, and filled it through the hole and then used silicone caulk and duct tape to seal it off.

When you store water, you have to make a decision whether to treat it now or treat it later. In my opinion you always want to treat it later, because you just don't know what grew in it while you were storing it--unless you're buying sealed water from a store, and even in those cases, if it's been stored for a long time you may still want to treat it.

If you've got new chlorine, and when I say new chlorine I mean it's been manufactured within the last month or two, you can use four drops per quart of water or 16 drops per gallon of water for storage purposes. You can also use pool-shock, which is calcium hyperchlorite, in powder or solid. You'll need to use 1/8 of a teaspoon for a 55-gallon drum.

There are some concerns with storing calcium hyperchlorite, especially around petroleum products, but it won't go bad like liquid chlorine will until you mix it with water. So it's got a lot longer shelf life.

The other thing you can do on the backend is to purify the water with chlorine again, or you can use a Sawyer .02 log purifier, which is rated for a million gallons or a First Need XL, which is rated for 150 gallons per filter, which incidentally is how much four people would need for 40 days for drinking and possibly a good chunk of their cooking needs. Then there's Berkey, I love the Berkey's. Berkey filters actually filter down to the virus level and they will handle 3000 gallons per filter. That will last you for years.

That is the surface level discussion of Berkey filters. When you get a little deeper into it, you find out that Berkeys are a version of the British Berkefeld Royal Berkey filters. We bought a Berkey before we knew that they weren't the British Berkefeld Royal Berkeys. There are several issues that we had with our Berkey filters that we found are not at all unusual, including the fact that the carbon charcoal filter oftentimes separates from the plastic fitting that attaches the filter to the housing. As a result, we use the stainless steel housing (which we love) and have substituted ceramic filters (also called "candles" for some reason) for the filters that came with the Berkey.

One of the things that you want to do with your water is to draw some out every few months and sniff it. If it smells rank or if it just smells stale, you need to figure out what you can do to feel comfortable drinking it. You never want to expose yourself to water-born bacteria, but especially not after a disaster.

The good thing is that we already discussed filters and purifiers in the 72-hour kit section, so this is one of the places where the 72-hour kit ties in with your long-term disaster plan. If

you've got good stuff in your 72-hour kit you're also set for a long-term disaster. Of course, ideally, you'll have purifiers of some sort in both your kits and in your home.

When you get stale water, water that's been sitting for a year or two years, and regardless of whether you decide you need to filter or purify or not, you probably want to shake it to aerate it. It will just taste better when you go to drink it. It won't be any more nutritious, but it will taste better.

Waste Disposal

The next thing we're going to cover is human waste—a very serious topic, even if it is a little uncomfortable to talk about. It can be comical or it can just be uncomfortable, but it's something we've got to cover because you create human waste every day. And in a disaster situation where you can't flush the toilets, you've still got to take care of it, so you need to plan.

One thing to keep in mind is that urine is sterile, as long as it's from a healthy person. Some Indian medical practices include drinking urine as a cure-all for all sorts of things. I don't necessarily believe in that, but I know that you can drink it for survival. I am not going to recommend that you drink it here; just keep in mind that, in general, it's clean. The biggest problem with it is it has salts in it, and if you drink it too many times the salts build up to levels where it will dehydrate you more than it hydrates you.

Fecal matter is the stuff you need to worry about, all the stuff that your body is rejecting, bacteria, viruses, parasites, dead cells, and the waste from all of your bodily functions. This is the exhaust, the junk, the fiber and undigested food from your body, and so we want to get rid of it.

Here is why it's so very important. Flying insects love fecal matter, and they love landing on food, which is a very unfortunate combination. Insects landing on other people's fecal matter and then landing on your food can pass diseases from person to person very quickly and easily. We see this around the world today and we've seen it throughout history.

One very important concept, because of this, is to find solutions that not only you can use, but also that everyone in your area can buy into and also use to keep the feet of the flies that land on your food as clean as possible. Basically, you need to protect yourself from other people's fecal matter and they need to protect themselves from yours.

You can use a composting toilet, but unless everyone in your neighborhood has one, you're still in danger from bad treatment of fecal matter. Chemicals are out for the most part, because they are simply not needed--there are enough bacteria and enzymes in fecal matter to digest

itself if you just leave it. Basically what you need to do is just put it somewhere where it won't seep into ground water, affect your food supply, and where insects can't get to it.

As far as keeping waste out of your house, if you've ever had a sewer backup into your house, you know what a horrible nasty thing it is. After a disaster it's a fair assumption to think that sewer backups will happen more often than they do during normal times. You need to consider this if your house is lower than the surrounding area. Even if you have never experienced a sewer back up before, you need to take measures to protect yourself.

What you want to do is look at getting a sewage backflow preventer. They are fairly straightforward; you can put it in and install it yourself. You can also get a valve to put on your sewer line, so that if the sewer system stops functioning you can turn the valve and shut it off. Either that or the backflow valve will work and keep sewage from coming into your house.

If sewers are working this is pretty straightforward, so I'm not going to spend very much time on it. Save your urine, dish water, laundry water, and water from cleaning your hands and showering and bathing to flush fecal matter down the toilet. If sewers aren't working three of your options are to burn it, bury it, or bag it.

If you're going to bag it, here are some things to keep in mind. Most people are going to produce between a quarter pound and four pounds of fecal matter per day, again this gets back to chewing, enzymes, probiotics, and eating foods that your body likes. You don't want to have four pounds of fecal matter per day, because that means you're eating junk that your body is not getting a lot of nutrition out of. Ideally, you are not going to have that issue; you are going to be closer to the quarter pound, but don't be surprised if you're closer to a half-pound or a pound.

Two thirds to three quarters of this is going to be solid matter; the rest is water. It works out to about 62 pounds per cubic foot, which is the same as water. This is why sometimes when you go to the bathroom you have some stuff that floats and some stuff that sinks--it's almost exactly the same density as water.

So for one person for 40 days, you're going to have between 10-160 lbs. of waste to deal with. Or, if you put that in volume it's 1.5-19 gallons. So what you can do is line a 5-gallon bucket with a trash bag, cover the feces after each use with dirt, sand, ash, grass clippings, etc, and seal the bucket between uses, emptying it once a week. How often you empty it is going to depend on how much waste you've got and how heavy of a bucket you can handle without spilling anything.

The other thing that you can do is you can use a toilet instead of a bucket. And what I mean by that is, instead of sticking a trash bag in a bucket, you stick a trash bag in the toilet and use the

toilet like you normally would only you cover it up with an air-tight seal between uses. You only use it for feces. If you're urinating you do that in a bucket or something else.

Now this is a workable plan but it's not ideal. And again, nothing is ideal, but it is a good plan. It's something that's been proven, and it may be necessary in areas that are experiencing flooding or high water tables. Some of the other solutions just won't work in those situations.

Another option is to burn it, and this isn't necessarily good for individual families, but it may be necessary for a condo or an apartment complex or somewhere where you don't have a yard or an area where you can bury or dispose of your waste.

The downside, of course, is that this method requires fuel and it creates smoke and odor. If you do decide to burn fecal matter, diesel is the preferred fuel to use. You can use all sorts of accelerants, but diesel is the preferred fuel because it doesn't flare up like gasoline or alcohol. A combination of 20 percent gasoline and 80 percent diesel is recommended by the Army Field Manual 3-34.471. What they suggest is that you have two metal containers, one that you're burning and one that you're using. Burn one every day and alternate back and forth between which one you use and which one you burn.

This is something you may want to seriously consider for sick people, because if somebody is sick then you really don't want insects getting into their waste and spreading sickness and disease.

The next option is to bury your waste, and one of the easiest ways to do this is with a slit trench. A slit trench is a four to six foot long trench that's one to three feet deep, six to eight inches wide and ideally one hundred yards away from all sleeping and living areas, as well as water and food.

In a normal neighborhood that's not going to happen--you simply don't have ten yards before you get to the next house in a lot of places. Maybe ten yards, but many people don't have ten yards before they get to the next property. So do what you can with the situation that you're given. This is a very good long-term solution, and what you do is you squat over the trench, get rid of your waste and then you cover it with dirt, ash, sawdust, straw, grass or vegetable scraps after each use.

For the most part you don't want to use lye or lime. That was used in old outhouses, but it really doesn't work. In tests of septic tanks and outhouses, it doesn't reduce the odor that much. Neither does it fend off flies that much and it doesn't help with the breakdown of the fecal matter. In fact, in a lot of cases it kills the bacteria and enzymes that are in the fecal matter to start with, causing it to last longer.

They've done studies on the effectiveness of lye with bodies because the mob. When the mafia would bury a body after a hit, they'd cover it with Lye or Lime to try and break it down faster. Interestingly enough, what they found is that it caused the body to break down *slower*. It didn't work the way they thought it would. One of the reasons for this is because it killed the bacteria that would normally cause a breakdown of the tissue.

For long-term, you want to dig a deeper hole and put an enclosed platform with a sealed hole over the pit or trench or whatever you decide to call it. But for the most part, just a slit trench in your backyard is going to work and it's going to take care of you for a long time.

If there's a chance of animals nosing around, you want to cover the hole with either with a sheet of wood that's weighted down so that animals aren't going to dig into it. You can also take care of it by covering up the waste with a lot of dirt every time that you use the trench, but that's going to mean that you have to dig more trenches more often because you are not going to get as much use out of each trench.

This won't work in a high water area—you are going to have to use other strategies, but if you have the ability to dig, it's a great solution.

The next option is a bag and bury combo, simply line your toilet, bucket or box with a bag and then collect the waste inside and dispose of it once daily outside. As a note, we've tried biodegradable bags, like the ones sold for compost bins. All I can say is they DO biodegrade—they start about 10 seconds after you start using them and they're full of holes by the time you try to carry out your trash/compost.

Toilet paper is another concern. The first thing you want to do is just keep a spare container of toilet paper around. Whether you get the 4-packs or the 12-packs, just keep an extra one around, it's very simple insurance. This is a case where two is one and one is none. Everyone benefits from having extra toilet paper.

When you're all out of toilet paper, the easiest thing to use is phone books. What you do is you crumple the paper into a ball, flatten it back out and then fold it however many times you need/prefer and use it like you would toilet paper. Of course, the nice thing about this is that you are probably going to get multiple phone books per year from all the phone book companies in your area. So instead of throwing them out or recycling them, just keep them for a few years.

Some final thoughts; one of the biggest concerns is flies going from other people's waste to your food. So after a disaster, you are going to want to spread the word on waste management and the best practices for taking care of it, possibly helping people set up a system for taking care of their own.

If you've got a solar still or a water still, urine can increase the production. It's a very easy way to recycle and reuse urine without actually having to taste urine, because the end product is going to be pure water and will have no similarity with the original urine.

The next thing is that hygiene saves lives. It saves lives in normal times and it saves lives after disasters. Equipment should be cleaned after each use. Clean your hands, clean your body, and clean your clothes. You'll be much better off, and if you can get people around you to practice good hygiene it will help them and it will help you.

One last thing; I know I have said this a few times, but I can't stress it enough – better digestion and absorption leads to less waste matter. So pick foods that your body likes, chew those foods thoroughly and consider using enzymes and probiotics.

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Power for Heat and Light

In this chapter, we are going to cover alternative ways to generate power for heating and lighting in a survival situation. Specifically, we are going to talk about scalable systems that are both affordable to put into place right now, and high quality enough to use whether your planning goes out to 6, 12, or even 24 months. We are also going to talk about solutions that you can start benefitting from right now, as well as in a survival situation.

What we want to try and avoid is buying things that will just sit around collecting dust for the next 10, 20, or 30 years. We want to get stuff that we can use both now and after a disaster. I'm also going to share a simple trick with you that will let you turn your extra beans and rice into useable electricity to run all of your electronic devices. I think you're really going to like this. So let's get right into it.

Figure 27 - Power for everything. Top Left to Right: Gas stove, Refrigerator, heating and air conditioning control panel (and blower). Bottom Left to Right: Smart Phone, TV and entertainment system, Security system control panel.

We are a power hungry society. We use power for everything: Cooking, refrigeration, heating and air conditioning, communication, lighting, entertainment, security, and more. Almost everything that we do involves energy in some way or another. If the power grid goes down, you only have two options: Number one is to use less electricity, because the situation has been forced upon you, or because of the limitations of your emergency energy supply. Or, the second option, you use enough fuel to produce the energy you want to consume. Option #2 is MUCH more difficult and expensive, both in terms of time and money.

Electricity Generation

Ideally, we would be able to make enough energy to take everything that we do during normal times using grid power. However, it's not very practical. Off grid power is very expensive. I can't begin to convey how much money it costs to go completely off grid, especially if you are in an urban area. If you are out in the country then you've got a little more flexibility and you can make things happen that you just can't do in the city. But even in the country it's pretty darn expensive to go off-grid, especially with

purely solar and wind. What's "expensive"? In general, if your power bill is in the $100-$200 per month range, it would cost you $25,000-$100,000 to go completely off-grid. You will NEVER get that money back (think about trying to pay off a credit card with a $25,000 balance with $100 per month payments).

But that's not necessarily why you go off-grid. You go off-grid to be self-reliant and more insulated from future energy cost spikes. In any case, you don't need to necessarily have a 100% self-reliant solution in place for emergencies, or even long term disasters.

So your main options are going to be to generate power with a conventional generator, with gas, diesel, natural gas, propane, wood gas, or another fuel; to use solar or wind power; or to use human power. Solar is great and I love it. My family has been using solar to one extent or another since the late 70s or early 80s, so I'm a big-big fan of solar. It's great, but it's something you can't put into place in the next couple of days. It's also pretty darn expensive; I'm going to give you a big warning on "cheap solar systems" in just a minute.

Human powered generation in the form of hand cranks and pedal power generators present a different problem. They're not that expensive to buy, but it takes a lot of man-hours per week to generate enough power to actually be useable—to run what we would consider vital appliances.

Gas generators, on the other hand, ones that use gasoline, natural gas, propane, diesel, etc., can be purchased today and used immediately. It's what people go to the store and buy when a hurricane is a day out and they want to make sure that they've got power. They're not rocket science. Assuming proper maintenance of your generator and your fuel, you simply put gas in them and use them.

Figure 28 - Conventional Gas generator.

Now, when it comes to generators you've got a couple of big considerations. On the upper end of the cost spectrum, you want a generator that's going to run everything that you use on a normal, day-to-day basis. On the lower end of the cost spectrum you're going to want a generator that fits with how much money you have to spend, is easy to move, and sips fuel rather than gulping it.

Whole house generation usually requires an 8- 20 kW generator, which costs several thousand dollars. Then there are problems with fuel. In urban areas you really can't store enough fuel to run one of these for very long. Most urban building codes restrict you to 5-20 gallons of gasoline in your house. Why? Because a gallon of gasoline, on average, has the same amount of explosive power as 13 full sticks of dynamite. You can ignore your local laws about gasoline, but if you ever have a fire in your home, you might find that your insurance doesn't cover you and that you are suddenly the target of both civil and criminal lawsuits. So just by where you live, it kind of limits you to a smaller generator and a smaller fuel supply. There are a couple of ways around this, which we will get it into in a moment, but the big point to keep in mind is that reliable whole house generators are quite pricey and take a lot of fuel.

Next, we've got the medium size generators that produce 3-8 kW. I prefer the ones similar to what's pictured here on the page Need to move photo or restate. Still, these aren't easy for smaller people or older people to operate. These take up a lot of space in a vehicle if you need to move it. Another big drawback to both the whole house type of generator and the medium size generators is that there just aren't as many times when you can use them before a disaster. It's not something that you can stick in the trunk of a car or in a mini-van or an SUV and use on a weekend, because they're just not that portable, they're loud, and they take a lot of fuel to run.

Some people do manage to and use them anyway, but they are fairly loud, they go through gas at a pretty good rate, and they are basically extreme overkill for camping. They tend to ruin the camping experience, not only for you, but for everyone within a quarter mile as well.

There's another class of generator and, it's fairly obvious by the bias that I'm putting into this section, that it's the way that I've decided to go. I very much prefer the class of generators in the 2kW range, because they weigh roughly 50 pounds, go easy on gas, and they cost under $1000.

Now if you are a little fuzzy on what the kilowatts are, that's okay. Virtually all of your appliances are going to use a certain amount of power, and that power is going to be rated in kilowatts. For example, refrigerators typically run from 200 watts to 300 watts, all the way up to 1000-2000 watts depending on whether or not they are frost-free and whether you're running incandescent bulbs or LED bulbs. This varies on whether you've got the most efficient LGs on the market, or an older model. You can run a few of the new high efficiency ones on a 2 kW generator.

In order to figure out what size generator you need, how many of them you need, and what you are or are not going to be able to run in a disaster, you're going to need to do is figure out what appliances or items you want to run at a given time, calculate their power usage, and adjust your load and generator choice as needed.

You are probably not going to be able to run your air conditioner on a 2 kW generator. I'll show you how to do that in just a minute, but this generator is going to be mostly for smaller energy tasks: charging batteries, refrigeration, and maybe running a fan. But the biggest use is going to be for charging batteries when it's loud outside and then running things off those batteries when it's quiet outside.

Figure 29 - Yamaha EF 2000 IS inverter generator.

What I recommend, and what we have gone with, is the Yamaha EF 2000 IS inverter generator. As you can see in the illustration, it has a handle on the top and the reason it has got a handle on the top is because it is light enough to carry with one hand, and that makes it pretty darn great. It's just a very good little generator and we've had good success with it.

Once you start looking at generators, or if you do any research online, you are going to see the big argument is red versus blue, red being Honda and blue being Yamaha. This is a debate that will go on as long as Yamaha and Honda are in existence. Yamaha is normally more expensive than Honda, that may change over time but right now Yamaha is more expensive than Honda.

Figure 30 - Generator comparison. Left: Honda 2000-watt generator; Right Yamaha EF 2000 IS inverter generator.

I believe that it's a higher quality product and that's why I chose Yamaha. My line of thinking is that when I really-really need it I don't want to screw around. I want to make sure that I've got a generator that works. I don't want to be penny-wise and pound-foolish, ending up with a cheap generator that makes me feel great when I buy it and stick it on a shelf, but doesn't work reliably in an emergency.

Like I said, they are both high quality. The Yamaha comes with more goodies, it's got wrenches, a spark plug wrench, and it's also got a charging cable so you can directly charge 12-volt batteries, which is quite handy. Both can be run parallel and double the output. What that means is that you can take two of the Yamaha 2000s, or two of the Honda 2000s, and with a special cable hook them together and then have enough power to run smaller, well tuned air conditioners. That way, you have the flexibility of having small portable generators, and enough power to handle some bigger stuff. In reality though, in an emergency situation it just doesn't make sense to run your air conditioner very much at all. If you do decide to go that route you are better off finding a small window unit that somebody has discarded instead of a whole house air conditioner.

As I said before, when you use the parallel chord you get redundancy, which is awesome. Instead of having one 4000-watt generator to go bad you've got two 2000-watt generators and if one breaks down, you've got the other. If you need parts from one you can salvage them off of the other. You have twice as many things that can go wrong, but if something does go wrong you've got a complete backup generator.

Not to mention, it's easier to carry two smaller generators because you can spread them out. If you are travelling in two cars you can put one in each car. If you have two houses, you can put one in each house. If you and your neighbor are preparing together, each of you can buy one and hook them together when need be. And the other thing is that you can control the fuel use. This is a big deal since the smaller generators; like I said, just sip fuel and the big ones go through a lot. When you have small energy needs, you can use just one generator. When you have more energy requirements, you can use both.

Figure 31 - Champion brand generator.

A third option, is the Champions. They are a newcomer to the market, but so far everything that I've seen has been good about the Champions. They've got some cool features. For example, they are stackable. They are also significantly less expensive, almost half as expensive as the Yamaha generators and less expensive than the Honda generators.

You can run them in parallel like you can with the Yamaha and Honda generators. One of the biggest problems is that there is a limited distribution network, almost no dealer network, which means no parts are available for it. With Yamaha and Honda, you can get replacement parts in virtually any moderate size city to large city in the US.

Here is another reason that I suggest going with either the red or the blue options; they can work with tri-fuel adapters. These things are really slick. What they do is they allow you to run propane, natural gas, or regular gasoline in your generator, which gives you tremendous flexibility and solves the problem of not being able to store gasoline in urban houses.

Figure 32 - Honda and Yamaha with tri-fuel adapters allow it to run on propane, natural gas or regular gas.

There are a few other advantages; one is that the exhaust smells better (in my opinion) when running natural gas and propane, compared to gasoline. Propane or natural gas can also significantly increase the longevity of the generator, because these fuels won't gum up the carburetor. In addition to being able to safely and legally store more fuel for your generator, you don't have to pour fuel into a hot generator, which is a shortcoming of a gasoline generator. Often times, when you take off the lid and pour fuel into a generator it may spill down and hit hot parts of the exhaust. (I keep a siphon pump/tube with a "pinch" valve on it with my generator to minimize this problem as much as possible.)

On the Honda, there is a lid with a hose in it that allows you to take fuel from another container. I've seen the aftermarket versions of this for the Yamaha as well, but I haven't tested them. With this tri-fuel conversion kit, you can store a lot of propane and, of course, propane doesn't go bad.

Two places where you can get these kits are: Propane-Generators.com and GeneratorSales.com. We used Propane-Generators and they're great to work with. They DO have a 4-6 week wait time between ordering and shipping, so get online and get one ordered if you think you might want one.

When you are using a generator, you've got to remember carbon monoxide. I don't want to sound like a broken record on this, but the fact is there are 400 deaths and 20,000 hospitalizations a year due to carbon monoxide poisoning. A huge percentage of these occur after natural disasters, when the electricity goes out.

