FirstAidGuide.net - Allergies

FirstAidGuide.net - Anaphylactic Shock

FirstAidGuide.net - Antibiotics

FirstAidGuide.net - Bites

FirstAidGuide.net - Blisters

FirstAidGuide.net - Breathing Problems

FirstAidGuide.net - Broken Bones

FirstAidGuide.net - Broken Bones - Infants

FirstAidGuide.net - Burns

FirstAidGuide.net - Choking

FirstAidGuide.net - Cold Injuries

FirstAidGuide.net - Common Cold

FirstAidGuide.net - Concussions

FirstAidGuide.net - Corns and Calluses

FirstAidGuide.net - CPR

FirstAidGuide.net - Dental

FirstAidGuide.net - Diabetic

FirstAidGuide.net - Download

FirstAidGuide.net - Drug Overdose

FirstAidGuide.net - Eye Injuries

FirstAidGuide.net - Fainting

FirstAidGuide.net - Family Disaster Kit

FirstAidGuide.net - Fevers

FirstAidGuide.net - Headaches

FirstAidGuide.net - Heat Illness

FirstAidGuide.net - Hydrocolloids

FirstAidGuide.net - Hypothermia

FirstAidGuide.net

FirstAidGuide.net - Indigestion

FirstAidGuide.net - Influenza

FirstAidGuide.net - Insect Bites

FirstAidGuide.net - Lice

FirstAidGuide.net - Lightning Strikes

FirstAidGuide.net - Lost in the woods

FirstAidGuide.net - Medicine Safety

FirstAidGuide.net - Meningitis

FirstAidGuide.net - Muscle Cramps

FirstAidGuide.net - Nausea & Vomiting

FirstAidGuide.net - Near Drowning

FirstAidGuide.net - Nosebleeds

FirstAidGuide.net - ORS INGREDIENTS

FirstAidGuide.net - Rib Injuries

FirstAidGuide.net - Seizures

FirstAidGuide.net - Shock

FirstAidGuide.net - Skin Closure Strips

FirstAidGuide.net - Sprains

FirstAidGuide.net - Tick Bites

FirstAidGuide.net - Viral Vs. Bacterial Infections

FirstAidGuide.net - Cuts & Wounds

## Allergies

Allergic reactions are caused by a hypersensitive immune system that reacts when it is exposed to a usually harmless substance. For example, if you're allergic to peanuts and you eat a substance that has peanut extract in it your body will react against this harmless substance as though it were a bacterium, virus, or other harmful toxin. Often the exposure to an allergen needs only to be slight for a reaction to occur, and sometimes a reaction may not occur for several hours.

**Some common allergens are:**

Food: nuts, shellfish, egg, wheat, beans, citrus, milk, additives

Medicines: penicillin, ibuprofen, aspirin, latex (gloves, condoms etc)

Plants & animals: pet dander, poison ivy, insect stings/bites, pollen, grass, dust

**Symptoms are as follows:**

Mild reactions (most common):

- Itching
- Flushed skin
- Hives
- Coughing, sneezing
- Headaches
- Asthma like symptoms (wheezing, coughing, shortness of breath)
- Red or watery eyes

More severe reactions:

- Intense hives
- Intense itching
- Swelling of the face, eyes, tongue, throat
- Difficulty swallowing (often because of swelling)
- Increased heart rate
- Drop in blood pressure
- Shortness of breath, hoarseness / asthma like symptoms
- Nausea, vomiting, diarrhea
- Pale skin, sweating
- Cramping and intestinal pain

Most Severe:

- Anaphylaxis or **anaphylactic shock**

Even after being treated some symptoms may persist or reappear 8-12 hours after the initial reaction. The symptoms are usually less severe and often will go away by themselves. Some symptoms, such as hives, will appear and disappear over 4-6 hours, even if the person is no longer being exposed to the allergen. Hives may last for several days or even weeks, so over the counter antihistamines, like Benadryl, can be used to treat hives.

**Treatment:**

One of the easiest ways to prevent allergic reactions is to avoid the substances that cause the reactions. If you leave your children in the care of a babysitter it is important to let them know if the

child has any allergies and what to do if a reaction occurs.

If a reaction does occur most (mild, and some more serious reactions) can be treated with antihistamines, like Benadryl. These stop the asthma like reactions, and cold like symptoms. Those with **asthma** should be especially careful if they are highly allergic to a substance.

If the reaction takes place on the skin (like poison ivy) use ice wrapped in a towel, cool oatmeal baths, and hydrocortisone cream to lessen the itching and swelling. If these things don't help, call your doctor. With things like poison ivy, you should wash everything the person who touched the plant has touched to avoid spreading it further and causing more reactions among them or other people. Wash everything, skin, hair, clothing, toys, countertops, and even pets.

If you think the reaction may be due to a medication the child has taken, immediately stop treatment and contact a doctor.

Even mild reactions should be treated quickly, because if they go untreated the reaction may jump from a mild to a serious reaction in a short amount of time. In more severe cases **CPR** and oxygen may need to be administered.

For some people it is very hard to avoid the substance they are allergic to. For these people a more expensive, but more permanent option is available. Immunotherapy, or allergy shots, is small doses of the allergen that are given to the patient and increased over time in order to develop an immunity to the allergen. They are almost 100% effective but usually require at least 5 years of monthly (in some cases weekly) shots.

For those who are very allergic to a substance often only a slight encounter with an allergen will send them into a potentially fatal reaction known as anaphylaxis, or anaphylactic **shock**. In these cases, time is very important and epinephrine (Epipen) must be administered. Unless you are trained, do not administer the shot, call for help instead.



## Anaphylactic Shock

**How do you treat serious reactions (anaphylactic and non anaphylactic)?**

If you know you're allergic to bee stings, it's wise to carry the self-injectable antidote epinephrine, better known as adrenalin. These prescription kits are sold under the names Ana-Kit, EpiPen, and EpiPen Jr. (for children), among others. These syringes are injected into the front of the thigh, or a muscle and work to constrict the blood vessels before more damage can be done. Most of the kits come with only one syringe and on occasion more than one dose is needed. Because bee stings can happen at almost any time during the spring, summer, and early fall it is important to keep several kits on hand, especially if medical help is out of reach, for example camping trips, hikes, and on vacations where territory and bugs are unfamiliar. Keep kits at home and in the car, and if your child is allergic, leave a kit with the school nurse. Although this drug may stop a reaction and make you seem alright it is very important to go to your doctor anyway as soon as possible to be sure. In some cases the epinephrine is not enough and intravenous fluids or other treatments are needed. ALL cases of anaphylactic shock, or suspected cases should report to the emergency room immediately! The longer you wait the more damaging the effects.

If you or someone you know or live with is at risk of going into anaphylactic shock it is important to know how to use the syringes. Ask your doctor for information about classes you can attend to learn how, when, and where to administer these shots and save a life. It is also advised that a Medic Alert bracelet or necklace be worn.

**Signs of anaphylactic shock:**

Reactions of this kind usually occur seconds or minutes after the sting is received, although a few cases have not reacted for up to 12 hours. When one goes into anaphylactic shock, the blood vessels dilate and begin to leak into the surrounding tissues, which may affect some organs. Below are signs and symptoms to look for.

· The skin is the first place to look. Hives, itching, swelling, redness and a stinging or burning sensation may appear. On the flip side, skin may also appear extremely pale.

· Because the blood vessels are leaking a person may feel lightheaded or faint. Some people will lose consciousness because of a rapid drop in blood pressure.

· Sometimes the throat, nose, and mouth become swollen and breathing passages become obstructed. The first signs of this are usually hoarseness or a lump in the throat. In some cases the swelling is so bad the air supply is cut off and the person experiences severe respiratory distress.

· Another respiratory problem could be the constricting of the airways, giving someone the chess tightness, wheezing and shortness of breath commonly associated with asthma.

· People may experience cramping (in women pelvic cramps may develop), diarrhea and nausea and vomiting.

· Especially if the allergen was swallowed, the gastrointestinal tract often reacts.

· Sweating

· Rapid pulse

**Causes of anaphylactic shock:**

It is important to note that this allergic reaction (which, again, is very rare), is not caused only

by bee stings. This reaction can be sparked by an injection, inhaling, swallowing, and being exposed to an allergen that the person is known to be allergic to. Injected allergens could be bee stings, as mentioned, certain vaccines prepared on an egg medium, penicillin, dyes used in diagnostic x-rays, and allergen extracts used in the diagnosis and treatment of allergic conditions. They can also be sparked by food allergies, even if only a small bite is taken. Skin contact with foods rarely causes an anaphylactic reaction. Foods that are commonly associated with this reaction are peanuts and nuts, seafood, and in children particularly, eggs and cows milk. Inhaled anaphylactic reactions are rare, but have occurred from the inhalation of particles from rubber and latex gloves.

**Prevention of anaphylactic shock:**

The most important part of prevention is avoiding the allergen as best as you can. For food allergies and insect bites this may be particularly difficult as food is presented in many different ways, and insects are all around you. For some people immunotherapy is key. This therapy introduces small amounts of the allergen to the person and increases the dose over time. This is a lengthy treatment and takes at least five years, however it can be an invaluable form of protection as it is almost 100% effective.

If your allergy involves bee stings it is important to note a few things about the bees. Honeybees can only sting you once, their stingers get stuck in the skin and they must tear away that part of their abdomen to escape. The bee dies shortly after delivering the sting. Luckily honeybees are not aggressive, like some of their relatives, wasps, hornets, and yellow jackets tend to be, these bees will only sting if they are disturbed or injured. The most common sting from these bees is when they are stepped on. The best way to avoid that is to keep shoes on while walking or playing in areas where honeybees forage, such as clover patches and flowerbeds.

Another few things to note about bees (and other stinging insects), is that they are attracted to bright colors and strong scents. Insects seeking nectar are drawn towards bright colors, and perfumes. If you are allergic to these stings it is recommended that you avoid hairspray, perfumes, and colognes and, in the case of bees, bug spray. Bug spray will not deter bees, and since the scent is strong they may even be attracted. You should also avoid areas where food is open to the environment such as garbage cans, dumps, picnic areas etc. Another interesting fact about bees and color, is that black is an irritant to bees, while blue is a comforting color, it is important to remember this when selecting bathing attire.





Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

# Bites

## Classification Of Bites

Bites of all kinds are serious, as bacteria and diseases are released directly into the body, and can spread quickly. Below is an outline of different kinds of bites and how to handle them.

**Human bites-** these should usually be treated as minor puncture wounds, and the area should be washed thoroughly with soap and water and then bandaged. Human bites can kill.

**Marine creature bites-** for bites and stings from creatures like jellyfish or Portuguese-men-of-war you need to be careful. Common jellyfish stings are usually not a big problem unless you are stung many times or are either very young or very old.

