

SurviveInPlace

**Lesson #6
Chemical and Biological Attacks
And
"Ghetto" Medicine**

By

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Foreword

I'm very excited to report that MANY students are sending in positive feedback about their results so far with the SurviveInPlace program.

- *Quite a few students have told me that they have completed all of the exercises to date and are LIGHT YEARS further along in there REAL preparedness levels than they were 6 short weeks ago.*
- *Additional students have indicated that they had decades of survival preparedness education and they're very happy with the logistical approach and how much it's helping them "tighten things down".*
- *There are also a LOT of students who don't have the money to go the traditional survival route, but are FINALLY SEEING SOMETHING THEY CAN DO to get them and their family prepared for disasters!*

I gotta tell you, it's been amazing to see the feedback. I've got many emails like this one from "Steve"...

Dear David,

I am a member of the Federal NDMS/DMAT: National Disaster Medical Service/Disaster Medical Assistance Team. We/I went to New Orleans and other areas of disasters.

I took a chance and subscribed to your site/lessons. I am VERY glad I did and recommend this to anyone serious about REALISTIC non-hysterical preparation. Well done/doing, Sir.

I don't say that to "brag" on myself, but to "congratulate" those like you who are taking action and seeing some great things happen in their lives.

And the best really is yet to come.

If you stick with this and put what I tell you into action, you'll have a life-changing experience. Like today's lesson, for example. Just one small section will put you at ease about several risks that keep other "preppers" up at night worrying.

I'll supply you with the information and the blueprints ... you put them into practice. Fair enough? I know you can do it because I've seen others doing it!

Rah-rah. Go team. End of pep talk. ☺

Welcome to your sixth SurviveInPlace™ lesson!

Remember, it's a self-paced course, so you can complete it in 12 weeks or stretch it out longer once you've received the lessons.

Last week, we covered the threat of the flu pandemic and how you can protect yourself from it easily and inexpensively.

Stay tuned, because I'm going to be sending out a mid-week email in the next few days with information on why I think that this year's flu season may actually be a big event...but not for the reasons everyone is saying.

I'd love to hear how your exercises from last week went for you. Please let me know by emailing me at david@surviveinplace.com.

This week, we're going to be covering the following:

1. Chemical and Biological Attacks
2. **Your Response to Chemical and Biological Events**
3. "Ghetto" medicine techniques

So, hit the "print" button, start reading, and let's get prepared!

This is going to be an exciting week. It covers a pretty meaty topic and again, I'm going to give you a solid understanding of chemical and biological attacks without getting too dry or bogged down. By the time you're done reading this week's lesson, you're going to have a LOT more practical knowledge and peace of mind about this threat.

We're also going to cover how to create a safe room in your house, office, or car in case there is an airborne threat that you need to protect yourself from. As we discussed in lesson 3 when we covered local chemical threats due to accidents, this is a very simple and practical exercise and this also will give you confidence earned from experience rather than simple book knowledge.

Finally, we're going to go over one of my favorite topics...simple improvised medical treatments. I am an Outdoor Emergency Care Technician (Wilderness EMT) and one of the tenants of the training is to work with what you're carrying on you, not what an urban EMT might have on their

truck. This mindset and knowledge is very important in a disaster situation where you will be faced with needing to treat traumas with non-ideal solutions.

Let's get started!

To begin with I want to address the 500 pound guerilla in the room, which is nuclear attack. I am not addressing nuclear attacks in this course for the simple reason that we're trying to address as many high probability disasters as possible in a limited amount of time. The chances of nuclear attack are several scales of magnitude lower than the chances of chem/bio accidents, conventional terrorist attacks, hurricanes/volcanoes/earthquakes, wildfires, or even economic collapse. At the same time, fallout shelters are expensive and take months to put in place.