Figure 33 - Carbon monoxide detector.

Typically the reason that they got carbon monoxide poisoning was because people tried using the generator in an enclosed garage that was attached to the house and the carbon monoxide seeped in. Why in the garage? So the generator wouldn't get stolen. Since they didn't have a carbon monoxide detector, they got carbon monoxide poisoning. Carbon monoxide will kill you before it kills the generator.

I hate to admit this, but I used to think that if I was using a generator or running the car in a garage, the engine would run out of air before I did. The fact is, the brain works differently than an engine. An engine can run way after carbon monoxide levels get to lethal levels. Bottom line: You just need to be really careful with it. I suggest using a plug-in carbon monoxide detector that's plugged into the generator and a second AA battery carbon monoxide detector in the house where you've got the generator running outside.

Solar Powered Lighting

Now for a lighting fast primer on solar… Like I said before, I love solar and we've been using it for a long time to one extent or another. There are four basic types of solar panels, and the two that I really want to cover are mono-crystalline and poly-crystalline. I've got pictures of both of these off to the right. The one on the top is mono-crystalline, and as you can see it's uniform and consistent. Poly-crystalline, on the bottom, looks irregular and has almost a snowflake pattern. The reason for this is that on the mono-crystalline panels, everything lines up the same way and it reflects light the same way. The poly-crystalline one is basically scrap mono-crystalline cells that are put together to make a poly-crystalline cell. The mono-crystalline cell will put out more electricity with a smaller panel, but it'll be more expensive. Normally, the cheaper panels that you see are going to be poly-crystallines of one design or another.

Figure 34 - Solar Panels. Top: Mono-crystalline panels. Bottom: Poly-crystalline panels.

You've also got amorphous and thin film cells, which are flexible. Again, these actually become more expensive per watt, but they are flexible and need to be much larger for the same output. So again, it's a cost-benefit of whether you want to go with the cheapest solution to have a panel or the cheapest solution per watt. The cheapest solution per watt is normally the mono-crystalline.

To complicate things a little, mono panels put out the most power per square inch in ideal situations, but drop off very fast if the angle isn't right, if there's a shadow on the panel, if the panel is damaged, during a rain storm, when there's snow/ice/dust on the panels, etc. Thin film panels, on the other hand, put out WAY less power per square inch, but put out power in all of the situations mentioned above that knock mono panels offline.

There's a definite tradeoff…unless you can get the thin film panels wholesale, a thin-film system will end up costing more to install than a mono and it will take more space.

If you need a compact package, the cheapest solution per watt is going to be the poly-crystalline. If you need flexibility and you need it to fit in a backpack, you are going to want to go with amorphous.

On a side note, there are 60-watt "solar generators" being sold by several manufacturers. They are typically paired up with what's called a modified sine wave inverter and they do technically work. But let's just go nuts and say you've got the high end LG refrigerator that only uses 300 watts of power and you've got a 60-watt solar panel. What that means, and this is a gross oversimplification, you are going to need to collect five hours of full sun in order to run your refrigerator for a single hour. Now, if you've got a more traditional 1200-watt frostless refrigerator, what that means is you are going to have to get 20 hours of sunlight for each hour that you run your refrigerator.

So you may actually be able to run your refrigerator when the electricity first goes out and you plug in into the backup power bank or the backup battery bank. But once that battery bank runs down, you are not going to be able to charge it fast enough. You're not going to be able to run a full size microwave for any length of time, or any other appliance that takes much power. You are simply not going to be able to add electricity to it as fast as you are talking it out. So they are good systems as long as you know, understand, and accept their limitations. The problem comes in when people think that they're going to be able to run their house off of the little panel and the little battery.

In addition, most of these backup kits, but most notably the Duracell and Xantrex models, have what's called a modified sine wave inverter and electronics run on a pure sine wave. These modified sine waves can cause things to burn out faster or not work as well, or not turn on at all. So if you like your electronics and want them to last, you will want to make sure that you are using a pure sine wave inverter and not a modified sine wave inverter. Besides labeling, you'll know that you have a modified sine wave inverter if your radios "hum" or "whistle" when they're running off of the inverter but not off of outlet power.

Personally, we are moving toward a combination of power sources to get completely off grid, but it's not cheap, it's not easy, and is not fast. But I like the idea of having our home insulated from attacks on the electrical infrastructure, and simple problems with the infrastructure so that's the way that we are moving.

Turning Beans into Electricity

Now I told you I would tell you a trick for how to turn beans into electricity; it's actually a very simple trick. You may or may not have heard it before; you may not have known how to implement it even if you did know. Basically, what you do is you trade food for time pedaling a human-powered generator, either a hand crank or a foot pedal crank generator. Basically, when someone comes to the door and they are asking for food, you can say to them "Absolutely. All you have to do is pedal this crank generate so many watts and I'll give you so much food. You can eat to your heart's content as long as you pedal."

Figure 35 - 300 Watt DIY Human powered generator with a bicycle.

Let me back up a second. Some people would call that cruel, some people would call that completely free enterprise. Either way, it's an idea that you can take, leave, or modify as you see fit. But after a disaster you've got people who need charity and you've got people who need to pull their weight. If people can't pull their weight that's where charity comes in. If people can pull their weight, however, I think that they should. That's just my opinion on it; if you've got a different one, that's fine.

What I've got pictured here is actually the Duracell power pack with the modified sine wave inverter that I talked about a minute ago. This is a 300-watt bicycle generator from pedalpowergenerator.com. They give you complete plans of how to make a generator yourself using whatever components you want, or you can buy the whole pre-made kit from them. This kit is great because once you've got the generator set up, you can hook a bicycle up to it, or a hydro-unit up to it if you happen to live near a stream. You can also hook a hand crank up to it, or even a treadmill.

The Battery Factor

Next we are going to talk about adding flexibility to your system with batteries. One of our plans for keeping the lights on after the grid fails is to use a generator during the day when it's loud outside to run appliances and also to charge batteries. At night, when it gets quiet out and we want to sleep, we turn off the generator and we use our batteries.

That way, we still have electricity, but we don't have a real loud signature that says, "Hey we've got a generator come steal our generator or come look for other things that you may want." Without batteries you either use power or you lose it. If you've got a solar array or a generator that's putting out 1000 watts and you are only using 300 of it, you lose the other 700. If you have batteries in your setup, then you can capture that electricity and use it when the sun is not out.

There are several different kinds of batteries, there's the lithium polymer, which is in the iPhone and some Air-Soft equipment if you use Air-Soft for firearms training. There are also lithium ion batteries that are also in cell phones. These are great choices, but they are very expensive and they may keep you from doing something as quickly as you would like to.

Personally we wanted to get stuff in place, and specifically we wanted to get stuff in place before a particular blizzard. So we went with T-105 type 6-volt batteries. Over the years, we've sampled a few different kinds. We've tried batteries by Interstate, by Deka, and by Alliance, all the same T-105 type, which is about the same size as a car battery, but these are 6-volt batteries that are made to run appliances rather than start cars.

Figure 36 - Alliance T105 6 -volt battery.

This is an important point; you've got car batteries and you've got deep cycle batteries. Car batteries are made to put off a large amount of power to start the car and then get immediately charged back up. Deep cycle batteries are made to get drained to 60-70 percent of their capacity, and then charged back up over and over again. If you were to use a car battery in a deep cycle application, your car battery will die very quickly, within days or weeks. If you use a deep cell or a deep cycle battery in an automotive application, as long as you've got enough amps it'll work fine. Normally it is not going to work because it's going to take several batteries to generate the amperage that you need to start a car. All of this is to say, if you've got an extra car battery lying around it's not what you want to use to power appliances.

The batteries that we've gotten are all 200aH batteries and they cost between $100 and $150 apiece. You can find them at local battery stores and golf cart supply places. A lot of times these are called golf cart batteries, because that's where they are used most often. They are also used in RVs. They aren't

used in household applications too much; there's a different class of batteries for permanent residential use that are called "fork lift" or industrial batteries.

Charging the batteries becomes the next issue, and the reason is that they've got to be maintained whether you use them or not. This is especially true if you are in a hot climate. Once you get over 75 degrees, the life of the battery drops off significantly. So you really want to maintain them and make sure that they keep a good charge, keep the fluid levels up so that when you do need to rely on them, they are going to actually work. Personally, I charge and check fluid levels in our batteries once a month.

Another key point on batteries is that you never want to mix batteries from different brands or that have been bought at different times. The weak one(s) basically kill the rest. The batteries either have to be the same, or you don't use them together. What we do is use pairs of batteries that we cycle between using and charging. Admittedly, it's not the most efficient way to go, but when we were tiptoeing into solar; it was the way that we could afford. So that's what we did. Since then, we've bought bigger arrays and we're getting ready to pull the trigger on a bank of 24 forklift batteries.

For charging the batteries if the battery levels are low, we use a combination 6 and 12-volt Schumacher plug-in chargers. Again this is admittedly not the best choice for charging industrial deep cycle batteries, but it does work for golf cart size batteries. We really need to upgrade to a dedicated charger and maintainer. They are not incredibly expensive. Initially, we went with the 6/12-volt charger so we could use it both for charging our 6-volt batteries once a month and for jump-starting vehicles if we needed to.

As I mentioned before, one big benefit of the Yamaha inverter generators is that they charge batteries directly, and they come with a set of built-in battery charging cables. You do need to keep track of the voltage, but it will charge it in no time.

Charge controllers are another component that you will want to look into eventually, but one that you don't necessarily need if you're just using a couple of golf cart batteries. Controllers are what you use when you are working with solar, wind or human power that's generating a DC current, which you use to charge batteries. They quickly become a deep topic, so I am only going to touch on them. The pedal power generator site that I mentioned earlier has a very good controller on it that will take a wide range of voltages and charge 6 and 12-volt batteries--actually 6-volt batteries in series or 12-volt batteries alone or in parallel.

Power Inverters

Figure 37 - Power inverter.

Inverters are the next big piece in your emergency energy system. The one here in the illustration is a relatively cheap one that you can get at Radio Shack. It has both a cigarette adaptor and alligator clips to connect directly to a battery or battery bank. One thing that you need to keep in mind with these is that they are most efficient when they are running at 60-70

percent of their rated capacity.

So if you get a 300-watt inverter, you really want to be running it somewhere between 180 and 210 watts. If you are using a higher load than that, it's going to drain your battery faster. If you use less than that, it's just not going to be as efficient because it requires a certain amount of power; and because of that you really don't want to use it if you are using less than half of the recommended load. You can use an inverter for a short time, especially if you are in your car, you are driving, and the alternator is powering your cigarette plug. If you are running an inverter directly off of the battery, you need to remember that car batteries are not designed to be discharged this way.

Again, pure sine wave inverters are very good, but the modified sine wave inverters can be iffy. Most inverters that you find in Radio Shack, Best Buy, Harbor Freight, etc. are modified sine wave inverters. We have the little Radio Shack model shown earlier in each of our vehicles. They have a modified sine wave inverter in them, so we can use them for computers and for charging our phones and other batteries. Overall, they've been great, but we have had a little trouble with them on rare occasions. For appliances, you're going to want a pure sine wave inverter.

As far as efficiency, no inverter is 100 percent efficient, they all waste power, mostly in the form of heat. Then they also waste power with the fan that's necessary to dissipate heat. 80-90 percent efficiency is what you'll normally find in stores, and 90-98 percent efficient is easy to find too. In fact, a lot of solar rebate programs are dependent on you having an inverter that's 90-98 percent efficient. So you can look for them or not, it's definitely not a deal killer to get an 80-90 percent efficient inverter if it's what you can afford and put into place right now.

Keep in mind that there's good enough, and then there's perfect. If you can do perfect, that's awesome. If you can only do good enough, do that. That way, if a disaster happens, you've got a workable plan in place. It may not be perfect, but it's better than having it all floating around in your head and saying 'I wish I would have'.

Something else to keep in mind is running load versus peak load. Most inverters have two ratings on them and they generally advertise their peak load. I'll use the 300-watt inverter as an example. The most power that it can handle at one time is 300 watts. And when you are starting an appliance, it takes more power to start it than it does to run it. So the running load is what it can handle for minutes or hours at a time, while the peak load is what it can handle for a few seconds while an appliance is starting up. So again you want to size your inverter for what you are running.

A garage door opener is an example of this. Going back to blizzards again, when my lovely petite wife was driving around with a newborn and a toddler, I didn't really care that she could open the door manually if she needed to in a power outage. I didn't want her to have to. If she absolutely needed to, that was fine—we both knew she could do it. Part of being a loving, doting husband was that I wanted to make it so she wouldn't have to get out of the car and open the door manually, even if the electricity was out.

So what I did was hook up an inverter to a battery bank that was constantly charged to our garage door opener. That way, when the electricity went out during blizzards or whatever reason they went out, she hit her garage door opener and the door would open. A garage door opener takes a lot more than 300 watts, so we had to get a bigger inverter that was dedicated to the garage door opener. For an (almost) plug and play solution to this problem, you can buy a UPS (uninterruptable power supply) and simply plug your garage door opener into it. You'll probably need a UPS that's rated to 1200 or even 1800 watts. As a trick, if you swap out your 2 60 watt incandescent bulbs in your garage door opener with LED or CF bulbs, you can shave 100 watts of power draw without sacrificing light.

Inverters are one of those things that, once you get into backup power, you are probably going to end up with a few different inverters. It's kind of like a knife, there are good general knives, but sometimes you want a specialty knife. We use small inverters for small handheld devices, keeping phones charged, radios charged, etc., while we are driving. We use big inverters to run appliances.

As another big note, if you're in a cold area, make sure you know how to tie your backup power into the blower on your gas furnace or fireplace. Why? Because one of the things that happens in a power outage in the winter is that you may have gas to your furnace but unless you've got power to run your thermostat and your blower, all that gas doesn't do you any good. So we have a backup plan in place to take care of that.

Using Less Power

Earlier, I discussed how you've got two options in the emergency power game, one is to make more power and the other is to use less. It's much easier to use less power than to find ways to generate more, because fuel isn't always easy to come by. If you are in a high wind area and you can have a windmill that's great as long as you've got wind. The same goes for solar power.

As long as it's sunny and you've got a correctly sized system, that's great. If you've got both, it kind of means that you've been able to buy your way out of the problem. There's nothing wrong with that, it's just not an option that's available for everyone either because of finances or location.

Even if you're running off of wood—wood doesn't cut, transport, split, and carry itself into your fireplace or dispose of the ashes after burning. Even though you may not account for it since you don't pay cash to get it done, the time that you spend on wood is a considerable cost.

So here are some ways to use less power. One is to use candles, lanterns, and LED lights for lighting. Personally we have candles and lanterns but they aren't something that we use a whole lot, and fire is the primary reason. We do use them in the kitchen where we've got tile floor, but we don't use them in the living room and bedrooms where we have carpet and fabric. This is something that you are going to have to make a choice on. If you do use candles and lanterns, make sure to have extra fire extinguishers available to use in case of fire.

Here's the best alternative we've found—LED Christmas lights! We absolutely love LED lights. After Christmas I go around to the different stores and I buy up the Christmas tree LED lights. They might cost

$1 to $3 for a 50-foot string of lights that were $10 to $20 just three days before. That's a GREAT tip for how to pick up LED lights on the cheap.

Headlamps and LED lanterns are a great option and a great alternative to incandescent lighting. We like using incandescent lighting just because of the quality of the light, but when it comes to power consumption you just can't beat LEDs. They are significantly more expensive but the energy savings is incredible. In our house we don't have LED lights in our appliances (other than our fridge) right now or in very many of our fixtures. Most of our LED lights are headlamps, camping lanterns, and other things that have multiple uses. In our RV though, we've changed a lot of the interior lights to LEDs. What we do is we have one switch set up to turn on only LED lights and another set up to work both LEDs and incandescents. So in the kitchen and living room area, we can turn on just the LED lights and go forever on solar and battery power , or we can turn on the LED and incandescent if we have a better power supply and have a lot of light.

You may be tired of hearing this by now, but my absolute favorite LED light is the Petzl Zipka. We use them every single night for reading, checking on the kids, letting the dogs out, throwing an extra log on the fire, etc. and I have only good things to say about them. They run on AAA batteries, and you can even get a Lithium Ion rechargeable battery pack for them that uses a micro-USB connector to charge.

Refrigerator Hacks

Refrigerators are another item that uses a lot of power. There is no real way to tell how long your refrigerator is going to last after the power goes out. It's going to depend on how well it's insulated and how full it is. The fuller it is, the longer it will last. I suggest filling extra space in your refrigerator and your freezer with water bottles or water jugs. That way, when the power does go out, you've got more thermal mass, and it will keep the refrigerator and the freezer cold much longer.

Another thing is that you want to limit access to your refrigerator and your freezer. If you can help it, you only want to open it once or twice a day. Ideally you don't want to open it at all, but at some point you are going to want to get food out of it so when you do just get it in and out as quickly as possible. One trick is that, if you are in a situation where you have a camera and it works, to take a picture of the items in your fridge. That way, you can look at the image before you open the door to find what you want and minimize your time in the refrigerator as much as possible.

Here's another refrigerator trick; if you know that there is a lot of empty space in your refrigerator when the power goes out, take a trash bag and blow it up and tie it shut. Then try and make it so it's just the size of the space in your refrigerator. And then when you open the door, stuff the trash bag in. What that will do is keep as much air from getting sucked out when you open the door the next time. Another thing that you can do is consider using a propane refrigerator freezer like what you find in RV's. If you have got an RV and it's parked next to your house it's pretty simple--You just move stuff from your house out there and start running off propane.

The downside of these is they are pretty pricy when you compare them to a conventional refrigerator, but I'll tell you a trick on how to get them cheaper in just a minute. Also one of the things you might

want to consider is that, instead of using a generator to power your refrigerator, consider using a deep freeze and a cooler. Basically, what you would do is run the deep freeze a few hours a day and freeze water in it and then take that ice and put it into a cooler. Preferably, you want a very high quality cooler like the Yeti coolers I discussed earlier. With the Yeti cooler, just a little bit of ice will last for several days.

Conservation Guidelines

Although conservation is always a good idea, it's especially important in a survival situation when you may not be able to replace resources any time you want. One of the first tips is to cook with the smallest possible appliance that you can. Even if you have got a way to power a full sized gas oven, try and use a smaller camp oven or a Dutch oven. Basically, try to figure out how you can use the least amount of fuel as possible for every given task. If you have a choice of using your full-sized grill or using a little camp stove, use the camp stove. If you have a debris stove or rocket stove and the ability to burn debris from your area, then use that and save your refined fuel for when you absolutely need it.

One quick word on air-conditioners; you can use them in a grid-down situation, but the amount of fuel that you need to power a generator, to then run an air conditioner, is going to be cost prohibitive. Again, you can use the strategy I talked about, which is finding a high-efficiency window unit and running that in one room, but for the most part you are going to want to figure out other ways to stay cool.

One of those is by adjusting clothing. In the summer, obviously you want to wear fewer clothes—and possibly wearing wet sheer cotton fabrics and standing in a breeze or in front of a fan. In the winter, obviously you want to wear more clothes. Either way, the goal in an emergency or survival situation is to conserve fuel, energy, and time. Regardless of whether you want to conserve fuel during normal times, during an emergency everyone needs to conserve. If you don't, it just means you are going to run out faster and you are going to have another problem that you have to deal with.

One of the best things that you can do to conserve power in an emergency is to create microenvironments, and a winter example is the easiest one. If it's zero degrees out and your power is out, instead of heating the entire house, just heat one room. Actually, instead of heating one room, set up a tent in a room or set up what we call with our boys a "fort" with couch cushions and blankets and sheets. Try to make it as small of an area as possible. If you make a small area, you can heat it with just your body heat and natural body functions. If it gets a little bit bigger then you can use other types of heat.

If you are in what I would call a normal suburban house with an oversized living room and a fireplace and lots of open passageways to other parts of the house, try and close them off with sheets or blankets or tarps or Visqueen. That way your fireplace can actually heat the room that you are in. Again you have a carbon monoxide issue here, so make sure that you are running a carbon monoxide detector. Still, just try and make the area as small as possible. If you do decide to go with the room air conditioner, pick a small room. Pick the smallest room that you can to use with the air conditioner so that you don't have to run it very long and you can get cool and get some benefit from it.

Figure 38 - Cooking with Sunlight. Left: Fresnel lens salvaged from an old projection TV; Middle: Old satellite dish coated with mylar tape; Right: Solar oven from SunOvens.

Cooking with Sunlight

Solar cookers save a tremendous amount of fuel just by harnessing the sun's energy. On the left is an example of one that I talk about in the Advanced Urban Water Purification book. This is a Fresnel lens and it's a lens salvaged from a projection TV. Basically, it's a big magnifying glass. What this does is it focuses the sun's energy and it focuses it quite well. This will start a piece of timber or lumber on fire in five to ten seconds in the focal point. It will also heat this little black camping cup from REI full of water well over 160 degrees in about ten minutes. So you can pasteurize water, making it drinkable. You pasteurize water by getting it to 158 degrees and that kills bacteria, viruses, and protozoa and you can use that for cooking as well. If you let it sit longer you can also boil with it.

Another option, pictured in the middle of the graphic, is to take an old satellite dish and coat it with Mylar tape, which you can get off Amazon. Point it towards the sun and again it heats the container up to 158 degrees to where the water is pasteurized relatively quickly. This takes a little longer than the Fresnel lens--15 to 20 minutes in this case and it was well below 20 degrees when I timed both methods in a head-to-head test.