You handle jellyfish stings much the same way as a Portuguese-man-of-war sting, even though p-m-o-w stings are more serious and can sometimes be fatal if you are stung too many times and do not receive the proper attention. Cover the jellyfish, or broken off tentacles with sand and Very Gently remove them and brush them off with a glove or piece of clothing. Do not touch them with your bare hands. P-m-o-w tentacles are paper thin, and even if they have broken off they will cling to you and continue to sting, hence the reason their stings are considered more harmful. It is possible to become ill from their sting, so if you've been stung by one make sure to seek medical attention quickly. If you are not hypersensitive to stings such as these, then you may treat these wounds as follows

- Thoroughly wash the area and apply rubbing alcohol (or salt water) several times, while being careful not to touch the area with your bare hands.
- Coat the area in a thick layer of baking soda and water paste, which may be removed (scraped off) about 30 minutes later.
- Once you have removed the layer, you should reapply the rubbing alcohol or vinegar. Salt water will also work if you have neither at hand.

If a stingray has stung you, then seek medical help immediately. Wash the wound in fresh or salt water thoroughly and keep the wound submerged in hot water while you get help.

If a larger animal such as a shark, or other toothed creature has bitten you, refer to the animal bites section below.

**Animal Bites**- These can be superficial, but they can also be very serious.

Most bite and scratches from household pets are superficial and can be treated with a simple washing of the wound, dab of antibacterial ointment and an adhesive bandage. But sometimes, Fido and Fluffy get a bit too frisky and really take a good bite out of you. When this happens, and when you are bitten by an animal that is not a pet of yours, you need to follow a different procedure.

- Wash the wound well with soap and water unless there is heavy bleeding. Then consult your doctor to determine if stitches are needed. If the wound appears serious do not attempt to clean it yourself.
- If the wound is large or deep you should see your doctor as soon as possible, as the wounds must be cleaned and bandaged properly to prevent the spread of bacteria and lower the risk of infection. If the wound is large and deep, stitches will be needed. In some cases, a tetanus shot

and antibiotics will be necessary.

- If swelling, bruising, extreme pain, increasing redness (sometime seen as streaks), tenderness, warmth or drainage around the bite area occurs then consult your doctor immediately.
- Also any flu-like symptoms, such as fever, exhaustion, and swollen glands that occur soon after the bite or scratch should be reported to your doctor as soon as they appear. This is crucial as it could be signs of infection or a disease.
- If someone else's pet bit you, you must notify the owner and determine when the animals last rabies shot was. Vicious animals that were allowed to roam free should be reported to the local health departments.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



# Blisters

## What are blisters?

A blister is a minor injury that unless it becomes infected, is found in unusual place, or reoccurs frequently can be treated at home without the assistance of a doctor. Blisters are formed by repeated the rubbing and friction in a particular area, which then fills up with fluid. Because they are so often exposed to friction the hands and feet are the most common place for blisters. Blisters will also form more easily on skin that is warm and moist, as opposed to dry or soaked, which again makes hands and feet an ideal place for blisters.

## Types of blisters.

There are two main kinds of blisters, friction and burn, and both are treated the same way. Leave the blister alone for a period of about 24 hours (you may cover it gently with an adhesive bandage to keep it from getting broken.). If after this time the fluid has not been re-absorbed, and you can see no apparent change in larger blisters then you may begin the following treatment.

Over small intact blisters you should place a blister bandage and leave them alone, as they should heal quickly and you should not break them.

Larger intact (or ones with only a small tear) blisters are to be treated in the following way.

- Sterilize a needle or straight pin by heating it until it turns red in a flame, placing it in boiling water or soak it in rubbing alcohol.
- Clean the blister with rubbing alcohol or antibiotic soap and water.
- After the needle has cooled, carefully pierce the blister on two opposite sides and press down gently on the blister with a sterile gauze pad to drain the fluid.
- Do not remove the loose skin!
- Cover the area with an antibiotic ointment. Keep in mind that you may want to avoid products containing Neomycin, which is known to cause allergic reactions.
- Then cover the blister with a blister bandage and change the dressing daily, or whenever it becomes wet, loose, or dirty.

## Damaged blisters?

If the blister is has a large tear in it...

- Then take sterilized, fine scissors and carefully, remove the loose skin after the fluid has been drained.
- The area should then be thoroughly cleaned with antibacterial soap and water
- Put on antibacterial ointment and cover with a blister bandage.

## Infected blisters?

If you see any of the following signs your blister may have become infected and you should go to a doctor to receive the proper treatment.

- Pus draining from the blister
- Very red or warm skin around the blister
- Red streaks leading away from the blister.

## Preventing blisters?

Blisters can be easily prevented, if the right steps are taken (no pun intended). For blisters on your

feet, you should be sure that the shoes you buy are comfortable. The best time to buy shoes is in the afternoon or evening as feet tend to swell during the day. Shoes that fit right should have about a thumbs space in between your longest toe and the end of the shoe. If your shoes are too narrow they can cause blisters on your big and little toes, if the toe box is too shallow they can cause blisters on the tops of your toes, and if the shoe is too loose they can create blisters on the tops of your toes.

When buying shoes for a sport, make sure to wear the socks or padding you would normally wear around your feet to make sure that the shoe will fit comfortably. Jog or walk around the store before buying them and then wear them around the house for several hours to make sure they don't "rub" anywhere and cause uncomfortable friction.

Socks also help decrease friction in shoes, and socks made of synthetic materials remove moisture from the feet better than wool or cotton socks. This moisture removal also decreases the likelihood of getting a blister. If you know you feet will be sweating a lot, you can carry extra socks with you to change when the first pair starts to become uncomfortable.

Another step that can be taken to prevent blisters is to apply a thin layer of petroleum jelly to your feet. This will help decrease friction. This can also be used on your hands. Things like wearing gloves when doing activities such as construction, landscaping, moving, and other activities where your hands are exposed to friction will also help cut down on the likelihood of getting blisters.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Breathing Problems

### Asthma

An asthma attack is when something (such as dust, pollen, cigarette smoke) triggers a switch in the person that causes their air passages to constrict, tighten, and spasm causing the person to cough, wheeze and have difficulty breathing. They can also be caused by anxiety and tension. Most people who suffer attacks on a rather regular basis will carry their medication with them.

If someone you are with is having an attack:

- Help them assume an upright position, it will be for them to breathe than if they were lying down. You may want to encourage the person to sit with their legs crossed and their elbows on their knees as this is a relaxing position and may ease breathing.
- Talk to the person calmly and try to help them to relax.
- Make sure they are in an area where there is a good supply of clean air (as opposed to a dusty room).
- As soon as the person is sitting down, have them take their medication. If they cannot then you will have to assist them. Shake the puffer and give them one puff of reliever (with or without a spacer), they should then hold that breath for 4 seconds then breathe in and out normally 4 times. Repeat this step four times.
- Wait 4 or so minutes. If there is no improvement repeat the previous step again.
- If there is still no improvement call an ambulance and continue repeating the process until help arrives.


### Hyperventilation

Hyperventilation is rapid short breathing, and the symptoms usually last 15 minutes to half an hour, although to the person experiencing them it will seem much longer. It may be frightening but hyperventilation is usually harmless and can be triggered by things such as:

Anxiety (most commonly)

Extensive physical injuries

Severe stomach pains

Heart or lung disease

If you are hyperventilating:

- Loosely cover your nose and mouth with a small paper bag.
- Slowly breathe into the bag and re-breathe the air in the bag about 10 times.
- Put the bag down and breathe normally for a few minutes before picking up the bag and repeating the previous step again.
- Repeat these steps until the symptoms lessen or go away.
- Try to focus on your breathing and remain clam. Try to take one breath every 5 seconds.

If someone you are with is hyperventilating:

- Stay calm and speak to the person clearly and slowly, if possible make eye contact.
- Don't crowd the person, give them space and make calming gestures and try to avoid

making a scene. If they are not already sitting, have the person sit down.
- Encourage them to breathe normally, and walk them through the breathing cycle "breathe...slowly...hold...release...slowly...rest...breathe..." and do the cycle with them. You'll want to pause for 1-2 seconds while holding the breath, and before inhaling again.
- If they are doing it right, calmly encourage them to keep going while continuing to breathe evenly and slowly.

**Panic Attacks:**

Panic attacks are brought on by social situation and activities that are perceived as a threat to the person experiencing them. They can happen to anyone, and are usually not a serious threat. They can however occur rapidly and repeatedly, and even after the attack the person may be highly anxious for many hours afterwards.

Symptoms (not all will be present at once):

- Shortness of breath with rapid breathing, or hyperventilation
- Palpitations or accelerated heart rate (when you can 'feel your heart pounding')
- Trembling or shaking
- Choking
- Chills, or flushing
- Sweating
- Nausea
- Numbness, or pins and needles in the arms and legs
- Chest pain or discomfort in the chest region (if pains persist after attack see a doctor, it may be signs of a heart attack)
- Fear of dying
- Fear of going crazy or doing something crazy

You treat a panic attack the same way you would treat someone who is hyperventilating.

- Stay calm and speak to the person clearly and slowly, if possible make eye contact.
- Don't crowd the person, give them space and make calming gestures and try to avoid making a scene. If they are not already sitting, have the person sit down.
- Encourage them to breathe normally, and walk them through the breathing cycle "breathe...slowly...hold...release...slowly...rest...breathe..." and do the cycle with them. You'll want to pause for 1-2 seconds while holding the breath, and before inhaling again.
- If they are doing it right, calmly encourage them to keep going while continuing to breathe evenly and slowly.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Broken Bones

A broken bone is never a laughing matter and if you, or someone you're with, breaks a bone it's important to know what to do. Although you should **always** get medical help rather than trying to fix the problem yourself, sometimes help isn't available and you've got no choice but to try to help the person yourself. First off there are several different kinds of breaks. And before you begin any treatment, it's important to know what type you're dealing with. If you think an infant has broken a bone click **Here** to view a section on how to handle the situation.

- A **Greenstick Fracture** is when the bone only cracks, and does not fully break. Because these do not break the skin, they should be treated as a Single Fracture. These fractures can be determined by using x-rays.
- A **Bending Fracture** occurs in children only. In this case the bone bends but does not actually break.
- A **Single Fracture** is when the bone breaks in one place, and does not pierce the skin.
- A **Compound Fracture** is when the bone has broken into two pieces
- A **Comminuted Fracture** is when the bone is broken in more than two places or crushed.
- An **Open** or **Compound Fracture** is when the bone has actually punctured the skin and is visible. These breaks are very severe and have a high risk on infection. DO NOT try to set these breaks yourself, instead get professional medical help immediately.

Once you've determined what type of break you have, there are a few things you should know about breaks in general. While your bones are strong, they can only take so much pressure and bend so much at one time before they crack or break. Younger people tend not to break bones as easily because their bones are more pliable, but bones that break at the ends should be looked at carefully because growth plates can be damaged. Older people are the opposite, a simple fall may result in a broken bone, which will take much more time and energy to heal. When a bone breaks, most people feel a sharp pain similar to that of a bad headache. The smaller the fracture the less pain you're likely to feel, this can make it confusing if you are trying to determine whether the bone is broken. Whether you think it is or not, ask your doctor because no matter how small a break it seems, a break is always a big shock to your body. With bad breaks, some people pass out because the brain gets sent too many signals at once, others feel pain or other sensations in parts of your body that are nowhere near the fracture. Other signs of a break are dizziness, sweating, thirst, pale or ashen skin, chills, and numbness or bruising around the fracture site. It is also important to try and get treatment for breaks as soon as you can because breaks that are not properly cared for can limit movement ability and cause deformities once they have healed.