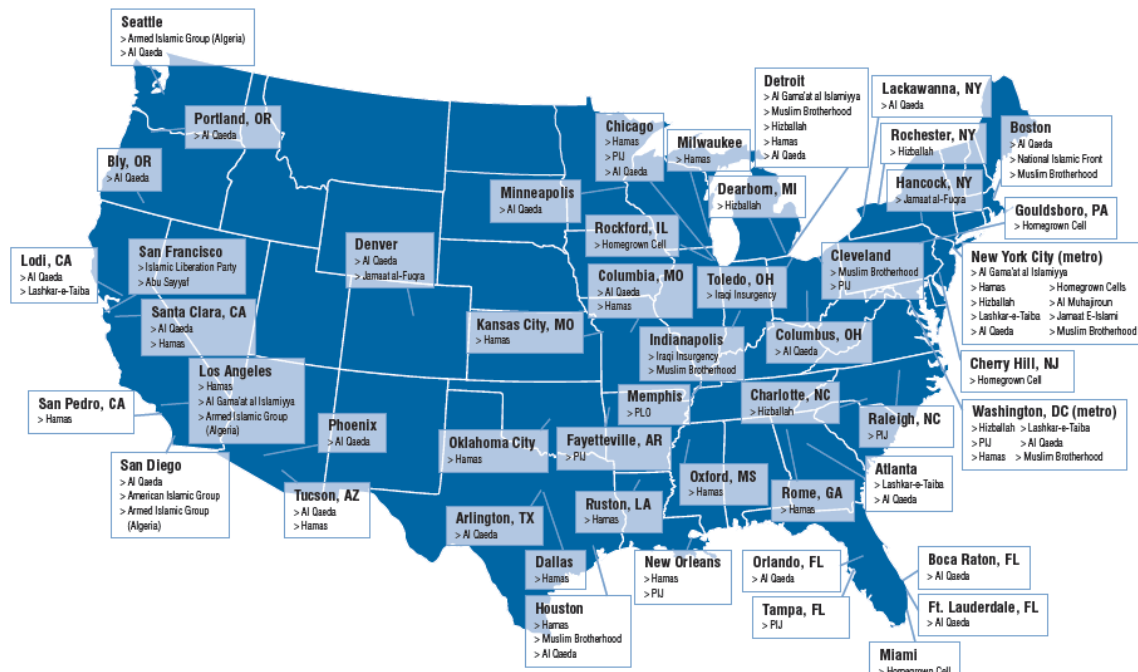
I can point you to several resources to help you get prepared for nuclear events...and will do a followup lesson on the topic if the demand is high enough, but for now we're going to spend more time on events that are more likely to affect you and that have solutions that are broader in their possible applications.

How great is the risk of chemical or biological attack?

Biological warfare has been effectively used since the Hittites herded victims of the plague into enemy lands in 1500 B.C. and chemical warfare has been used in the form of poison tipped arrows since man began hunting. They are proven strategies that have benefited from thousands of years of use and refinement, but how big is the risk that we face today?

To begin with, let's look at Islamic terrorist groups that are operating openly in the US. Nineteen states have active, publically known terrorist cells ranging from the Muslim Brotherhood and Hamas to al Qaeda.

The Terrorist Network in America, 1991–2007



The Investigative Project on Terrorism

This map represents the cumulative terrorist network in the United States over more than a decade and a half. It is not meant to be a snapshot of the current terrorist network.

Thanks to Kim at The Investigative Project On Terrorism for the use of this map and the research that went into making it. To see a larger version, please go to > <http://urbansurvivalplan.com/229/terrormap/>

Second, the effects of chemical and biological weapons are truly terrifying. Blistering skin, suffocating, loss of nerve control, organ liquification, sores, and the thought of mummy-like infected people coughing and spreading suffering and death is enough to keep a sane person up at night.

Third, the Soviet Union manufactured hundreds of tons of biological weapons as well as 40,000 tons of chemical weapons. Some of these are still under Soviet control. Others were destroyed, sold to countries like Iran, and some of them and have been lost.

A friend of mine from Provo, Utah studied bio-weapons under the head of the former Soviet Bio-Weapons program, Ken Alibek and contributed a lot of valuable information for the previous lesson and this one. According to Mr.

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Alibek, the height of their production, they were manufacturing enough Anthrax to kill the entire world several times over, EVERY WEEK and had the capability to ramp up their production levels by several multiples.

Fourth, Both Iran and North Korea have chemical weapons stockpiles and are working on biological weapons.

Finally, we've seen both the manufacture and use of chemical and biological agents by individuals and terrorist groups in recent years, including:

- The use of sarin (chemical nerve agent) in the Japanese subway system in 1995. The attack happened in 5 subway cars at roughly the same time during morning rush hour. A single drop of sarin the size of a pin head can kill an adult. Each attacker carried at least 1800ml of sarin (almost 2 liters/32 ounces), most of which was released, but injuries were limited to 1100 and **12 died**.
- Post 9/11 anthrax attacks in 2001 by a former US government scientist, infecting 22, **5 of which died**.
- A foiled al Qaeda attack in Amman, Jordan in 2004. They had 20 tons of chemical agents, including 71 different lethal blister, nerve, and choking chemicals. The chemicals would be aerosolized and spread by three precise explosions designed not to burn up the chemicals. The combination of chemicals meant that victims would have multiple symptoms and there would be no single effective treatment. The effective kill zone of the chemical cloud was expected to extend outward 1 mile from the explosions.
- Three 2007 "dirty" chlorine attacks in/near Baghdad. A pickup loaded with explosives and chlorine cylinders was blown up, hospitalizing 55 and **killing 5**. In a separate incident, a bomb was detonated on a chlorine tanker affecting 150 local residents. And in the third incident, a pickup loaded with explosives crashed into a chlorine tank, **killing 12**.
- 2008 ricin event. A Salt Lake City man manufactured homemade ricin for "self defense" and mishandled it in a Las Vegas motel, causing him to be hospitalized.

Ironically, when you understand the full significance of these five sets of incidents, they are five of the most comforting things you can know about the risks we face from chemical and biological attacks.