There is a third option on the right; this is a sun oven or a solar oven from SunOven. The downside of this option is, while the last couple were very cheap to implement – You can get Fresnel lenses on big trash pickup days when people have TVs out on the curb or you can buy them off of Amazon for 100 bucks framed and ready to go, and the satellite dishes you can get for free, buy off of Craigslist or Freecycle, but the solar ovens are 300 bucks.

They do work very well - as you can see they are cooking bread in there. You can make one at home on your own out of cardboard and aluminum foil using the exact same design parameters as the commercially available ones.

Batteries

Another thing you can do for power is keep LOTS of small batteries on hand. We keep at least 50 AA and AAA disposables on hand at any given time. We just pick them up when they go on sale at Costco. We don't get them at sporting goods stores anymore because we found that the AA batteries that are sold in sporting good stores normally have a lot less capacity than the normal batteries. It may look like you

are getting a heck of a deal, but in reality you are not. You are getting about a third of the capacity for maybe half the price.

Another option to keep in mind is nickel–metal hydride rechargeable batteries, which vary in quality from very good to complete junk. As a rule, you want to make sure that you avoid buying them unless you see a milliamp hour rating on them. Three quality brands are Sanyo (also branded as Eneloop), AmazonBasic is great, and GP is great; a lot of other ones are hit and miss. With Eneloop, there are batteries that have an 800-milliamp hour capacity and there are Eneloops that have 2000-milliamp hour capacity; it's not apples to apples. Buy the 2000 milliamp hour variety and you've got two and a half times more power than with the 800-milliamp hour ones. So you really want to make sure that you look for and find the milliamp hour rating before you buy these nickel–metal hydride rechargeable batteries.

When it comes to disposables, something that we are switching over to with a lot of our electronics is lithium batteries. All I can say is they are incredible. In GPS units they last two to three times longer when the temperature is what I would call normal. In cold weather they last even longer compared to alkaline batteries. They are also lighter and they have a 15-year shelf life. Yes, they are more expensive per battery, but they aren't more expensive when you consider energy density and how many batteries you need to carry with you to run appliances for the same amount of time. There are lithium rechargeable batteries as well, but they cost about $10 a piece and I just don't see the value in them right now.

Here are a couple of power tricks I want to share with you. The first is how to get cheap uninterruptable power supply systems or UPS systems otherwise known as battery backups, and I especially look for ones that have automatic voltage regulation (AVR). Automatic voltage regulation smoothes out "rough" electricity that spikes or drops on a regular basis based on what else is happening along your power line. So if you have problems from the substation in your area, problems on your block, problems with your transformer etc., the automatic voltage regulation or AVR will smooth your power out so it doesn't damage electronics and so that your electronics last longer.

With all these systems, the batteries die at some point, and when they do it's very easy to open them up and replace the batteries. It's so easy all you have to do once you open it up and look at the battery is type in the model number in Amazon and order the battery or go to Radio Shack and buy the battery; it's just a fraction of the cost of going out and buying a new UPS system.

One of the interesting things is how often these get thrown away. You can see them on the curb on big trash days, or on hazardous material days, and you can see entire battery backup units at battery recycling stations or battery recycling drop off locations where you drop off batteries. So you just pick up the system, open it up, take out the batteries and order new ones. The new ones and the ones that came with the battery will normally have the same connections. If not all you do is snip off the ones that came with the unit and put them on to the new one either a crimp them on, twist and tape, solder, however you want to connect them, but you can get a very usable power supply for very a low price.

Next thing is if you have got the space, consider buying a used RV. I know that sounds odd, but the reason is, when you buy a used RV, you've got water storage, a generator, propane tanks, appliances that run on propane and a 12 volt refrigerator, an air conditioner, deep cycle batteries, and a battery charge controller for cheap. Just before I wrote this, I looked up RVs in my area. Right now, there are four RVs that have all of these items in them, from $500 to $1,800. So for less than the cost of a refrigerator or less than the cost of the generator or less than the cost of the air conditioner, you can get all of them. Granted, I'll be the first to say RVs take work. And all of these systems in these dirt cheap RVs are probably going to need help, but they may not. If you go out and you look at them and the reason that they are giving away the RV is because the engine doesn't work and all you want to do it tow it and take all the stuff out of the inside or use all the stuff from the inside, then you are good to go.

For self-propelled RVs you can have engine problems, transmission problems--all sorts of things that make the RV not worth very much to people who actually want to travel in it. But all of the things that are valuable from a self-reliance perspective may still be in workable order. You can, all of a sudden, have redundancy with what you have got in your house, for a very low price. So if you have got space to park it, and if that's something that interests you, I want to encourage you to look into an RV. Also look at the trailers. We have gone this route and, as a result, have a back-up to every system in our house. It happens to be a trailer that we can take wherever we want to go. We can also leave it by the house and have backups for all the systems that are in our house.

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Medical, Trauma and Communication

In this chapter we're going to talk about how to have simple, secure, radio handsets for communicating with friends and family without breaking the bank. We are also going to talk about trauma techniques used by combat medics, first responders, and third world missionary doctors that work whether you have the right supplies on hand or not. This is so important, especially if you're in a situation where calling an ambulance isn't an option or the ambulances are all tied up. Even if there are ambulances available, hospitals may be overwhelmed, having no ER bays available.

In disaster situations, you've just got to work with what you've got wherever you are. This will give you a fighting chance to help people survive, and to help yourself survive. As a result, we are also going to talk about medical alternatives when pharmacies aren't an option.

Handheld Communications Solutions

Let's start off with the incredibly important topic of communications. Lots of people use "talkabout" family radios when they visit amusement parks. They use these to talk with their family, arrange meet ups, to keep track of each other, and everything else. Many people also use cell phones in place of family radios, but the fact is that they don't always work in a disaster. Cell towers can get overloaded during a disaster, phone companies may limit calls to prioritized accounts, or the phones/towers can even be affected directly by the particular disaster.

Talkabouts, on the other hand, have some issues of their own. Sometimes there are so many people on the frequencies that they're virtually unusable.

What we are going to talk about here is what to look for in a radio after a disaster situation. I'm going to stick to consumer grade devices. This isn't a fully stocked, rural retreat, military grade plan for surviving 100 years after the apocalypse. You can do that…like we are, but in the meantime, this is stuff that you can use on a daily basis and stuff that you can also use in a disaster.

What we are looking for is a solution that's affordable, one that will allow secure and private transmissions, and one that has high quality microphones and speakers. Nothing is more frustrating than talking to somebody on a walkie-talkie and just getting a garbled bunch of noise. The signal may be fine, but the combination of a poor microphone, a poor speaker, and someone who is talking directly into the microphone oftentimes makes radio communications a cruel joke. A walkie-talkie would not be my first choice, but is better having no method of communication.

Next, they need to be easy to operate. There are a lot of radios out there that are incredible, however they basically require an engineering degree to operate. We don't want anything that complicated. We also want great range, which is a little bit difficult because of several factors. For starters, the contour of the earth limits range…normally to a max of 11 miles. Then, the items in our environment limit range, like trees, houses, buildings, rolling hills, mountains, electrical power lines, and big chunks of metal. Frankly, there are tons of things that affect radio transmissions, even other radios. There is no way to really guarantee what range a radio is going to give you.

I will tell you this though, when you see radios in sporting goods stores that tell you they have a 20-mile range, they're lying…or at least purposely misleading you. That may be technically correct if you're talking between two hot air balloons, but in the real world, when a radio says it has a 20 mile range, you're really looking at closer to a half mile to a couple of miles of range. That is much more consistent across multiple scenarios and predictable.

There are scenarios in which you can increase that range considerably. For example, talking from hill top to another hill top with nothing in between, across a lake, etc., but for the most part you are looking at that half mile to two mile range as the range you will get under real world conditions with inexpensive consumer grade radios.

We also want to look for long battery life and the availability of affordable replacement batteries. It's great to be able to use standard alkaline batteries. It's not so great when they burn out really quickly and you're going through batteries all the time. It's also great to have a wonderful rechargeable battery that lasts a long time. However, it's not so great when it dies and you don't have a replacement for it because you can't afford one. In addition, it can take as long as four, six, eight hours to charge a battery. Don't worry—I'm going to share a solution for that problem as well.

We also want something that's durable that's not going to break or disintegrate the first time anything bad happens to it. As I mentioned regarding the Talkabouts, we also want uncrowded frequencies. Ideally, we want to be the only people using a particular channel and the only way to do that is to go where everyone else is not.

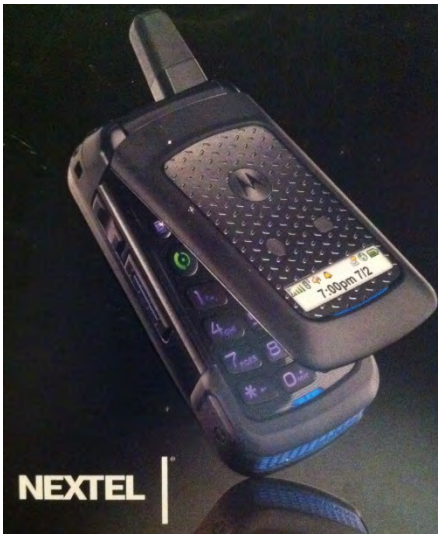

Figure 39 - Nextel Motorola I576 radio.

The solution that we've decided on is the Motorola I576 radio. Now if you're saying it looks like a phone, that's because it is. It's actually a Nextel phone or Sprint Nextel phone. I think TELUS in Canada also uses this particular one—anyhow, I know they use this technology. What

happened is that Motorola made some tri-mode phones. They've got the regular phones, they've got Direct Connect (which Nextel is famous for), and then there's a third mode called Direct Talk. Direct Talk allows the phones to talk directly to each other without going through the Nextel network. Basically, this turns them into walkie-talkies, and they just so happens that they are very high quality walkie-talkies. We are going to get into this for a minute.

A little background on Direct Talk, also called MOTO--It's basically a setup that uses the 900 MHz range of frequencies for communication, also called the 33-cm range by the FCC. There's a lot of stuff in this range, like phones, baby monitors, etc., so it can be crowded. However, this particular setup takes care of that issue in a very neat way. They use a technology called Frequency Hopping Spread Spectrum (FHSS) and basically what it means is that the radios change frequencies 11 times a second, and so if somebody happens to be listening in with a scanner, they are going to hear $1/11^{th}$ of a second of your conversation. They are not going to hear enough to be able to figure out what you're saying.

It takes some pretty serious electronics to piece together the conversation. While it's not totally secure, 99 percent of the people out there are not going to be able to hear what you are saying on these radios. The other one percent, even if they have the ability, will probably lack the time, materials, and the inclination to want to figure out what you're saying. It's just too tedious.

These radios have 10 channels and 15 sub-codes. So even if several people are using Direct Talk, there are still 150 different channels for them to use. Put another way, if you go back to the two-mile effective range of radios, unless you've got 100 people within two miles using these radios, you're probably not going to overlap at all. That's why the Motorola i576 is a much nicer solution than the Talkabouts.

One thing to keep in mind is with Direct Talk, channels aren't frequencies. The channels work like this; a channel is basically a set of 50 predefined frequencies that the radios are going to rotate through 11 times a second. Every 4.5 seconds, these radios cycle through all 50 channels, both the sending and the receiving radios cycle through them at the same rate, so you just absolutely cannot hear any of switching – it's crystal clear.

Another thing to keep in mind is these are not compatible with other frequency hopping spread spectrum (FHSS) platforms. Motorola has several radios that use the FHSS platform for communication, but they aren't compatible with the Direct Talk. You can look at it this as a positive or a negative. I look at it as further isolating Direct Talk and making it even more secure.

For another good option, you can go to Best Buy and find a system called Tri-Square, which uses the same FHSS technology; only they are not compatible with Direct Talk. So even though there

are different systems using the same frequency hopping spread spectrum (FHSS) platform in the same range of frequencies, you can't listen into people's conversations. The downside is it means you need to have your radios figured out in advance, because the chances of finding anyone else with these direct talk phones after a disaster happens is slim to none. The upside is that, people aren't going to be able to listen to your conversations.

Again this isolation leads to security, the fewer people that even have the ability to listen the better. There are several phones out there that use this technology, all made by Motorola, and any one of them will work. The interesting thing is that, these are all fairly expensive phones, a couple hundred to four hundred dollar phones apiece. But this is the great thing; when they were deployed a lot of fleets used them, and fleets upgrade their phones fairly often. So what has happened is, I wouldn't quite say there's a glut, but these come onto the market through eBay and Craigslist and other sites fairly often and at very decent prices.

When you go to eBay, you may have to do a little digging to find exactly what you want. A search for Motorola may turn up nothing relevant, but type in "Direct Talk" in quotes, and boom! All of a sudden you have phones from the list we want to search. One thing to consider is that the prices for these phones range considerably, and obviously, you're going to want more than one. I have seen groups of five or ten go from as little as $10 a piece to as much as $100 a piece, so it does require a little bit of looking around. $20 apiece for the phone, battery, and charger is a home run, in my book.

You'll also want to read the descriptions carefully to make sure the phones you're looking at actually work, as some are sold for parts. Another thing is, you want to get as many chargers as you can. These phones in particular use a micro-USB charger from Motorola. That's actually a great thing, because it's a very standard charging connection that you can buy new at almost any big box store; so that's not a problem at all. It's also the same charger that most Blackberries, many Bluetooth devices, and Kindles use.

Batteries and Accessories

Something else to consider is battery options, i.e. you want to make sure you've got plenty of batteries for these phones. You can find deals online for 50 batteries for $74. That's $1.50 a piece, which is just incredible. I've also seen 25 for $44, so locating batteries for most of these Motorola devices is not a problem and they last about one day each. Actually, I've used them for a day and a half several times and almost a day and three quarters on road trips.

The other thing, some of the options you'll run across online will include accessories--most won't but some will. The final piece of the puzzle is these Motorolas require a SIM card to work and that's kind of a bummer. I'm not sure how flexible these SIM cards are. For example, I don't know if you can use an AT&T SIM card in a Nextel phone and make it work off-network. It may

be possible it may not be. I will tell you what I did, because it has worked incredibly well. I did a search on eBay for hybrid SIM cards and I bought a few of them.

As I'm writing this, I just found a bunch online. For example, someone's selling ten for $85, so $8.50 apiece. These cards should allow a Motorola phone to work on the Direct Talk mode. Before you buy SIM cards, you might try any old SIM cards you might have lying around the house. Or, if you know anyone who works at a Sprint store, ask them if you can have some extra SIM cards that they have lying around. Unless you've got an inside track, the chances of getting them from Sprint are pretty slim.

With this Direct Talk solution, what you've got is a very durable walkie-talkie that has range that's better than Talkabouts and about the same price as the high quality Talkabouts, but with much more privacy.

Medical and Trauma Preparations

The next thing we are going to talk about is improvised medical and trauma management. This is a tricky topic because of liability and also the moral considerations. I don't want to, in any way, give the impression that reading this book is any way equivalent to attending several hundred hours of formal medical training, or thousand hour training courses in the case of getting a degree.

The disclaimer I can give is that this is for educational, and or entertainment purposes only. It's a great starting point, but it shouldn't be considered medical and trauma training on its own. I'm sure everyone reading this is wise enough to understand that fact, but I absolutely have to make it clear that this is only a primer when it comes to trauma management. If you do this stuff without the proper training it's very possible that you could make the problem worse and even cause death for yourself or the person you're trying to help.

I want to give you some quick background on me, so you understand why I write what I do about medical and trauma topics.

This is a very serious topic to me and has been for as long as I can remember; I was exposed formally to advanced pre-hospital life support from a very early age, possibly before I could walk. My father was one of the very first civilian medevac pilots in the U.S. Frankly, he liked what he saw the doctors doing in the back; this was before there were EMTs and paramedics like we have today.

If you ever watched the TV show, "Emergency," you know what those early days were like. Doctors actually rode around in the helicopters, figuring out how to do things in the field, which was interesting in and of itself because they were used to a hospital setting. In any case, it got

him interested enough that both he and my mom became EMTs. Since many hands makes a load lighter, they became instructors for several different medical certifications, and instead of getting a babysitter when they taught classes, they usually took me to the trainings. Basically, I had no choice but to sit quietly and listen. I absorbed this training several times a year for several years. I often played the dummy when the topic was early childhood care. Now, to be clear, this doesn't mean I learned much during that time, but it did give me a passion for it that has carried me along for several decades.

Fast-forward a few decades; I started guiding backcountry trips in the Rockies. Backcountry guiding is a profession in which advanced medical care is very important, because you just can't carry supplies with you. You've got enough stuff to worry about and you basically make do with what you've got on your back and what's around you. Before I started doing it, when I knew I was going to be in that situation, I just started pouring through books and reading every medical and trauma course that I could get my hands on. I read books about backcountry medical care, third world medical care, and what missionaries and missionary doctors did when they were in areas where they just didn't have supplies.

Hold on – there is a point to this.

I loved it so much that I wanted to learn everything I could about it. It didn't mean I was qualified to do stuff to other people. What it did mean is that I was able to identify problems very quickly and was able to get people off of the mountain before small problems became big problems. It didn't mean I was able to treat people. In many cases treating people without formal training and certification could easily be considered immoral, and it's definitely considered illegal unless you're being covered by the Good Samaritan Law.

So fast-forward a little bit; I went ahead and got formal wilderness EMT training as well as formal medical tactical training, which is medical treatment for tactical situations like gunshot wounds. I did ski patrol and got to use a lot of this stuff and absolutely loved it. It's a fascinating field of study and I encourage you to learn about it if you're at all passionate about it, feed that passion. It's a topic that the more you study the more you'll benefit from it. I've been able to help a good number of people with my medical and trauma skills.

It's absolutely amazing the benefits you get from understanding trauma and medical care, even if you never use the skills on anyone else. You understand your body a lot more. Again, you can spot small problems in yourself before they become big problems. To be clear, it's not becoming a hypochondriac, it's actually knowing, identifying and getting in front of problems before they get dangerous or unmanageable.

One thing that is very important when thinking about disaster survival situations is improvisation. There are many reasons that this is so important, but one is that you're not

going to have everything you want when disaster strikes. You're always going to want to have more supplies and you're going to want to have them closer to where you are. That's going to be coupled with the fact that you're not going to want to walk around with a full medical kit all the time. You end up making do with what you've got, regardless of whether you are a paramedic working on an ambulance or riding a bike in the middle of the woods and come upon somebody who has impaled themselves on a tree.

The degree of improvisation is significantly different, the paramedic working from an ambulance has a lot of supplies readily available, but they are still probably going to have to improvise. Of course not as much as the person who's out in the woods who has just what's in their backpack or small pack on their bike.

Another thing to keep in mind is you just can't carry enough to handle a multiple casualty event. If you come upon an accident with a first aid kit in your car and it involves a motorcyclist, you *may* have enough equipment in your first aid kit to take care of him. If you come upon a school bus accident, there's just no way that you're rolling around with enough materials to take care of them.

That's another reason why it's so important to be able to improvise in a trauma situation. You need to know the fundamentals so that you can see items in your environment that will work, maybe not perfectly, but that will work until a higher level of care arrives or you are able to get the patient(s) to a higher level of care.

Another consideration is that resupplying in a disaster situation is not always an option. I'm a disaster first responder and one of recurring problems is that after a disaster, when disaster first responders go out and respond to an event, there's always a fear of what is going to be there when we arrive on the scene.

Are there going to be enough supplies? And as you're treating people and going through supplies, there is a second fear. That fear is, is anyone going to resupply this stuff that I'm using? Do I have to ration care? What happens when it's gone? Is there a supply chain in place? That's during good times. After a catastrophic event, let's say an infrastructure event where the electrical grid goes down nationwide, the supply houses, the transportation, the warehouses, the entire supply chain for medical supplies could be compromised, which means you will have to make do with what you've got in your environment. So again, improvisation is key.

The other thing you may not know is how long you have to self-support before you can resupply. If you're planning on being able to resupply every six hours and it ends up that you can only resupply every six days, you've got five and a half days where you potentially don't have any "regulation" supplies to help people.

Another thing to keep in mind is that the best way to help the most people is to keep yourself in good shape and take care of yourself, so you're not a drain on the EMS system. Part of this includes saving your supplies for yourself, specifically your purpose-built supplies. You want to save them to be able to take care of yourself, and to use other people's supplies on them. If they don't have any supplies and you don't know when fresh supplies will arrive, you want to improvise. If it becomes a situation where you just can't help them because there is nothing you can use to improvise, that's a bad situation. Bad situations will happen. But let's deal with the high probability stuff, which you can typically remedy by improvising.

Trauma vs. Medical Care

Next we are going to talk about trauma versus medical issues, so that we understand the difference between the two. For me, I think of trauma injuries as kinetic injuries, i.e. they involve motion. Easy examples of these are sprains, strains, breaks, cuts, stabs, tears, blisters, punctures, bumps, bruises, and abrasions. They're things you use bandages for, and it's different than medical in that medical includes things like temperature regulation, being too hot too cold, dehydration, and hyponatremia, blood sugar problems, medication withdrawal, acute illnesses and infections, chronic illnesses and heart issues. Very different items are necessary for each and very different treatments. Of course there's some overlap; many traumas cause medical issues and vice versa, so it's not a clear-cut line. The way you treat them is going to be very different.

Bleeding

Controlling bleeding is a very important topic, and one that most people are familiar with. Ironically it's not as important as maintaining an airway and making sure the patient is breathing. But after that it's pretty important, and it's also one of the easiest things to talk about instead of demonstrate. I can go over how to maintain an airway in a book, but it's really something that you want to practice in a live setting.

The traditional mnemonic for dealing with bleeding is RED. The R stands for Rest, which is calm down, stop moving, and do whatever you can to control pulse and blood pressure. The next thing is Elevation; raise the level of the heart. And the third thing is Direct Pressure or use Pressure Points.

