

# Fastest Way To Prepare

The background of the entire page is a dramatic, high-angle view of a city skyline, likely New York City, with several prominent skyscrapers. A massive, jagged crack has split the ground, running from the foreground into the distance, with debris and smoke rising from the fissure. The sky is overcast and grey, contributing to a sense of impending disaster or chaos.

## MODULE 4

MEDICAL TRAUMA  
AND COMMUNICATIONS

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## Module 4: Medical Trauma And Communications

Welcome, in this module 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 going to talk about trauma techniques from combat medics, disaster 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, or even if there are ambulances available there are no beds at the hospital, no ER bays available, and you've just got to work with what you've got where you are. This will give you a fighting chance to help people survive, help yourself survive. And we are going to talk about medical alternatives for when pharmacies aren't an option.

Let's start off with Ideal Communications. Communications are so important whether it's calling for help or just basic communications. So many people when they go to amusement parks they take little talk about radios and they use them to talk with their family, to meet up, to keep track of each other, everything else. Cell phones are a great example of this also, and cell phones are great except for the fact that they don't always work in a disaster, because either the towers get overloaded and the cell phone companies shut them down, except for prioritized traffic or they just don't work because the disaster affected them directly or because their generators didn't work or ran out of fuel.

Talk-about's on the other hand have another interesting issue and that's that there are so many people on the frequencies that sometimes they're unusable. What we are going to talk about is what we're looking for in a radio after a disaster situation. This is consumer grade; this isn't a fully stocked rural retreat military grade for surviving 100 years after the apocalypse, this is stuff that you can use on a daily basis and stuff that you can use in a disaster.

What we are looking for is a solution that's affordable, that will allow secure and private transmissions, that has high quality microphones and speakers, because nothing is more frustrating than talking with somebody on a walkie-talkie and just getting a garbled bunch of noise. The signal may be fine, but the combination of poor microphone and a poor speaker and somebody speaking right into a walkie-talkie can make it impossible to understand. 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, that basically need an engineering degree to operate; we don't want anything that complicated. We also want great range, and great range is a little bit difficult because of several factors. We've got to start with just the contour of the earth limits range, and the items in our environment limit range, trees, houses, buildings, rolling hills, mountains, electrical power lines, big chunks of metal; there are so many things that affect radio transmissions, even other radios. There is no way to really guarantee how long a range a radio is going to give you. I will tell you this though, radios that you see in sporting goods stores that tell you they have a 20 mile range, that may be technically correct if you're talking between two hot air balloons, but in the real world you're

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looking at much-much-much closer to a half mile, couple of miles of range. That is much more consistent and predictable.

There are setups that you can have that will increase that considerably. Talking from hill top to 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 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, it's not so great when it dies and you don't have a replacement for it because you can't afford one and it's going to take four, six, eight hours to charge a battery. So we have a solution to that.

We also want something that's durable that's not going to break and be fragile and basically disintegrate the first time anything bad happens to it. As I mentioned before, with the talk-about's we want uncrowded frequencies, we want to be the only people using a particular channel and the only way to do that is to kind of go where everyone else is not.

The solution that we've decided on is the Motorola I576 radios, and 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, I know they use this technology. What it is, is Motorola made some try-mode phones. They've got the regular phones, they've got Direct Connect which Nextel is famous for, which uses the Nextel network to let people use the phones like a walkie-talkie with anyone else who happens to be on the Nextel network and have a Direct Connect phone, 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, and basically turns them into walkie-talkies and it turns them into what happens to be very high quality walkie-talkies. We are going to get into this for a minute.



One aside here, and that is, I recently wrote an article for my monthly newsletter, called The Lamplighter Report, and it covered this. What I've got to balance is getting new information to the subscribers to the Lamplighter Report with getting people who don't subscribe to the Lamplighter Report up to speed.