**How do I treat these injuries?**

Now here's what to do if someone has broken a bone. First and foremost, Stay Calm! Your staying calm will help to keep the person suffering the break stay calm and comfortable. Next, call 911 or get to an ER. If you are out of reach (say you're camping in some remote area) and cannot get to help, or are instructed by a trained professional, only then should you begin the following steps. It is very important to note the following:

- If you think the person may have injured their back, neck, or head DO NOT move them unless it is Absolutely Necessary!
- Try not to move the broken limb, as it could cause more damage and pain.

**If you cannot reach help, or have been instructed to administer aid, here are the following**

**steps for helping the person in need:**

1. Make the person as comfortable as possible before immobilizing the injured area.

2. To keep the area from moving you'll have to make a splint. This works with leg and arm breaks where the arm is not bent. This can be done using a variety of materials such as boards, rolled newspapers, sticks, an umbrella, rolled blankets etc. Place the item around the injury and gently secure it with rope, strips of cloth, a tie; whatever you have available.

3. If the above materials are unavailable, and the injury involves limbs, you may tape or tie the injured leg to the uninjured one, tape an injured arm to the chest, or to the side of the body (surround the limb with padding first) depending upon whether the elbow is bent.

4. After you have wrapped and splinted the limb, check for a pulse. If you cannot find one then it means the bonds are too tight and must be loosened. Because fractures cause swelling you should check this often to make sure the person remains comfortable. Other signs that the splint is too tight are a numbness, tingling, or bluish tint to the skin at the sight of the break.

5. If the person has broken their arm and the arm is bent at the elbow then take a cloth and fold it into a triangle. Then gently slip the widest part under the arm and tie the two ends around the neck, forming a makeshift sling. You want the arm resting at a 90 º angle.

6. To keep the swelling and pain down, apply an ice pack, ice wrapped in a cloth, or, if all else fails, a bag of frozen vegetables. Do not keep the ice on for much longer than 20 minutes as it can cause numbness and discomfort.

7. Unless the person is bleeding, aspirin, ibuprofen, or another pain reliever may be used to ease the pain.

**Healing Process:**

Once you have received professional help for a broken bone, the healing process can begin. Some bones are placed in a sling, others in a cast and depending upon the severity of the break can be in a cast for a few weeks or several months. Sometimes with more severe fractures, where the bone is crushed or broken into several pieces a steel pin is used to help repair the bone and set it in place. When the cast comes off you may notice that the area underneath the cast looks pale, dry, and smaller (where the muscles are). Don't worry this is only temporary. It's good to remember that even though you are out of a cast or sling, your bone is still very weak and sensitive and it's a good idea to avoid sports and activities where you might re-injure yourself until your doctor tells you it's ok.

**Safety Tip:**

When you're able to get back into the sports arena, remember, to avoid breaking another bone always play it safe! Wear any protective gear available when participating in any activity that can cause serious injury. Helmets, pads, face guards, and most importantly Seat Belts! Many states these days make wearing your seat belt a law, but don't just do it because it's the law, do it because it could save your life! If you're driving a car and want to cut down on the risk of serious injury in case of an accident, make sure all your passengers are buckled up before you start the car. Remember, it's not just a safety tip... it's the law!

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Broken Bones - Infants

### Introduction and Symptoms

When it comes to broken bones, babies are rather lucky, their bones are very pliable so in many cases what seems like a broken bone is just a bad sprain. If the suspected area only swells a little and the baby doesn't seem like he's in too much pain then you can treat the injury yourself. Just place an ice pack over the area for 20 minutes four times a day for two days. If the swelling goes down and things seem to improve, then it is only a sprain, but if the area continues to swell up then you may have a break and should go see a doctor. If you aren't sure how bad the injury is then check with your doctor just in case.

If you suspect a break and these signs are present then your baby probably broke a bone:

- Swelling and bruising at the site of injury
- A snapping sound
- Stiffness
- Severe pain at one particular spot
- Tenderness at the site when touched
- Limbs that look "bent out of shape"
- Pain that gets worse when movement is involved
- And (in children that can walk and stand) inability or unwillingness to walk/stand.
- Limping

If your baby has suffered a serious break, for example the bone has pierced the skin or you fear neck, back, skull of pelvis breaks/injury then get them emergency medical help right away! If the bone has pierced the skin then the baby has what is called an open fracture. These are the worst kinds of breaks because of bleeding and the high risk on infection.

- Do not wash the wound, or touch it for any reason.
- Call 911 Immediately!!
- To lower the risk of infection, cover the area (gently) with a sterile piece of gauze of a diaper.
- Do not give your baby anything to eat or drink!

If you think your baby has a broken bone, and it is not a serious break (skull, neck, back, pelvis) then you may administer the following aid before bringing them to an ER.

- Keep your baby as calm as possible to avoid them doing more damage to the injured area.
- Immobilize the area by making a makeshift splint. This can be done using a ruler and a few strips of cloth, or other variations on that. See the broken bones page for more in depth info on splints.
- Do not give your baby anything to eat or drink, as it may delay medical treatment.
- Never attempt to straighten the bone yourself, you will make the injury worse.

The following symptoms may indicate shock and/or internal bleeding. If you see any of these, or any chest, head, or abdomen wounds call 911 and get to the nearest ER.

- Clammy of bluish skin
- An abnormal pulse (weak, rapid, or some other irregularity)
- Coughing up or vomiting blood
- Confusion or loss of consciousness
- Rapid or shallow breathing

If you can't get help right away, you may give the child an over the counter pain medication like acetaminophen or ibuprofen. You should also follow the ICES approach:

- ICE- decreases swelling and pain. If you don't have an ice pack, a bag of frozen veggies will do

just fine. (20 min, 4 times a day)

- COMPRESSION- decreases swelling. After icing the injury, wrap the affected limb in an elastic or cloth bandage. You want the bandage snug rather than tight, and should be able to fit one finger between the bandage and the skin. Check the bandage frequently, if the injury continues to swell it could become uncomfortable.
- ELEVATION- decreases pain and swelling. If you can, raise the affected limb about 6 inches above the baby's heart. Place a pillow or folded blanket under the raised limb for comfort.
- SUPPORT- create a split, again ruler and cloth, or a large handkerchief to make a sling. This step is most important for occasions when a trip to the ER will take over two hours, and severe injuries.





Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

# Burns

## What are burns?

Burns are injuries that damage and kill skin cells. These wounds often need special consideration and require a trip to the doctors. Burns can be caused from hot liquids and materials, common household chemicals, fire, radiation from the sun, and other sources. When someone has been burned there are three important factors that must be looked at, depth (first, second, or third degree), area (total body space covered), and location (where the burn is on the body).

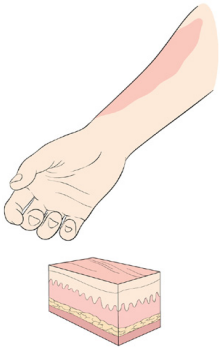
Depth is a measure of how deep the damage to the skin goes. We will look deeper into the three degrees of damage in the section below. The total body area is also important, the skin is a barrier to protect the body, and when it's damaged, the victim is subject to fluid loss and infections. If more then 15% of the body surface is damaged the victim can go into **shock**, and may require hospitalization for IV fluid resuscitation and skin care. The most important factor is location. If a burn occurs on the neck or near the nose and mouth, the persons breathing passages may be affected. Burns often swell and this could become a life-threatening problem if the airways become constricted. Another facial burn that needs special attention are the eyes. These should be looked at as soon as possible and handled very seriously as burns to the eyes may lead to clouded or lost vision. Because burned tissues shrink, burns that extend circumferentially around body structures often require the surgical removal of the dead and damages tissue, this procedure is called an escharotomy. Burns are often difficult to heal and may leave scars.

## Burn Prevention

Burns of all kinds can be prevented easily. Keep household chemicals out of reach of children. Make sure hazardous chemicals are well marked and caps are screwed on tight. Keep hot object safely out of reach and make sure to turn off heaters and stovetops when finished to prevent burns. Also keep socket caps over all unused electrical sockets to protect against electrical shock, and keep all electrical wires away from water.

## Classification and Treatment

First Degree:

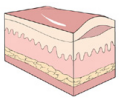


Most first degree burns are superficial and can be cared for at home without the help of a medical professional. These burns are much like typical sunburns and are cared for in a similar way. You should immerse the burn in cool water (do not use ice!) and then blot it gently and apply burn cream and then cover with a dry, clean, non-stick pad.

These burns usually leave the skin red and mildly swollen. The skin sensations are intact and the burn is painful to the touch. Most average sunburns are characterized as first degree burns.

*Second Degree:

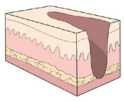
Second degree burns are more serious and should be seen by a medical professional. If the burn seems very severe report to an emergency room or call 911. Although second degree burns often look like first degree burns, in the sense that they are red, the damage goes deeper. With these burns, the pain is more intense and blistering may occur. The burns may also be wet, or weeping and may have a shiny surface. It is advised that these burns are not touched or covered.



*Third Degree:

These burns are the most serious. Third degree burns are very deep and the burn often appears white, deep red, or black because of skin death. These burns are often without sensation because nerve endings have been damaged. It is important that these burns are not touched, or covered unless absolutely necessary. Any contact with the burned skin can cause more damage and heighten the chance of infection.

* For both second and third degree burns:



* If face is affected sit the victim up and watch for breathing difficulties, until medical help is received.

* If arms and legs are effected, keep them elevated above heart level.

Burn Treatment:

- Remove and constricting jewelry
- Do NOT use oils or butter on a burn
- Douse effected area with cool water ASAP! It can be cleansed gently with chlorhexidine solution.
- Do NOT use ice or ice cold water, this can cause additional damage

If you have not received a tetanus booster within 5 years, get one to protect against tetanus infections

Electrical Burns:

If someone receives an electrical burn, they should seek professional attention immediately. These burns often result in serious muscle breakdowns, electrolyte abnormalities, and occasionally kidney failure. An important thing to note about these burns is that the damage is often internal and cannot be seen from the outside.

Chemical Burns:

These burns should be treated like thermal burns and doused with large amounts of water to flush out the effected area. Contaminated clothing should be removed . It is also very important that you DO NOT try to neutralize the chemical burn by adding another chemical, as this could result in a chemical reaction causing thermal burns or greater skin damage. Many chemicals can be treated to reduce skin damage, so when in doubt it's a good idea to call your local poison control center or make a trip to the local ER. When working with chemicals always wear the proper protective gear to avoid burns and other injuries.