In reality, this is correct. But if you've got someone you're treating in a disaster situation or post disaster situation and Rest and Elevation are enough to take care of the issue – you don't REALLY have an issue and you don't need to be spending time with them unless they happen to be the only patient. In my experience, the first thing you do is apply direct pressure. The second thing you do is More Direct Pressure. The third thing you do is even More Direct Pressure. And

once you have the bleeding taken care of, or stopped, then you supplement the Direct Pressure with Elevation and Rest.

An easy thing to remember on Direct Pressure is put the white things (bandages) on the red stuff, and what I mean is – if you see red, cover it with a white bandage or whatever you've got as an improvised bandage until you're not seeing red anymore. So what you're going to do is push and push harder and push harder and push harder, until you help the body stop the flow of blood.

Six Improvised Trauma Tools

Next I am going to go over some valuable trauma items that you're not going to find in the medical supply aisle, but you're going to find are very helpful in trauma situations. The first one, of course, is **duct tape**, which has so many uses for trauma it's amazing. It's really only limited by your imagination.

Figure 40 - Improvised Trauma Tools. Top: Roll of Duct tape; Bottom: Packet of US Grade A Honey.

You can cut out homemade butterfly bandages with it, you can even use it as a cast by basically using a newspaper to support a limb and then duct taping it. Then you have a setup that's about as good as a cast. It's amazingly stout and hardy. You can use it for splints, you can use it to cover bandages, and you can use it to completely cover a wound, a hole, or a cut. Obviously, you want to put something between the tape and the skin if you can; avoid putting it directly on an injury, if at all possible.

You can also make a waterproof bandage out of a regular bandage by covering it over with duct tape. You can use these for blisters, hot spots, knee braces.

Next is **honey**, and honey is great. One of the most obvious uses is to help diabetics who are having blood sugar issues--it can turn someone around pretty darn quickly. I like carrying it with me just because low blood sugar is such an issue, especially if people are drinking sugary drinks on an empty stomach which happens more often than you'd like to see when people run out of food. They may still have a Coke left or some other sugary drink. When they go ahead and drink it, all of a sudden their blood sugar spikes up and their body says 'wait a minute this isn't good at all' and releases insulin. Then, true to form, the body usually releases more insulin than it needs and the blood sugar level is going to drop below normal levels.

Small amounts of honey can help bring someone's blood sugar back up to functional levels. It can take care of headaches caused by low blood sugar, helping people get back to functional levels of self-sufficiency so they can get to safety. It can also give people the little boost that they need to be able to start eating and taking care of themselves if they're in sad shape. Watch out that you've actually got honey and not honey flavored high fructose corn sweetener, or you'll just be adding to the blood sugar rollercoaster.

Figure 41 - Improvised Trauma Tools. Top: Hand sanitizer; Bottom: Instant Krazy glue.

The next thing is **hand sanitizer**, which is extremely important for trauma situations. One of the biggest causes of death during the Civil War wasn't getting shot; it was infection after getting shot because of sanitation practices. They just didn't have the ability or the know-how to maintain a sterile environment. They didn't know how to sterilize wounds; the doctors didn't know how to sterilize their hands. They were going from patient to patient without cleaning their hands and so, once infections did happen they spread very quickly in the medical environment that was designed to help save people. Obviously, hand sanitizer can go a long way to eliminating that.

One simple example is, you get a cut that breaks the skin after a disaster. And we are not talking about a big cut that requires stitches; we're talking about something small. One of the easiest things that you can do is suck it up and put some hand sanitizer on it. Once it dries, put a little cotton or an actual bandage on it and then cover it with duct tape. Ideally, of course you want to put some antibiotic ointment or some other kind of ointment on it. But as long as you can clean that area and seal it so it isn't going to get infected, your chances of survival have just shot through the roof. Is it incredibly simple, yet it gets ignored all the time. It gets ignored after every major disaster in the U.S. When relief teams go in after tornados, when relief teams go in after hurricanes, when relief teams go in after major floods – this happens just again and again and again. After a disaster small cuts and scrapes end up getting infected just because of the environment and the lowering of hygiene standards. So I can't emphasize enough how important this is.

What kind should you get?

We primarily use alcohol/aloe/ vitamin E sanitizers, like Purell, although if you would ask me what the "best" kind of hand sanitizer is, I would tell you to get one that has benzalkonium

chloride in it. Why? Because benzalkonium chloride will kill noroviruses and alcohol based sanitizers will not unless it has an emulsifier in it.

The next item is **Krazy-Glue and/or Super-Glue**. I am a big fan of Krazy-Glue. I have used it several times instead of stitches on myself. I cannot use it on anyone who is not family, simply because of the fact it is not an approved medical item. I also can't really suggest that you use it as a medical item, but you may want to do a little research on it, see where the research leads you. Interestingly enough, the chemical that's in Krazy-Glue or Super-Glue was originally designed as an alternative for stitches, however the pH is off and it burns the skin, as you probably know if you've ever gotten it in an open wound. There's a medical version called Derma-Bond, and Derma-Bond is great stuff and if you have the money to get, I suggest getting it. It ends up being about $15 per single use, whereas the 4-pack of Krazy-Glue that I show here costs a few bucks. So I don't have Derma-Bond, I have Krazy-Glue and I use the stuff.

Figure 42 - More improvised trauma tools. Top: Maxi-pads; Bottom: Dental Floss.

In a backpacking situation, instead of doing the hand sanitizer and duct tape option, you can do hand sanitizer and then cover the scratch with Krazy-Glue. You can also use it for blisters, although duct tape usually works better than Krazy-Glue. A combination of Krazy-Glue covered over with duct tape is also a very good option.

Next is **Maxi-Pads**. Besides the obvious fact that if you spend any time with a woman in her menstruating years, it's good to have these around because there just aren't that many good ways to improvise. (There are "cozy" and "diva" options, but those aren't *really* improvising.) That being said, I carry these in my med kit because they absorb blood. They have enough of a barrier to keep blood from going through the backside to give you a little bit of protection as a care provider. Their biggest advantage is not only the protection that they provide, but also the convenience; it's helpful to have that little barrier there to keep layers of dressing from getting wet with blood. You can put these directly on injuries where you need to apply pressure and clamp down with the pressure and

these will absorb blood--a significant amount of blood. They're also designed not to stick to the wound. They do stick, just not as bad as porous cotton, gauze, or many other bandages.

Next comes **dental floss**. This is somewhat of a specialty item and I like the widest waxiest dental floss I can find for it's emergency use. The reason I use it and the reason that I carry it is that when I was doing ski patrol, I saw a lot of wrist, elbow, and shoulder injuries, due to snowboarding. What happens when you get an arm injury, even if it's not on the hand, is that your hand starts swelling. And when your hand starts swelling, and you've got a ring on, pretty soon the ring starts acting like a tourniquet, which is obviously not a good thing. And so you need to get rings off as quickly as possible. Often the fingers have already started swelling by the time you get to someone or by the time you get coherent enough to take care of yourself and realize you're in trouble.

You've got to have a way to get the ring off after swelling has started, and the way you do is to wrap your finger with dental floss and wrap it like a mummy, as tight as you can. You are basically going to compress the finger all the way from the ring to the end of the finger and then pull the ring off over the dental floss; it's a great-great technique. There are several specialty items that are designed for this purpose, and still emergency rooms around the country keep dental floss on hand for this specific purpose; it works, it's easy, and it's proven. For the EMT, first responder, and the prepper, it also happens to be incredibly cheap.

In the absence of dental floss, one of the things that used to be a great solution was cassette tape (or VHS tape), just the actual tape from inside a cassette. It's wider than dental floss and thinner than dental floss. It's just that tapes aren't that easy to find anymore, but if you have an old cassette tape, throw one into your med kit; it wouldn't be a horrible idea.

Now the neat thing with the six items I just mentioned is, none of them seem medical, but these are all potentially life-saving devices. They are very inexpensive and they are things that I want to encourage you to have on hand now. After a disaster happens, these are things that you may be able to find when you can't find specialized trauma items. Again they are just great things to have, both now and after a disaster.

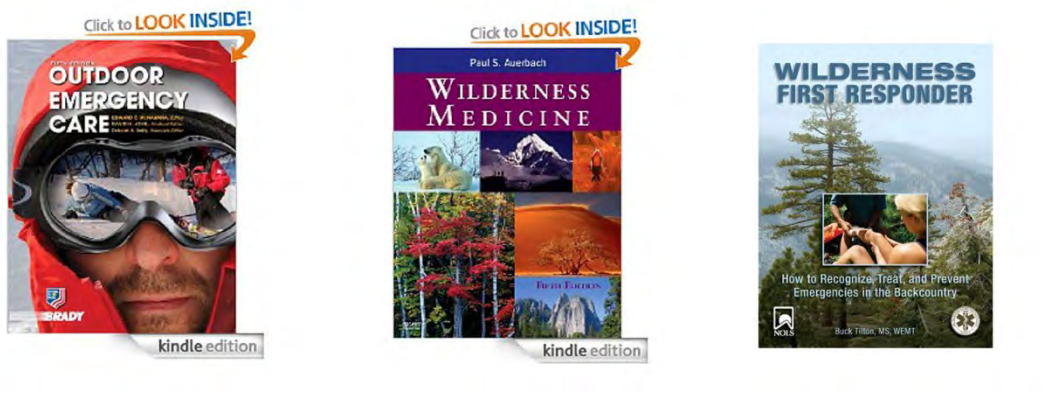

Figure 43 - Training resource books. Left: Outdoor Emergency Care by Ski Patrol National; Middle: Wilderness Medicine by Paul S. Auerbach; Right: Wilderness First Responder by Buck Tilton.

I would be remiss if I didn't point you to some training resources for medical and trauma care, because again, I've gone through hundreds of hours of training and I would guess thousands of hours of actually spending time with patients. I love it, but you just can't convey a course and live experience in a short chapter. I can give you a taste for it; I can give you some highlights.

From personal experience, I will tell you that no matter how much training you get, when you're dealing with a particular emergency for the first time it never feels like you had enough training. For me, I've always felt like I've been fumbling around the first time I've been dealing with a particular problem. It doesn't matter how much training I had, it has always taken me one or two times of doing stuff for real before it felt natural. Of course that effect is multiplied if you don't have actual training to back up the mental knowledge. So I really want to encourage you to go out and get medical and trauma training.

Medical/Trauma Training Resources

See what's offered through your local EMS system or ambulance services. Call them up and ask who they use for their EMT training, and ask if there are any classes that you can sit in on, that you want to learn more about emergency medicine in case of a disaster. More than likely, if they ask why you want the training, the best answer is going to be to say you want to learn to take care of yourself and your family, to help out at your church, or that you're thinking of getting active with a volunteer emergency response group.

Most areas have search and rescue teams attached to their Sheriff Department. And most of those search and rescue teams like their members to have advanced medical training. These teams provide advanced medical training at a very low cost.

After that is CERT, the Community Emergency Response Team. CERT organizations exist throughout the country and they're designed to respond, be a local response to disasters. They are a great resource. When you go through the CERT training initially, the medical component is

limited just because of the sheer volume of items they have to cover in the 22-hour training. And only a portion of those 22 hours is devoted to medical. But after you go through the initial training, the training options open up and you can go and get advanced training and continue on as far as you want to—even up to Paramedic level in some areas.

The fourth local training resource I want to suggest is the Volunteer EMS system. If your area has one, again, they are either going to have EMT instructors or they're going to have other resources that you can plug into to get advanced medical training.

If you want to travel, there are three great solutions that I want to suggest. The first one is NOLS, or National Outdoor Leadership School. They do wilderness first responder and wilderness EMT training, which I will get into in just a second. Outward Bound is another one, Outward Bound and NOLS have been around for decades and they are great organizations. There are some things I don't particularly care for with them, but a lot of things I really like too.

I love what they do in getting people outdoors and getting people prepared for improvising in cases of medical emergencies. Outward Bound usually has other organizations do medical training for them. One of them is Wilderness Medical Associates. They do training internationally, so basically most places where you might be in the world, you could find a Wilderness Medical Associates class for wilderness EMT training or other wilderness medical training.

As far as the certifications, my pick would be the Wilderness EMT or Outdoor Emergency Care. Wilderness EMT is put on by NOLS and Outdoor Emergency Care is put on by the National Ski Patrol. They probably still argue on whether or not they are equivalent, but in my opinion they are 90 to 99 percent equivalent certifications. The big difference between them and a regular EMT class is that a regular EMT class teaches someone how to function out of an ambulance, while a wilderness EMT or OEC class teaches people how to improvise, to make do with what they've got on their back, in their hip pack and in their environment.

The next certification you might want to think about is Wilderness First Responder. Let me back up a second - the Wilderness EMT and OEC are roughly 120 hour classes. Wilderness First Responder is an 80 hour class and it's a very good class. Since it's 40 fewer hours, it covers fewer topics in less depth, but it's still a very good class on trauma and medical fundamentals and improvisation.

The next training I recommend is tactical medical first responder classes. Those can range from a 4-hour class to a 16/20-hour class on how to respond to gunshot wounds and stabbings in an urban environment, where you may not have any medical supplies with you, may not have access to medical supplies, and will need to consider the possibility of having to balance patient care with interacting with both active shooters and law enforcement.

As far as books, if you want to go on Amazon, I am going to give you three suggestions. One is the book *Outdoor Emergency Care*, the OEC student guide from National Ski Patrol. The picture above is the most updated version, I would not hesitate at all to get an older version, however, the older versions are great as well and you can save a little bit of money there.

Next is the book, *Wilderness Medicine*, and besides being a good book, the main reason I recommend this is because it comes with DVDs. If DVDs are a way that you can see yourself consuming the information then go for it.

The next book is, *Wilderness First Responder*. Again, this is the text for the Wilderness First Responder certification through NOLS, another great resource. They vary in price levels, I believe the *Wilderness First Responder* book is in the $20 range, the OEC book is going to be in the $40-$80 range, depending on which version you get. The *Wilderness Medicine* book is in the $150-$200 range because it comes with the DVDs.

Alternative Medicine

The next thing we are going to talk about is medical emergencies, and specifically what if there aren't any more medications. If you can't go to a pharmacy and buy medications, you need an alternative. It's important to note that there are some significant limitations on what I can say, because of the FDA. You can't say that a product can treat or prevent an illness unless the FDA has approved it, you're sharing a personal story, or unless you're quoting a study; it's a pretty big labyrinth to work through.

One of the first things I want to talk about is chronic illness versus acute illness. It's important to understand the difference between the two of them. Chronic issues are issues that affect people day in and day out for months and years at a time. On the flipside, we have the acute illness, which comes and goes. The flu is acute, while Type I Diabetes (generally, from birth) is chronic. It doesn't come and go; it's there, yesterday, today, tomorrow. Acute stuff is going to come and go. Some acute stuff turns chronic, but for the most part acute is acute. It's important to understand this when we're looking for solutions.

One of the first things we're going to talk about is fever. A lot of people want to treat a fever immediately, and first thing they do is take Tylenol. Fevers happen to be one of the body's ways of dealing with infection, so to the extent that it doesn't become dangerous you want to let the fever go. You are going to need to do research on this and figure out what temperature is too high for you.

As an example, with infants, most urgent care and ER personnel will tell you to bring them in with a 100 to 102 degree fever due to liability concerns. Child healthcare specialist and author, Dr. Sears, on the other hand, says that 104 degrees is the point where you want to start getting

serious and managing fevers, but up until then letting them go so the fever can do its work. Of course, when its nighttime and you need to sleep, or if you've got kids and you need them to sleep so you can sleep, that may be a time when you want to manage the fever so you can get some shuteye.

For the most part, what has been determined is that stopping fevers is going to make an illness last longer than letting the fevers go, within reason. If the fever gets to the point where it could cause damage rather than simply being a symptom of an underlying infection, then you want to start taking action by removing clothing, doing tepid baths, alcohol rubs, etc.

Diarrhea is kind of the same thing. Conventional wisdom holds that when you get diarrhea, you take Imodium, plug it up and get back to work. But the problem with that thinking is that if diarrhea is caused by a sickness, the body is often trying to get rid of the sickness by expelling it as quickly as possible via diarrhea. As long as you can stay hydrated, you probably want to go ahead and let the body do what it needs to do. If you are having problems keeping hydrated, then it's going to be a matter of talking with a medical professional and finding out whether it's a better course of action to start IV fluids or go ahead and do the anti-diarrheal medication.

Diabetes is normally chronic, but can also be acute, as we've seen with several Hollywood movie stars. There are clinics across the country helping people who have developed Type II Diabetes, either to significantly reduce or completely eliminate their insulin use with simple diet and exercise. If you have Type II Diabetes and are concerned about what would happen if you ran out of insulin after a disaster, it's worth investigating whether you can maintain it with diet and exercise. With Type I Diabetes, if you have bad diet, you may be able to reduce your insulin use with a better diet. If you decide to go this route, it's something you need to work on with your doctor; it's not a joking matter. Your body must have insulin to live; it's not something you can just do without. Either your body is going to produce what you need or you need to supplement it. You can do things to reduce the amount of insulin you need, but you can't alter your diet and exercise so you don't use any insulin; it's not possible.

I really need to stress this: Do not attempt to make adjustments to your medications without consulting and working with your healthcare professional.

The next thing is pain, which is a tricky subject, because pain is so subjective. What's pain for me might be completely different for somebody else. A mosquito bite may be pain, hitting your hand with a hammer may be pain, or taking a rifle shot to the leg may be pain depending on your pain tolerance. Some people can sleep when they're in pain, while others cannot. There's no hard and fast rule for pain, but managing it is a pretty important thing.

One of the easiest ways to manage pain is with over-the-counter medication, but of course anyone who's used prescription pain medication knows that it doesn't always work. If you take

enough of it to take care of serious pain, it can be very harmful to the kidneys and the liver, so you need to be very careful taking over-the-counter pain medication. If you can use it andif it will take care of the pain using the prescribed dosage--then that's great. Because of that, we keep a lot on hand, not because we use a lot of it, but because we want to have it available if we need it.

Another approach that you should seriously consider is using "mind over matter" principles, also called self-hypnosis or meditation or "finding your happy place." These all sound corny and if you come from a Christian background like I do, all of these seem woo-woo, like stuff we shouldn't be messing with. In reality, God made our bodies certain in ways; different religions, ideas, and thought processes have been wrapped around mind over matter and self-hypnosis and meditation and the whole idea of a happy place. It's the way God made our minds, and if we can use that tool without dishonoring or attempting to supersede God, then I think it's a good tool to use.

One example of this in action is natural birthing. People who use a midwife and/or doula and go through the natural birthing process learn how to manage pain. It doesn't get rid of pain, it doesn't make it not exist in a mother's mind, but it allows them to almost disassociate from the pain and let their body keep working on what it needs to work on without medication. The same thing goes for former drug addict; when they need to get dental work done, they can use mental tools to make it through without narcotics. They change the way that their mind is working for the time being.

Now has hypnosis and self-hypnosis been used for evil purposes? Absolutely--all of these mind techniques have been used for evil purposes. I believe there is a good use for them and I believe a very excellent use for them is a way to manage pain on your own without medication. I've used it myself, my wife has used it in two childbirths, and we are big believers in the process.

Another thing is prayer, some people are going to argue that the reason prayer works is because it's got you focusing on something other than the pain. Other people are going to say it's because of the supernatural influence and the prayer is being answered. I have no idea which it is, and quite frankly I don't think you can categorically say it's one or the other. I think it's a combination of both, sometimes it might be all one; sometimes it might be all the other.

The last thing is human touch and/or having a pet around. Although simple, both of these can help with pain considerably. Again I don't understand why, but I do know that they work. Sometimes holding a hand can help take care of a lot of pain or touching a pet can make a bad headache feel better. To me it doesn't have to make sense, I just know that it works. I've seen

this work with patients more times than I can count and I've just come to accept the power of touch in helping to keep emotions and pain under control.

Now we are going to get into a couple of things that are considerably "out there." If you have past drug use issues, then these are obviously things you're not going to want to do. They are things you may want to keep in mind for people around you who don't have past drug issues. I am not trying to push this on you, but this is definitely an option.

Opium comes from poppies, and we get opium from opium (obviously), we get morphine from opium, and we get heroin from opium. It can be used for very good things or it can be used for very bad things. In a disaster situation, where you may not be able to get pain medication to take care of extreme pain for surgeries or other items, having poppy plants may be invaluable. There are entire books on this, on which particular poppies produce the most of the drug and are still legal to grow. The illegal part of it is harvesting the latex or the sap.

The next thing is psychotropics. These definitely need to be administered by a doctor; however you can find plants in the wild and possibly in your garden that have dissociative properties that allow short-term surgeries to be done without narcotics. Again, this just absolutely has to be done by a doctor, by someone who understands anesthesia and can do the job.

The reason I mention it here is because I know most of the people reading this aren't doctors, and sometimes you just need to have the information and know that something is a possibility. That way, when an event happens you can say, "Oh wait a minute, I know that we can use psychotropics and make this happen. Let me get my mushroom book…" I'm not advising that you go out and experiment with mushrooms and other items. What I am saying is that you should know that this is an option, and if it's something that interests you do research on it and get things in place, so that after a disaster you can go to a local doctor and say, "before things happened I did this, this, and this."

The next pain control method is exercise. Again, this depends on the type of pain that you've got. If you've got a gunshot wound, exercise isn't going to help. If you've got chronic pain, exercise may help considerably. Two examples of this are plantar fasciitis and lower back pain. With plantar fasciitis, the pain sometimes flares up because your foot hasn't been working through its range of motion. Sufferers can loosen it back up with exercise and stretching, not excessive exercise, because that can cause damage.