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Here is what I am going to do, I am going to post the article that I wrote for the Lamplighter Report in the Members' Area and you'll get that, you've got access to that, and it's going to get you up to speed on a lot of things here, and everything else that I cover on this presentation is going to be additional. That way both groups, the people who did have access to the original article and the people who did not have access to the original article will both be on a level playing field and walk away with the same set of data and that should be the best possible solution for everyone involved here.

A little background on Direct Talk, or it's also called MOTO, it's basically a setup that uses the 900 MHz range of frequencies, and also called the 33-cm range by the FCC. There's a lot of stuff in this range, there are phones, baby monitors and other stuff, and so it can be crowded. But 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<sup>th</sup> 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, enough so that it's not totally secure but it is pretty darn 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 they've got to have the time, the materials, and the inclination to want to figure out what you're saying.

The radios have 10 channels and 15 sub-codes. Even if several people are using Direct Talk, there are still 150 different channels for them to use, so to put it 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. It's much-much nicer than the talk-about.

One thing to keep in mind is with Direct Talk, channels aren't frequencies. What happens is, a channel is basically a set of 50 predefined frequencies that the radios are going to skip around to, again 11 times a second, so basically every 4.5 seconds the radios cycle through all 50 channels and both the sending and the receiving radios cycle through them at the same rate so they can communicate with each other and you just absolutely cannot hear any of it – it's crystal clear.

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

If you go to Best Buy you can find a system called Tri-Square that uses the same technology but they are not compatible with each other either, so even though there are different systems using the same frequency hopping spread spectrum (FHSS) platform in the same range of frequencies,

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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 people with these direct talk phones after a disaster happens, it's not going to be real great. The upside is, people aren't going to be able to listen to your conversations, so again there's some good benefits there.

Again this isolation leads to security, the fewer people that even have the ability to listen the better. And there are several phones, and don't worry about writing these down, I'm going to give you the list in the Members' Area for you to download. There are several phones that you can use with this technology, all made by Motorola, and anyone of them will work. The interesting thing is, these are all fairly expensive phones, a couple hundred to four hundred dollar phones, 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 a glut, but these come onto the market through eBay and Craigslist and other sites fairly often and then come out for sale in decent quantities and at very-very good prices, and I am going to show you that in just a second ... actually right now.

We are switching over to eBay here, and we're going to do a search for Motorola, and this is important – eBay showed no results at all. I am going to click this little magic button here that also searches the description and it's going to change things considerably, 4847. Well I know this one isn't one I want, and I know this one isn't one I want, so let's put quotes around "Direct Talk" so that it will only return results for the two words that are right next to each other and boom! All of a sudden we have phones from the list we want to search. Let's see here, let's find one, let's look at the I560, \$34, \$75, so those are a little pricy. Let's try this – 576, the phone that I said that we like a lot. And still fairly expensive, there's \$26 for three phones, that's a decent deal, but let's go up here and you can see I've already done this. Click on I576 lot, and you can do this for any model number. One of the reasons I like the I576 is because it's one of the models of phones that has passed the military durability standards. Now we are looking at lots of I576 phones, theoretically, there we go there's that three again, there's five for \$175, five for \$176, ten for \$354, so that's \$35 a piece for them. Not bad, but you can go through here and look and you can find them for \$10, \$20 apiece. The prices range considerably. 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. There are a few things you want to make sure you've got with these, one is you want to make sure they work, and let's see if I can find one – no. What will happen is, people will sell phones for parts and it will be listed in the description, it will say they don't work. So you want to keep an eye out for that. The other thing is you want to get as many chargers as you can; this uses a micro-USB charger from Motorola. What that means is, that's actually a great thing, it's a very-very standard charging connection that even if you get phones that don't have any, you can buy new ones, and it's not a problem at all.

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Something else to look at here is batteries; you want to make sure you've got batteries for the phones. Here are 50 of the batteries for \$74. So \$1.50 a piece if I'm doing my math right, which is just incredible, I may end up buying that. And 25 for \$44, so you can get batteries for them and the batteries last about a day a piece. So actually, we've used them for a day and a half, almost a day and three quarter of driving and they've worked great.