**Sun Burns**

A sunburn is the result of your skin being exposed to too much of the suns ultraviolet radiation. This threat varies greatly with the seasons and with changing atmosphere conditions. The amount of sunlight you are exposed to also depends on the geographic features of altitude and latitude, as well as clothing, lifestyle and occupation. Indoors, sunburn-producing rays are filtered out by ordinary window glass. Outdoors however the suns rays are able to pass through light clouds, 25 cm of clear water, and fog.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

# Shock

**What is shock:**

Shock is what happens when the heart and blood vessels are unable to pump enough oxygen-rich blood to the vital organs of the body. Although every illness and involves shock to some degree, it can be a life threatening problem. The best way to protect people from the serious damages that shock can have on the system is to recognize the signs before the person gets into serious trouble. In most cases, only a few of the symptoms will be present, and many do not appear for some time. The most common symptoms are:

- Pale, cold, clammy and moist skin
- Vacant or dull eyes, dilated pupils
- Anxiety, restlessness, and fainting
- Weak, rapid, or absent pulse
- Shallow, rapid, and irregular breathing
- Nausea and vomiting
- Excessive thirst
- Person may seem confused or tired
- Loss of blood pressure

**Classification of shock:**

*Hypovolemic Shock:* This form of shock is brought on by a decrease in the amount of blood vessels or other fluids in the body. Excessive bleeding from internal and external injuries, fluid loss due to diarrhea, burns, dehydration, and severe vomiting usually cause this kind of shock.

*Neurogenic Shock:* In the case of neurogenic shock, the blood vessels become abnormally enlarged and the pooling of the blood disallows an adequate blood flow to be maintained. Fainting is an example of this sort of shock, as the blood temporarily pools as the person stands. When the person falls the blood rushes back to the head and the problem is solved.

*Psychogenic Shock:* This shock is more common, and is known as a “shock like condition”. It is produced by excessive fear, joy, anger, or grief. “Shell shock” is a psychological adjustment reaction to stressful wartime experiences. Treatment for shell shock is limited to emotional support and help from a medical facility.

*Anaphylactic Shock:* This form of shock is brought on by an allergic reaction from a food, bee sting or other insect bite, and inhalants. ~~For more information on the care and treatment click the link below.~~ Anaphylactic Shock

**Treatment of shock:**

1. Call 911 (or your local emergency help provider) for help

2. Lay the victim face up, on a blanket or coat if possible, and raise the feet above the head unless they are fractured. If the person is bleeding from the mouth or vomiting, tilt their head to the side to avoid fluids going into the lungs and airways. If you are unsure of injuries keep the person laying flat.

3. Loosen tight clothing, braces, belts, jewelry etc to avoid constriction of the waist, neck and chest.

4. Keep the victim comfortable and warm enough to be able to maintain their own body heat. If possible, remove wet clothing and place blankets beneath the victim. NEVER use artificial sources of heat. If they are bleeding severely do not apply heat to the wounded area as it will prevent the blood from clotting as easily

5. Check for other injuries, such as **bleeding** and **burns** and treat the other injuries according to first aid procedures. If possible try to splint **sprains** or **broken bones**. If you are unsure of how to do this, leave them as they are to avoid further damage.

6. If they claim they are thirsty moisten their lips with water but DO NOT give them anything to drink, as it may induce vomiting.

7. Try to keep the victim calm, excitement and excessive handling will worsen their condition try to assure them help is on the way.

Remember, if you can perform these actions before shock has completely developed you may prevent its occurrence and if it had developed you may stop it from becoming fatal. If shock is left unattended to the victim will die, it is extremely important that first aid be performed as soon as possible.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**

## Wounds

**Bumps and Bruises:**

Bruises, everyone gets them. Those ugly discolored patches that appear after you do something like slamming your elbow into the wall behind you, or taking a trip over your feet and falling hard. A bruise is caused by the damaging or breaking of a blood vessel, because of a blow to the skin. Some people bruise more easily than others. Children, for example, bruise much less easily than an elderly person would. Medications that interfere with blood clotting also help people to bruise more easily. Warfarin, a drug often prescribed to prevent clotting in those who have had clots in the legs or heart, can cause people to bruise severely.

Why do bruises change color?

Bruises are fairly predictable, you can often tell how old they are just by looking at them. When they first appear they will be reddish, a reflection of the blood trapped in the skin. After 1-2 days the bruise will appear blue or purple. By day 6 or so the bruise will be green and around days 8-9 it will be a yellowish brown. Usually the bruised area will look normal within 2-3 weeks.

What if it doesn't get better or it stays swollen?

Sometimes this happens. If the bruise becomes firm and actually seems to become larger two things may have led to this. First of all, when the blood vessel broke, if it was a large amount of blood the body might have decided just to wall it off, rather than clean it up. This bump is called a hematoma, and it may need to be drained by your doctor.

A second problem, which is much less common, is when the body deposits calcium in the area of the injury. This area then becomes tender and firm and requires x-rays and a trip to the doctor. This condition is called heterotopic ossification.

Other kinds of bruises:

Petechiae are little (3-3 millimeters) red dots that appear anywhere on the body, although the legs are most common. They are tiny little accumulations of blood. Often there are few of them and they usually indicate some sort of serious health problem.

Bruising around the belly button could be a result of bleeding in the abdomen.

Bruising behind the ear can indicate a skull fracture

And lastly bruises that are raised, firm, and occur without any injury may be signs of a "autoimmune" disease, in which the body attacks it's own blood vessels. Your doctor should evaluate all of these sorts of bruises.

How to treat bruises:

When bruising first occurs you can minimize the effects by using a cold compress. Place the ice in a bag or towel, as placing ice directly to the skin can cause frostbite. The cold reduces the flow of blood to the area and therefore reduces the size of the bruise. It also decreases the inflammation in the area and decreases swelling. If possible elevate the area to slow the blood flow. The lower the area is in relation to the heart the larger the bruise can be. Applying pressure also helps reduce blood flow and swelling. Another thing is to avoid medications that make it easier to bruise, however it is vital that you consult your doctor before making any changes to the medications you're on.

**Cuts and Scrapes:**

How do I care for cuts and scrapes?

With all cuts and scrapes the most important thing to do first is to clean out the wound. Make sure you wash your hands before cleaning a wound to avoid transferring more dirt to the cut. Always wipe away from the wound when removing dirt and other particles that may be in the wound. When washing the wound use soap and water, but do not scrub because that may do more damage. Hydrogen peroxide may be used but it is no substitute for soap and water! Also in some cases iodine and hydrogen peroxide will delay healing. After the wound has been thoroughly washed look at it and determine how bad it is bleeding. Apply direct pressure with a clean dry cloth or sterile gauze bandage, while elevating limb (if possible) above the heart. This will slow bleeding and help a clot to form. If bleeding is spurting out of wound or bleeding continues heavily after pressure has been applied for 5-10 minutes stitches may be needed, so go to the hospital and have the wound checked out by your doctor as soon as possible. If the bleeding slows however cover the wound with a clean bandage. You may wish to apply a thin layer of antibacterial ointment to the wound first, to protect against infection. If the wounds are on the hands or feet avoid using these ointments after the first day. Make sure the wound is kept clean and dry while it heals. It is good to clean the wound and apply fresh bandages daily. To keep smiles on faces of those young and old try some of Crackles' funky bandages in zebra, rainbow, smiley faces, dinosaur and more!

Ointments:

- chose your ointment carefully. Some ointments like Bacitracin and Neo-mycin are common and best suited for small or minor cuts. If a large area is affected or if it is a more sever cut consult your doctor before using any ointments. It is advised to call your doctor if you have any ointment questions.
- If wound has not been properly cleaned the ointment may seal in bacteria. Another thing to be wary of is using too much ointment. If to much is applied it can increase the chance of infection, as bacteria is attracted to moisture. Apply only a thin layer to ensure the best protection.
- Always apply the ointment with a clean swab or gauze. Applying ointment from the tube may contaminate the tube and put future wounds at risk.
- Ointments may be used up to three times daily, but it is not very commonly recommended. Overuse of ointments may cause allergic reactions and will delay healing. Make sure to wash the wound before applying fresh ointment.

Who should always go to the doctor for minor wounds?

Diabetics and people who either have a long-term illness or are taking drugs that suppress the immune system should always go to the doctor, as they are in a more fragile state and are at greater risk of getting an infection.

What are signs of infection?

If the wound begins to drain greenish fluid, or is the skin around the wound is red, swollen and increasingly painful. Signs of an infection, known as Lymphangitis, is any red streaking on the skin around the wound may indicate an infection where fluid is draining from the tissues in the lymph system. This can be serious especially is accompanied by a fever. If signs of this infection are seen, get to the doctors as soon as possible.

Taking proper care of a wound by keeping it clean and covered can often prevent infection. Airtight bandages are recommended over “breathable” bandages. When applying fresh bandages make sure your hands are clean and the bandage remains sterile. It is advised that the bandage is opened over the wound and that the pad remains untouched except by the wound.

If wounds are neglected the following signs mean trouble.

- Redness, swelling, increased warmth and tenderness around the wound
- A strong or displeasing odor
- Chills and or fever
- The red streaking of Lymphangitis
- Pus or watery discharge coming from the wound or collected beneath the skin around the wound.

The telltale signs of sunburns appear between 1-24 hours, and are usually (if the burn is light) redness, skin is tender or painful to touch, and swelling. If the burn is more serious it will be very painful to the touch and blisters may develop along with redness and swelling. If a large portion of the body is burned chills, fever, weakness and even shock may be experienced. Treat your burns with care. Aloe Vera is a healthy moisturizer and help soothe the pain and heal the skin. Other gentle moisturizers such as Noxzema may help cool and soothe the itching and pain. Anesthetics may be used to ease pain, unless blisters are present. If used around blisters they may make the problem worse! Also be careful as local anesthetic lotions may cause a sensitizing reaction. As the burn heals the burned skin peels off and new skin is revealed. This skin may be hypersensitive for the next few weeks and care should be taken.

Healing Tips:

* Drink lots of liquids

* Taking a hot shower after receiving a mild burn can bring about peeling sooner

* Vitamins E and C can be ingested as part of a daily diet or spread as an ointment over the burn. This will help prevent severe damage from the burn and shorten its effects.

*Another simple and easy summer pain reliever is watermelon rind. Cut away the pink fruit and place the greenish white rind over the burn, it has a cooling effect and will temporarily relieve the discomfort of the burn.

**Prevention:**

The best way to deal with sunburns is to avoid them in the first place. Sunscreen is a simple way of protecting yourself that takes little time and will be invaluable to keeping your skin looking healthy. For most people and SPF of 15 is strong enough to ward away burns, but if you burn easily then remember that the higher the SPF the stronger the protection. For most sunscreens to work at their best they should be applied at least 30 minutes before going out since they take about that much time to bind to your skin. This is especially important if you'll be in the water or participating in some high-energy activity where you will perspire. Many people think sunscreen is just a summer product but in fact it is helpful all year round. During the summer exposure to the midday sun should not exceed 30 minutes, even if you tan before you burn. In the winter the greatest danger comes on foggy days when the UVB levels are almost as high as on clear days, this danger is greater at higher altitudes. Use Scivolutions, Inc. "ItSUNuff" sun exposure monitor patch to tell when you have had enough sun and should get inside before you burn.



**Classification of wounds:**

Incision: These cuts are often the result of some sharp object such as broken glass, knives and sharp edges. The amount of bleeding varies on the depth and extension of the cut. Some of these wounds require stitches.

