



The Well-Stocked Medical Survival Kit - Series One

BASIC FIRST-AID

By Sandra Hale LVN

Biography: As a Licensed Vocational Nurse, my first job was in an Emergency Room. After that, I trained and worked Adult and Neonatal Intensive Care, Cardiology Units and did some private duty with adult and pediatric patients on ventilators. I hold certificates of training in EMT, Ambulance Paramedic, Advanced Cardiac Life Support, CPR Instructor,

Expert Field Medical Badge and military training and experience as an Army Combat Medic serving in Afghanistan in 2007.

First of all, it doesn't do much in an emergency to be well-stocked with all the equipment you need and don't know how to use it. I watched an episode of "Doomsday Preppers" and actually saw a man insert a 16 gauge needle into his wife the wrong way (towards the fingers- instead of towards the heart) to start an IV. Wrong.

I suggest at the minimum, that everyone take a Basic First Aid course and a CPR course, because the main component required in your emergency survival kit is **MEDICAL KNOWLEDGE**.

An emergency is not the time to pull out a First-Aid book and start reading. Please, obtain a little medical knowledge before anything happens. It's something that will last you all your life whether you ever use it or not. Keep in mind that the average person is not taught the same procedures as professional medical personnel and the medical facts and techniques you are about to read may differ from what the general public is taught. This knowledge is for survival emergencies and should not be substituted for professional medical care when it is available.

First of all; you have two kinds of patients:

- 1) Patients that you witnessed fall, collapse or otherwise get sick or be injured.
- 2) Patients that you did NOT witness fall collapse or otherwise get sick or be injured.

Witnessing an event that leads to a casualty has its benefits. You can immediately know how to handle the patient. For instance, if you witnessed someone clutch their chest and collapse, so long as they didn't hit their head or fall too hard or in a weird position, I'd open the airway to a sword-swallowing position and go straight for the pulse and check the breathing all at the same time, knowing they probably need CPR or at least chest compressions.

But, if the patient fell down a stairs, I'd guard the neck and pull the chin up and jaw out to check for breathing, and then check the pulse, knowing they probably messed up something in their neck or spinal cord or broke a bone somewhere. If you witnessed someone getting shot, you'd go straight for the entrance and exit wounds. Just common sense. You have to be able to think in an emergency.

You need to know you're A-B-C's.

Airway – The very first thing you need to do is check whether your patient is breathing or not. If not, lift the chin up and pull the jaw forward, open the mouth, pinch the nose closed and give a few quick breaths and then quickly check your patient for a pulse and profuse or arterial bleeding.

The three minute physical consists of carefully looking over and touching the entire body (head to toe) for bleeding and broken bones. This can be done by carefully running your hands with very slight pressure all over the patient, including underneath the body, without rolling them over, while pulling your hands out at short intervals checking them for blood on your hands which would indicate bleeding on their backside where you touched them. If you see blood on your hands, log roll (keeping the neck straight without bending it in any direction) the patient on their side and actually look at the damage. You need to know what you're dealing with.

Bleeding- Stop the bleeding:

- 1) Direct pressure over the bleeding area; except the ears. Blood or fluid coming out of the ears may indicate a spinal injury and putting pressure over the ears may increase spinal pressure and the patient may die.
- 2) Elevation –which only works for limbs (arms and legs); Do not elevate the feet higher than the head if there's a head injury because the last thing you need is all that blood rushing to the site of bleeding.
- 3) Digital or finger pressure over the nearest artery that feeds that area. Keep a picture chart of arteries in your medical kit for quick reference. Remember everything flows toward the heart. Digital Pressure and tourniquets go between the wound and the heart.
- 4) Tourniquet- This applies only to limbs (arms and legs). A rope, a hose, a belt, a hair band, a piece of torn cloth or just about anything you can wrap around it tightly will work.