The other thing, some of the options will include accessories for them, most won't but some will; and the final thing is these require a SIM card to work and that's kind of a bummer, but it does. One thing that I can't tell you is how flexible these are on SIM cards. 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 I wanted it to work and it has worked incredibly well is, I did a search for hybrid SIM cards and I bought them. Let's see if we can find a bunch of them here. There's ten for \$85, so \$8.50 a piece. You get those cards and then it works in the phone. What I would do before that is if you have any extra SIM cards lying around, try them. 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. If you don't have a friend that works there, the chances of getting them are pretty slim, I've been trying to social engineer that for a while and haven't been able to get them to give me any that they were throwing away. The reason is because of course there's private information on it when people turn in their phones, so I understand that completely. But, still trying to figure out how to get some, and I don't care if it has other people's information on it or not, I just want the SIM cards so the phones will be able to talk to each other. But with that combination, what you've got is a very durable walkie-talkie that has range that's better than talk-about's and about the same price as high quality talk-about's, but much-much more privacy.

So the next thing we are going to talk about is improvised medical and trauma management. This is a tricky topic to talk about because of liability and also just the plain moral considerations. I don't want to in any way give the impression that listening to me talk for the rest of the time that we have together on this presentation is any way equivalent to going through an 80 or 120 or several hundred hour formal medical training course, or thousand hour training course in the case of getting a degree. It just isn't.

What this is, the best way to disclaim it is to say it's for educational entertainment purposes only. It's a great starting point, but it shouldn't be considered medical and trauma training on its own. I think everyone here should be wise enough to understand that fact, but I absolutely have to clarify it and make it clear that this is a beginning when it comes to medical stuff. If I've got the next little bit of time and no other time to tell you everything that I know and everything that I've learned about medical and trauma management – this is it. Another thing I skipped over, 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. This is serious stuff. It's

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pretty straight-forward but it gets complicated by the sheer number of simple steps that there are. So with that in mind let's talk about it.

This is a very serious topic to me and has been for as long as I can remember; I was exposed formally to it from a very-very early age, possibly before I could walk. My father was one of the very first medivac pilots in the U.S., civilian medivac. He frankly liked what he saw the medics doing in the back, they weren't medics, they were doctors at the time, because they didn't have EMTs and paramedics like we do today. It was doctors riding along trying to figure out how to do things in the field, which was interesting in and of itself because they were used to a hospital setting. But in any case, it got him interested enough that he became an EMT and my mom as well, they became instructors for several different medical certifications and instead of getting a babysitter, they usually took me to the trainings and I basically had no choice but to sit quietly and listen – they let me play and do stuff, but I had to not be a bother. I absorbed stuff several times a year for several years; I was the dummy when the topic was on early childhood care. Now this doesn't mean I learned a lot during that time, but it does mean that I got a fascination with it and a passion for it that has carried me, it's lasted for several decades.

Fast-forward a few decades; I started doing back-country guiding. Back-country guiding is one of the big places where 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 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 everything I could get my hands on back-country medical care, on third world medical care, on what missionaries and missionary doctors did when they were in areas where they just didn't have supplies, and taught myself.

Hold on – it does get better.

But, this was just; 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, but what it did mean is I was able to identify stuff very quickly, get people off of the mountain before small problems became big problems. It didn't mean I was able to treat people, in no way did I ever try to go beyond my level of formal training, because in many cases that could easily be considered immoral, it's definitely considered illegal unless you're being covered by the Good Samaritan Law, going beyond what you've been trained to do is not a good idea.

So fast-forward a little bit, I went ahead and got formal wilderness TMT training as well as formal medical tactical training, basically medical treatment for tactical situations. And that basically boils down to people getting shot. Had the formal wilderness training and the formal tactical medical training, I did ski patrol and got to use a lot of this stuff and absolutely loved it. Its fascinating material and I encourage you to; if you're at all passionate about it, feed that

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passion. It's a topic that the more you study the more you'll benefit from it. I've gotten to help a good number of people with the skills that I've developed and the work that I've done in that area. It's absolutely amazing the benefits you get from understanding trauma and medical care, just with yourself, you understand your body a lot more. Again, you can spot small problems in yourself before they become big problems, it's not becoming a hypochondriac, it's actually knowing, identifying and getting in front of problems before they get much bigger than they should.