To begin with, take a look back at the number of people killed in each attack. The deaths were all tragic, but they were relatively small compared to other attacks, like the bus suicide attacks that happen all too often in Israel using conventional bomb vests.

Next, take a look at the Japanese subway attacks. The loss of life was tragic, but the terrorists used enough sarin to kill tens of thousands (possibly hundreds of thousands) of people and instead, killed 12. The group responsible, Aum Shinrikyo, had millions of dollars at their disposal and had spent the previous 3-4 years trying to either buy or produce (with the help of several PhDs) either a toxic strain of botulism or anthrax. Despite having time, money, and skilled help, they were unsuccessful.

Then look at the proposed attack in Amman. The death toll projections ranged from 20,000-80,000 with well over 100,000 injuries expected. This is would have been a tragedy, but the silver lining here is that the number of people who would have been within the 1 mile kill radius of the chemical clouds and outside of the kill radius of the initial blasts would have been a limited number.

This is an important point, because it brings up the fact that even if there is a large scale chemical attack, and the target is in the US, and the target happens to be in your city, the chances of you being directly affected are very slim.

Finally, we have the 19 publically known terrorist attacks that have been thwarted since 9/11. It would make sense that if terrorists intended to use chemical or biological weapons, at least one of these attacks would be chemical or biological. While some of them planned on using conventional explosives to attack fuel targets or making a dirty-nuclear bomb, NONE of them included biological or chemical attacks, let alone using the nightmare scenario of using a crop duster to spread bio/chemical agents over a city.

Let's compare this threat to a few other threats:

1. Malaria, tuberculosis, & HIV/AIDS kill 5 MILLION people every year.
2. Smoking kills upwards of 5 million people every year (443,000 in the US.)
3. Ordinary flu kills an average of 36,000 people per year in the US.

4. The cumulative total from the chem/bio attacks mentioned above that span a 15 year period is 34, or roughly the number of people who die from the flu every 8 hours in the US.

As you begin digging into the threat of chemical and biological attacks, you'll soon read several nightmare scenarios that have been put forth by various local, state, and federal entities. At first, the effects of a chemical or biological attack look horrible, with large percentages of cities suffering and dying.

The statistics from these scenarios are used in news articles, fiction books, TV shows, and movies. They are also what most people think of when they think about the threat posed by chemical or biological attacks.

If you dig deeper, though, you start to see that the technologies used aren't realistic. In the case of bio attacks, Ken Alibek and his Soviet scientists were SCARED of making dry powder smallpox, because it is so dangerous that it's nearly impossible to work with without becoming infected, even when using the best containment and decontamination methods known. Even so, we "game" the use of dry powder smallpox in our scenarios and use infection and re-infection rates that are 3-5 times higher than what we know to be true or what scientists predict as a worst case.

With both biological and chemical attacks, the scenarios ignore how vulnerable potential toxic clouds are to environmental conditions such as temperature, humidity, elevation changes, wind (too strong or none at all), and micro weather patterns found in areas with lots of trees, hills, buildings, and even large black asphalt parking lots.

With both, the concentrations need to remain in a narrow range to achieve maximum death tolls. Too high of a concentration wastes the weapon and too low of a concentration turns many weapons from killers to severe irritants.

Fortunately, the response to a chemical or biological weapon attack is the same as the response to the chemical accidents that we addressed in Lesson 3, so even though the chance of (1) an attack happening that is (2) in your city that (3) affects you is miniscule, we can create a response that is simple, inexpensive, and effective enough to be practical. In addition, the

exact same response will protect you short term in the event of a dirty nuclear attack.

Your response:

There are two responses you're going to want to consider if you have a chemical or biological event: Evacuate or Survive (Shelter) In Place.

If an event happens, the local government entity is going to suggest that everyone take actions that will make their response easiest and hopefully limit the number of casualties. This is not necessarily the best suggestion for YOU.

As an example, let's say that I'm home with my family this evening when I hear a massive explosion. I go outside and see a giant cloud of smoke going into the air off to the Northwest. I can't see the ground where the fire is, but I know that there's a refinery 2 miles in that direction. As I'm looking, I hear multiple secondary explosions and see that the wind is blowing the cloud towards my house with a light breeze.

I look at the trees in our neighborhood and estimate that the wind is blowing at 5-10 mph at ground level, giving us 12 minutes to get ready or leave, assuming that the wind isn't blowing harder at higher altitudes.

I know that the smoke cloud shouldn't affect us at this distance, but I'd rather we didn't breathe in the chemicals or be around as the chemicals/debris start cooling, clumping with moisture in the air and start falling back to earth. My initial hunch is that it's an accident or isolated attack, so I'm not worried about long term security issues.

This has all happened within 30 seconds of hearing the explosion, so there's nothing on the news yet and there's not likely to be any increase in traffic yet, so we grab our home GO bag, turn off the AC, lock up the house, top off our gas tank with our reserve fuel, hop in the car, and take off within 10 minutes of hearing the explosion.

As we're driving off in the car, we hear that there was an accident at the refinery and the "official" recommendation that people downwind from the refinery move indoors, seal their doors and windows and stay calm.