You can have someone else hold pressure on a wound that you cannot wrap a pressure dressing on or apply a tourniquet, like the abdomen, but if you're alone, you can put something heavy on top of the area to help stop the bleeding. Use common sense here, not heavy enough to interfere with breathing or circulation to other areas. And, even though most people use their hands to apply pressure on a wound, guess what? Any part of your body will do. The hardest parts of your body to use to put pressure on a wound are the heels of your hands, fist, elbows, knees, heels and feet.

Pressure must be maintained continuously for at least five minutes to slow or stop arterial bleeding. Using your knees frees your hands. I would use elbow or knee for a bleeding groin artery. If alone, you can let go of pressure after a few minutes if you need to give more breaths or do CPR for a few minutes, then quickly return to pressure over the wound. Repeat this cycle till help arrives or the bleeding stops.

Circulation - Check the pulse. The carotid arteries that run along both sides of your neck are the easiest to check. If no pulse and arterial or heavy bleeding are under control, start CPR. Check your artery chart and know where the arteries are to check for a pulse.

I know what you're thinking; shouldn't I just jump into CPR and forget the bleeding? Wrong. If the bleeding is profuse or spurting from an artery, the patient will bleed out and die within minutes. A carotid or femoral artery bleeds out within 2-3 minutes, and the Aorta within 3 heartbeats. Use common sense about how bad the patient is bleeding. CPR is nothing but breathing and pumping blood for a patient. If there's no blood in them to oxygenate or to pump, you're jumping up and down for nothing. There has to be blood to circulate for CPR to be effective.

When I taught CPR, my favorite question to ask the class was: If you knew the patient just had a heart transplant, would you do CPR? How about a known heart or lung condition? Or, you knew they just had surgery? Every single time, everyone answered "NO" they would not do CPR. Wrong.

When your alternative is DEATH, you do CPR because if you don't, they're going to die anyway. At least you tried. And, on that note, let me just say, that CPR will not be successful in all cases. There are going to be complications and unseen and unknown problems where if you had a heart surgeon with his surgical team around him, and the chest already open, the patient would still die. That's life.

One of the hardest things I had to do was stop CPR when the doctor ordered the code to end and pronounced the patient dead. There was a part of me that wanted to keep on going. In a multiple casualty situation, you have to know when to move on to the next patient.

Types of emergency dressings:

1) Regular dressing (cloth or gauze) with a bandage or wrapping of some sort tied only tight enough to hold the dressing in place.

2) Pressure dressing. A dressing (cloth or gauze) with a bandage or wrapping of some sort tied tight enough to stop the bleeding but not stop the artery from pumping, which means you should be able to feel a distal pulse. For instance, if the pressure dressing is on the arm, you should be able to feel a pulse on the wrist area below the thumb. If the pressure dressing is on the leg, you should be able to feel a pulse on top of the middle area of the foot. Again, keep an arterial chart and check it.

If you need to stop arterial bleeding from a limb really fast, that's what a tourniquet does. Sometimes, you need both. For instance, you apply a pressure dressing and it soaks thru and keeps on bleeding continuously. In that case, leave the dressing in place and apply a tourniquet between the wound and the heart. This should stay on until the bleeding slows or stops.

The old rule was to loosen a tourniquet every fifteen minutes to see if the bleeding has stopped or just to let a little blood into the limb to prevent the need to amputate. If the bleeding has stopped or really slowed down, then apply a pressure dressing. Now, they say to leave a tourniquet on until they get to the hospital, but if no hospital, then what?

I would loosen (not remove) the tourniquet every fifteen minutes and reapply if necessary. If you leave the tourniquet on too long, you will definitely have to amputate. I could do an entire article, just on the use of tourniquets and constricting bands. I have personally never had to leave a tourniquet on for more than fifteen minutes. In fact, I've stopped severe arterial bleeds with direct pressure for five minutes then a pressure dressing and still had a pulse, which means the limb will probably not have to be amputated. Just a note about using a blood pressure cuff or any like device, for a tourniquet. This is dangerous if you don't know what you're doing. If you have to use it, pump it up only enough to stop the bleeding or until the pulse disappears (which is the artery). The rule of thumb for any bleeding is that you only use enough pressure (digital, pressure dressing, tourniquet or otherwise) to stop the bleeding and no more than that.