One of the things that is very-very important when thinking about disaster survival situations is improvisation. The reason that it's so important, there are several reasons, but one is you're not going to have everything you want when something happens, you're always going to want to have more stuff and you're going to want to have it closer. 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, and so 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 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 whose out in the woods who has just what's in their hip pack or backpack or small pack on their bike.

The other thing is you just can't carry enough to handle a lot of people. 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.

It's another reason why it's so important to be able to improvise in a trauma situation. You need to know fundamentals so that you can see items in your environment that will work, maybe not work perfectly, but that will work.

Another thing is resupplying is not always an option. I'm a disaster first responder and continually one of our problems in multiple groups that I've been a part of is that after a disaster, when we 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 go through supplies, there is a second fear and that is, anyone going to resupply this stuff? 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, improvising.



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And the other thing is you may not know how long you have to self-support until 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, well you've got five and a half days potentially where you don't have any supplies to help people if you don't have the ability to improvise.

Another thing to keep in mind is the best way to help the most people is to keep yourself in good shape, be able to take care of yourself, so you're not a drain on the EMS system. And part of what that means is saving your supplies for yourself, specifically your purpose built supplies. You want to save them to be able to take care of yourself and use other people's supplies on them, and if they don't have any supplies and you don't know when you're going to be able to resupply and replace the materials you're using you want to improvise when you're helping other people. 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 and bad situations will happen. But let's deal with the high probability stuff which is you can take care of other people by improvising.

Next we are going to talk about trauma versus medical issues, so that we understand the difference between the two. Trauma, it's hard not to think about this from an engineering perspective for me but trauma injuries are kinetic injuries, they involve motion. Easy examples of these to relate to are sprains, strains, breaks, cuts, stabs, tears, 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. So very-very different items, very-very different treatments. Of course there's some overlap, many traumas cause medical issues, many medical issues cause traumas, so it's not a clear cut line. The way you treat them is going to be very different.

Alright so now we are going to talk quickly about bleeding, and bleeding is very important. 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 and do, and hope to be able to convey enough information that you can actually use it. I can go over how to maintain an airway on a presentation, but it's really something that you want to practice and do in a live setting.

The traditional mnemonic for dealing with bleeding is RED, and RED 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 need to be spending time with them unless you don't have anyone else to spend time on. The easiest thing to do in my opinion and experience is, the first thing you do is Direct Pressure. The second thing you do is More Direct Pressure. The third thing you do is even More

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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 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 out of the body.

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-very helpful in trauma situations. The first one of course is duct tape, and duct tape has so many uses for trauma it’s amazing. It’s really only limited by your imagination.

You can make homemade butterfly bandages with it, you can use it as a cast, basically take newspaper support a limb with newspapers and then duct tape it, and 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, you can use it to completely cover a wound, a hole, a cut. You want to put something between the duct and the skin if possible – actually avoid putting it directly on an injury, if at all possible. And I can’t think of too many situations where you wouldn’t be able to avoid it. But the pain and trauma it will cause when you take it off if you don’t have something between the duct tape and skin – I’ve done it and it’s not fun at all.

So getting back to it, you can make a waterproof bandage out of a regular bandage by covering it over with duct tape, you can use them for blisters, hot spots, knee braces, basically you can create almost anything as far as trauma supplies with duct tape.

Next is honey, and honey is great. In addition to using it with diabetics it can be absolutely vital and 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 and they go ahead and they drink it and 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 and true to form, the body usually releases more insulin than it needs and the blood sugar level is going to drop below normal levels.