Many people panic and leave when they hear the announcement...taking 30 minutes or more gathering belongings and actually leaving. Gas stations have lines from people who left home with empty gas tanks and the roads

leading away from the refinery are soon packed like rush hour.

Meanwhile, as the congestion is building, we're already checking into a hotel in a neighboring town that's perpendicular and well away from the path of the smoke and debris. Our simple knowledge and preparedness allowed us to respond quickly, decisively, and calmly and turn an event that was full of drama for others into little more than an impromptu night or two away from home.

What was the best response in this instance? There are several factors, but the speed that we were able to respond made leaving a viable option. If I'd ignored the sound of the initial explosion and tried to leave when the alert came on the air, we would have been stuck in traffic like everyone else and would have probably been better off surviving in place.

Another factor is the overall civil situation in your area. If you're in the middle of a larger emergency like being in New Orleans 4 days after Katrina, you might not have the option to leave quite so easily.

As I have mentioned before, if an event like this happens while your family is spread out between work, school, and activities, you're probably not going to be able to stomach the thought of leaving without them. I couldn't.

Survive In Place

If evacuating is not an option, you've got two major strategies you can use:

1. For an airborne threat where the contents of the air is the threat.
2. For an epidemic/like the flu or another biological event where the air is not dangerous but other people are.

If you're facing an airborne threat, you want to try to seal off a room or section of your house where you can stay for at least a few hours, but possibly longer. Most chemicals dissipate within a few hours under normal atmospheric conditions, but an uncontained leak or an industrial fire could put contaminants in the air for much longer.

Ideally, you want to pick a room/area that can be shut off from the rest of your house, has no windows, no air ducts, and hard floors. If that's not a

possibility, pick the room with the fewest windows and ducts. Try to allow for at least 10 square feet per person for adequate oxygen.

If you are in a situation where you need to use your safe room, make sure to take everyone's pulse every 10-15 minutes and write down the information. Your pulses will probably be elevated from stress and rushing to get into the room, but if you start to see a sudden spike in your pulse after the 5 hour mark, it could mean that you're running out of air and will need to prepare to leave your safe room immediately if anyone begins to pass out or is unable to stay awake. The 5 hour mark is merely a guide and will be very different for two professional free divers who have learned to control their breathing and heart rate than it will be for two large people who are prone to panic and hyperventilation.

You'll have to make a choice on what to do with your pets. They take air that you may need, you may have bathroom messes to contend with, and they may cut your plastic with their paws if they hear outside noises. We've made the decision to include our pets, but we only have two dogs and understand the risks. Now is the time to decide what you are going to do with your pets.

TO DO:

Decide what you're going to do with your pets in the event of an airborne threat.

Since many chemicals (chlorine, as an example) are heavier than air and will tend to collect in basements, you will ideally want to have your safe room on the ground floor or higher.

Your first step in securing your house is going to be to limit the amount of outside air that can get into your house by turning off your AC/furnace/fan, shutting and locking all doors and windows and closing your fireplace damper, if you have one. If you feel like you have time, tape a sheet of plastic over your fire place opening.

Next, you want to create an interior safe room with an even higher level of safety. Here's how to create a safe room in your house.

First, you need the following items:

1. Your home GO bag
2. Thick plastic sheeting. You'll see recommendations on thickness ranging from "anything thicker than plastic wrap" to 10mil. We have 3.5mil. That being said, I wouldn't hesitate to use contractor trash bags or multiple layers of regular trash bags if I was away from home and that was all that was available.
3. 3" wide duct tape
4. 5 gallon bucket with a lid and trash bags for your "bathroom"/TP/wipes

If you've got time, you'll also want the following:

1. Pillows, bedding, blankets
2. Extra drinks
3. Extra food
4. Small books/games
5. A radio if you don't have one in your GO bag
6. A land line phone that's plugged into the wall and/or a cell phone
7. Chemical heat packs/foot warmers and/or chemical cold packs

As a note, everything except for the GO bag will store easily in a closet in your 5 gallon bucket.

Sealing the room

As a note, our safe area is a bedroom and bathroom "area" (I wouldn't call it a suite) that gives us water, a toilet, a bed, and makes our safe room quite comfortable.

Once everyone's in the room, the first thing you want to do is fill the crack under the door with trash bags, pillowcases, or clothes. Second, tape all the seams on your door(s), and window(s).

Third, using a utility knife, scissors, or a pocket knife, cut a sheet of plastic for each door, window, vent, electrical outlet, or other openings to the outside or the rest of your house. Make sure to allow an extra 3-5 inches of plastic on every side. When you're done, tape down the corners and then, using one single strip of tape per side, tape down the sides.

Thick carpet poses a unique threat in that you may not be able to get a good seal. Depending on the threat, you may need to find another room or cut

through your carpet so that you can get a good seal between the plastic and the cement or wood below.