Laceration: These are jagged irregularly shaped cuts or tears in the skin. Most lacerations are serous and require stitches, because of heavy bleeding. Chances of infection depend on the size, cause, and depth of the laceration. If the laceration seems severe, it should be seen and treated by a doctor. In these cases cover the wound with a clean cloth or sterile covering and seek medical treatment as soon as possible.

Punctures: Puncture wounds are caused by an object piercing the skin. These wounds range from minor to severe and should often be looked at by a doctor. The cause of a puncture wound is important, for example, if a rusted nail causes the wound the risk of infection is high and a tetanus shot may be needed. Splinters, glass, nails, pins, and other objects can also cause these wounds. Because the wound penetrates the skin (and in some cases, several layers of skin) they are often difficult to clean and infections are common.

In some cases, the puncture wound is very deep, such as a nail puncturing the foot. At times, the nail or other object may puncture the bone and introduce bacteria. These wounds are often marked by having difficulty removing the object from the affected area. If bone puncture is suspected, visit your doctor as soon as possible.

In more minor puncture wounds infection is not as common, but if redness and swelling persist, contact your doctor.

**What about those tetanus shots?**

Most people (in the U.S) have been immunized against this bacteria. If it has been five years since you received your last booster shot, and you get a puncture wound, you should get another to protect against tetanus infection. If you've never had a tetanus shot, or you have had fewer than three shots you may need to take a medication known as Tetanus Immunoglobulin to prevent the infection of this bacteria.

***Severe bleeding injuries:**

1. Lay the person down. If possible, position the person's head slightly lower than the trunk, or elevate the legs. This position reduces the chances of fainting by increasing blood flow to the brain. If possible, elevate the site of bleeding.
2. Remove any obvious debris or dirt from the wound. Do not remove any objects pierced into the victim. Do not probe the wound or attempt to clean it at this point. Your principal concern is to stop the loss of blood.
3. Apply pressure directly on the wound with a sterile bandage, clean cloth or even a piece of clothing. If nothing else is available, use your hand.
4. Maintain pressure until the bleeding stops. When it does, bind the wound tightly with adhesive tape or a bandage. If none is available, use a piece of clean clothing.
5. If the bleeding continues and seeps through the gauze or other material you are holding on the wound, do not remove it. Instead, add more absorbent material on top of it.
6. If the bleeding does not stop with direct pressure, you may need to apply pressure to the major artery that delivers blood to the area of the wound. In the case of a wound on the hand or lower arm, for example, squeeze the main artery in the upper arm against the bone. Keep your fingers flat; with the other hand, continue to exert pressure on the wound itself.
7. Immobilize the injured body part once the bleeding has been stopped. Leave the bandages in place and get the injured person to the emergency room as soon as possible or, if they cannot be moved, call **911** in the U.S. & Canada

*Information on severe bleeding from: www.coolnurse.com



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Sprains and Dislocations

### What is sprain? A Dislocation?

A Sprain is an injury to the soft tissue, or ligaments, around a joint. This sometimes happens when someone moves the wrong way and "twists" something.

A Dislocation is when the bone becomes separated from the joint it meets, or it pops out of it's socket. This sometimes happens when the bone and joint are overstressed. They an also be caused by contact sports, rheumatoid arthritis, inborn joint defects, and suddenly jerking that arm or hand of a small child. Dislocation is most common in the shoulders, but fingers, hips, ankles, elbows, jaws, and even the spine are also prone to dislocation.

Both of these injuries are commonly confused with fractures (broken bones) because they all exhibit many of the same symptoms.

- Pain
- Swelling
- And an inability to move and bear weight
- A misshapen appearance
- Any discoloration

### Treatments and warnings:

Because of this, the same first aid care can be used for all three of these injuries.

- If you suspect a dislocation do not try to put the bone back into its socket, you may only make the injury worse.
- If you suspect a dislocation in the neck or spine be very careful and do not try to move the person yourself unless absolutely necessary, as damage may have been done to the spinal cord (which may paralyze parts of the body below the injury site.) Also, if you suspect an injury this serious call 911 immediately.
- If the site of injury is bleeding then treat the **wounds and cuts** accordingly, but do not try to reset/reshape the bone or joint. Also look for signs of **shock**.
- If the pulse is weak below the affected area call 911 and loosen all restrictive clothing.
- If the person is in severe pain, or the injury is to the neck, spine, hips, or thigh bone, call 911.
- If the joint or bone needs to be repositioned, do not give the person anything to eat or drink as it will put off medical treatment.
- Remove any articles of clothing or jewelry covering the affected area, or restricting blood flow to it.
- You may give over the counter pain medications such as acetaminophen and ibuprofen as directed by the doctor. If there is bleeding do not give aspirin because aspirin is a mild blood thinner and will delay clotting.
- Use the PRICE technique
    - Protect- if possible make a splint to help immobilize the affected area. Rulers and cloth, rolled up magazines and a belt, branches and shoelaces; all types of things can be used to make a splint. This will help prevent further damage to the limb. Do not try to reposition the bone/joint while making the splint.
    - Rest- Avoid movement of the injured area and avoid participation in activities where you may be at risk to re-injure yourself until after the wound had had plenty of time to heal.
    - Ice- Use ice to minimize swelling. If no ice is available, a bag of frozen veggies is a good substitute.
    - Compression- An elastic or fabric bandage may help decrease swelling and ease the pain. Ask a doctor before using one and make sure the bandage is not wrapped to tightly, which would hinder circulation.
    - Elevation- If possible raise the injured limb up above the heart. Support the elevated limb in a sling or under a pillow or folded blanket.

**Prevention**

- Wear protective gear and padding especially around recently injured areas
- The Doctor will often tell you how long you should wait before using the injured area again, in a very active way. Take his or her advice as it decreases your chances of re-injury.
- Avoid sports in which you may re-injure the area.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**

## Cold Injuries

Cold injuries, such as frostbite and chilblains are common during the winter months when people are out exposing themselves to the elements. Many people think that for a cold injury to occur the temperature has to be below freezing (0 degrees C, 32 degrees F) but in fact cold injuries can occur in temperatures above freezing if there's a wind chill or when a glove or sock gets wet. There are two types of cold injuries, the ones where body tissues freeze and the ones where they do not. The people most susceptible to cold injuries are the young and the elderly, although anyone who exposes him or herself to the cold is at risk.

**Cold Injury Classification:**

**No tissue freezing**

Chilblains: these are the most common cold injuries. They tend to occur when there is exposure of skin to a dry cold. In this case, the affected area may itch and appear reddish blue and be swollen and painful. Over time blisters containing clear fluid may form and the area will be sensitive to cold in the future. Luckily there is often no permanent damage.

"Trench Foot": The name of this condition comes from the cold injury that often took hold on the soldiers living in the trenches during World War I. This condition also goes by the title of Immersion injury. These injuries occur when a part is the body is exposed to a cold and wet environment. For example, if while playing out in the snow your socks get wet you are increasing your risk of developing trench foot is you fail to correct this problem. These are like chilblains, except they are often more serious. The blisters are deeper and resemble those of burns, and the area remains sensitive to the cold. Again there is usually no permanent damage.

**Tissue freezing**

Frostbite: this is probably the most serious cold injury. In this injury the tissues of the affected area actually freeze. Ice crystals form within the cells, causing the cells to rupture and die. Luckily this injury has several stage and can be caught early.

The first stage is called "frostnip" this occurs when only the surface skin is frozen. It starts like a chilblain, with itching and pain. The skin then progresses to loose it's blood supply, and eventually looses feeling and goes numb. Because only the top layers of skin are affected, there is usually no permanent damage aside from long-term sensitivity to cold, which may occur.

The second stage occurs if no action is taken in the situation described above. In this case the skin becomes hard and frozen , luckily deep tissues are spares and remain soft. Several days (usually 1-2) after the injury occurs, hard blisters will form. They often appear blackened and look worse than they are and heal within about 3-4 weeks. These injuries should usually be seen by a doctor and again the only permanent damage is heat and cold sensitivity.

If the injury progresses to the third (or fourth, depending on severity) stage of frostbite then the deep tissues are affected. Here the muscles, tendons, blood vessels and nerves of the affected area are frozen. The area will feel hard and woody and you may not be able to move the part on it's own (for example, if your fingers are affected you will lose the use of them). This loss of use may be temporary or in serious cases permanent. The affected area looks either deep purple or red with blisters, which are usually filled with blood. Frostbite such as this usually results in the loss of fingers and toes. Often it may take several months to determine the extent of the damage, and surgery is usually delayed until they are certain that the tissues cannot be revived.

**How do I treat these injuries?**

There are a few important things to remember when treating these injuries the first of which is

vital. It is very important never to thaw an affected area if there is a risk that it may re freeze. If it is warmed then refrozen ice crystals will form and more damage will be done. If you are afraid the area will become re frozen then leave the affected area frozen. Another mistake would be to follow the old folk remedy of rubbing the affected area with dry snow. Any rubbing may aggravate the area and cause more damage. Warming the injury is the proper treatment but cold injuries should never be warmed over a fire or next to a heater. This could cause painful burns and dry out the injured tissues, causing again, more damage.

The proper way to treat these injuries is to put the affected area into a tub of hot water (104-108 degrees F and 40-42 degrees C). It is very important to take the temperature of the water with a thermometer or a hand that is not frozen. It is very important to avoid burning the injured area, and it may not always be obvious because these areas often lack feeling. When feeling is returned there may be quite a bit of pain in some cases. Aspirins, ibuprofen, and acetaminophen may be used for the pain. If you feel stronger pain control is needed contact your doctor.

**Who is most at risk?**

As mentioned above the young and elderly are at the greatest risk. The elderly have poor circulation and children have smaller limbs which freeze much faster. In both cases they may not be able to get help or recognize the problem before the injury is upon them. Other people at risk are those who consume alcohol during the cold winter months and those who are taking medications that depress the ability to feel naturally. These people may not recognize they are in trouble until it is too late. Alcohol causes warm blood to become cooled at the surface of the skin, which sets the person at a greater risk of getting a cold injury. And lastly those who have illnesses such as diabetes, poor circulation, hypothyroidism and arteriosclerosis are at a greater risk as well.

**How do I prevent a cold injury?**

The best way to prevent these injuries is simple. Dress warmly and move indoors when your fingers, toes, or face begin to feel cold. Always keep your hands and feet dry and covered, and change wet gloves and socks as soon as possible. It's also good to keep your ears covered. Several drugs have also been tried to prevent frostbite by dilating the blood vessels and increasing circulation but the effectiveness of these is anecdotal, and it has not been proven to help. Medications to avoid are beta-blockers. These medications reduce circulation and increase the risk of cold injuries.