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Small amounts of honey can help bring someone's blood sugar back up and get them functional. It can take care of a headache in the instance of a headache caused by low blood sugar, and can make them functional and help them self-support and get to safety if it's a situation like that. Or just help give them the little boost that they need to be able to start eating and taking care of themselves if they're in sad shape.

The next thing is hand sanitizer, and hand sanitizer is so important for trauma. 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 and didn't have the know-how to maintain a sterile environment. They didn't know how to sterilize wounds; the doctors didn't know how to sterilize hands. They were going from patient to patient without cleaning their hands and so, once infections did happen they spread very-very quickly in the medical environment that was designed to help save people. So hand sanitizer can play a huge role in that. One just real simple example is, you get a scratch in the woods, or rub up against something in a house or whatever and break your 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, put some hand sanitizer on it, take the burn, let it dry and put a little either 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 if 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 – yes it is, it's just incredibly simple, it's sickeningly simple and sickeningly obvious. 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, lowering of hygiene standards. So I can't emphasize enough how important this is.

The next thing is Krazy-Glue and 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 for a medical item, but you may want to do a little research on it, see where the research leads you. Interestingly enough, Krazy-Glue or Super-Glue, the chemical that's in it was originally

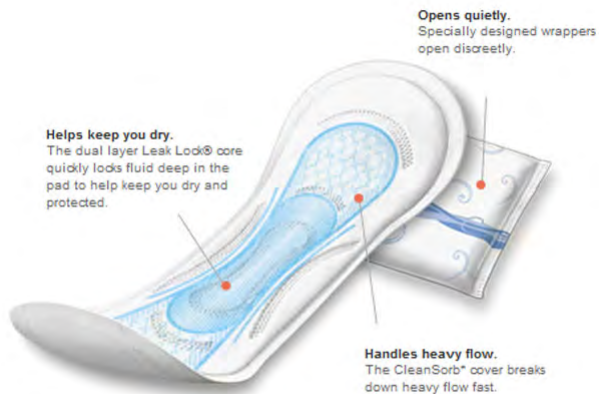


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designed as an alternative for stitches, the pH is off and it burns the skin, as you probably know if you've ever gotten it on yourself. And so there's a medical version called Derma-Bond, and Derma-Bond is great-great stuff and if you have the money to get, I suggest getting it. It ends up being about \$15 per single use, whereas Krazy-Glue is as you can see here, it's four, and that four pack probably costs a couple of bucks. So I don't have Derma-Bond, I have Krazy-Glue and I use the stuff.

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, and you can 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. I carry these in my med kit, and the reason is 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. It's not so much the protection, it's convenient, it's helpful to have that little barrier there to keep layers of dressing from getting wet with blood. But you can just put these right on injuries where you need to apply pressure and clamp down with the pressure and these will absorb blood, a significant amount of blood and are designed not to stick to the wound. They do stick, just not as bad as let's say porous cotton or something like that would.

Next dental floss, and this is a specialty item that is still very-very important and I like the widest waxiest dental floss I can find. The reason I use it and the reason that I carry it is because when I was doing ski patrol I saw a lot of wrist, elbow and

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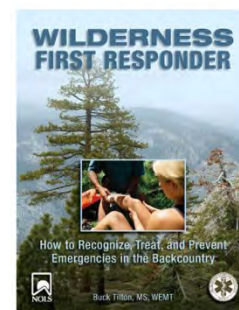
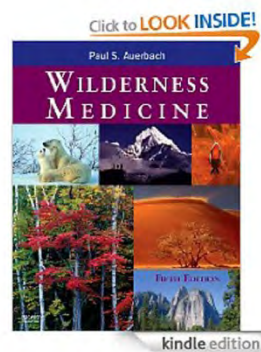
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shoulder injuries, due to snowboarding. People falling over. What happens when you get an arm injury even if it's not on the hand is that your hand starts swelling and when your hand starts swelling and you've got a ring on, pretty soon the ring starts acting like a tourniquet which is obviously not a good thing. And so you need to get rings off as quickly as possible, off yourself or from other people after an injury to the arm or the hand, and a lot of times it just won't happen. 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 take care of it and the way is you basically wrap your finger with dental floss and wrap it as tight as you can. You are basically going to cut off circulation 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, it's proven.