TO DO:

As a test and to prepare, buy a roll of 3 ½" **BLUE** painter's masking tape (it is designed not to damage paint), cut your plastic barriers, and tape them into place in your safe room with the BLUE tape. This will insure that you have your plastic pre-cut, that you know how much tape you'll need, and as with any skill, your second time will be much faster than the first.

Test out the blue tape on your walls before you go crazy with it. It's made to be easy to remove without damaging walls/ceilings/floors, but you will want to test it to make sure.

As an additional step, spend 3-5 hours in your safe room so that you have experience using your 5 gallon bucket and know if you need other items.

As a test to see how well your taping/sealing is, one strategy is to put yourself in the room while someone else cooks a pungent meal like curry, onions, or garlic in another part of the house. If you have a portable fan, blow it towards your safe room as an added test.

It should go without saying, but if you have thick carpet, do not cut it for the test.

At Work

If you are at work when you need to create your safe room, the basic procedure is the same, except you will have the extra challenge of blocking the air ducts.

The best solution is to find out how to shut off the air in the room you've chosen as a safe room ahead of time. If it's not obvious and you have maintenance personnel, they may or may not be willing to tell you how to turn off the air.

If you can't turn off the air, you can still block the air. Here's how:

1. If possible, find a room where the fan doesn't blow as strong as other rooms.
2. Get access to the duct by removing the grate.
3. Take an alcohol wipe or something similar and clean the duct near the grate so that your tape will stick.

4. Cut a sheet of plastic that is a couple inches bigger than the duct in every direction.
5. Tape the plastic sheet to the duct as close to the grate as possible. You may need to reinforce the tape by supergluing both the plastic and the tape to the walls of the duct. Depending on how strongly the fan is blowing, it may be very difficult to get a good seal.
6. Using a pillow, crumpled up paper, or anything else handy, fill the 3 ½ inch gap between the plastic and the grate due to the tape and re-close the grate. This will help support the plastic and take some of the pressure off of the duct tape.

In both home and work situations, once you're in your room, listen to your radio until you receive the "all-clear" to come out. You can also call or text your out-of-town emergency contact occasionally to see if they have any additional information about the situation in your area.

Epidemics and Pandemics

If your area is experiencing a biological event, be it the aftermath of an attack or if a highly contagious and nasty strain of the flu develops, you may want to isolate yourself from other people until the threat passes.

It's important to note that the limited number of epidemics and pandemics that the Earth has experienced means that there is not a pool of experts who have "been there" and "done that" to provide us with proven strategies to follow. Instead, I have consulted with survival experts and am sharing their combined wisdom with you. This section will be expanded and refined if there is a pandemic approaching and I will keep you informed of changes via email and blogs.

We're going to spend a few lessons on the subject of surviving without leaving your home, but there are a couple of items that are specific to biological events:

1. Do a "gut check" and make sure that things are really to the point where you need to isolate yourself from other people. Are you being overly paranoid? Is the risk of sickness great enough that it's worth risking your job and/or relationships?
2. Get your story straight. If you can't pull off looking and sounding like you're not home, put a sign on your front door explaining why you

refuse to answer. It could be, "Wife pregnant, we're not answering our door" or "Baby sleeping, please don't knock or ring the doorbell" or "Mom just finished chemo, we're not answering the door" or something similar.

I wouldn't suggest putting a sign up saying that you're sick as a ploy. The possibility exists that sick people will be gathered up so that they can be helped and isolated from the general population. It's doubtful that officials would believe that nobody is really sick in your house if you have a sign up saying that someone is.

You want to try to create an impossible argument so that anyone reading the note will leave you alone and won't think you're just being rude. Whatever you decide on, you MUST stick with it and do not tell anyone that it is merely a ploy.

3. Decide what you're going to tell your employer, co-workers, friends, and family. They may not have prepared like you have and/or may not appreciate your concern or you isolating yourself from them. Try to be as nonchalant as possible and as non-committal as possible. If things don't get as bad as you think they might, you don't want to have burned any unnecessary bridges.

The most awkward time in a situation like this is going to be the time between when people who are "aware" start taking action and the majority of the population realizes there is an issue.

4. Get daily sun exposure. If possible, get it where people can't see you and won't be tempted to talk with you.
5. Stay out of sight as much as possible, drawing curtains if necessary.
6. Decide your response if "help" comes.
7. Get daily exercise to help combat stress.
8. Decide early on what trigger you will use to start going back out into public.
9. Set limits on how much news you will watch, read, or listen to. The media's primary job is to keep your attention so they can sell advertising. It's not to motivate you, educate you, or help you

through a disaster. I anticipate that the phrase, "If it bleeds, it leads" will be particularly accurate during a biological event.

10. Take OpSec precautions when you are talking with people about the flu and your plans/preparations. If there is a break in the supply chain and they think that you are "hoarding" food, vitamins, or medication, they'll be coming to you when they need help. I'll paraphrase James Rawles by saying that charity is great during a crisis, but it should be anonymous and on your terms.