As far as the lower back pain, a lot of lower back pain is caused by belly fat. If you have chronic back pain and it's enough to bother you and change your lifestyle, it may mean that you want to consider exercise. I know this isn't anything new so I'm not going to spend a lot of time on it, just think about the fact that if you have pain and if it bothers you and if you want to get rid of it, exercise may be an option.

Nine Must-Haves

Next we are going to cover nine other must-have items for medical situations, and I am going to start off with something very simple: psyllium or Metamucil. Fiber is great because it can help both if you are constipated and if you have diarrhea. Now we've talked about diarrhea before, not necessarily being a bad thing, since it's your body trying to get rid of an illness. But if you have another situation where you absolutely cannot deal with it for a period of time, then Metamucil may be a solution. You absolutely have to get rid of waste, so constipation is a serious problem. A lot of survival foods may not agree with your system enough to allow for regularity, and one of the BENEFITS of MREs to some people is that they'll block the intestines up--so Metamucil is a great thing to have on hand.

Another thing is salt. Often times, when people are exerting themselves and drinking lots of water, they drink only water and they sweat a ton. This can result in a situation called hypernatremia, which is where the sodium levels in the body get critically low. When this happens, you pretty much feel like you want to die. I am saying that from having experienced it a few times, and basically you just want to curl up in a ball and shut your eyes and make it all go away. It's a very bad condition to be in and a little bit of salt can take care of it very quickly.

Tea Tree Oil is another great item to have. It's been shown in studies to have several antimicrobial, antibacterial, antifungal, antiviral properties. I want to encourage you to get the good stuff if you get it. If you don't like the scent or the taste, I suggest that you get Naioli, which is a type of tea tree oil that has different esters in it than the regular tea tree oil you're probably used to. Naholi is smooth enough and sensitive enough that it can be used around babies and it doesn't irritate them and make them upset. It's incredible stuff.

The next item is baking soda; a combination of baking soda and salt is roughly what I use for toothpaste. I haven't used regular toothpaste in several years and I really-really like baking soda and salt based toothpaste, because I don't like artificial sweeteners. I don't like the taste of them and I like salt better than I like sugar. A little bit of baking soda can go a long way for brushing teeth. As a note, I get VERY regular dentist checkups and get great evaluations on my dental health.

Cinnamon oil is the next item you want to consider stocking up on; cinnamon oil has several very good properties. One of these is that the Institute of Infection in Kiel, Germany has shown that cinnamon oil will kill MRSA or the drug resistant bacteria that's in hospitals that's killing people. That's a phenomenal attribute of cinnamon oil and reason enough to keep it on hand. You can mix a couple of drops in a little aerosol bottle of rubbing alcohol and use it for underarm deodorant; the antibacterial properties and antifungal properties will help with underarm odor. It will also help with foot odor, with fungus in shoes, or funk in shoes, in

sleeping bags, in sandals; it's a great little tool to use and keep on hand. And you can put a drop or so with baking soda for cinnamon flavored tooth powder.

Next we've got Benadryl, and you will notice this is the only drug that I'm listing here, and that's because of how important antihistamines are. If you get into a situation where you're approaching anaphylactic shock, Benadryl may buy you enough time to keep your from going into anaphylactic shock. Another thing, one of the big exacerbating issues with allergy response is how the person views what happened emotionally, more or less. So if you've got someone who has an allergic response and they feel their throat tightening, the tendency is to panic, understandably. If you have a person who has an allergic response and their throat starts to tighten and you give them Benadryl, and regardless of whether or not the Benadryl works on the histamines, the person calms down, and their chance of surviving has just gone up.

I am a big fan of keeping Benadryl on hand, we keep it in all of our cars, and it is something that I would place a high value on after disaster.

Another item is chemical heat and cold packs, and I especially like the reusable chemical heat packs. The reason these are so valuable is that if you've got someone who is overheating, cold packs under the armpits is a very quick step in the right direction. If you are trying to make a fire and you are so cold that your hands don't work, a chemical heat pack may buy you just enough heat to help your fingers work. You can also stick the heat packs in coats to increase core body temperature.

An easy way to cycle the cold ones to make sure that you always have fresh ones with you is to occasionally use them when you're transporting groceries. Use the hot ones when you're bringing food to somebody else's house. Throw a chemical heat pack or two in with the food--not actually touching the food--but in the container with the food to keep it warm.

Next, a lot of people talk about drinking cranberry juice for urinary tract health, and one of the problems with that is the amount of simple sugar that's in cranberry juice. Even pure cranberry juice has more sugar in it than it needs to have to help with urinary tract infections. But if you drill down, the reason that cranberry juice works is because there is a specific sugar in it called D-Mannose. D-Mannose basically bonds with the walls of the urinary tract and keeps infections from taking that same spot, and so they just pass on through. This has been a true lifesaver for us. We went from dealing with UTIs on a fairly regular basis to being able to eliminate them in a matter of hours, or not having them at all. Again it went from a very serious issue to a complete non-issue very quickly. So if that's a concern for you, I suggest looking into and deciding whether or not you want to have D-Mannose on hand.

Another medical item to keep on hand is Vitamin D3. I am a huge proponent of Vitamin D3 both from the sun and supplementing. If you decide to supplement check Vitacost.com for drops and make sure that you're getting "D3" and not just "D".

Five Immune System Boosters

I am going to leave you with five tricks to strengthen your immune system. Most of them are things that you know, but it's always good to be reminded of them. Most things in life and most things in preparedness are simple, and what trips people up is the sheer number of simple things they've got to stay on top of. It's not finding a silver bullet, its staying on top of a million little silver BBs.

I am not sharing these as if you've never seen them before. I am sharing them with you because they are so important. First, get daily exposure to sunlight; the Vitamin D3 that sunlight will help your body produce is the best form of Vitamin D that you can possibly get. It's the most efficient way for your body to get Vitamin D3. Vitamin D3 is absolutely vital for your immune system, for inflammation response, pain response, and for mood. It's a very-very important thing to keep on top of.

Next is getting enough sleep. Ideally, if you need an alarm clock to wake up, you're not getting enough sleep, but most people's lives are such that they can't just give up using alarm clocks. So, what most people end up needing to do if they truly want to get enough sleep is go to bed earlier and try to catch up on the weekend. But that doesn't always work, especially if you're sleeping in to catch up, because while you do want to catch up, you also want to wake up the same time every morning.

So to the extent that you can, get enough sleep every night. One of the ways you can do that is to try to make sure that your sleep is uninterrupted, that your sleeping area is quiet, that your sleeping area is as pitch black as possible. Any lights, indicator lights, clocks, or any light coming in through windows might very well be interrupting your sleep. You may not think that the light is interrupting your sleep, but your body releases sleep hormones and chemicals based on light levels.

We have very few lights in our rooms, we can orient ourselves in our room, but we can't see our hand in front of our face, and it makes a huge difference in the quality of sleep that we get.

The next thing is to burn clean fuel in your body. Drink clean water, eat good food that your body likes and it won't stress your immune system as a result. Any time/energy that your kidneys, liver, etc. have to spend on processing substandard food is time/energy that it can't spend on helping you achieve optimal health.

This one is huge – wash your hands. I don't want to say go and wash your hands 20 times a day, but you should wash your hands whenever you are in a restroom (50-70% of people don't). Before you handle food or you touch your face, just try to think about all the germs you come in contact with everyday with your hands. You are not going to prevent all of them from getting in your body, and you really don't want to, because you want to build up immunity. However, you do want to wash your hands so you get large colonies of germs growing on your hands, because they will eventually get into your body.

Last, don't touch your face unless you need to, and that means resting your chin on your hands, which is a habit of mine. Rubbing your eyes, touching your ears, touching your nose, all sorts of things, the more you touch your face the more likely you are to spread infection from your hands into your body.

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Must Have Items in Psychology

In this chapter, I'm going to talk about psychology for survival and how to prevent post-traumatic stress disorder. These are two incredibly important topics when it comes to survival and preparedness. Psychological preparedness can mean the difference between life and death, perhaps more than all of the other systems that you've put in place. On that same note, the skills and knowledge you've learned will be with you whether you've got any supplies with you or not. So again it's just an incredibly important topic.

One neat thing about this chapter is that you are going to be able to take action on most of this stuff immediately after you've read through this information. You are going to be able to use it in the future without a whole lot of training or practice. Basically, you'll benefit from simply knowing a few fundamentals. There are a few things that you are going to want to practice, and I will go over those.

Mental Survival Strategies

So in survival there is a rule of threes and the rule of threes is that you can survive without food for three weeks. You can survive without water for three days. You can survive without air for three minutes, but there are many cases where you can only survive without a clear head for three seconds; that's why this is a huge issue. Let's look at a few examples; one would be if you are underwater and you breathe in, accidentally drawing water into your lungs instead of holding your breath. That's a case where boom!! You've basically eliminated/reduced your chances of survival.

Another example is panicking in a bad situation. Let's say you are somewhere where you are high up off the ground and need to balance. Perhaps you're in the middle of a violent physical altercation - if you don't keep a clear head you can be done very quickly. And another risk of panicking is that, quite frankly, you can have a heart attack. While you won't die immediately, you will essentially be walking dead if you cannot get outside help to take care of the situation. These are just some of the reasons why psychology is so vital in a survival situation.

The three keys to survival psychology are a positive yet realistic mental attitude, setting goals that you can follow to basically know that you have something to live for, and adequate sleep. Don't underestimate the value of sleep; it's huge. Now, when we talk about a positive and realistic mental attitude, the first thing I want to tell you to do is throw away your rose colored glasses. They are not going to help you. Being delusional will not help you in a survival situation. If you are trapped in the middle of a blizzard and you keep telling yourself, "Yay, this is great, we are on a beach. It's 90 degrees outside," it's not going to help your situation.

What you need to do is say I'm in a blizzard. I don't have adequate supplies. If I don't take care of things quickly I'm going to be in a world of hurt, so I better get moving. One thing to note;

there is a great book called the *Survivors Club*. In it, the author talks about how, during Vietnam, the one class of people who consistently died first in POW camps were the optimists. The reason goes back to the rose colored glasses and simply not having a firm grip on reality. People would say things like "If I just make it till Thanksgiving, they are going to rescue us at Thanksgiving." That would get them to Thanksgiving, but it wouldn't get them a week past Thanksgiving when rescue hadn't come.

The people who did better were the ones who said, "I'm just going to figure out how to make it through the day," or "I'm just going to figure how to make it through this week," and not saying that rescue is going to come. Instead, people who survived had the attitude that, "I'm just going to figure how to make it through, and I've got to do what I need to do. I know I don't have a set end in sight, so I better just pace myself. This is a marathon and not a sprint, and if I sprint towards Thanksgiving and there is no finish line then, I know that's not a good thing."

The same thing is true in a survival situation; you've just got to be realistic about your situation, accept it and deal with it. One of the ways that you can do this is to focus on what you do have some control over and what you can do to affect change in your environment. If it's after an electromagnetic pulse and there are no electrical devices working, you've got to just accept reality. That's something you don't have control over. What you do have control over is your attitude. What you have control over is what actions you take on a daily basis to improve your survivability. And another thing, something that sounds so simple, because it is truly that simple, is to practice being thankful. In a situation where you have illness in your family, or if you have experienced a loss, if you've got relationship issues, if you've got financial issues, or if you've got issues at work, it's very easy to focus on those and just let it drag you down. You already know that things like this can alter your attitude to one of negativity and bitterness. That's why it's so important to develop the discipline of being thankful for what you do have. I have talked with paraplegics and quadriplegics who practice this on a daily basis, and they are great people to be around because they are thankful for what they have.

I've talked with people who are in chronic pain who are thankful for what they have. It doesn't change the fact that they have chronic pain. It doesn't take away the pain, but it allows them to have a much fuller life by being thankful for what they do have.

Setting goals is a huge thing. There is a story that I like to share about a guy who crashed his plane in the desert; I believe it was the Sonoran desert. He survived for about a week or ten days walking through the desert with no supplies whatsoever. How did he survive? He should have been dead. The reason that he lived was because he was in the middle of a divorce and there was no way that he was going to give his soon-to-be ex-wife everything. He knew she was going to get half, so he just absolutely refused to die, and that fire inside kept him going.

Now that's not necessarily a good fire to have inside, and hopefully most of you don't have that fire inside, but you can have other fires inside. You can have family, you can have faith, or you can have patriotism. Who knows what the reason is going to be for you? Something has to give

more of a reason to live than to give up, because things get rough. Things get rough in everyday life and things get really rough in a survival situation.

Another great story that I love is about prisoners in Vietnam who practiced golfing in their minds while they were in their prisons. It sounds funny because it has been used as a punch line in so many movies, but they went to their "happy place." They went to their favorite golf course in their mind and played it, every single day, in as much possible detail as they could remember. They imagined the colors. They imagined the smell. They imagined how the wind felt. They imagined having good shots, bad shots they had to recover from, everything. Interestingly enough, some of these guys, one in particular, did very-very well when he got off the POW camp and came back to the United States and played golf, even though he hadn't touched an actually golf club in years.

This is also called disassociation; and you want to be careful with that when you disassociate, because you are basically ignoring reality and adopting an alternative reality in your mind. It can be good or it can be bad, depending on whether you keep it under control or not. Most importantly, you just want to keep things straight in your head, what is reality and what isn't reality.

There's another thing you need to have, and that is goals—but not just any goals, SMART goals. You want your goals to be Specific, Measurable, Achievable, Realistic, and Tangible.

Specific: Goals that have a number attached to them are wonderful, because it means that there is concrete time when you achieve the goal. You want it to be measurable and again numbers are great with this. For example, I want to be X weight by X day, or I want to have X gallons of water stored up by X day, anything like that.

Achievable & Realistic: If you say 'I want to have 20,000 gallons of water at my house by the end of the day today' and the only way that you have to get water is to transport it from a stream that's a mile away and all have got to transport it is buckets. It's not achievable (or realistic) and the end result of that is sure you are shooting for the moon and you are setting crazy goals, but you are not going to achieve them. And pretty soon your mind is going to realize that and it isn't going to give any significance to the goals that you set because it knows; it's been conditioned to know that you don't achieve the goals that you set.

Tangible: It's great when your goal is something that you can feel, touch, taste and smell. You want to attach as many of your 5 senses as possible to the goal (and the reward for achieving the goal) so that your mind begins to accept it's eventual reality as a given and any obstacle that gets in the way as a simple hurdle.

Sleeping in Survival Situations

The next topic we're going to cover is sleep. A lot of people think that sleep is an indulgent thing. They say things like "I'll sleep when I'm dead," or "Warriors don't need sleep," or "We'll

sleep when the battle is over." That thinking is really pretty ridiculous, even though it's done continually in the business world. I want you to read a quote from the article, "Ethical Standing for Command or Self Care." This is what they call the need for sleep.

> "It's time to critically reexamine a love affair with stoic self-denial starting with the service academies. If an adversary can turn our commanders into sleepwalking zombies from a moral point of view, the adversary has done nothing fundamentally different than destroying supplies of food water or ammunition. Such could be the outcome despite our best efforts to counter it, but we must stop doing it to ourselves and handing the enemy a dangerous and unearned advantage."

Granted, this is for soldiers during wartime, but we are foolish not to learn from and apply the lessons that our troops are learning in war, where the cost of a mistake is measured in blood, limbs, and lives. We can apply many of these lessons to our survival planning, and sleep is one of the big categories of lessons.

Most everyone accepts that if we go without food or water we are going to perform at a diminished capacity, so we either store up food and water or make plans to secure continual supplies. Likewise, if we go without sleep, we are going to perform at a diminished capacity and it doesn't matter what you do to try and get around it, the fact is you need sleep to perform at optimal levels.

Some of the things that a lack of sleep negatively impacts are; judgment, immune function, the ability to heal, the speed that your brain can think and the speed that your muscles can twitch, flex, and react. It takes your brain longer to realize that stuff is happening, i.e. latency, and it takes longer for you to react once your brain does realize what's happening. Sleep deprivation affects complex thoughts and motor skills. It affects memory, your ability to learn, and this is perhaps one of the most important things--it affects your mood and intrapersonal skills. Frankly you get to where you are not nice to be around, and you just can't function with other people as efficiently as you know you can with adequate sleep.

Now all of these things are bad from a survival standpoint. If you get into a post disaster situation where you need to be firing on all cylinders, you don't want your judgment hampered. You don't want your immune function hampered. You don't want your ability to heal hampered. You need all these things working at a 100 percent, and the way that you do that is to get enough sleep. It goes directly against what has become common thought. Common thought is you stay awake and push through and if you sleep you are weak. In reality, this is short sighted thinking.

Real life doesn't work that way; study after study has been done to try and get around this limitation that the human body has and it just can't be done. Militaries have done it, executives have done it, special operations forces have tried to get around this limitation of sleep and it just doesn't work. There have been some rare people who claim that anyone can sleep four

hours per night and function at a 100 percent, but in reality it just doesn't work out. There are a few outliers who are able to do that, but the vast majority cannot.

Almost all people who think that they are able to perform at 100% with limited sleep learn a quick lesson if they agree to do a sleep study in isolation. Within 1-2 days, their bodies revert to 7-9 hours of sleep per 24 hour period and their productivity skyrockets. 90-95 times out of 100, you'll start having shortcomings in all of these areas when you start cutting back on sleep or cutting back from quality sleep in an attempt to "cram more in" to your schedule.

Now let me put this to you another way; do you want to try and make it through a survival situation while you are drunk or while you are sober? Or, if you are partnered up with somebody after a disaster, do you want them to be drunk or sober? And here is why I ask this. If you go 24 hours without sleep it's equivalent to a 0.08 percent blood alcohol level which is legal intoxication in I believe every state in the US; and it's at or higher than the legal intoxication limits around the world.

So just think about that as your trying to push through and do an all-nighter. At some point you are going to have to make up for it. You may as well go out and have a few drinks and try and get stuff done, as to do it on no sleep. And you shouldn't excuse yourself or others from doing critical tasks while sleep deprived any more than you would excuse yourself or others for doing them while legally intoxicated.

A common "compromise" that people do is they try and cut back a couple of hours a night, saying that it won't hurt them and that the extra 2 hours adds a huge percentage of time to their day. In reality, this does catch up to them and it catches up quite quickly. Just cutting out a couple of hours of sleep at night for two to three weeks also puts you in that legally drunk category. I cannot stress enough how important it is to get sleep and how important it is on your performance, your physical performance and your mental performance, not only in a disaster, but also before a disaster.

Basically, being legally drunk puts you at 50 to 70 percent effectiveness. So if you are going with six hours of sleep at night, and you want a really quick way to get a 20 to 50 percent increase in productivity, all you need to do is sleep a couple more hours per night. You will lose a couple of hours of your evening, but the hours that you are awake you will be so much more efficient. It's absolutely amazing the difference that it makes.

If you've been sleep deprived for years, there's a good chance that you've learned to expect less from yourself than you used to—less energy, slower metabolism, worse memory, more dependence on caffeine, etc. It's up to you, but 100% of the people I know who have fixed their sleep habits have had life changing results.

Here's another thing to consider. One of the main ways that people try to overcome the need for sleep is with stimulants, which may work for very short periods, but doesn't work over the long term. In the short term, there are some benefits—like if you are trying to stay awake for a

24-hour or 48-hour period of time, but once you start getting beyond that, the brain and the body just needs sleep. I wanted to cover this because there is a lot of talk about stimulants, and they are very widely used and abused, so I'm going to go over a few here:

Nicotine is very ineffective for staying awake and one of the proofs is the number of people who fall asleep smoking and set their house on fire.

Caffeine does work very well, especially if you are trying to stay awake for an all-nighter. It will help keep you relatively effective, not incredibly effective, but more so than if you don't do anything. The downside is that caffeine has a pretty significant impact on the adrenal system and blood sugar levels. For a lot of people they end up having less energy over a four to six hour period with caffeinated drinks than if they wouldn't have done anything at all. And a lot of the reasons for that is because of the sugar they have with their caffeine. It's not a real clean drug to use, as it taxes the kidneys and liver.

There many downsides to caffeine—jitteriness with excessive amounts, addiction, inhibition of melatonin release for sleep, taxing of the adrenal glands, it's acidic nature, increased pulse rate and blood pressure, and more. A lot of people in the US use caffeine, and I'm not saying it's horrible to use. In fact, I use and enjoy it on a daily basis (in moderation). It's just very easy to abuse and it's very easy to take it in quantities and timing that hurt other systems in your body.

Another drug that has been used for years by the military and civilians for staying awake for long periods of time is dextroamphetamine or Dextrodrine. It does its job well. It does keep you awake and effective. There are a few problems with it; one is addiction. Another is that it affects mood and interpersonal skills, similar to the way that sleep loss does. It makes you very effective at tasks, but limits your ability to understand the human element of decisions—put another way, it tends to make people prioritize task completion at the expense of relationships with other people.

So, yes, you can get stuff done with amphetamines, but you might make decisions that hurt people around you and cause long term consequences. It's a truth that you need to understand before you decide that you want to be able to use amphetamines to stay awake for 24-48 hours straight.

A very common amphetamine is Adderall--one of the several amphetamine-based ADD and ADHD drugs. Adderall is basically a combination of four amphetamines including dextroamphetamine. It has a lot of the same problems: There is a crash at the end. It causes relationship issues. It causes hyper focus at the expense of the human element, and you still need sleep afterwards. If you stay awake for two days on it and miss two sleep cycles, the third sleep cycle when you actually do go to sleep will oftentimes not be enough to replace the two nights that you missed, but you are going to have to sleep a significant additional amount to normalize back to an optimal level.

So Adderall isn't something that you should use on a sustained basis to avoid sleep (although many do). You can use it to stay awake, which is what some people do. You really can't successfully use it for extended periods of time to avoid sleep.