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

Now the neat thing with these six items is, none of them scream medical, but these are all potentially life-saving devices. They are very inexpensive and they are things that, one, I want to encourage you to have on hand now, two, after a disaster happens these are things that you may be able to find when you can't find specialized medical items. The other thing is you are going to use these whether you run into medical problems or not. Again they are just great things to have, both now and after a disaster.



I would be remised if I didn't point you to some training resources for this, because again I've gone through hundreds of hours of training. I would guess thousands of hours of actually spending time with patients. I love it, but you just can't convey it in a short video. I can give you a taste for it; I can give you some highlights. From personal experience I will tell you that no

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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, and 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 before it, 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 head knowledge. So I really want to encourage you to go out and get training for it. Basically, your local EMS system, your local 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 to take care of yourself and your family, or say that you're interested in getting into the business. But more than likely, the best route is going to be to say you want to learn it to take care of yourself and your family.

Next is 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, and provide advanced medical training at a good cost. After that is CERT, the Community Emergency Response Team. CERT organizations are 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 hours training. And only a portion of that 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, basically as far as you want to.

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 something's I don't particularly care for with them, but a lot of things I really like with 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 – if you have the ability to and frankly I have no idea how I was able to do the original training that I did, but the Wilderness EMT or Outdoor Emergency Care. Wilderness EMT has been put on my NOLS and outdoor emergency care is put on my National Ski Patrol. They probably still argue on whether or not they are equivalent, but

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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 and a wilderness EMT or OEC class teaches people how to improvise, 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. Of course since its 40 fewer hours it covers less stuff in less depth, but still a very good class on trauma and medical fundamentals and improvisation. The next ones are, pretty much any city that you're in around the country, people who are teaching fire-arm classes are also teaching 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 and may not have access to medical supplies.

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*, and it is the OEC student guide from National Ski Patrol. The picture I have here is the most updated version, I would not hesitate at all to get an older version, 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 that happens to be a way that you can see yourself consuming the information is by watching the DVDs at night, half hour or an hour at a time rather than reading then go for it.

The next thing is the book, *Wilderness First Responder*, and again, this is the text for the Wilderness First Responder certification through NOLS. Again, 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, and the *Wilderness Medicine* book is in the \$150-\$200 range and that's because it comes with the DVDs.

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

One other thing I want to say, I do find it very ironic that the module on improvise solutions to medical issues was delayed because of the fact that I'm dealing with a medical issue, which happens to be an illness that I've had for several days – ironic, yes. There are some good lessons here, it was very predictable that I was going to get sick and I will cover why here in a second.

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One of the first things I want to talk about is chronic illness versus acute illness. The terms, I'll be quick about it, but it's important to understand the difference between the two of them. We've got chronic issues and those are things that affect people day in and day out for months and years at a time, other things are acute, they come and they go. The flu is acute, Type I Diabetes is chronic, it doesn't come and go it's there, yesterday today tomorrow, around for a long-long time. Acute stuff is going to come and go, some acute stuff turns into chronic but for the most part acute is acute. It's important to understand this in the things we're looking for solutions for. One of the first things we're going to talk about is fevers – and a lot of people want to treat a fever immediately, first thing they do when they or their kids get a fever is take Tylenol, and 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. I know on DrSievers.com he talks about 104 degrees being a 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 night time 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 shut eye.

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, again within reason.

