

# First Aid Myths

Survival in an emergency situation in the wilderness often depends on being able to sort out myth from reality. People who find themselves in precarious scenarios may be forced to deal with such things as how to stop bleeding, how to help a snake bite victim and how to treat a badly sprained ankle. Knowing what works and what is an old wives' tale can be of great aid and possibly even save a life.

## Scraping Off a Bee Stinger

This is the granddaddy of all first aid myths. Safety first! Get away from the bee. Bees release a scent when in danger to attract other bees. If you're still around when reinforcements get there, they'll sting you. **Remove any stingers immediately!** No need to scrape off bee stingers, just remove them. It's OK to pull stingers out with your fingers. The longer bee stingers are allowed to remain in the body, the more severe the reaction will be. How fast you remove the stinger is much more important than *how* you remove it. Grab it, brush it, flick it -- it doesn't matter -- just don't spend time digging through your wallet for a Visa card to scrape it off.

## Breathing Into a Paper Bag for Hyperventilation

Running makes you breathe fast. Pneumonia makes you breathe fast. Stress makes you breathe fast. There are a lot of reasons why we hyperventilate (breathe fast). In no case is a paper bag indicated as proper treatment. This one is actually very dangerous. **Do not use a paper bag for hyperventilation!**

Hyperventilation syndrome is usually associated with panic disorders. It is a psychological or emotional condition that causes victims to breathe too much. Breathing too deep and too fast causes the body to lose carbon dioxide (CO<sub>2</sub>), the byproduct of metabolism in our exhaled air. While CO<sub>2</sub> is a byproduct, we still need a minimum amount in the bloodstream to maintain the proper pH balance in our bodies.

When we lose a significant amount of CO<sub>2</sub>, some body tissues start to malfunction. First, numbness develops in certain areas -- typically the lips, fingers and toes. After a while, the muscles of the hands and feet begin to cramp.

Paper bags have been used for years to treat hyperventilation syndrome. The idea is that rebreathing the air we exhale makes us inhale more CO<sub>2</sub> and helps us to quickly add the CO<sub>2</sub> back into our bloodstreams. It works. Breathing into a paper bag has been shown to increase CO<sub>2</sub> levels in the blood, although not as quickly or as effectively as many doctors previously thought. In one study, patients who *thought* they were getting something similar to the paper bag treatment did nearly as well as the real paper bag group.

The problem with paper bags is not that true hyperventilation syndrome patients are at risk from the treatment. On the contrary, while it hasn't been shown to really help hyperventilation syndrome patients, it hasn't been shown to hurt them, either. What paper bags do hurt are the dangerous medical conditions that *look* like hyperventilation. Heart attacks and asthma are most commonly confused with hyperventilation syndrome.

Breathing into a paper bag restricts the fresh air you are able to get. Without fresh air, too little oxygen is in the air you're inhaling. So, breathing into a paper bag dangerously lowers the amount of oxygen in your bloodstream. There have been several documented cases of heart attack patients incorrectly thinking they had hyperventilation syndrome and fatally worsening their heart attacks by breathing into a paper bag.

To make matters worse, several studies now show a link between high concentrations of CO<sub>2</sub> and panic attacks, which means that artificially increasing CO<sub>2</sub> in inhaled air is likely to trigger more feelings of panic in patients who suffer from anxiety.

The best treatment of hyperventilation syndrome is to stay calm and practice breathing slowly and not too deeply. Calmness and breathing exercises have just as much success as paper bag breathing, and no one is going to die from staying calm.

## **Putting Something in a Seizure Patient's Mouth to Bite**

While somebody suffering a seizure may very well bite his or her tongue, it rarely becomes an airway emergency. Seizures look scary, but generally do very little harm. You're more apt to cause an airway blockage by stuffing your wallet in the seizure victim's mouth than by leaving the victim alone.

Clear hard or sharp objects away from the vicinity of the victim. Seizures can be violent enough to injure a victim. Loosen tight clothing around the neck, especially ties or collars. These items may restrict breathing or block the airway. Pad under the head with a pillow or rolled-up jacket. If possible, roll the victim to his or her left side. This way, sputum or vomit will drain out of the mouth away from the airway. **Do not put anything in the victim's mouth!** Seizure victims do not swallow their tongues.

## **Leaning Back with a Nosebleed**

Lean forward, not back. Don't try to protect a favorite shirt by leaning back. The blood needs to go somewhere and will most likely go down the throat. If the victim leans back, blood could get in the windpipe causing a blocked airway, or go into the stomach. Blood may irritate the stomach lining and cause the victim to vomit.