**When is medical help advised?**

Chilblains can usually be treated at home, while a doctor should look at trench foot and frostbite cases. Those two injuries require long-term evaluations to watch for complications. Infection of a cold injury is often increasing redness and warmth. Also, if there is a lot of blistering and you are not up to date on your tetanus shot, you should get a booster. If you are unable to get medical care for your chilblain cold injury, try to keep the **blisters** closed, and clean. If they do open let them drain then cut off any dead tissues with a pair of sterile scissors. Once the blister is open, it is important to keep it clean and covered. A first aid cream such as bacitracin may be used.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Concussions

A concussion is by definition “any impact to the head”. The impact to be worried about is anything that hits you in a moderate to quick motion. When this sort of impact happens the brain may collide and bounce off your skull. This causes swelling to occur and in severe cases, it causes a bruise to appear on the brain known as a contusion. Because brain tissues are so sensitive and delicate moving around in this fashion can cause them to tear, stretch, twist, and swell. When these things occur the “messaging’ system of the brain is often disturbed and the person may have trouble with certain mental or physical activities. Whiplash, car accidents, blows to the head, falls, and (most common) sports injuries are all common causes for concussions. Sometimes when a person receives a concussion they will go unconscious, this is often a sign of brain damage and should be dealt with promptly.

**Signs of a concussion are as follows:**

- Blurred vision
- Slurred speech
- Delayed (or incoherent) verbal and motor responses
- Drowsiness
- Confusion
- Memory loss
- Persistent headaches
- Dilated pupils
- Uncoordinated movement
- Loss of balance
- **Seizures**
- Inability to focus
- **Bleeding or bruising** behind the ears
- Sudden changes in personality or mood swings
- Inability to perform simple tasks and calculations

**If you’re afraid brain damage may have occurred look for these signs:**

- Headache
- Unconsciousness
- Pale skin
- Unequal size of pupils
- Difficulty speaking
- Clear or reddish fluid draining from ears, nose, or mouth
- Paralysis of an arm or leg opposite the side of the injury to the head.
- Paralysis of the face on the same side as the head injury.

**While waiting for medical assistance to arrive:**

It seems as though the person has suffered more than just a bump on the head, and you have called for medical assistance you may perform the following steps to help the person.

1. While waiting for medical assistance lay the victim lying down in the recovery position. (Head lowered and legs elevated, loosen any tight clothing, apply cool, damp cloths to face and neck (if available) )
2. Make sure the victim is breathing properly
3. Control any bleeding
4. If the victim becomes unconscious for any amount of time, make sure to note this information and report it when medical help arrives.
5. Even if they complain of thirst DO NOT give the victim anything to drink.

**Prevention...**

Remember, although most concussions do not result in hospitalization, the American Brain Injury Association notes that traumatic brain injuries kill 56,000 Americans per year and hospitalize another 373,000 more. These are important statistics to note, because many people tend to overlook concussions that appear to be only minor. Also remember that concussions may not always cause big problems, but the may cause microscopic ones. This microscopic damage is so small that doctors, even on a brain scan, cannot see it and often goes undiscovered. Someone who has suffered several concussions could be at a higher risk of facing problems with vision, balance, memory, and concentration later in life. The damage from concussions is accumulative, which is why it's extra important to wear the proper head gear when participating in sports or activities where you might be in harms way. To avoid whiplash injuries always buckle up when you get into a car.



## Seizures

### What is a Seizure?

A Seizure is a miscommunication between the nerve cells and the brain. When a seizure occurs normal brain functions are impaired and sometimes brain damage can occur. There are two kinds of seizures, **General** (tonic-clonic or 'grand-mal') and **Partial** (temporal lobe). General seizures affect small areas of the brain while Partial seizures affect the whole brain. Seizures usually last only a few minutes (in between 1 and 10) and must run their course before they end.

### Causes:

Seizures can be caused by:

- High fevers (especially in infants and young children) these are known as "fever fits"
- Epilepsy
- Brain injury, strokes
- Infection
- Poison
- Snakebites (or bites from other venomous creatures)
- Shock
- Heat stroke
- Vaccinations
- Reactions or overdoses to medication or drugs
- Diabetes
- Trauma
- Reye's syndrome

### Treatment:

Symptoms and treatment are as follows:

General

- The person may yell or cry out
- Stiffen
- Difficulty breathing (look for pale or bluish skin)
- Jerking motions
- Falling
- May last 1-4 minutes

Treatment

- Remain calm
- Move all sharp edged objects out of the persons way to help keep them from injuring themselves
- Monitor their breathing
- Do NOT try to restrain the person, you cannot stop the seizure
- Do not force anything into the persons mouth or give them anything to eat or drink

Once the seizure has subsided

- Help the person lay down and place something soft under their head
- Turn them to one side so they don't risk choking on their saliva
- Remove tight or restricting clothing and jewelry
- The person will probably feel confused and disoriented.
- They will also be very tired, let them sleep but stay with them until they have awoken and are

fully awake and alert/aware.
- Do not give them anything to eat or drink until they have fully recovered

Partial

- The person may experience convulsions (violent shaking and seizing, uncontrollable jerks and twitches)
- Glassy stare
- May give no response, or an inappropriate response when questioned
- May sit, stand or walk around aimlessly
- Make lip smacking or chewing noises
- Appear to be drunk, drugged, disorderly, or even psychotic.
- Fidgety
- Crying out
- Falling over
- Losing consciousness
- Body may stiffen

Treatment

- Remain calm, and call 911 (this may not always be necessary in the case of epileptics, but is always necessary if the person is diabetic)
- Move all harmful objects out of the persons way, or try to direct them away from them vocally (if they are not convulsing)
- Do NOT try to restrain the person
- Observe their behavior, in more severe cases this may become very important information
- Be very gentle with the person, and do not be too physical with them

Once the seizure has subsided

- The person will be very sleepy, let them sleep
- They may have a headache
- Give them no food or drink until after they have rested and are fully alert and recovered
- The person may be confused and disoriented

- Turn them to one side so they don't risk choking on their saliva

- Remove tight or restricting clothing and jewelry

**Call 911 if**

- If this is a first time
- If the seizure lasts more than 5 minutes
- If the person has one seizure after another
- If the person is pregnant, injured, diabetic, or has requested an ambulance
- If the person is not breathing correctly within one minute after the seizure. If needed begin CPR.



## CPR

CPR is most commonly needed when someone goes into cardiac arrest (a heart attack) without notice, or they are choking on something and need assisted breathing. Below you'll find methods on how to deal with these situations until help arrives.

**CPR for adults**:

**1. CALL**

Check the victim for unresponsiveness. If there is no response, Call 911 and return to the victim. In most locations the emergency dispatcher can assist you with CPR instructions.

**2. BLOW**

Tilt the head back and listen for breathing. If not breathing normally cover the mouth with yours and blow until you see the chest rise. Give 2 breaths. Each breath should take 2 seconds.

**3. PUMP**

If the victim is still not breathing normally, coughing or moving, begin chest compressions. Push down on the chest 11/2 to 2 inches 15 times right between the nipples. Pump at the rate of 100/minute, faster than once per second.

**CONTINUE WITH 2 BREATHS AND 15 PUMPS UNTIL HELP ARRIVES**

NOTE: This ratio is the same for one-person & two-person CPR. In two-person CPR the person pumping the chest stops while the other gives mouth-to-mouth breathing.

**CPR for Children (Ages 1-8)**

CPR for children is similar to performing Quick CPR for adults. There are, however, 4 differences.

1) If you are alone with the child give one minute of CPR before calling 911

2) Use the heel of one hand for chest compressions

3) Press the sternum down 1 to 1.5 inches

4) Give 1 full breath followed by 5 chest compressions

**CPR for Infants (Age <1)**

**Shout and Tap**

Shout and gently tap the child on the shoulder. If there is no response, position the infant on his or her back

**Open The Airway**

Open the airway using a head tilt lifting of chin. Do not tilt the head too far back.

**Give 2 Breaths**

If the baby is NOT breathing give 2 small gentle breaths. Cover the baby's mouth and nose with your mouth. Each breath should be 1.5 to 2 seconds long. You should see the baby's chest rise with each breath.

**Give 5 Compressions**

Give five gentle chest compressions at the rate of 100 per minute. Position your 3rd and 4th fingers in the center of the chest half an inch below the nipples. Press down only 1/2 to 1 inches.

**Repeat**

Repeat with 1 breath and 5 compressions. After one minute of repeated cycles call 911. If you feel a pulse return give one breath every 3 seconds and discontinue chest compressions.

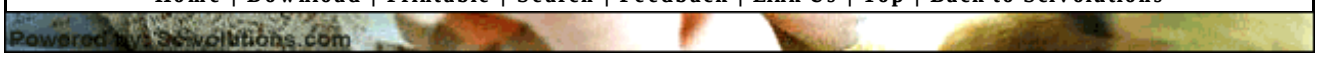
**What complications can occur?**

Vomiting is the most frequently encountered complication of CPR. If the victim starts to vomit, turn the head to the side and try to sweep out or wipe off the vomit. Continue with CPR.

The spread of infection from the victim to the rescuer is exceedingly rare. Most cardiac arrests occur in people's homes - relatives or friends will be the ones needing to do CPR. Even CPR performed on strangers has an exceedingly rare risk of infection. There is NO documentation of HIV or AIDS ever being transmitted via CPR.

(CPR information, pictures, and methods taken from: http://depts.washington.edu/learncpr/)





# Dental

## Dental Injuries:

Dental Injuries can be caused by a variety of facial traumas. Whether the injury is caused by making the save in the game or taking a spill from your bike, it's important to know how to take care of these injuries. Dental injuries involve not only the teeth, but the jaws, muscles, and gums around them. Most hospitals have oral surgeons who can handle emergency tooth removals and jaw fractions. If the injury has added head and neck trauma, go to the emergency room. Injuries like broken teeth or those knocked out of the mouth can be dealt with a dental office.

## Dental Injury Classification:

## Tooth Fractures (chipped or broken teeth):

These fractures can range from minor to severe. Minor injuries involve chipping only the outer tooth layers while severe injuries involve vertical, diagonal, and horizontal fractures of the tooth root. The tooth is made up of three layers, the enamel, dentin, and the pulp. The enamel and dentin are the two outer protective layers of the tooth. The enamel is the white hard surface, and below that is the yellow layer of dentin. The innermost living part of the tooth is called the pulp. Because only 1/3 of the tooth is visible (known as the crown) in the mouth x-rays are necessary to determine the extent of the tooth fractures.

## Chipped Teeth:

These injuries are minor and involve only the enamel layer of the tooth. In these instances, the tooth is not out of place and the gums are not bleeding. The tooth may not be sensitive to temperature or food, but rough edges on the tooth may irritate the tongue and cheek. The pulp is not often at risk here and treatment is not urgent. On the way to the dentist, sugarless gum or orthopedic wax may be placed over the tooth to ease any discomfort. At the dental office, the treatment is usually a filling or having a "cap" put over the tooth to protect the pulp and restore normal tooth contour.

## Fracture of Enamel and Dentin:

This fracture is deeper and like a chipped tooth, the gums are not bleeding and tooth is still in place. However, these fractured teeth may be sensitive to food and cold temperatures. Prolonged exposure of this fracture could lead to bacteria attacking the dentin and eventually result in pulp death. Death of these tissues can lead to infection and abscess. Because of this, these injuries should be treated within days of the injury. An anesthetizing cream will be placed over the dentin, followed by a dental filling and cap will be placed over the tooth. A follow up x-ray will be required 3-6 months later to ensure that the pulp has not died.