Diarrhea is kind of the same thing, conventional wisdom is you get diarrhea you take Imodium, plug it up and stop it and get back to work. But the problem with that thinking is if diarrhea is caused by a sickness, is usually the body trying to get rid of the sickness and that's the method that it's trying to do it, so as long as you can maintain hydrated, you probably want to go ahead and let the body do what it needs to do. And if you are having problems staying 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, now this is something that can be, is, normally chronic but can also be acute as we've seen with several-several Hollywood movie stars. There are clinics across the country helping people who have Type II Diabetes, either 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, this is something to consider is see if you can maintain it with diet and exercise. If you have 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. So either your body is going to produce what you need or you need to supplement it. You can do things so you don't use an excessive amount of insulin but you can't alter your diet and exercise so you don't use any insulin, it's not possible.



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

The next thing is pain and pain is a tricky-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, hammer hitting the finger may be pain or getting shot may be pain depending on your pain tolerance. And some people can sleep when they're in pain some people cannot. It's just, 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 body, to the kidneys and the liver, so you need to be very careful taking over-the-counter pain medication. If you can use it, if 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 set of items to seriously consider is mind over matter, also called self-hypnosis or medication or finding your happy place. These all sound corny and these have all been – if you come from a Christian background like I do, all of these seem woo-woo and like they're stuff we shouldn't be messing with. In reality, God made our bodies certain ways, different religions and ideas and thought processes have been wrapped around mind over matter and self-hypnosis and meditation and the whole idea of a happy place. But it's the way God made our minds and if we can use that tool then I think it's a good tool to use.

Some examples of this are natural birthing, people who 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 their minds, to a certain extent sometimes it does, but it allows them to almost disassociate from the pain and let their body keep working on what it needs to work on and have childbirth without medication. The same thing for former drug addicts, you need to get dental work done, they can go through it. They change the way that their mind is working for the time being. Now has hypnosis been used for evil purposes? Absolutely, all 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 used it myself, my wife has used it in two child births 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 being answered. I have no idea which it is, and quite frankly I don't think you 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 other thing is human touch

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and/or having a pet around. 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.

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.

Here's what it is, opium comes from poppies, we get opium from opium, we get morphine from opium, we get heroin from opium, it can be used for very good things it can be used for very bad things. And 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, and there's entire books on this, on which particular poppies produce the most drug and are still legal to grow. The illegal part of it is harvesting the latex or the sap, so growing them, having flowers in your garden, harvesting is illegal.

The next thing is psychotropics, these definitely need to be administered by a doctor. But basically you can find plants in the wild and possibly in your garden that has dissociative properties that allow short term surgeries to be done without narcotics, and 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, because I know most of the people going through this aren't doctors, is because sometimes you just need to have the information and know that something is a possibility, so that when an event happens you can say oh wait a minute, I know that we can use psychotropics and make this happen. So I'm not saying go out and experiment with mushrooms and other items, what I am saying is 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, this and this. This is the research I found, this is where we need to go to get this item, and let me know if I can help.

The next thing 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, a couple of examples of this is plantar fasciitis and lower back pain. With plantar fasciitis, sometimes it is because your foot hasn't been working through its range of motion enough and the stuff just stops working and it needs to get loosened back up with exercise and stretching, not excessive because that can cause damage. But exercise instruction definitely. As far as the lower back pain a lot of lower back pain is caused by belly fat, and 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,

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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.

Next we are going to cover nine other must-have items for medical situations, and I am going to start off with something very-very simple and its psyllium or Metamucil, and its fiber. Fiber is great because it can help both if you are constipated or if you have diarrhea. Now we've talked about diarrhea before, not necessarily being a bad thing if 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. Constipation, you absolutely have to get rid of waste so constipation is bad also, and a lot of survival foods may not agree with your system enough to allow for regularity, so Metamucil is a great thing to have on hand.

Another thing is salt, one thing that can happen a lot is when people are exerting themselves and they aren't used to exerting themselves and they drink water, they drink just water and they're sweating, they get into a situation called hyponatremia which is where the sodium levels in the body get critically low, and 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-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 Naholi, which is a type of tea tree oil that has different esters in it than the regular tea tree oil that you are probably used to. Naholi is smooth enough, sensitive enough that it can be used around babies and it doesn't irritate them and make them upset. It's incredible stuff.