Modafinil and Provigil: One of the more popular drugs right now for alertness and being able to work for long periods of time is Modafinil or Provigil. These are used not only by executives in a lot of companies especially tech companies, but by pilots and lots of different military personnel who are over in Iraq and Afghanistan. This drug is not addictive, which is good, but still you can't just avoid sleep. Your brain has to have sleep to regenerate. You need it to replenish hormone levels. You need it to replenish other chemicals in your brain and you just can't avoid it.

You can postpone sleep, and if you are going to use any of these, Modafinil and Provigil are probably the cleanest ones to use with the fewest side effects. But these will not eliminate the need for sleep. You still MUST get good solid sleep for optimal performance levels.

So what is the solution? The best solution is to actually get enough sleep, which you can do with naps if you can't get it all at once at night. Or, ideally, you can do it with a solid seven to nine hours of sleep at night. If you can't get a solid night of sleep and need to nap, there some tricks to squeezing the most benefit possible out of every sleeping and napping minute.

One of them is to sleep when your body wants to sleep. A lot of times that is going to be early morning (after midnight) and early afternoon (after lunch). Another thing is to be aware of is that if you sleep for much more than 20 or 30 minutes at a time, you are going to have what's called sleep inertia. Everyone's familiar with this when you wake up from a long nap, you're groggy, and it takes you awhile to get going.

So what you want to do is: if you have a choice between taking an hour and a half nap during the day or three 20 or 30 minute naps, take three 20 or 30 minute naps. If you need to wake up and perform right away, you want to take a short nap, whereas you won't be able to with a longer one. This napping technique doesn't eliminate the need for sleep, but it does improve performance, as well as letting you go longer periods of time with less sleep.

Ideally, you are going to have four factors in place when you sleep--actually six—to get optimal rest from your sleep. The two I'm not going to spend much time on are proper hydration and nutrition, both of which are important. Aside from those two, the conditions that you are looking for are a dark room, a quiet room, a comfortable temperature, and safety. Safety is important, so that you can actually switch your mind off and go to sleep. It's really important to have a dark quiet room. Personally, we started using blackout shades a few years ago for our sleeping areas and it has made a dramatic difference. As a sidenote, in the summer it means the difference between our kids waking up at sunrise and sleeping an hour or two past sunrise.

Now one thing that everyone knows is that, even if you have an ideal sleeping setup, during a time of crisis your mind may race and keep you awake. I call those the demons that keep you

from sleeping. They maybe from past engagements if you are a soldier, police officer, or do contract security. Or it could be from fire and EMS experiences, or from any traumatic event. In most survival situations, there is going to be a trauma that has happened at the beginning that put you in the survival situation, followed by others.

It could be as simple as a fire burning down your house, along with almost everything that you own. Whatever it is, it's important to know how to use tools to turn this off without using drugs or alcohol because drugs or alcohol will let you shut your eyes and keep them shut, but they won't necessarily let you get the sleep that you need, or the deep stages of sleep that help the brain and body regenerate as quickly and efficiently as possible.

One great coping mechanism in a time of crisis or high stress is free writing. Free writing is basically just sitting down with a pen and pad of paper or sitting down at your computer and getting all of the thoughts in your brain out on paper. It could be the things that are bothering you. It could be good things, or it could be bad things, just whatever is front and center of your mind. Write it down, and then next to it write down the feelings that you have got about it and the thoughts you associate with it. Just the process of organizing your thoughts enough to write them down helps the brain to cope with extreme, stressful, or complex situations. It's really amazing in its simplicity and effectiveness.

The next technique is also very simple and very powerful; it's deep breathing. Deep breathing consists of breathing in using your diaphragm, and when I say using your diaphragm, what I mean is that you want your lungs to expand downwards, not your chest to expand upwards and outwards. One way to tell if you are breathing properly is that your belly will go outward when you are doing deep breathing. Many people, even in the middle of a stressful situation, find that they can benefit by laying down and doing 10 to 20 deep breaths where they breathe in for a three for a count, hold it for a three count, breathe out for a three count, in for a three count, hold for a three count, and blow out for a three count. If you have a military or tactical background, you will recognize this as David Grossman's "Combat Breathing."

In many cases, simply deep breathing 10-20 times will be enough to help people fall asleep without anything else. One of the reasons for this is that your brain is focusing on the technical aspects of breathing, which is a distraction from the current stressor. Another factor is that deep breathing oxygenates your blood, mind and your muscles, giving you a state of well being that lowers your defense system and lets you get to sleep.

Meridian Tapping

This next technique is absolutely incredible, and I'm going to go into more detail on it because of how important it is. It's very effective and it's somewhat controversial. I'm going to start out by saying that is one of the craziest, wackiest, and hokiest things I have ever seen and I really didn't want to talk about it too much before this course. The reason I'm discussing it is because

of how well it works, regardless of the fact like it doesn't look like it should. In fact, it looks kind of ridiculous.

Two popular names for the technique, or set of techniques, are EFT or the "emotional freedom technique" and TFT or "thought field technique." Both of these have aspects to them that I don't necessarily agree with. It's hokey enough to start with, but there are some parts that I just won't do. I have not found any drop-off in the effectiveness by getting rid of the very hokey parts of it.

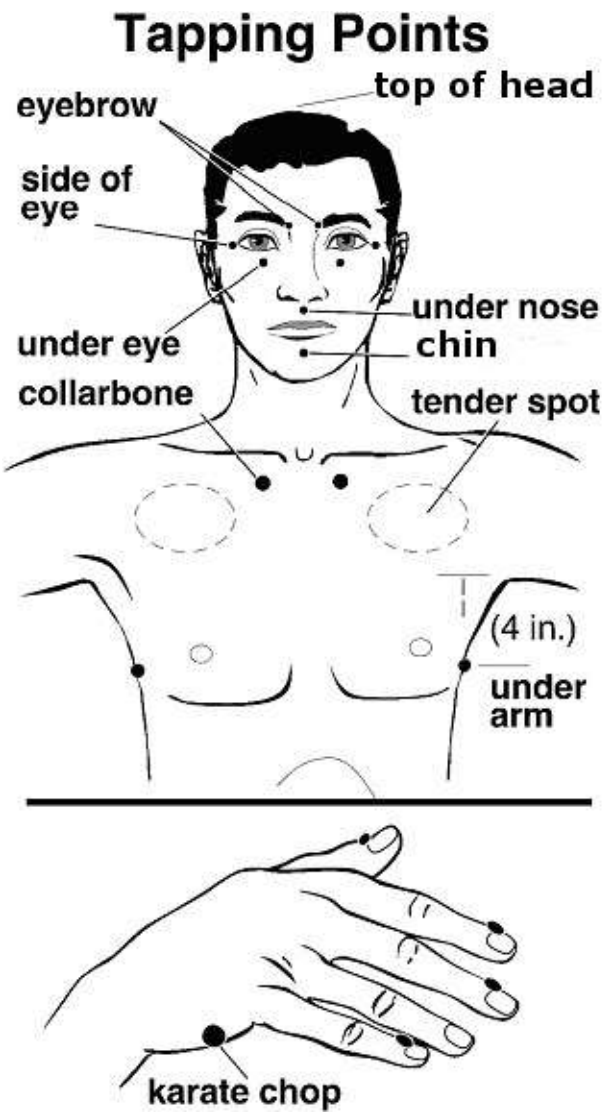

Figure 44 - Illustration of tapping meridian points.

At the core of meridian tapping, what you do is you tap on meridians while thinking about whatever your biggest stressor is. The meridians are acupuncture and acupressure points. There is no magic behind it—it's just the way the body is wired. I don't necessarily agree with Chi or any of that stuff, but it doesn't change the effectiveness. There are several basic sequences that you can do and a very basic way to do it. The graphic to the left demonstrates one popular sequence.

I will give an example; let's say there was a terrorist attack that had a significant personal impact on your life--like you lost a good friend, or the economy crashed, or the electrical grid went dark. Whatever it happens to be, you want to get as focused and granular with the stressor as possible. You may end up doing these exercises a few times for a few different things. However, after you've tapped the points, mostly on your face and head for five to 10 seconds, each in order, you will probably find relief.

It's a fairly rapid rhythm, and again you want to do it for five to 10 seconds. What you want to do is tap the eyebrow on the inside by the bridge of the nose, followed by the side of the eye. Then, under the eye on the bone, the pressure point under the nose, and the soft spot right below the collar bone about an inch inside the sternum. Next, do the under arm spot and then the karate chop. You can do the karate chop point of one hand hitting the karate chop point of your other hand.

Now again it does seem quite odd and I have been skeptical every time I've successfully used it over the last 9 years. It works for me and it has worked for every single person who I've suggested it to who tried it. If I hadn't had the great history and experience with it that I do, I wouldn't even think about sharing it with you here.

After you do the karate chop, you want to go back to the point that's under the collarbone and one inch outside the sternum and keep tapping on that.

While you tap on that, you want to shut your eyes and look back and forth between down to right and up into the left, making a diagonal. Then do the other diagonal, making "X"'s. After you have done that 10-20 times, you are going to roll your eyes counter clockwise, and then roll them in the other direction clockwise. Then hum five seconds of any tune, "Happy Birthday," "Mary had a Little Lamb," whatever you want it to be. Count out loud to five and then hum another five to ten seconds of the song.

Again, I can't say this enough how odd it seems. I can't say it enough how wacky it seems. I can't say it enough how much I don't understand how this works, but I *know* it works and it has worked for thousands of people. In my case, I didn't believe it would work and it worked. In most of the people that I have introduced it to, they didn't believe it would work. It worked. You don't have to believe in it or understand it for it to work. It just does.

Here are some of the finer points of it. You want to focus on the specific thing that's causing you anxiety, to lose sleep, or whatever it is. Many of the people who teach the emotional freedom technique and TFT suggest that you say affirmations while you are doing the tapping, but I can't bring myself to do it. It's too corny and it works without using them. The affirmations they want you to say or something like, "Even though my house burned down, I deeply and completely love myself.' While it's true that I do love myself, I don't have a need to say it. If you do, then go for it.

The technique works without doing that, so I have just completely stopped doing that for the last several years and I have talked with instructors who have also stopped doing that because it just didn't feel right to them either. What you are going to find is that if you use the EFT techniques, you are going to find that it immediately helps you to relax and eventually sleep, despite stressful conditions. Normally, if you would rank the severity of a negative emotion that's keeping you awake on a scale of 1-10, EFT will help people go from an intensity of 8-10 to an intensity of 2-4 in a couple of minutes.

EFT can help you take care of multiple issues by just working through one issue at a time, and then the next, and the next, until your brain has quieted down enough that you can drift off to sleep. Again, I don't know why this works, and furthermore I don't believe it should work. I just know it does and it's meant being able to go to sleep without drugs or alcohol for many, many friends of mine who have dealt with very traumatic things. If you are soldier, it's not uncommon thing to have dealt with nasty, nasty stuff and you understand the challenge of turning off the demons at night.

This is the way that I have been able to help a lot of friends to sleep at night without drugs or alcohol, and to do it in minutes. It's very powerful. Personally, I have used it for dealing with stressful issues. I have used this before free diving to slow my heart rate. I have used it before doing precision shooting. I have used when I had had an allergic reaction to slow my heart rate, and actually slow down or stop the histamine response. It wasn't an anaphylactic type allergic reaction, but it was an allergic reaction that had predictable results. I was able to counteract them by using EFT. Finally, several years ago, I researched using EFT to trigger endorphin releases at-will on multi-hour runs.

Normally it's called runners high, and normally it just kind of happens or doesn't happen. It's not very predictable when it happens naturally, but by using EFT you can actually make it much more predictable. And once I get that endorphin release, I can run extra hours. So it can be a huge, huge advantage or benefit when you are doing endurance events. A site that I want to suggest that you go to is EFT.Mercola.com. They do talk about saying affirmations. They have a slightly different basic recipe than what I've discussed, but the fundamentals are all there.

There are a million ways to skin this cat and a lot of it depends on whom you are talking to. Whether they are trying to brand the EFT for their particular purposes or whether they are just trying to tell you the most effective way to make it work. I don't really have a horse in this race. I just know it works and I like it a lot, and I know that it has helped several friends of mine and I know that it can help you as well.

Post-Traumatic Stress Disorder

Pretty much anytime you have a disaster or you have found yourself in an extreme survival situation, it will cause a psychological trauma to one degree or another. If you don't deal with it, PTSD can disable you. It can take you to a situation where you need drugs or alcohol to go to sleep at night. It can affect your day-to-day life. There have been several names for it throughout the years--shell shock, battle fatigue, PTSD, etc. They are basically all the same thing. These are un-dealt with traumas to the brain, not physical traumas, but psychological traumas.

This condition is not only brought on by combat, but combat is the most common exposure that we have to the terminology. PTSD can be brought on by an accident, like a car accident or some other accident where you get hurt or somebody around you gets hurt, or if you see somebody die or get hurt very badly. After a disaster, or after a loss either of a loved one, post-traumatic stress disorder can kick in immediately, or six weeks later, six months later 18 weeks later, 18 months later (those are specific time periods when PTSD tends to pop up…not simply random lengths of time.) It can kick in on many different time frames. So it's something that you want get in front of and get control of before it sneaks up on you if you have experienced a traumatic event.

Fortunately, it's very simple to do this and in fact it can help reduce PTSD incidence by up to 80% according to studies of first responders after mass causality incidences. It's as simple as going through the techniques I've just shared with you for getting to sleep after a traumatic or stressful event!

Another thing I that I want to suggest if you are interested in going further with this is getting CISM certified, which stands for Critical Incident Stress Management. CISM is basically psychological first aid for post disaster incidence. It doesn't mean that you are a doctor. It doesn't mean you are a psychiatrist, it doesn't mean you are psychologist, and it doesn't mean you are a counselor. This is first aid. It's not the heavy lifting, it's the initial work, and sometimes first aid is all people need. And sometimes, if you don't get first aid you bleed out.

Sometimes first aid is what you need to survive until you get to a higher level of care, and it's the same thing with psychological incidents. Sometimes first aid is all you need. You can do a search on Google for CISM training or critical incident stress management training and find what's being offered in your area. A lot of times it is going to be through churches or other entities that are dealing with disaster recovery or disaster preparation.

This section on sleep and psychology is an incredible force multiplier if you take the time to understand it and use it. Efficiency, productivity, and judgment are all affected by psychological states. If you are in a group of six people in a survival situation, would you rather be teamed up with five lifeless, energy sucking emotional vampires, or would you rather be with five positive, can-do people. Which one you are with can easily determine whether you live or die; it's just that important. To stack the deck in your favor, try and pick out people who are positive, can-do people ahead of time and practice the art of self and team encouragement.

On that note, it's also incredibly valuable to be able to alter other people's psychological states. What I mean by this is to focus on what influences your mood and then figure out how you can use that knowledge to influence others. Learn to try and influence others from being energy-sucking emotional vampires to positive, can-do people who are going to increase your survivability. After chemical withdrawl, depression from loss due to the disaster, pain, and lack of sleep, one of the biggest things to watch out for is the blood sugar levels of the people around you.

Watch their eating habits. Are they eating sugary foods or healthy foods? Watch to see if they're getting enough sleep at night? Get them to sit and talk about goals. Get them to practice the art of gratitude. Encourage people, respect them, and let them know that you appreciate them and that you think that they are vital for your group's survival. It's much easier to pull people down than it is to bring them up, but by combining these factors: the food, sleep, goals, gratitude, encouragement, and respect, you have a better than descent shot of turning some around and making them a true asset to your team.

This is a key tool that you can take from this book and put into practice immediately. You can practice it with family members, friends, co-workers etc. If it doesn't feel natural at first, that's

because it's a discipline and it's something you've got to practice and do regularly but it's worth it because it makes the sun brighter for you and everyone else around you. It makes the days go by better and it makes bad times much easier to go through. To top it off, it's free…and a solidly developed skillset at helping people psychologically could put you in as good of standing as someone who has solid hunting, medical, or other skills that are more traditionally valued for survival situations.

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Security Review and Recommended Training

In this chapter we're going to discuss a wide range of security issues, including deception, defense and destruction. I'm also going to share recommended trainings, both local and training that you travel for. Let's get started.

There are a few different aspects to security that I want to cover. I'm going to focus on concepts that take little to no money more than "doo-dads". The first concept is deflecting attention using deception, which is basically making yourself not look like a target...or like less of a target than your neighbors. The next concept is early notification so that you have more time to respond. The last concept is twofold: Passive defense that prevents entry, in case they decide they want to try and get in; and kinetic defense in case they actually do get through your first line of defenses and come into your house and make it obvious they intend to do grievous bodily injury and are willing to do harm in order to get what they want.

Deflecting Attention

First of all, I'll begin with deflecting attention. For this, you'll need to understand a concept called the baseline. In short, the baseline is what is normal for your particular area. If we are talking about your home, the baseline is going to be what is normal for your neighborhood. If everyone has a 1500 square foot house and there's a single 4000 square foot house in the middle of them, the 4000 square foot house stands out because it exceeds the baseline look for the neighborhood. If everybody in the neighborhood has a Chevy, Ford or Dodge and someone has a Maserati, the Maserati is going to exceed the baseline. You can go on from there, but it becomes fairly obvious fairly quickly.

On the other side of this is, if the baseline is that everyone has normal cars, and you've got a jacked-up, armored, and camouflage SUV, that doesn't meet the baseline either. Neither does it when everyone in the neighborhood has open front yards and you've got a six-foot tall rock or brick fence with concertina wire on the top. If you want to stray from the baseline by appearing to be a fortress, you'd better be darn sure that you truly have a fortress, and not an M&M with a thin candy shell and a soft interior.

Basically, what you want to do is try and blend in, ideally making yourself less of a target than your neighbor. That way, if a thief is looking for a target of opportunity in your neighborhood, it doesn't look like you've got stuff that they want. In addition, you don't look like the wounded gazelle that's easy to get. The funny thing about the wounded gazelle and the baby gazelle in

the wild is that normally they don't provide the most meat. The reason that they get eaten is because they provide some meat with the least amount of effort. You don't want to be the wounded gazelle. You also don't want to look like the meatiest gazelle out there. What you want to do is just kind of blend in and not really be spectacular in any way to a thief.

What you want to do is compare yourself to the baseline, look at your neighborhood through the eyes of a thief, and see if you are the target that you would attack. Hopefully you're not. To take it one step further, make a list of the houses on your street or in your neighborhood that you would rob first if you were a thief. The goal isn't to pick up a second income knocking off your neighbors, it's to make sure that your house isn't one of the most desirable houses.

Some of the things you want to look at are the cars that you drive, and specifically the cars that you park outside of your garage. What do people see when you open your garage? What about the clothes that you wear? If you are incredibly flashy, or if you are wearing gold jewelry like Mr. T or a WWF fighter, that would make you a target in my mind. This also applies to the toys that you have--these could be an excessive amount of high dollar kids toys, but more specifically what I'm talking about are adult toys, like motorcycles, 4-wheelers, boats, things like that. Big screen TVs and high-end computers that you can see through windows also fall into this category. Take an inventory of things that a thief might see value in and would be worth attacking your house for, as opposed to someone else's.

The next consideration is trash discipline; when you get new items, it's a very smart idea to cut up or tear up your boxes inside of your house so that they fit into your trash or recycling bin. Basically, what you want to do is have it so that as people are driving by they don't say, "Oh that guy has a new big screen TV. I know where I would go if I wanted a big screen TV to pawn."

The other thing is making it too obvious when your home is empty. Almost everyone leaves home occasionally, for family outings or for vacations or whatever. It's very rare that you have a home that is never unoccupied, but it does happen. Here's the thing; you don't want to announce when your home is empty. Though it might seem like a nice thing to do, you don't want to go around the neighborhood and say, "Hey we're going to be out of town for a few days." If you do have a trusted neighbor, which hopefully you do, just tell them you are going to be gone and ask them to pick up any fliers or other door-to-door trash that gets left on your door or doorstep. That way it's not as obvious that you're gone, you're not broadcasting the news that a thief could get in and have a wide open shot at your belongings for an extended period of time.

Early Notification

Figure 45 - Early notification devices. Left: Six-sensor alarm with remotes; Middle: Motion detector with remote control; Right: Single door or window alarm.

The next topic I'm going to cover is early notification. I am going to discuss a few effective off-the-shelf components that I picked up at Harbor Freight. In my experience, Harbor Freight doesn't have the highest quality materials, but what they do have is very inexpensive items that perform quite well for their cost. They aren't great but they do work. They are definitely better than nothing. I suggest that people look at Harbor Freight for BARE BONES security components. It's a great place to try products out, then when the cheap ones wear out, consider upgrading to higher quality products. Most of the stuff that you find at Harbor Freight you can also find at Radio Shack, and definitely on Amazon, made by different companies at slightly higher quality almost always higher prices.

The set up in the photo above is a six-sensor alarm with remotes. They have adhesive tape on the back and you can stick these sensors on windows and doors. If any of these get tripped, an alarm goes off and tells you which sensor is being tripped. It's a good little basic setup, and it's in the $20 to $30 range. They don't go to a central alarm in your house or to a monitoring service, so they probably won't do much to deter a thief when you're not home—they simply give you a little extra time to respond if you are home and someone tries to break into your home.

The next item in the photo is a motion detector, and it has a remote control. One of the ways that we use this fairly regularly is when we're traveling by car with valuable items. We will stick this unit in the car while we're sleeping overnight (if we are sleeping in a motel where we're close to the car.) That way we don't have to lug everything into the hotel and make it obvious what we've got with us. We can just leave stuff in the trunk or cover it up in the back of the SUV and have this thing armed so that if someone does get into it during the night we know right away. We also use this in our garage--it's a great little setup. This motion detector does plug into the wall, but you can also power it with a 9-Volt battery for quite a long period of time. Other models from Radio Shack use AA or D batteries, depending on the model.