If the fracture was deep enough to do actual damage to the pulp then either the dying tooth will have to be removed or a root canal will have to be performed. The root canal is designed to save the tooth from a) serious infection and b) having to be removed. The root canal removes all the dying pulp tissue and replaces it with inert material.

## Serious Tooth Fracture:

A serious fracture is one that exposes both the dentin and the pulp. And should be treated immediately. This tooth may be loose or out of place and the gums may bleed. To prevent the tooth from falling out the dentist may have to splint it by bonding it to the adjacent teeth while the bone and gums around it heal. Because the pulp is exposed in this injury, there is a high risk of pulp death; therefore, a root canal is often performed on the first visit for the injury. However is the dentist decides to splint the tooth then the tooth will need to be reevaluated in 2-4 weeks to see if a root canal is needed. After the procedure, a filling or crown is added and the splint is removed. The most severe

tooth injuries are the ones that fall vertically, horizontally, and diagonally on the tooth roots. In many cases, this leaves the tooth very loose and extraction is needed. The hole is then filled with a removable plate that contains a false tooth. On rare occasions, teeth with horizontal fractures near the tip of the roots don't need to be extracted. However, the tooth is closely observed and x-rayed periodically to watch for signs of infection and pulp death, in which a case a root canal would be needed.

**Teeth Knocked Out:**

As many parents know, the upper two front teeth are the two most likely to be knocked out. Those who play sports are at a great risk of this, as are children who have protruding front teeth that have not yet been put into correct alignment.

In most cases, if a child's baby teeth are knocked out nothing is done because the teeth will be replaced with permanent teeth in time. Knocked out permanent teeth are different stories. These teeth should be retrieved and kept moist and clean (rinse in clean water or milk) and put back in their sockets as soon as possible. Time is the most important factor here. The soon a tooth is re-implanted the better chance it has to become reattached. Teeth re-implanted within an hour frequently reattach themselves. This can usually be done without the help of a dentist, but if you are at all unsure store the tooth in milk or clean water and brought to the dentist as soon as possible. Or if the victim is an adult or calm child, the tooth can be held within the cheeks inside the mouth.

After the tooth has been re-implanted, the dentist will splint the tooth for 2-8 weeks. This helps stabilize the tooth while the bone heals. During this time, the patient must take special care to eat mainly soft foods and brush all the other teeth to keep the mouth as clean as impossible to ward off bacteria. In adults, the re-implanted tooth should have a root canal performed in 1-4 weeks, but in children, however, this is often unnecessary because the roots may not have fully developed. These teeth are observed for 5 years to make sure the pulp is healthy and no root canal procedure will be needed.

For most re-implant patients over the counter medications like acetaminophen (Tylenol) or ibuprofen (Advil) are fine for pain relief. Chlorhexidine mouth rinse may be prescribed to prevent gum disease and inflammation, since splinted teeth cannot be brushed normally. The splint also usually collects added tartar and debris. Oral antibiotics and tetanus toxoid injections are considered for patients with lacerations on the gums and mouth.

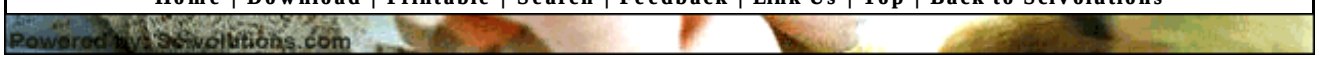
**Teeth Displaced:**

Often instead of being knocked out of the mouth, teeth are displaced. This gives the tooth the appearance of seeming longer, shorter, or "bent" to the side, front, or back. Luckily this injury isn't an emergency, but a trip to the dentist is recommended as the sooner the tooth is realigned the better (and faster) the tooth will become correctly realigned. Sometimes the trauma can cause injury to the pulp so the tooth is monitored for several months to determine if a root canal, or tooth extraction is required.

**Prevention:**

Prevention for dental injuries is fairly basic. Braces align teeth properly and facemasks and mouth guards have been shown to reduce trauma to the teeth, gums, jawbones, and joints. Mouth guards reduce the deformation of the skull when a force is directed at the chin. Mouth guards have become very important, almost eliminating the injuries that occurred to the face and mouth. While mouth guards can be purchased in stores the best ones are custom made by your dentist. The store bought mouth guards are less expensive, but are not made for the athlete and may become loose, uncomfortable, and make cause problems with speech or breathing. A well fitting mouth guard should do none of the above.





Contents

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# Diabetic

## Classification

There are two different categories of emergencies when it comes to diabetes. Hypoglycemia (low blood sugar) and Hyperglycemia (high blood sugar). Below is a little information and some signs and symptoms of each.

## Hyperglycemia

Hyperglycemia (high blood sugar)- onset of this condition is usually slower, and may occur when the diabetic consumes a large amount of sugar when they are remotely inactive. It may also be a sign of ketoacidosis.

- Hot dry skin
- Extreme thirst, or excessive thirst
- Frequent need to urinate
- Smell of acetone (nail polish remover) on the persons breath
- Drowsiness
- Unconsciousness, which may lead into diabetic coma if untreated
- Blurred vision

Treatment for Hyperglycemia

1. Do not give the person something sweet to eat or drink as it will raise their blood sugar even more.
2. Do not give the person an insulin shot. If the person is conscious and able, allow them to give themselves a shot. If they ask, you may give assistance.
3. call a 911 or bring the person to the ER if blood sugar is abnormally high, or if person is unconscious.
4. If help is delayed, give the person sugar free liquids.

## Hypoglycemia

Hypoglycemia (low blood sugar)- the onset of this imbalance is usually rapid, and commonly happens when the diabetic is physically active and are not doing enough to maintain their sugar levels.

- Pale skin
- Weak and tired
- Confused (may act drunk)
- Aggressive or cranky
- Hungry
- Excessive sweating
- Rapid pulse
- May go to sleep and become unconscious
- Seizure

Treatment for Hypoglycemia

1. A diabetic should always try to carry something sweet with them, be it a non-diet soda, fruit, or some candy in case they go 'low'. Administering this sweet drink or food item will help reverse the effects of hypoglycemia and raise the persons' blood sugar levels. Glucose tabs and gels are available in most drugstores. Only give food or drink if the person is conscious.
2. If the person loses consciousness or cannot swallow then medical assistance is needed. Call 911 immediately or take the person to the ER.
3. If the person goes into a **seizure** call 911 immediately.

4. There is an injectable medication called glucagon, which is available by prescription. A family member or friend should learn how and where to administer this shot, which raises the blood sugar quickly.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Drug Overdoses

When someone overdoses, speed is the most important factor, even more so than the substance that was overdosed on. This is because the longer someone goes without treatment, the more the drug is absorbed, and the more damage is done. People can die from drug overdoses.

**Symptoms:**

When someone has OD'd they may be...

- Unconscious
- Seizing
- Confused
- Fainting, dizzy, uncoordinated, or drowsy
- Slow or rapid pulse
- Vomiting
- Acting strangely, drunk, psychotic, overly friendly etc
- Have difficulty breathing
- Slurred speech
- High or low temperature
- Enlarged or extra small pupils
- Reddish face and heavy sweating
- Delusions or hallucinations

**Treatment:**

- Contact the poison control center and 911 immediately
- If the victim is unconscious check vital signs. If you need to, begin CPR.
- If the person is unconscious check the airways and clear them out (remove any pills, vomit, etc)
- Once the unconscious person is 'stable' place them in the recovery position (lying on their side) and wait for help to arrive while keeping a close eye on them.
- If you find pills, syringes, medications, bottles & containers (from medications or drugs) or drugs around the person save them and give them to the medics when they arrive. If available save a sample of the vomit as well.
- If the person is conscious ask them what happened and most importantly keep them as awake and alert as possible.
- DO NOT try to induce vomiting unless instructed to do so by a medical professional. The poison control center will tell you what to give and how much to give based on the persons age/weight and other stats.
- DO NOT give the person anything to eat or drink unless instructed
- DO NOT leave the person alone
- Try to figure out the time when the drug was taken and what quantity was taken.

**Drugs and Symptoms Chart:**

Below is a list of substances and the symptoms that overdosing on them will bring about.

| Name | Examples | Signs and symptoms of over dosage |
|---|---|---|
| Acetaminophen | Tylenol®; Parafon forte®. | Nausea; vomiting; pallor; sweating; kidney failure; jaundice; difficulty breathing; delirium; and unconsciousness. |

| | | |
|---|---|---|
| Alcohol | Beers; wines; spirits. | Changes of mood; lack of coordination; slurred speech; sweating; rapid pulse; vomiting; drowsiness; and unconsciousness. |
| Amphetamines | Benzedrine®; Dexedrine®; Methedrine®. | Excitement; dilated pupils; talkativeness; insomnia; tremors; exaggerated reflexes; bad breath; vomiting; diarrhea; fever; irregular, rapid heart rate; hallucinations; delirium; convulsions; and unconsciousness. |
| Anticoagulants | Dicumarol®; Coumadin®; Panwarfarin®: | Nosebleeds; pallor; bleeding gums; bruising; blood in the urine and feces; shock; and coma. |
| Antidepressants | (1) tricyclic compoundsóTofranil®; Elavil®.<br><br>(2) MAO inhibitorsóNardil®; Parnate®. | (1) Dry mouth; dilated pupils; vomiting; irregular heart rate; retention of urine; hallucinations; lack of coordination; exaggerated reflexes; agitation; convulsions; unconsciousness; and hypertension. (2) Agitation; hallucinations; exaggerated reflexes; irregular heart rate; sweating; retention of urine; convulsions; and muscular rigidity. |
| Antihistamines | Tripelennamine; diphenhydramine; chlorpheniramine, promethazine. | Excitement or depression; drowsiness; headache; irregular heart rate; nervousness; disorientation; lack of coordination; high fever; hallucinations; fixed, dilated pupils; delirium; convulsions; and coma. |
| Atropine | Hyoscyamine; scopolamine; stramamine. | Dry mouth; hot, dry skin; flushing; high fever; dilated pupils; irregular heart rate; excitement; confusion; convulsions; delirium; and unconsciousness. |
| Barbiturates | Amytal®; Nembutal®; Seconal®; phenobarbital. | Drowsiness; headache; confusion; lack of coordination; slurred speech; lack of reflexes; slow breathing rate; and coma. |
| Benzodiazepines | Librium®; Valium®; Mogadon®; Xanax®. | Drowsiness; dizziness; lack of coordination; and, in rare cases, coma. |
| Caffeine | Coffee; tea; No-Doz®; APC. | Restlessness; excitement; frequent urination; rapid pulse; nausea; vomiting; fever; tremors; delirium; convulsions; and coma. |
| Cannabis | Hashish; marijuana. | Overdose usually causes only sleepiness. |
| Chloral hydrate | Noctec®; Somnos®. | An overdose of chloral hydrate produces symptoms similar to a barbiturate overdose, but chloral hydrate may also cause vomiting. |
| Cocaine | Cocaine; crack. | Stimulation followed by depression; nausea; vomiting; anxiety; hallucinations; sweating; difficulty breathing; convulsions; cardiovascular collapse; severe hypertension. |
| Contraceptive pill | | Overdose may cause nausea and vomiting. It does not usually require emergency medical aid, but it is advisable to consult a physician. |
| Digitalis | Lanoxin®; Crystodigin®; Purodigin®. | Vomiting; excessive salivation; diarrhea; drowsiness; confusion; irregular heart rate; delirium; hallucinations; and unconsciousness. |