Another thing is baking soda, a combination of baking soda and salt is roughly what I use for toothpaste, I haven't used regular toothpaste in quite a long time 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. So that's an after disaster, a little bit of baking soda can go along way for brushing teeth.

Cinnamon oil is the next thing, cinnamon oil has several very-very good properties, one of them is 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, which is a phenomenal attribute to 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, and 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

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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 name 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 you 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, 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 thing is chemical heat and cold packs, and I especially like the reusable chemical heat packs, and the reason these are so valuable is because if you've got someone who is overheating, cold packs under the armpits is a very-very good 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 them in coats, they are great-great tools, and an easy way to cycle them to make sure that you always have fresh ones with you is to use them when you're transporting groceries. Use them 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, this has been a true life-saver for us, and fortunately this is all over the NIH website so it's something that I can talk about and not just say that it was something that we came up with. But a lot of people talk about using, taking cranberry juice for urinary tract health and one of the problems with that is the amount of simple sugar that's in cranberry juice. And 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 sugar in it called D-Mannose, and D-Mannose goes along and basically bonds with the walls of the urinary tract and keeps infections from taking that same spot, and so they just pass on through. What it meant for us we went from dealing with UTIs on a fairly regular basis to being able to eliminate them in a matter of hours and/or not having them at all. Again it went from a very serious issue to a complete non-issue very-very quickly. So if that's a concern for you, if you have girls in your family, I suggest looking into and deciding whether or not you want to have D-Mannose on hand.

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Another thing is Vitamin D, and I am a huge proponent of Vitamin D both from the sun and supplementing. If you decide to supplement check Vitacost.com for drops.

I am going to leave you with five tricks to strengthen your immune system, and most of them are things that you know, but it's always good to be reminded of things. 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 a million little silver BBs.

I am not sharing these with you as if they were brand new and stuff that you've never seen before, I am sharing them with you because they are just so important, and I got tripped up by this. I am going to cover this in just a second, but the reason this module got released late is because I have been able to talk for several days. And this is the first day I have not been able to talk again, because I was sick, and the reason I was sick is because we went back and forth with our boys between one of them was teething and we weren't getting good sleep at night taking care of his teething. Then about the time that he'd be fine the other one would come down with something and he'd decide at 1:00, 2:00 in the morning that it was time to come and share daddy's pillow. Of course whenever he needed to cough it was right either in my face or on the back of my head, and the cuddly little guy, bless his heart he made it pretty darn hard to sleep. And the combination of the two of them back and forth meant that for about two or three weeks I didn't really sleep as much I should. I didn't get near as much sleep as I should, and I compromised my immune system, I got sick and I lost my voice. That led to this module being released late.

The point is, it wasn't a big thing that caused the problem, it was a little thing. That's the reason I'm going over these. First, get daily exposure to sunlight, the Vitamin D that sunlight will help your body produce is the best form of Vitamin D that it can possibly get, and it's the most efficient way for your body to get Vitamin D. Vitamin D is absolutely vital for your immune system, for inflammation response, for pain response and for mood, so it's a very-very important thing to keep on top of.

Next is getting enough sleep: I just talked about that. Ideally if you need an alarm clock to wake up, you're not getting enough sleep, that's just almost impossible. 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 just 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, and that means any lights, any indicator lights, any clocks, any light coming in through windows, ideally you want to have it so you can't see your hand in front of your face, and you really can't orient yourself in your room. We have very-very few lights in

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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 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. And this one is huge – wash your hands, I don't want to say go and wash your hands 20 times a day, but whenever you're in a restroom wash your hands and before you handle food, before you touch your face, just try to think about all the germs you come in contact with everyday with your hands, and 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, but you do want to wash your hands so you get large colonies of germs off of your hands before you're touching things that are going to go into your body.

And 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.

So that's it for this module, this was a long one. Much longer than I thought it was going to be. If you've got questions or comments, please send them to me at [David@FastestWayToPrepare.com](mailto:David@FastestWayToPrepare.com).

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