Ghetto Medicine

Otherwise known as "field expedient" or "improvised" medicine, here are some of my favorite non-conventional medical treatments. By reading the following and continuing, you accept the risk that these treatments may hurt you or others and should only be used after doing your own research, getting proper medical training, and as a last resort.

These tips, tricks, and shortcuts can help anyone, but are really designed to help people with formal medical training train their mind to see alternative methods of treating themselves and patients when they are in a non-ideal situation.

I am a former first aid and CPR instructor and believe that everyone should have this level of medical training, at a minimum. The classes will teach you how to respond to basic traumas and medical emergencies, as well as how to communicate with EMTs and Paramedics. That being said, it will not teach you how to deal with injuries or medical situations when you don't have someone with more training coming to relieve you quickly.

It's for that reason that I encourage you to get wilderness medical training of some sort, like wilderness first aid, wilderness first responder (WooFeR), wilderness EMT, or Outdoor Emergency Care (Primarily for ski patrol, trail patrol, and search and rescue). Why? Because all of the wilderness medical training classes assume that you're going to be away from an ambulance, helicopter, and other higher levels of medical care and supplies for an extended period of time. These classes force you to improvise, adapt, and overcome to treat people with what you happen to be carrying with you and what you can find in your environment. This skillset most closely fits what you'll be facing in a disaster or emergency situation.

Here are some of the tricks that either I or one or more of my contributing experts, including a former Navy Seal Medic, Combat Medics back from Iraq and Afghanistan, local paramedics, and first responders who operated in New Orleans after Katrina have used over the years that you will surely benefit from.

1. **Superglue/Crazy Glue.** At the time of this writing, I have used superglue or crazy glue on 4 facial cuts, a cut on my knuckle that went to the bone (I was on a hunting trip and was fortunate not to have cut any nerves, tendons, or ligaments), and numerous smaller cuts on myself, my dog, and others, as well as blisters and hot spots.

I've found that Crazy Glue works a little better for me (dries quicker and thicker), but the 12 packs of superglue are so convenient that it is the main brand that I use. It's cheap enough and has enough uses that it's worth buying a few tubes and practicing with it on your hands and/or feet. Superglue is very effective at securing skin to skin, so do not touch the glue with a finger to see if it is dry. Instead, use a piece of string, floss, paper, or a similar item that you don't mind being stuck to you for a few days.

As a rule of thumb, if I am on the fence about whether or not I need to get stitches, I use superglue. If I were to get a serious cut where the muscle needed to be sewn together, I would not use superglue. In "normal" times, I'd get medical attention and in a disaster, I would attempt to use a satcher kit or dental floss and a needle if I absolutely had to.

Some people have an allergic reaction or asthmatic reaction to Superglue. Don't wait until there is an emergency to find out if that's you. Take the time to try a small amount of it on your skin and see if you have a reaction. Make sure you do this in a well ventelated area and have a responsible adult with you who can get you to medical treatment if necessary when you do this.

As a note on personal responsibility, allergic reactions and severe asthma can kill you. You are responsible for your actions. DO NOT try this if you have ever had an allergic reaction to superglue, anticipate that you might, or if you are apprehensive about trying it.

If you aren't allergic to it and decide to use Superglue, the first thing you want to do is irrigate/clean the wound and control bleeding with pressure and elevation. Next, clean it out with sterile water or saline and pat dry. Then, close the cut with a butterfly bandage or tape that you've cut like a butterfly bandage.

When the skin is lined up the way you want it to heal, apply a thin layer of superglue. It will sting, and burn both your cut and possibly your eyes. If the cut is 1" long, you will want to apply the superglue approximately ¼" to ½" to the side of the cut so it has enough healthy skin to grab onto. Spread the superglue with a toothpick, metal pin, or the tip of the tube if you must, but never use a Q-tip or cotton. Once the glue dries, (in 1-2 minutes) apply a second layer over the top.

As a final step, cover the superglue when it's dry with athletic tape, duct tape, or a bandage making sure to use gauze, cloth, or paper to keep the tape from actually touching the superglue. The butterfly/superglue will hold the wound closed and the covering will help the superglue stay in place as long as possible and keep the wound area from getting dirty.

You can also use superglue on hot spots and blisters, but I've found duct tape to be superior in almost every way for this application.

Make sure to use superglue in a well-ventelated area and try to avoid breathing in the fumes or letting them hit your eyes, especially if you wear contacts. Inhaling the fumes can cause flu like symptoms or an asthmatic response. It can also cause an allergic skin reaction, so make sure to test it in a non-emergency situation first. You also want to avoid touching superglue with cotton clothing, cotton balls, or Q-tips, as it causes an exothermic reaction that can burn or irritate your skin.

There are less toxic "medical" superglues available including several brands of liquid bandage and even prescription strength Dermabond. I've tried every commercially available liquid bandage I've seen and I haven't been impressed with any of them. They are less toxic, but they just don't work that well. In my experience, they dry slower than superglue, wear off faster, and don't hold wounds together as well.