The last item in the photo is a single door or window alarm. There are a few reasons why I like this one. This little thing costs about, it's either $3 or $4 at Harbor Freight, and you can get them pretty much anywhere that sells alarm components. It has both a chime and an alarm function.

One interesting thing about these cheap alarms is that I'd suggest buying them, regardless of what kind of alarm system you have or anticipate having. Personally, I use the door alarms when I travel. I simply set the two components on the ground in the path of the door in my hotel room. (This is a tip that I learned from the late, great, Ron Hood) Our kids are the age where they can open the door in hotels and they are not old enough to always make good decisions. So we can set it on chime mode and if the door opens in the morning while we're asleep, we know it.

I also usually have a set on my tactical vest to use as a distraction device. If you find yourself in a situation where you're defending yourself from a home invader, pull out the alarm, flip the switch, and roll it across the floor like a flash-bang grenade. The 120 decibel siren won't win the fight, but I've proven it's effectiveness as a distraction device in dozens of force-on-force training interactions. In a fight—whether it's with empty hands, sticks, knives, or firearms, sometimes gaining a fraction of a second advantage to be able to successfully start executing your plan means the difference between success and failure.

There are a couple of other more obscure, uses that I have found for them as well. I have used it as a distress beacon doing search and rescue drills. The other benefit is it can cover up your movement, and if you're in a position where it would be more advantageous to cover up the sound of your motion than for you to hear somebody else's motion, this could be just the tool for that.

Figure 46 - Left: Other options for early detection. Left: Pressure mat from Harbor Freight; Middle: Jack Russell Terrier alarm watchdog; Right: Doberman Pinschers actual guard dogs.

The next item on my list is a pressure mat. The ones available from Harbor Freight are really almost too sensitive to be useable with the alarm. What I have done when I've used them is one of two things. The easiest is to disconnect the alarm and hook up a light bulb to it, and then you still have the benefit of the early detection but you don't have the annoyance of all the

false alarms, or the audible annoyance and your adrenaline level getting cranked up unnecessarily.

Next would be a watchdog, like the little Jack-Russell Terrier in the photo. Watchdogs are going to *watch* people take stuff out of your house; they are going to *watch* people break in. They are going to *watch* people do whatever they do. They are going to bark and they may nip but they are not exactly a threat. What they do is they give you advance warning so you can respond to a threat faster, and a few seconds can make a huge difference in a fight. What you want to do is look at smaller dogs like these as an alarm, not necessarily as a deterrent. However, it is a deterrent in a sense that people don't want to be detected. It's not a deterrent in that they think the dog is going to hurt them.

The next level up from this of course is an actual guard dog that can not only warn you when people are coming, but also take care of business for you if they get into your house.

Improvised Alarms

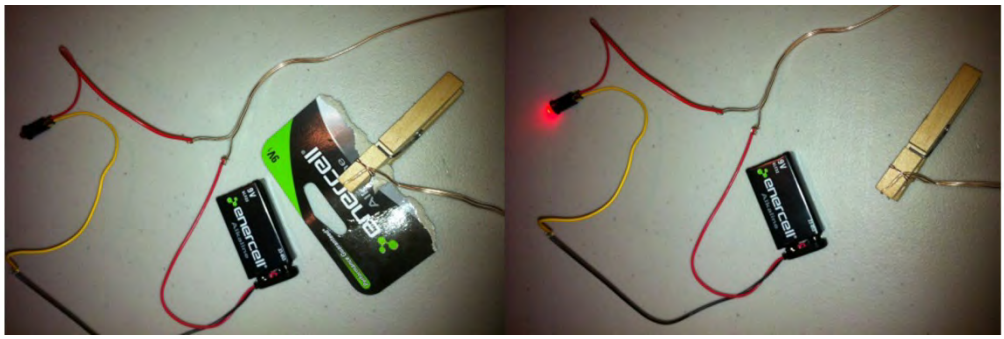

Figure 47 - Improvised Alarm made of Clothespin, a 9-volt battery, light, string and trash.

In the photo above is an improvised alarm I want to share with you. It's made from a clothespin, a 9-Volt battery, a light or buzzer, string, and some trash. The uses for it are extremely broad--you could probably write an entire book on them.

In a nutshell, it works like this; you take a clothespin and you wrap wire around both parts of the wooden clothespin, and when the clothespin is pressed together the wire leads will touch each other. This will act as a switch, closing the circuit. In this case I've got a 9-Volt battery and an LED light with a resistor (built in) on it. I've got a piece of cardboard in the clothespin between the wires preventing the circuit from closing. Once I pull out the piece of cardboard, either with a string, rubber band, shoe lace or something else, then the light turns on. This could happen because someone opens a door, drawer, or crosses a tripwire.

The way you use this is that you would secure the clothespin to something and you would secure the piece of cardboard to something else, and when a person, a door, an animal

whatever tugs on the cardboard and removes it from between the wires, the wires connect and your circuit closes, and whatever you have hooked up to gets activated. You can substitute a buzzer for a light--it really depends on what you have in your environment and what's easy to get. You can buy the stuff ahead of time. Again it just depends on how you want to do it.

Here's a closer picture of the clothespin,(photo_) so you can see what I'm talking about with the wire being wrapped around it, and cardboard not being between it. As the spring pulls the ends of the clothespin together, it makes the wires touch each other and close the circuit.

Again, here is a larger image with the clothespin, the battery leads and the light. And there's the clothespin with the wires. (photo)

A couple of ways you can modify this: one of the best ways to modify it is to put thumb-tacks in between the ends of the clothes pin and wrap the wire around the pin part of the thumb-tack. This way, the head of the thumbtacks will be touching each other, which makes a very nice smooth surface to pull items out from between. It basically gives you a little bit smoother, more predictable, and more durable switching system. You don't have to use the thumbtacks for this to work, but it can help make this crude device a little more refined.

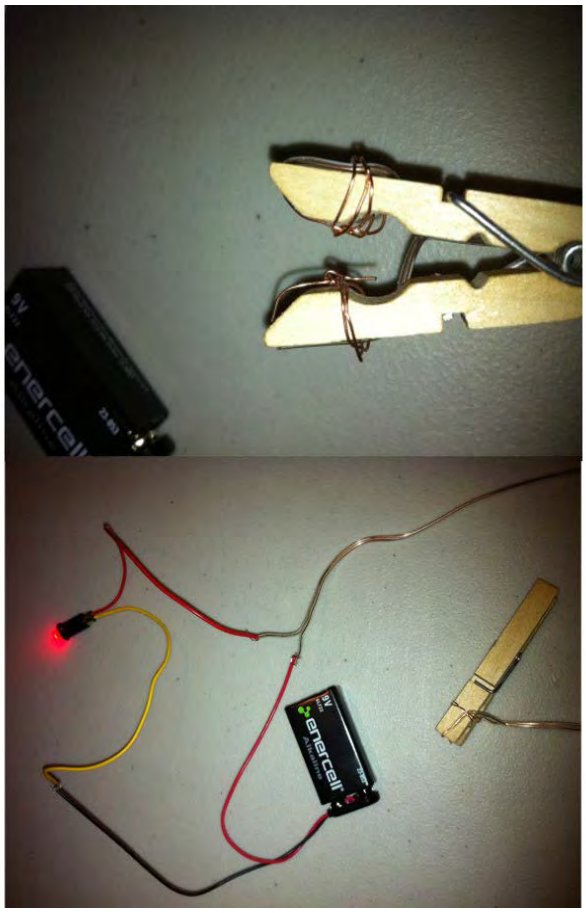

Figure 48 - Top: Closeup of clothespin; Bottom: Closeup of battery lead, light and wires.

In addition to a buzzer, one of the ways I used this a lot when I was a kid was to hook it to model rocket engines, and electric igniters. I would use this switch, a little PVC tube and a model rocket engine to make little trip flares that would be erratic and kind of go all over the place. But I used them for all sorts of fun stuff. I used them with friends, I used them with hunting, and this little trigger works great. Was I having fun? Absolutely. Is there a practical/tactical application? Absolutely.

Another similar switch can be made using a mousetrap instead of a clothespin. Again, you can use a thumbtack and set the metal bar of the mousetrap to slam down onto the thumbtack to complete the circuit. The uses for this are as varied as your imagination can come up with. You

can use it on game trails, you can use the model rocket engine igniters, you can light fireworks with it, anything that makes noise or lights up. The neatest thing about it is that if you travel a lot, these items can be purchased almost anywhere and they don't raise any eyebrows. Clothespins, light bulbs, and 9-Volt batteries are pretty innocuous (and you don't REALLY need the 9V clips, like what I show in the pictures.)

Passive Defense Tactics

One of the biggest points of weaknesses on a traditional house is the fact that screws are used on the doors. Now, I have to back up a second and say that most houses in the U.S. are not defendable. You give me a dump trunk, or a semi, or even a pickup, and I will just ram through the wall of any house that I want to get into. Whatever you do to your door, it isn't going to affect me at all. If your doors aren't vulnerable, I bet your windows are. If your windows aren't vulnerable, I bet your walls are. If your walls aren't vulnerable, I bet your roof is. Etc…

That being said, most attacks and/or robberies aren't that determined and committed. What they are doing is looking for easy prey. Again, they are looking for the weak and injured gazelle. You don't want to be the weak and injured gazelle. If somebody decides that you look like a good target or they are just going door-to-door looking for weak or unlocked doors; you want yours to be secure. One of the ways you can do this very easily is to replace the screws on your door with long screws that actually go into the doorframe, otherwise known as the header. In most cases that's going to be a 3.5" to 4" screw. That strengthens your door from being able to be opened with a strong shoulder, to taking a significant number of blows to get through. Here's the key to this—you can go out and buy a $70 deadbolt, or two or three, but if you don't tie it into the door frame with good screws it doesn't do you any good at all. That's because the weak part is going to be the wood that you screw the deadbolt into. On the other hand, let's say you use long screws for the deadbolt and you've got short screws for the hinges on the other side of the door. Well that becomes your weak spot that's going to break. So you want to replace those screws as well.

Another great passive security tactic is window film, and this could be generic 10 or 12 mil security film, or it could be high end security film from 3M. It's going to cost about $9-$10 per linear foot, so if you have a window that's four feet tall it's going to cost about $40 to put that film on it. It doesn't make it burglar proof, but what it does is create a film so that if somebody hits your window with a hammer or a rock it's going to break, but they can't reach their hand in because the film will hold the window together. It basically causes quite a bit of trouble for them getting in with using simple means.

The next passive tactic is to own a dog; we've already talked about those.

Motion lights are another great one, because if any good people are nearby when the light turns on, their eyes are drawn to the light. If you've got them set up correctly, anyone who's in the area that trips the motion sensor is going to be lit up by the light. When you combine those two factors, it draws people right to intruders. So that's another easy one, and actually the combination LED and solar security lights have gotten good enough now to where they're worth using. They aren't going to light up an entire yard, but they are good, solid pieces of equipment now.

We've bought several of the $50 models off of Amazon. Admittedly, the cheaper ones aren't that high of quality. The panels are under-sized, and the detectors are wonky. That being said, when you buy one and split it up into its individual components, they're a good deal, even when they don't work right for their intended purpose. What you're getting is a solar panel that works as a battery charger, a low voltage motion detector, and a bright LED light that can be powered with ordinary AA batteries if the rechargeable ones die. In fact, most solar/LED security lights have an "emergency" mode so that you can use them as your primary light source during a power outage.

The next thing is a door stop, just those little wedges that you stick underneath the door to keep it from closing when you've got a self-closing door. You can also stick it between a door and the sill of the door to jam it shut. You can also use shims if they're the right size and you've got the right spacing around your door; they will essentially jam it shut. (If you've ever "pennied" a door, you understand the power of a wedge in a door) And the more someone pushes against it, the tighter it gets. You can use those in hotels too; it's a great solution for keeping doors shut on the road, when you don't have any real security.

The next thing is a sheet of plywood for securing windows and even doors. This, of course, is great for hurricanes and it is possibly great for after a disaster, but it's going to draw people's attention to you when your house has plywood on it and everyone else has windows. So you have to make a judgment call on whether you want that attention or not. If everyone in your neighborhood is using plywood, then you'll want to be using plywood. If the situation is bad enough, you COULD use plywood on the inside of the house, but that's a judgment call that you're going to have to make on a case by case basis.

Figure 49 - Securing doors. Left: Buddy Bar Door Jammer; Right: Katy Bar.

Next, I'm going to discuss two of my favorites. These are simple, quick, and effective methods of securing doors. I don't use either of these in the exact form that I'm showing you, but I want to show the concepts to you in this form because it may be the best way for you to get something in place quickly. You can simply go to the websites of the companies that make them and order them and have it delivered in a couple of days.

The Katy Bar goes across the door and basically keeps the door from opening; you just cannot open it. It's very secure if you have it screwed into the frame of the door. The Buddy Bar Door Jammer is another good one. There are some knock-offs out that, but I haven't had good success with them. The Buddy Bar Door Jammer is much better than the imitators. Basically, it works like this--when somebody on the outside of the door tries to push in, the door jammer both pushes against them and upward into the doorframe, jamming the door. You can contact the manufacturers directly at KatyBar.com and BuddyBarDoorJammer.com and please let them know how you heard about them.

Now you can mimic both of these concepts with 2x4s if you spend a little time. What we have done is have S-brackets and long screws on hand, so in the event of a disaster our plan is to just screw the S-brackets into our doorframe and put a 2x4 across it. We have the S-brackets, we have the screws, and a bunch of rechargeable drill batteries, in addition to hand powered screwdrivers. You can also use a 2x4 for the door jammer--you just have to make sure that the interface between the wood and the floor doesn't slip, which you can take care of in a number of ways by using non-stick pads that you'd use in the kitchen or other rubber coatings. In a worst case scenario, you can also screw a block into the ground to act as a break for the jammer. This is a pretty permanent and destructive solution; however, it may come to that in a disaster scenario.

Kinetic Defense Tactics

The first thing you do is make yourself an undesirable target by matching the baseline. The second thing is make yourself hard to get to and give yourself time to react by hardening your house and using early warning systems… If they're not deterred and are intent on doing you harm, then you're playing a different game and it's likely that you're going to find yourself in a physical conflict whether you want to play that game or not.

The most common tool that people talk about for home defense is a firearm. This is a great strategy IF you do the training necessary to be able to effectively deploy your weapon under stress. There's a world of difference between somebody who has a 38 special revolver that's been in their bedside table for 20 years, and someone who shoots regularly, does force on force training, does building clearing training, practices clearing their own house with the actual firearms that they would use in a self-defense situation, has the fields of fire set up and knows them, so that they know that when they fire in a certain direction, they won't be endangering other members of their family or their neighbors. Do I think firearms are good for home defense? Absolutely. But there's a training component that goes with them that's absolutely vital. And if you don't have both, you need to have other plans in place.

Next, of course, you have sticks and blades, which are better than nothing, but they're obviously far inferior to guns. It's unfortunate, but in some places you just can't have firearms, even if you're an honest and law-abiding citizen.

Chemicals, like pepper spray and bear spray are wonderful. They are not 100 percent effective, but they work extremely well when they do work. They can be dangerous with children or people with compromised lungs around, of course, so you need to keep that in mind. You've got to be prepared to follow-up with your pepper spray attack or bear spray attack in the event you may need to; and be prepared to get some of it on yourself.

The next defense item is tasers and/or stun guns. I get asked about this quite often, "what's the difference between a taser and a stun gun?" More specifically, people don't know that there's a difference between tasers and stun guns. Stun guns are kind of like taking two bare wires from a wall socket and sticking them on someone; or more accurately two leads from a car battery, because, while stun guns pack a lot of voltage, they don't have much amperage. They work on a simple pain compliance principle. The purpose is getting someone to reply to your request, because you are causing him or her pain. If they happen to be the type of person who doesn't respond normally to pain, then stun guns aren't going to do a whole lot of good. In those cases, they can become more of a liability than an asset.

Tasers on the other hand, are like a radio jammer and they interrupt the signals that the brain uses to control muscles. Tasers cause all the muscles of the body to lock up. So this isn't a pain

compliance tool, it actually interrupts the messages between the brain and the muscle, so the tools are completely different animals.

A big reason why they cost significantly different amounts of money, and a big reason why law enforcement doesn't carry stun guns, is because the concept is very different. Tasers have a much higher probability of working. Tasers are not foolproof either, people can avoid being taken down by tasers with certain movements and or the different clothes that they wear, etc., but they are a great tool.

All of these weapons have one very common shortcoming, and that is you have to get to them. You have to get to them and you have to make them ready to deploy or ready to use. Sticks and blades, of course, are ready to use immediately, but you may have to acquire the correct grip, etc. One of the things that I consider absolutely vital, not only for home defense but for day-to-day living, is being able to use your body weight in focused strikes to take out attackers. This way, you can protect yourself no matter where you are and no matter what you happen to have, or not have, in your hands. Even if your hands are tied behind your back, if you have your body weight and you have the ability to focus an attack, you can still defend yourself.

At this point it's important to talk about fighting versus eliminating a threat. They are completely different animals. In fighting, a typical fighting scenario that we think about would be personified by the Ultimate Fighting Championship, or a bar fight; it's chest thumping, It's more of an ego-driven contest. It's not an, "I'm going to destroy and kill you and take what's yours and make it mine," type of encounter. When you're eliminating a threat, you don't have gloves, tape or padding and you don't have time to warm up.

Along with that, there's no medical care or recovery time before your next fight. For example, let's say you've got multiple attackers and you get lucky enough to land a combination of punches on the first guy and knock him out. However, in the process you broke one of the 27 bones in one of your hands; that hand's not going to be useful for the next attacker. You don't have medical care to fix it; you don't have recovery time to fix it. You've got to be switched-on and you have to be on immediately. There are no referee stoppages when you're eliminating a threat--when you're protecting your life.

If things get bad, the referee is not going to step in. In fact, in the UFC or in a bar fight, where fights end is the point at which they are just getting started in a real fight. I will get into that in just a minute.

Basically, there is no "trading blows" in a real fight. If you are planning on trading blows with an attacker, it's not a good concept; it's not a good strategy. Your strategy should be to eliminate the threat as quickly and efficiently as possible. There are no rules. I've joked through the years about how the UFC has continuously started adding rules to the fighting. The reason they did

this was 1.) So they could get sanctioned by the state Athletic Commissions, and 2.) so they could create a sport where the fighters would have fewer career-ending injuries. If somebody is attacking me and trying to cause me or my family bodily harm and/or kill me, I want to cause career-ending injuries. I want to end their ability to attack my family or myself, at least temporarily. Basically, everything that is illegal in sport fighting is the first stuff that you want to do when you're eliminating a threat.

One of the assets that I recommend without hesitation is Target Focus Training. We almost always have special offers running at: SurviveInPlace.com/targetfocustraining. The reason that I recommend them so much is because, for one, I've been training using their concepts for 16 almost 17 years, and I own every tape and DVD that they have, I have gone through their live training multiple times, trained with other practitioners in cities across the country, train it with my wife, and trust the concepts to protect her in the event that she faces a violent encounter.

Does it work in real life? Yes. In addition to (literally) hundreds of anecdotes from people I don't know, a very good friend of mine used these concepts to kill an attacker during the First Gulf War. He was clearing a house, took a blade in the back, turned around and literally found himself in a knife fight in a closet. His rifle was useless, he didn't have time to grab his knife or pistol, and he didn't want to wrestle with his attacker—so he quickly used his bare hands to take out his attacker before he could stab again. It's a very solid system. I personally used it when I was fighting competitively, not to end people, not even to break bones, but a lot of the physiology still carried over to competitive fighting.

One of the big questions that I want to ask you is this: When your life depends on it, do you want to wrestle or trade blows with a bigger, stronger, faster opponent? Or would you rather render them unable to defend themselves as quickly as possible? In fighting, fights are called when one person is unable to defend him or herself. The referee will stop the fight, friends will step in and keep someone from hitting an opponent in a bar fight when that person is no longer able to continue. When you're fighting for your life, the fight doesn't stop here. What you want to do is be able to take someone and make it so they can't defend themselves as quickly as possible. Then break whatever is necessary so they can no longer hurt you. You can then safely either leave the area or call the police or whatever else you ideally want to do. This doesn't mean you need to kill them, it just means you need to take them to a non-functional status so they can't hurt or kill you.

The way that you do this, and it's probably fairly obvious by now, is with dirty strikes. I am going to tell you a handful of targets that you can use. After I discuss the targets, I'm going to go into a bit more depth. You'll notice that there aren't 20, 50, 100, or 200 targets; it's a fairly limited number of targets, for a very simple reason—you don't NEED to remember 20 obscure targets. You'll also notice that these targets will work, regardless of whether you are using hands,

elbows, legs, knives, bats, hammers, rocks, etc. When you understand the power of proper targeting, you quickly understand that anything you have in your hands only enhances your ability to attack those targets.

The first target is the eyes, and you want to scratch or poke eyes. When scratching the eyes, you want to simply scratch across the eyes. When it comes to poking the eyes, you want to try to go completely through the head with your finger. I apologize if that's graphic, but when you're preparing for fighting in a life or death situation, there are some graphic things simply have to be covered.

Next is a forearm to the throat. Again, this is actually a forearm through the front of the throat--through the esophagus. It's not simply touching the throat with the forearm or playing a nice game of patty-cake; it's trying to push the forearm completely through the neck to stop a lethal attack.