Pinch the victim's nose just below the bony bridge. Your fingers should be on the soft tissue as well as the bone. If there is still blood flowing, adjust your grip. There should not be visible bleeding while you are holding the nose. Blood vessels that supply the nasal membrane can be pinched against the bony bridge (the hard part) to slow blood flow and create a clot. Hold the nose for at least 5 minutes. Do not let go to check bleeding until the 5 minutes is up. Placing ice or snow over the bridge of the nose can constrict the blood vessels and help stop bleeding. Use this in addition to pressure.

After 5 minutes, release the pressure to see if the bleeding has stopped. If not, repeat Step 3 for 10 minutes this time. Remember: don't let go to check bleeding until the 10 minutes is up. Repeat for another 10 minutes if necessary.

After the bleeding is controlled, do not let the victim blow his or her nose. Blowing the nose will release the clots and encourage bleeding to start again.

Most bloody noses are the result of dry nasal membranes or trauma. However, some nosebleeds occur spontaneously and may indicate more serious medical problems. Get medical attention if the victim is suffering from frequent or hard-to-control bloody noses.

## **Butter on Burns**

What is it with food and first aid? Butter and oil are great for basting, but unless you want to make a burn worse, leave them in the kitchen. Oils hold in the heat, exactly the opposite of what a burn victim needs. If you have to put butter on something - try the steak you won't be using for your black eye. Treating a burn begins with stopping the burning process. Cool the burned area with cool running water for several minutes.

## **Drinking Alcohol to Warm Up a Cold Victim**

Remember the pictures of St. Bernards racing through the snow-covered mountains, kegs of brandy lashed to their thick necks? Didn't happen. They were carrying mail. Just because a Hot Toddy by the fire keeps you warm in the ski lodge, it isn't a good idea to count on the booze to warm you up. Alcohol makes you feel flush and warm, but actually leads to hypothermia in cold weather. Of course, you knew it couldn't be that simple. Alcohol has a reputation for warming us up on cold days because it makes us *feel* warmer when we drink it.

Alcohol causes blood vessels to dilate, which shifts blood flow to the surface of the skin where nerve endings respond to changes in temperature. A gallon of 99-degree blood flowing past our natural thermometers makes us feel all warm and cozy. (Anyone who's sipped hot toddies by the fire knows that feeling.)

Unfortunately, when we're skiing in snow and we take a sip of brandy to give us a warm little pick-me-up, we aren't heating anything at all. Instead, we're letting more blood flow past the surface of the skin, where the cold outside air is able to steal a little bit more heat from our core. Thanks to the brandy, we're actually getting colder, not warmer. Alcohol does nothing to warm us up and is a quick way to get hypothermia in a cold environment.

## **Tourniquets**

Many people have heard that the best way to stop heavy bleeding is by using a tourniquet. Nothing could be further from the truth. The tourniquet should be the last resort and is only a viable choice if someone has lost a limb or a limb has been partially rendered from the body by a horrible accident. The pressure that a tourniquet applies will severely damage blood vessels and can often result in tissue death, making it possible that a limb will need to be amputated. Heavy bleeding should be handled by applying pressure directly to the wound or to the area right above or below the wound. Once bleeding has been controlled the wound can be cleaned, packed and a pressure bandage applied. Less serious wounds should be allowed to bleed until they stop as this process will usually keep any organisms capable of causing infection from entering the wound.

## **Snake Bites**

Many misconceptions and myths surround snake bites and how these dilemmas should be treated. A rattlesnake does not always warn someone of an impending attack as is widely thought, and even though this species has potent venom a person rarely receives a full dose of it when bitten. Many times, no venom at all is injected into the person. When a person is bitten by a suspected poisonous snake, a tourniquet should never be applied for the reasons previously mentioned, and the area should not be cooled or iced.

The myth that cutting an "X" shaped incision over the wound and then sucking the venom out, perpetuated by countless examples on film and television, has never been proven to provide any relief. This procedure in truth would only be responsible for tiny volumes of the venom being removed from the bloodstream but would make the person vulnerable to extremely dangerous infections.

The proper way to treat snakebite is to clean the wound thoroughly with soap and water and to keep the bitten area below heart level. If possible, carry the person to a vehicle and get her prompt medical attention; if she must walk then have her move slowly.

## **Sprained Ankle**

How to treat a badly sprained ankle, which for a hiker or backpacker can be a serious situation when out in the wilderness, has always been subject to myth, with a large portion of the population thinking that warmth should immediately be applied. However, the opposite is true since heat will make the swelling and pain increase and slow down the healing process. If you spend time on trails and out camping, remember the acronym RICE. This stands for Rest, Ice, Compression and Elevation. The ankle should be quickly rested and iced if possible or soaked in cold water from a stream. Even snow can be used as a substitute for ice. Ice the ankle for 20 minutes to half an hour and then put a compression bandage such as an elastic wrap on it to give it support. Elevate the affected foot. Repeat this procedure up to four or five times a day until the swelling goes down.