The BEST liquid alternative to stitches that I've used has been Dermabond. Unfortunately, it is \$20-\$50 per single use tube compared to \$5 for a 12-pack of superglue that gives you the possibility of multiple uses per tube. It is the perfect combination of fast drying, high strength, high durability, and low toxicity. I had an ER doctor use it on a cut directly under my eye with minimal effects from the fumes.

Because of the toxic nature of superglue and the reactions that it causes in some people, I can't categorically tell you that it will work as well for you as it has for myself and others. As a result, I encourage you to try out some of the "medical" superglues that you can find anywhere first aid supplies are sold.

2. **Maxi Pads.** There are some medical/hygiene items that there are few good substitutes for. Maxi pads are one of those items. If you live with or spend time with any women who are in their menstrating years, it's just smart to have maxi pads in your 72 hour kits and/or med kits.

I carry maxi pads for another reason, and that is to use as absorbant trauma dressings. They will soak up a lot more blood than a 4x4 and make more sense than ruining a roller bandage simply soaking up blood and applying pressure.

A note on tampons. I used to carry tampons to pack puncture wounds from sticks, poles, and presumably from bullets and stab wounds. Over the last few years, EMT and medic experience in the field has shown this to be a bad solution for small injuries because the tampon swells and tears healthy surrounding tissue as it soaks up blood and expands. You'll still see people promoting the use of tampons and duct tape, but I strongly suggest that you do NOT pack wounds with anything that will become an integral part of a clot and has to eventually be removed. If you get the patient to a higher level of care, tampons are a pain to remove once clotting has started and if you are looking at leaving the wound packed for an extended period, you risk septic infection.

If you're a guy and you're not up to speed on feminine hygiene products, tampons are cotton "plugs" with a string attached for easy

removal and maxi pads are rectangular absorbant pads with an outside coating that helps to keep the clotting action of the wound from attaching the pad to the patient.

Two other alternatives to absorbant dressings that you may have with you in an emergency are disposable diapers and adult undergarments.

3. **Dental Floss.** I learned about the wonders of dental floss when I was doing ski patrol. One of the issues that you face with wrist, elbow, shoulder, or arm injuries is swelling of the fingers. If you are wearing a ring and your finger swells up to where you can't remove your ring, you have a potentially serious problem. If the finger keeps swelling, the ring will eventually act like a tourniquet, so it's important to remove the ring as soon as possible.

Unfortunately, you aren't always able to start providing care before the finger is too swollen to remove the ring. If you do research on ring removal, you'll find people giving advice about using every type of lubricant known to man, but dental floss is the simple solution that is widely regarded as the best by EMTs and ER nurses.

Try to get the widest waxed dental floss you can find and start wrapping the ring finger, starting at the fingertip. Wrap the floss around the finger all the way up to the ring, making sure that you wrap tight enough and close enough together that the finger + floss is smaller than the ring. Once you get up to the ring, do a few more quick wraps to push down sections that you've missed and remove the ring quickly.

As a note, You can also use VCR or cassette tape for this.

TO DO:

Try this on yourself. One of the things that you'll notice is that speed is key with this technique. Your finger will start to swell as you're wrapping it and you will have to go back and wrap over sections that have swollen in the few seconds since you wrapped them. This effect will be even more pronounced with someone who is experiencing distal swelling due to an injury and speed will be even more important.

4. **Sugar.** In the movie "Shooter", Mark Wahlberg poured granulated sugar into his bullet wound to help it heal. Believe it or not, this treatment has been WRITTEN about since 1700 BC, is known commercially as "Sugardine" or "Sugardyne" and is a very popular treatment for injuries in horses.

The simplest and most effective mixture is sugar and a 10% iodine or betadine solution. Simply pack or cover the wound with the mixture, and dress it.

The mixture works by in part because bacteria doesn't grow in the presence of pure sugar, the sugar absorbs fluids, promoting drainage, and the betadine/iodine prevents infections.

Even after 3700 years of use, the instructions for how often to re-apply vary widely from every 4-6 hours to every day. The common advice is to apply a fresh mixture when the old mixture has completely liquified.

5. **Gunpowder.** This technique was made popular by John Rambo when he packed a wound with gunpowder and lit it to cauterize the wound. **Please don't ever attempt to cauterize a wound with gunpowder.** The basic premise of using gun powder on a wound actually has a basis in truth.

Gunpowder, otherwise known as black powder, is a combination of sulphur, charcoal, and saltpeter. These were common wound treatments for over a century and are still generally accepted naturopathic treatments for wounds.

Unfortunately, the modern handgun and rifle ammunition that you shoot does not contain gunpowder. It contains smokeless powder, which is usually nitrocellulose or a stable form of nitroglycerin. In any case, modern ammunition does not have sulphur, charcoal, or saltpeter and will burn like heck and not do much good in a wound.

6. **Safety Pins.** Safety pins are wonderful survival tools. In addition to using them as an improvised fish/animal hook, zipper handle, and a quick fix for shoe laces, they have several medical uses as well. You can use large safety pins for finger splints, to drain a blister, close

large wounds to prevent debris from entering, and even as an improvised sling.