The next strike is one of my favorites. The vasovagal strike is quite simply cool. It is the closest thing to the Vulcan death grip that I know of, and there's a very solid physiological reason for the strike working. When you hit the side of the neck, one of two things can happen: You can either hit the vagus nerve or you can hit the carotid artery. Either one of these will cause the brain to think that the blood pressure in the body has shot through the roof, and it will cause the arteries in the lower part of the body to dilate or get bigger. When this happens, it causes the blood pressure in the brain to tank, and this happens over a period of a quarter of a second to two seconds. It's a very impressive strike, a very simple strike, and it's not something that you can defend, no matter how many shoulder shrugs you do with 500 lbs on the bar. It's physiologically impossible to toughen yourself up against the vasovagal strike.

In fact, that's a commonality between all these strikes. No matter how strong you are, your eyeballs are still your eyeballs, your esophagus is still your esophagus, and the vasovagal strike is still very effective. You want strikes that you can use on bigger, faster, stronger, younger, opponents. You don't want to be screwing around trading blows, punching with 27 bones in your hand, you want to take somebody out and make yourself safe.

Next is the groin strike. One of the problems with groin strikes is that people think of a groin strike as what they see on America's Funniest Home Videos. You know, when somebody gets kicked, punched, hit with a ball, or whatever, in the groin. They groan for a while, then they shake it off and laugh and they're good to go. That's not a groin strike, that's America's Funniest Home Videos; that's a little bit of pain but not horrible. In a true groin strike, what you need to conceptualize, is you're not kicking the groin you're kicking the middle of the person's chest, and your shin just happens to be going through the groin. You're goal isn't to touch the groin; your goal is to crush and go through the groin.

A good way to think about this is to picture whatever you're using to strike as a bullet, and the eyes, the throat, the side of the neck, the groin, they are all targets on the body. When you shoot something with a bullet, it doesn't stop when it hits its target, it goes through the target. In most cases the bullet travels quite a distance beyond the target, and that's how you want your strikes to be as well. You don't want to just touch and play patsy; you are trying to destroy parts of the body. By destroying parts of the body you are attempting to make it so you're your attacker is no longer able to continue attempting to use deadly force against you or someone else, and that brings up a big point. This is not stuff that you would use in a social situation; this is stuff to use when your life is at risk and you would use a gun if you had one. If you wouldn't take a gun and shoot at these targets, don't strike them with your hand, with your foot, or with anything else. These are very effective strikes, and when you get to this point where you think you need to use it, there's not really any turning back and it's serious stuff. So you need to be careful about when and where you use this. Again it's not social; it's not something you're going to use with a brother-in-law or a brother screwing around. This is stuff that you only use when your life is at risk.

The next strike can be very severe if you do it properly, however it's not as severe as the others against a standing attacker—it's a bladder strike. That spot that you'd target is just above the waistline. You need to consider it as the entry point of your strike and visualize your actual strike going completely through the body. In reality it won't but that's the intensity that you need to have with the strike so it will cause the damage that you need it to stop your attacker from being able to use deadly force on you.

Next is the knee: The knee is a wonderful target because it's only made to bend in one direction. If you have the ability to dive at it while grabbing the ankle, the bigger your opponent is the more they are going to help you destroy the knee and get you the response you need so you can take your attacker to a non-functional level.

You will notice that I only showed you six targets. Limited options are good, because you won't get paralyzed by analyzing which one is the best. What you do is scan, find the closest, easiest target and you attack it with everything that you've got. If your attacker still poses a threat, pick the next closest, easiest target, and attack it with everything you've got. As soon as your attacker no longer poses a deadly threat, move on to the next attacker or leave and notify authorities.

One of the commonalities between all of these is they will make somebody unable to defend themselves for a short to a long period of time. It may be a few seconds, it may be a few minutes, but all you need is a few seconds where the person is unable to defend themselves. I will get into that in just a moment.

As I've said, in a life or death situation you never simply strike these targets; they are the entry point of your strike. What you want to do is strike one to two feet beyond your target and ideally you should end up standing where they were when you started the strike, because you have transferred all of your body weight and all of your mass through the point of impact with their body and that has displaced them. Thus, your momentum has taken you so that you are standing where they were standing before. The great thing about this is these same targets and the same fundamentals work with blades and impact weapons. So if you want to attack the groin, you can attack it with your arm, with a leg, with a blade or with a stick and the results are going to be slightly different, but the fundamentals are going to be the same.

It's really, really, important, in fact it's absolutely crucial to understand that the goal isn't to try to convince your attacker to change their mind about attacking you. Once they have the opportunity and have shown their intent and ability to hurt you, the goal is to cause a quick, initial injury that will take them to a nonfunctional state as fast as possible, so they can't kill or seriously injure you. What you do once you have caused this initial injury--and you've got several seconds to a minute where they are unable to defend themselves--is that you take advantage of this opportunity to break down their body's mechanical, plumbing, and/or electrical systems so they are unable to hurt you.

I will give you an example. If you kick someone very hard in the groin, what's going to happen is that their hands will go to their groin and their chin will shoot forward and up--and by the way this works for men and women. If you know where your attacker's hands are, one thing you can do is break their fingers. If you break the fingers on both hands, now they can't pull a trigger on a gun, they can't hold a knife and they can't use a stick. If you feel the need to make sure that they can't run after you, you can also use this time to attack their knee and/or ankle.

At this point, you've probably bought yourself time to go and call law enforcement, call for help, and get somewhere safe. Since you've taken out their ability to run with the knee/ankle strike and you've taken away their ability to use a knife/firearm with their strong side hand with the finger attack, you've got a lot more reason to be confident that they're not going to stand up and attack you once the shock of the initial groin strike wears off.

You have taken them to nonfunctional temporarily. They will no longer be able to mount an effective lethal force attack against you using their hands.

The underlying concept here is that you need to break down the machine that is trying to hurt you—by attacking the mechanical structure, the plumbing, or the electrical system. More specifically, if you look at their body as a machine and their mind as the "person", you want to break down the machine so the person cannot use the machine to hurt you anymore. The machine simply won't work anymore.

One way to think about it is that, if your attacker is driving and runs out of gas, all they need to do to come after you again is put gas in the car. Or let's say they flood the engine, all they've got to do is give it a few seconds and clear the carburetor and they can start the engine again. But if, while they are trying to start the engine again, you flatten all four tires, you've made it so the vehicle is not going to be able to come after you effectively anymore. You basically want to do the same thing with the machine that's trying to attack you or the body that's trying to attack you. Once you get it to where it can't defend itself temporarily because of your initial attack, you break it strategically so that when it is able to continue its attack, the "machine" doesn't have the ability to do so.

Live Training

Next, I want to talk about live training. Live training is great for several reasons, and one of them is that you get to focus for an extended period of time and you get what I like to call "learning inertia." To me, learning inertia is kind of like a freight train; once you get up to speed on a certain topic, it's easier to absorb more new information and one, two, three, and four-day live trainings are absolutely phenomenal for crunching a lot of new information into a short amount of time.

Put another way, learning a new skill is a lot like trying to get up on water skis. If you try to get up on skis by going slowly or starting and stopping a lot, you end up getting dragged through the water and getting water in all sorts of places where it doesn't belong. But, on the other hand, if you brace yourself and yell, "HIT IT!" and let the boat get you up to speed and on the water planed out, you can actually slow down some if you want.

With learning a new skill, you can do something similar by compressing a large number of learning repetitions into a short period of time in a 2-5 day intensive training and then maintaining (and even improving) you skills with less frequent practice over time.

I have been through so many of these live compressed trainings now that I'm always amazed at the impact they still have. But most live trainings will have a lifelong impact on you in one way or another. Some are going to be major life-changing impacts. For the most part, you won't be able to go through a multiday live training and not have it affect you for the rest of your life.

Then the question comes down to whether to do your live training locally, or to travel for training. There are benefits and drawbacks to both options, and I want to discuss them because they are fairly significant and important.

With local training, you're going to have lower cost and a big reason for that is because of the cost of travel, the cost of lodging and the increased cost of food when you're not eating at home. I don't necessarily mean the course is going to cost less because in some cases you may

be near the place where everyone else in the country wants to come for a specific type of training. Another benefit of local training is less travel time. Often, if you've got a two-day course far from home, you may need a day on either side for travel, so your two days of training now becomes four days of being away and that can be problematic for work and family life.

However, one big drawback of local training is the distraction of home. Without having committed to travel and lodging, it's possible to cancel local training right up until the point where you're in the car going to it. It's also possible at night between days of training to go home and get completely engrossed in family life. I've had this happen before, where one of my kids got sick at home when I was at a local training. If I would have been half way across the country, my wife could have handled it and I would have come home after it was all over and everything would have been good. But since I was in town and I love my wife and I love my son, I took care of my son that night. What it meant was I didn't get to spend time thinking about the training I had gone through that day, I didn't get to spend time preparing for the training the next day, and frankly I didn't sleep that much because I was taking care of my son. So in that case, the local training didn't end up giving me near as much bang for the buck as if I would have been at a course away from home.

Again, if you're away from home and a serious problem comes up--if it's a life or death problem, then you can hop on a plane from wherever you're at and get back home. But there are a number of everyday problems that can pop up that you will probably react to if you're nearby, but not if you're out of town. When you travel, you are able to be fully engaged in the training. You get to think about what you did for the day and mull it over and prepare for the next day.

Sometimes what I have done in the past is, on a local multiday training, I will go so far as to get a hotel next to the training area and not stay at home, even if it's only a 20 minute drive to get to the training. The reason for that is purely psychological. I want my wife to know that I am fully engaged in this activity for two days, I am not available to do honey-do's, I am focused on this just as if I had flown all the way across the country. In my mind, it gives me the freedom to focus on it and get more bang for my buck and for the time I've invested.

Does this make sense? If I've decided that a training is worth allocating 2-5 full days of my life to (and the sacrifice of income/family time that this represents), as well as the money that the actual training cost, it makes sense to me to pay $100-$200 more for a hotel to make sure that I get 100% of the benefit of the course.

So you've got a lower level of commitment with local training and a higher level of commitment with training that you travel for. The quality is a very interesting trade-off. If you train locally

you are going to have the best in your area, which could also be the best in the country. When you travel, however, you are always going to be able to travel to the best in the country.

The big question is, if money and time keep you from doing the best training in the country, is it really worth it to wait? Or should you get 80-95 percent of the experience by training locally where you can get it done and even train more often?

I lean towards local, but I don't hesitate to travel for particular courses that aren't available in my area. Another factor to consider is that when you train locally, there's a good chance that you'll meet people who could be potential assets in difficult times. The flipside of that is, when you travel, you get a chance to be anonymous and you don't have to be anyone. You can just be John Doe out training and no one needs to know where you're really from or what you really do. All they need to know is that you have a common interest and you're a nice guy; and there are obvious benefits to both.

Medical Training

There is one particular class of training that I suggest you do locally. Medical training is a biggie. First-aid, CPR, first responder, EMT--all of those are great, especially if you can get the wilderness versions of them. Another training that's especially good to do locally is a tactical first responder class. These are normally designed for law enforcement and military, and what they teach is how to take care of somebody immediately who has been a victim of a gunshot wound or another massive trauma. These are normally one to two days in length and are very involved and focused. They're not going to be as broad-based as a first responder or an EMT class, but they don't need to be. Tactical first responder trainings are working on one tremendously focused skill and getting you very well trained in it. You can call local police departments or military bases to find classes or local training agencies. Local firearms training agencies are also a good resource to find out holds these trainings. If you have trouble finding a tactical first responder class, start calling around to your local law enforcement agencies and ask to talk with their SWAT medics. They will likely be willing to put on a one-on-one or small group class for you and your family/friends that would focus on what to do if you find yourself a victim in an active shooter situation or something similar.

Taking classes with your local law enforcement really depends on where you are and what your thinking is. Most of my friends and some relatives are in law enforcement and/or the military, and I enjoy being around law enforcement and military. I work with them in different capacities, so it's like family to me. I don't have an adversarial relationship with them, and so I like taking classes with them. If you're in that same boat, then that's another benefit of taking a tactical first responder class that's created for law enforcement and military. You'll get to know guys who are operating in your area and get to know them better than you would otherwise.

Another thing you want to do local training in is a wilderness survival class and/or an edible native plants class. I've lived and used wilderness survival skills in six different regions, climates, terrains, etc., and have six different sets of data to go back to on what kinds of foods to look for, what kind of wood to look for to start fire, what kinds of plants I can eat, what's good and what's bad, what animals are easy to find, easy to trap, easy to kill, etc.

This is something you can travel for if you want to train with a particular person or learn certain skills, but for the most part you're going to get as much or more bang for your buck by doing local training on these things. What you're going to find is that if you take an edible native plants class from a local instructor, you are going to start looking around your neighborhood and realize that within 100 feet of your house, in the front yards of your neighbors, there are 10, 20, 30 plants that you could eat.

Another benefit of an edible native plants course in your own area is that you can identify things that other people see as weeds in your yard. You can even let them grow and even help them along, possibly planting additional "weeds" that are really edible plants.

If, on the other hand, you live on the coast and go to the Arizona desert for a wilderness survival school, you'll learn great concepts, skills, and psychology, but the plant, animal, and tool identification and use lessons won't do you much good when you get home.

Firearms Training

I like local firearms training, because of the fact that you can do so much more of it than if you have to add the travel component. That being said, I still do travel for firearms training. While I am going to suggest some places to travel to get firearms training, I also want to emphasize that the quality of firearms training in your area is probably very good. Almost every city in the country has guys who have deployed to Iraq and Afghanistan and you can almost surely find SF, SEALs, TACPs/PJs and MARSOC guys wherever you live, if you want.

Almost every city in the country has police officers that have a high level of proficiency in SWAT operations. A lot of these guys enjoy teaching. They enjoy the stuff that they learned, and they received or earned a level of proficiency that you can only get when you do this stuff for real, and they like passing it on. It makes a lot of sense in my opinion to train with guys locally who you may be able to interact with on a daily basis after the training. You may make new friends. I have in several cases and there are some big benefits to it.

The next form of live training I recommend is executive protection or dignitary protection training. This training is incredibly valuable for a number of reasons. One is that you're going to get firearms training. In most states you're going to get unarmed and armed security training and licensing. You're going to get situational awareness training, and you're going to get pre-

planning training for how to think about moving a high value target into and out of an area. All this stuff transfers over directly to daily life with a family, except instead of a multimillionaire as your dignitary that you're protecting, you're protecting your family. You don't have to be all formal about it; you don't have to do diamond formations with your wife and kids, but it helps you see the world in a different way and it helps you prepare and think in a different way. I don't know anyone who has gone through executive protection training who hasn't experienced immediate, tangible benefits in their daily life.

The next live training that I suggest you get is herbal medicine and aromatherapy. Some people think this is kind of nutty, but I've used it quite successfully for some time, and I'm a big believer in it. With the FDA restrictions on it, I don't really want to get into a whole lot of details. I'll just say that you should look for people in your area who are very good at herbal medicine and aromatherapy and whose outlook on life and the world, and possibly religion, mesh up with yours. That way, when they start talking about stuff, it's either not going to sound whacky, and it's not going to throw you off. You want someone who focuses on facts and history as well as the science or herbs and aromatherapy and/or essential oils. You want it to be practical to your life. You don't want to feel like you're just spending time making potions and lotions and neat smelling things. This is stuff that's actually going to work for you and your body.

With herbal medicine and aromatherapy skills using locally sourced plants, you will be giving yourself sustainable medical care. If/when these skills don't work, you always have the option of switching over to pharmacy store solutions. One of the big differences, though, is that locally sourced herbs can get replaced much easier in a disaster situation than pharmaceuticals that are manufactured a thousand miles away.

The next trainings I recommend include permaculture, hydroponics, and aquaponics. These are things that, again, you can do most anywhere in the country.

Permaculture is figuring out ways to make the land support you for a long period of time without having to introduce foreign and non-organic items into it.

Hydroponics is growing plants with water and not with soil, and aquaponics is a mesh of water, fish, and plants. With both hydroponics and aquaponics, one of the big benefits is that they allow you to make several times more food per square foot or per cubic foot than traditional gardening. This way, you can have a garden that supports your whole family in a very-very small area, whereas with regular traditional soil gardening it's quite difficult to do that.

The next one is 2600 or lock picking meet-ups: these are about hacking and social engineering. 2600 is a magazine you may see in Barnes & Noble, and it was inspired by a hacker in the 70s. Basically, a hacker is somebody who takes something that's designed to work a certain way and

figures out to make it work for another way, not necessarily someone with malicious purposes. As an example, if you've ever used a screwdriver or a knife as a pry bar, you were "hacking."

In a lot of cases, hackers are people who find shortcomings in security systems and software, and report them to the company or the entity so that they can improve their security system. Hackers often want to get through security systems as a challenge, but once they do they don't necessarily have any intent or desire to do any harm. There are, of course, hackers who do harmful things after they break through security measures, but that's not what we're talking about here.

Back in, I believe it was the 70s, there was a whistle that came in Captain Crunch boxes. A hacker found out if he put his finger over one of the holes, it made a tone that was 2600 MHz, and 2600 MHz happened to be the same tone that telephone linemen used to trick the phone into letting them make test calls from pay phones for no money. What this guy was able to do was take this little plastic whistle from a Captain Crunch box, plug one of the holes, blow on it, and make free calls from payphones. It was one of the big watershed moments for hacking and caused hacking to become much more popular and organized. Both of these skills, hacking and lock-picking, are part of an overall thing called social engineering. Basically, the idea is getting things to work in ways that they are not designed to, which can be very valuable both in a urban escape and evasion situation, and during desperate times.

There are components of it that are unsavory and quite frankly you don't have to do the unsavory parts. Being exposed to them and knowing what they are helps protect you and keep you safer moving forward, because you know what to look for, you know what kind of things malicious hackers might try to do to you.

Lastly, I highly recommend suturing and stapling courses for permanently closing up serious wounds on the body.

I mentioned earlier that there are some trainings that are definitely worth traveling for. One that I mentioned earlier was Target Focus Training, www.SurviveInPlace.com/targetfocustraining and there's a home study course that they offer that is absolutely incredible. Once you've gone through that you might consider attending live training. I can't emphasize enough how great the live training is. I've trained TFT concepts since the mid-90s, bought almost all of their courses, done the live trainings multiple times, and trained one-on-one with their instructors and other students across the country. If you can make it work, it is something that is life changing, no matter where you're at in your progression on preparedness.

For firearms training and emergency medical training, you should check out GunSite.com One of the reasons I recommend GunSite is because they have some assets that most local

trainers don't have and that they can't afford. They've got $2000 remote controlled targets that are on wheels and will come at you and turn and do all sorts of things.

One of the Gunsite instructors that I want to mention specifically is Randy Watt. Randy is a Colonel with the 19th Special Forces group and has had multiple deployments to Somalia, Iraq, and Afghanistan. He's also one of the top SWAT instructors in the world. Since he's a full time Special Forces colonel, he's pretty tied up with that, but when he is available I highly-highly recommend Randy.

When you get to the upper echelons of tactical firearms skills, the differences between the top 100-200 guys are negligible when it comes to how they'll be able to impact your shooting ability. They could be, hands down, the best tactical operator who has ever walked the Earth, but if they yell like a drill sergeant for no reason (stress inoculation is a reason) or can't effectively convey shooting concepts in a way that helps you as a shooter, then time spent with them may have little more than entertainment value. On this note, Gunsite places an emphasis on using instructors who are not only great shooters, but who are also great instructors.

Another school you should consider traveling to is InsightFirearmsTraining.com. Insight is also in Arizona, like GunSite, and they are incredibly unique. They use a form of conversational hypnosis to take people who are either just starting out with firearms or are very advanced in their training, and get them to shoot quarter size groups at 20 feet within 20 minutes. The reason for this is that shots on the body may or may not shut someone down immediately, depending on how much of a shock they cause on the central nervous system. Shots in the T-box on the head, which is between the eyes and down the nose, will shut someone down immediately; they will stop a lethal threat in its tracks. And so Insight's thought is, instead of doing two to the chest, and a failure drill to the head if that doesn't work, just do the shot to the head and be done with it. The shortcoming, of course, was that people would miss their first shot, second shot, and third shot, especially under stress. Over the last 15 years, they've figured out how to train people very rapidly to be able to make between the central nervous system shots with a very high hit ratio in a very short period of time.

The next school is Tony Scotti's driving school. His website is VehicleDynamics.net and they teach defensive driving for personal protection specialists. This is for guys from the Secret Service, dignitary protection, executive protection, etc., again this is a great skill to have. It will increase your awareness as you're driving in everyday life. You are not going to need to do a pick on someone very often and make them spin off the road, or break through a roadblock made up of multiple vehicles, but if you ever do have to you'll know how to after going through Tony Scotti classes.

In Closing:

I want to congratulate you for purchasing this training and for completing the absorption stage. That being said, all of this knowledge won't save you or your loved ones unless it's combined with action—Action in the form of learning and honing skills, hardening your house, and stockpiling items that you won't be able to easily get your hands on after a collapse.

What's next? First, I want to encourage you to keep up to date by going to SurviveTheComingCollapse.com and sign up for my free weekly newsletter so that you can get continuing survival and preparedness tips, tactics, and techniques.

And, when you're ready for more high quality survival and preparedness information, I suggest that you consider some of my other products:

TacticalFirearmsTrainingSecrets.com
SurviveInPlace.com
UrbanSurvivalPlayingCards.com
UrbanDisasterWaterPurification.com

And, if you have any questions or comments, I want you to please shoot me an email at David@FastestWayToPrepare.com, especially if you have gone to any of the trainings that I mentioned or if you have any others that you would suggest. If you have questions or comments for me, please shoot me an email. God Bless and Stay Safe.

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