The rule concerning dressings is that when you apply a dressing (any type of dressing) don't disturb it for a while. This is because it helps the blood to clot. If you apply it and then after a few minutes remove it, you're removing any clots that formed to help stop the bleeding. You can apply more dressing over the soaked dressing, but removing them later to check on the wound or change the dressing, is something that needs to be explained.

I would not remove a pressure dressing until the dressing has stopped showing fresh blood on the outside. Then, to remove it, I would pour water or saline over the dressing and carefully cut it off with bandage scissors (with blunt ends) being careful not to cut the skin or touch the wound. Hopefully the water is sterile- if not boil it and let cool before using it. You can then clean the wound and apply a regular dressing if active bleeding has stopped.

Gunshot and Chest Wounds: Check for an entrance and an exit wound. Usually the exit wound is larger. Take the clothing completely off the area to check for these wounds. Small caliber bullets (and for that matter, any small projectile) usually do NOT exit. Depending on the type of rifle and distance, small projectiles will usually keep going until they hit a bone and they either follow the path of the bone until they lodge somewhere or they may ricochet off the bone and head in another direction.

At close range, a small caliber bullet to the head will ricochet thru the brain until it stops and the brain will look like Swiss cheese. A small caliber to the central area of the body will usually lodge in the spinal column. It may or may not go thru a major organ where it could lodge there. Professional assassins' used to use high powered rifles with 22 long bullets because they do the most internal damage and leave the smallest entrance wound with no exit wound. I don't know what they use now.

A bullet or projectile wound is treated like any other wound unless it's in the chest area and punctures the lungs. If it does, the blood will have oxygen bubbles and/or make a sucking sound. This is called a "sucking chest wound" and needs immediate attention. Cover the wound with Vaseline gauze or any other material that is waterproof or air-tight, like a piece of plastic, food wrapping, ect... The object is to prevent air from leaking out of the lungs because the lungs are under pressure and will deflate like a balloon and make it difficult to breathe. After the wound has stopped sucking air, the lung should begin to inflate again and make breathing easier. The one thing to worry about is if tension builds up behind this dressing and makes breathing difficult again. If this happens, remove the dressing to release the tension and wait until the patient exhales and re-apply the dressing. This may need to be repeated often.

Broken Bones: There are only two kinds of broken bones or fractures you're going to deal with in an emergency. The broken bone you can see and the broken bone you can't see. If you can see a bone sticking out somewhere, it's probably broken. If you run your hands with slight pressure over an area and can feel the broken bone or hear a crackly noise called crepitus, the bone or joint may be broken or displaced.

Sometimes, you can feel little air pockets under the skin; this can indicate a broken or dislodged bone or joint with complications. Both are treated the same. The rule is to immobilize the joint above and below the break.

Immobilize this area with a splint. Almost anything hard will do. A piece of wood or cardboard, a pipe, a tree limb, duct tape, even a pillow will do in a pinch. In fact, you stabilize broken ribs with tape or a pillow tied to the chest. The idea is to stabilize the broken bone so it doesn't move and the sharp ends don't cause more damage, like puncturing a vein or artery or an organ. Do not put pressure on the area unless it's seriously bleeding and then you want to put pressure around the area, but not directly on the broken bone.

Some medical kits have traction splints. If you don't know how to use them, don't do it because once you apply traction, it should not be removed without professional help. When you pull the broken bones apart with traction, you have sharp ends that should not be touching each other. That's good; however, if you remove or loosen the traction, then the sharp ends go back toward each other and may pierce or cut veins and arteries that they would not have touched had you left them alone. In other words, you can do more damage than was there in the first place.