To use safety pins as an improvised sling, all you need is an injured patient with a long sleeve shirt on. Simply put their arm in the position that hurts the least and start pinning the sleeve to the body of the shirt. Once you're done, they'll probably still be able to move their arm around because of the shirt being loose against the body. To fix this, simply draw up the extra material under their good arm and knot it or pin it so their shirt is tight against their skin and the injured arm is immobilized as much as possible.

7. **Duct Tape.** Duct tape is the survivalist's friend. Here are 16 more reasons to carry at least a full roll of duct tape in your kits.
 - a. Hotspots (pre-blisters) – apply directly to the area, making sure to cover an area bigger than the hotspot.
 - b. Blisters – cut a piece bigger than the affected area, put paper/cloth between the blister and the tape and you're good to go. Depending on the blister, you may/may not need to build up the area around the blister to relieve pressure or pop it to continue using the affected area.
 - c. As a temporary cast, once you've set the bone, you can wrap the bone/joint in newspaper and then wrap the newspaper with duct tape until you get to a higher level of care.
 - d. If you are wearing dress shoes or cheap shoes that are falling apart in a survival situation, a few wraps of duct tape will get you more mileage out of them.
 - e. If your shoes are completely thrashed, you can make improvised shoes from duct tape by wrapping your feet. Place extra layers in front of your toes to give them a little extra protection from stubbing. To pad the bottom, you can use card board, carpet strips, or anything else you find in your environment.
 - f. Gaitors. Since blisters are so detrimental to effective movement, if you find that you're repeatedly removing pebbles/debris from your shoes, you can make duct tape gaitors by wrapping tape around the top of your shoes & legs a few times to make sure no debris can get in your shoe.

- g. Knee support. Many people wear a tight wrap under their knee to provide support. Wrapping a ¾" strip of duct tape around the leg twice can accomplish the same thing.
- h. Knee support. If you experience a torn ACL/MCL and don't have knee support, you can splint your knee with duct tape and any available stiff object (stick, bar, rolled newspaper, file folders, cardboard, etc.).
- i. Sutchers/stitches. If you can hold a wound together temporarily while you apply duct tape (with superglue butterfly bandages, or improvised butterfly bandages) you can provide additional lateral support to the wound to keep it from re-opening. Just remember to put something (paper, cloth, gauze, etc.) between the wound and the duct tape so the duct tape won't stick to the wound and open it when you remove the tape.
- j. Sucking chest wound. Simply tape 3 sides of a plastic bag over a sucking chest wound to create a butterfly valve.
- k. Neck brace substitute. If you've got someone secured to a board, chair, etc. you can immobilize their head with duct tape instead of the traditional wrap. Just make sure to put something between the sticky tape and the patient's hair.
- l. Dog paw protection. If you're in an area with sharp rocks, ice, or debris, you can tape your dog's paws to protect them. They will lose significant traction, but saving their pads is often worth the tradeoff. You can wrap them initially with a roller bandage to keep the tape from pulling out their hair when you remove it.
- m. Finger splint. Use duct tape along with a popsicle stick, safety pins, a bic pin, a folded file folder, or even rolled up duct tape!
- n. For mass casualty incidents, you can use duct tape stuck to the patient to record triage information, as well as vital information.
- o. As an alternative to triangle bandages for providing an anchor point to apply traction to arms or legs.
- p. Arm splint. Find where the arm is most comfortable and secure it to the body.

TO DO:

Get a roll of duct tape and try several of these techniques on yourself

and with a friend or family member. Critique each attempt and try to figure out why certain methods work better than others. Be very careful with duct tape and body so that you don't end up looking like a man-o-lantern. You may want to shave a small area or do most of the exercises over clothes to minimize pain.

Review of This Week's Assignments

To Do:	Date First Completed:
Decide what you're going to do with your pets in the event of an airborne threat.	
Do a test run in your safe room using BLUE painters tape. Monitor everyone's pulse to get used to being able to take vitals quickly.	
If you know that you aren't allergic and have no medical concerns try using superglue on your skin to see how well it works for you and how long it stays on your skin.	
Practice using dental floss to remove a ring from your finger and from someone else's finger.	
Practice some of the duct tape medical treatments.	
Make sure you have duct tape, pads, superglue, safety pins, and wide floss in your 72 hour kits.	

If you aren't able to get through all of the exercises this week, that is alright. The main thing is that you keep making progress. Remember, this is a self-paced course, so it's great if you complete it in 12 weeks, but there's nothing wrong with completing it over 24 weeks.

I'd love to hear your feedback on this. Would you rather have less information and fewer exercises in each lesson, or is the pace good for you? Please email me at david@surviveinplace.com and let me know.

See you in 7 days! (Keep your eyes open for a mid-week bonus) In the next few weeks, we're going to be covering strategies for building up your team, extended urban survival strategies, and tips and tricks for hardening your house.

God Bless,

David Morris
Publisher, SurviveInPlace.com