By the way, I watched the movie "Black Hawk Down" and I can tell you all the mistakes the medic made when he tried to play doctor instead of keeping it simple. The soldier in the movie had a wound to the groin that apparently severed the groin artery. The medic went inside the wound with forceps to clamp off the artery. All he had to do was hold pressure until the artery clotted off, then applied a pressure dressing to hold it until they evacuated.

But, no, he had to get fancy and try surgical techniques that he had no real comprehension of and when he put the forceps on the artery, it moved, of course, and took the forceps up into the wound. He could have left that alone and just applied pressure but again, he had to go digging for the forceps, which caused more bleeding and pain and put the patient into shock and he died. The moral of this story is to just keep it simple.

While I'm on the subject of shock. You need to talk to your patient, even if they are unconscious or dying. It's a medical fact; the last thing to go is your hearing. Tell them they are going to pull thru this and tell them what you're doing to them. If they are conscious, distract them, talk about something else or give them something to do, for instance, let them hold pressure on their wound. This is not only ethical, but it's humane. There is always hope. Who are we to be brutally honest and destroy that slim chance that they will survive. I leave that decision to God Almighty and His Infinite wisdom. Do all you can and leave the rest to Him.

I remember when I was a child; I cut my heel almost completely off (it was hanging by a tendon) by getting it caught in the spokes of a speed racer bike as a passenger. My sister was driving. When I started screaming, she pulled over in front of the house of an elderly couple tending their garden. They rushed over to me and carried me to their lawn and the man ran inside to fetch towels and applied pressure to my heel, the woman started talking to me about my fingernails.

Yes, that's right. She said they were so pretty and kept asking me questions and making me answer them. She blocked my view of the wound and wouldn't let me look at it. After a few minutes I calmed down and was telling her my name and where I lived and before long my oldest brother showed up and carried me to the emergency room where they took off the towel and he fainted. It took 14 large stitches to put the heel back on.

Moral of the story: The wound was so bad, had I looked at it, I probably would have also fainted or gone into shock. It's easy to do. People die of shock all the time. I've seen it happen.

There was a famous (although quite unethical) experiment where doctors took healthy prisoners into a room with a curtain and they stuck their hand thru the curtain for what they thought was a simple procedure.

Not using anything but a blunt object pulled across the surface of the skin, the doctor would loudly declare he accidentally cut too deep and told the patient it was bleeding profusely and he could not stop the bleeding. This play-acting went on until the patient was told he was going to bleed to death. The majority of the patients went into shock, some died. They found out that a person can die of self-induced shock when there is no physical reason for it. The power of the mind has not been fully discovered. The bible tells us not to faint in our mind. I believe there's something to that verse.

The only thing that doesn't change in medicine is the fact that it is constantly changing. Whether the change is new or improved medical treatment or new or improved drugs or techniques. I found that if you stick to the tried and proven basics, you can't go wrong.

I found out thru experience that not one person or institution or doctor has all the truth. It's a combination of everything you ever learned, put together with a little common sense that makes the difference.

Example: My paramedic instructor taught us the many and varied ways to treat a snake bite. Some say apply a constricting band, some say apply ice, some say don't, ect... Afterwards, she said this: "The techniques and theories are different, but if it's ME that's been bitten by the snake, I want you to do them all." I just want to go on record as saying that I feel the same way.

Disclaimer: This is not a complete representation of everything you need to know about First-Aid. The medical facts presented are real, the opinions expressed are my own and do not necessarily reflect the opinion of my Editor or this website. Always seek professional assistance when available. Do not attempt something complicated that you do not fully understand because you may do more damage than good. Under law, most states have the "Good Samaritan Act" that protects lay people from liability should they attempt to help an injured person and do something wrong. That law does not apply to any medical person who holds a license such as doctors and nurses, paramedics and other medical professionals who are expected to act at the level of education reflected on their licensure.