| | | |
|---|---|---|
| Diuretics | Hygroton®; Lasix®; Dyazide®. | Massive urine output and irregular heart rate. Rarely there may also be skin rashes and abnormal sensitivity to light. |
| Glutethimide | Doriden®. | Drowsiness; lack of reflexes; pupil dilation; slow breathing rate; and coma. |
| Hallucinogens | LSD; psilocybin; mescaline; phencyclidine (PCP). | The symptoms of an overdose are not always readily distinguishable from the normal effects of these drugs, which vary betweeen individuals. The effects include hallucinations; nausea; confusion; and lack of coordination. In some cases, especially with PCP, there may be paranoia; delusions; extreme anxiety; aggressive and violent behavior; depression; seizures; coma; cerebral hemmorrhage; and even death. |
| Ipecacuanha | Ipecac syrup. | Nausea; vomiting, sometimes bloodstained; diarrhea; abdominal cramps; irregular heart rate; and cardiac arrest. |
| Iron | Iron supplement tablets and syrup. | Nausea; vomiting, sometimes bloodstained; abdominal pain; pallor; headache; confusion; convulsions; and unconsciousness. |
| Narcotics | Opium; heroin; morphine; Methadone®; codeine. | Pinpoint pupils; drowsiness; shallow breathing; muscular relaxation; coma; slow pulse and respiratory arrest. |
| Phenothiazines | Chlorpromazine; prochlorperazine; trifluoperazine. | Sleepiness; dry mouth; lack of coordination; muscular rigidity; tremors; uncontrollable facial grimacing; low body temperature; irregular heart rate; convulsions; and coma. |
| Quinine | Antimalarial drugs. | Vomiting; deafness; blurred vision; dilated pupils; headache; dizziness; rapid breathing; irregular heart rate; and unconsciousness. |
| Rauwolfia alkaloids | Reserpine. | Flushing; dry mouth; abdominal cramps; diarrhea; irregular heart rate; tremors; muscular rigidity; and unconsciousness. |
| Salicylates | Aspirin and many aspirin-containing painkillers. | Abdominal pain; nausea; vomiting; restlessness; noises in the ears; deafness; deep, rapid breathing; fever; sweating; irritability; confusion; delirium; convulsions; and coma. |



Contents

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## Eye Injuries

Eye injuries can happen to anyone, and are quite common. Below are several types of injuries and suggested treatments.

**Particle of dust or speck of dirt in the eye**

- Do not rub your eye, as it may cause scratching and other injury to your cornea.
- Gently lift your upper eyelid down over your lower one, allowing your eye to flush the particle of dirt out. Hold your eyelid like this for a minute or so or until you feel the object has been removed. This may be repeated as necessary.
- Blink your eye several times to help remove the object.
- You may also try to flush it out of your eye using a little bit of cool clean water. (this may be more effective for dust, smoke, and heat burn to the eyes as opposed to dirt particles.)
- Try not to remove it with your fingers as you may do damage to your eye.
- If object remains in the eye, keep it closed and go see your doctor.

**If something has become embedded in the eye**

- Cover both eyes with a clean sterile pad and go to the doctors
- Do Not try to remove the object or touch the eye.

**A hit or blow to the eye**

- Quickly apply a cold compress to the area around the eye, not the eye itself, for about 15 minutes. This will reduce pain and swelling.
- A black eye or blurred vision may indicate eye damage and should be looked at by a doctor.

**Cuts to the eye or eyelid**

- Bandage the eye area gently with gauze and medical tape and get the person to the doctor as soon as possible.
- Do not attempt to remove any objects on the eye, or touch the eye.
- Do not apply pressure to the injured area, and do not rub the affected area.

**Chemical burns to the eye**

- Immediately flush the area with water, using your fingers to hold open your eyelids. Make certain that your fingers and clean and have no chemicals on them to avoid further damage and possible reactions. Continue to flush eye for at least 15 minutes. You may want to move your eye around while doing this to help assure the removal of all chemicals.
- Make sure the head is tilted so the chemicals and water do not flow into the unaffected eye.
- These burns should be looked at by a doctor as soon as possible to make sure no damage was done to the eye.

Remember, eye injuries are usually preventable if the proper gear is worn. In labs always wear protective gear and goggles, and when playing sports make sure that you wear a mask or eye guard. When playing outside watch for branches and other things which might bring about an eye injury.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Fainting

People most often faint when there isn't enough blood flowing to the brain. When this happens the person becomes unconscious, and the unconscious spell is usually brief. Fainting is not life threatening, although if the person faints on a regular basis it may be a sign of a more serious medical disorder, and should be discussed with your doctor. If a person feels faint (weak/lightheaded/dizzy/nauseous), have them lie down with their feet elevated above the level of their heart (about 8-12 inches), or have them sit with their head placed down between their knees.

Fainting may occur because of:

- Emotional and/or physical shock
- **Dehydration**
- Pain
- Overexertion
- Heart diseases
- Sudden changes in body position (most common in the elderly and pregnant)
- Insufficient fluid and food intake.

When someone faints there are many things that you need to check before beginning treatment for the fainting. Such as...

- Was the person injured when they fell? (**wounds**)
- Is the person showing any signs of **shock**
- Has the person had a recent head injury?
- Have they fainted recently?
- Are they pregnant?
- Are they breathing correctly/normally?
- Do they have a history of heart disease?
- Is the person properly fed and hydrated?

**Treatment:**

- Lay the person on their back with their feet elevated above their heart, or 8-12 inches, if possible
- Loosen any tight clothing and jewelry especially around their head and neck.
- Watch their airways, are they breathing correctly? If they stop breathing begin to administer **CPR.** If breathing stops then the situation becomes more serious and you should try to get medical help as soon as possible.
- Sometimes when people lose consciousness they vomit, you may want to turn the person onto their side in case this happens.
- If you suspect a head, neck, or spinal injury get medical help as soon as possible and do not move the person unless absolutely necessary.
- Do not try to give the person anything to eat or drink
- If the person does not regain consciousness within 2 minutes call 911 or get other emergency medical help.
- If the person is older (over 40) contacting a doctor or calling 911 may be in order to make sure it was not a heart related problem.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Heat Illness

**What are they?**

Heat Illnesses are a common and treatable summer hazard. A heat related illness should never be ignored; if it is then the victim's condition will worsen and could lead to death. Heat illnesses can happen to anyone, but babies under a year old, the elderly, the sick, the physically active, and people exposed to hot weather conditions are at the greatest risk.

**Dehydration:**

Dehydration is easier to prevent than treat. Your body, under normal conditions, has a certain balance of fluids and electrolytes. When this balance is disturbed other systems are affected and illnesses occur. Dehydration is a drop in fluid levels and can usually be treated easily with no lasting effects. Prevent dehydration by keeping your body hydrated. If you are doing something active outside such as hiking or a sport, you'll sweat and breathe a lot harder, losing more fluid than normal. Some medications also cause fluid loss. In situations like these, it's important to drink water or sports drinks (which replace electrolytes as well) whether you feel thirsty or not. If you feel thirsty, you're already showing signs of dehydration. It's good to know the symptoms of dehydration in case you are ever in a situation where you may be at risk. Below are some of the more common symptoms:

Early or mild dehydration:

- Extreme thirst
- Flushed face
- Dry, warm skin
- Weakness
- Headache
- Dry mouth with thick saliva
- Decreased coordination
- Fatigue
- Smaller appetite
- Impaired judgment
- Dizziness that worsens as you stand and move
- Small amounts of dark yellow urine
- Arm and leg cramps
- Very few tears (when crying)

Moderate to severe dehydration:

- Fainting
- Convulsions
- Low blood pressure
- Less sweating (internal cooling mechanism becomes ineffective)
- Severe arm, leg, stomach, and back cramps
- Bloated stomach
- Sunken 'dry' eyes
- Lack of skin elasticity (a bit of lifted skin takes longer to 'spring' back into place)

Dehydration can be treated by:

- Giving the victim more liquids than usual, but in small doses, too much at once could cause vomiting which would lead to even greater fluid loss. Water, sports drinks, and oral rehydration solutions (**ORS**) are best. Sports drinks and **ORS** replace both fluids and electrolytes. **ORS**'s can be bought or made. The drinks should be sipped slowly, in small amounts for about an hour. Even if you vomit while doing this, your body is retaining some of the fluids. Chilling the liquids can help, as it can prevent internal body temps from becoming to high and progressing to

heat stroke.
- Nonprescription medicines that will help replenish fluid and electrolyte levels are available. Salt tabs however should be avoided, as they will lead to further dehydration.
- The person affected should be resting in the shade and should not resume activities until urination becomes normal (pale yellow and clear), and the other symptoms of dehydration disappear.
- Those suffering from dehydration have less of an appetite. If you fear you are becoming dehydrated (or want to avoid it altogether), make sure you eat and drink small amounts of food 5-7 times a day.
- In cases of severe dehydration, get the person to an emergency room, as untreated dehydration can lead to death.
- If a person who is severely dehydrated can drink, they should still be given the **ORS** and water.

**Treatment, and Symptoms of Heat Exhaustion:**

Heat Exhaustion

Heat exhaustion is similar to, and often follows, dehydration. It's what happens when you're losing more fluid and electrolytes than your body can handle. And although both fluids and electrolytes are being lost, exhaustion is a greater loss of electrolytes whereas dehydration is a greater loss in fluids. Heat exhaustion is a form of volume shock, in other words, the lack of fluid causes the blood vessels, especially in your arms and legs, to constrict. Luckily, this is a non-life threatening illness.

Symptoms:

- Sweating
- Increased pulse and respiration
- Pale and clammy skin
- Fatigue
- Nausea and vomiting
- Slightly lowered or elevated temperature
- Exhaustion
- Lightheadedness and dizziness
- Possible heat cramps
- Feeling thirsty
- Decreased urine output

Treatment:

- With enough fluids and rest this illness is self correcting
- A Sports drink or oral rehydration solution (**ORS**) should be given to replenish decreased electrolytes. Drink fluid slowly, as the body will absorb it better.
- Take a good long rest before continuing with your activities; if symptoms seem severe, you may want to see a medical professional.
- If the person is suffering from heat cramps a slightly salty drink (sports drink or **ORS**) and stretching the muscle should ease them. If they return, you should probably discontinue the activity you are doing for the rest of the day.
- If heat exhaustion is not properly treated, it may become Heat Stroke, which is deadly. If the person's temperature goes above 103° then treat them for heat stroke!

**Prevention, and Symptoms of Heat Stroke:**

Prevention:

Keeping up with your body, is more important than keeping a fast pace with your friends. If you feel the symptoms of exhaustion coming on take a break, slow down, drink and eat a little before going on again. It will also be helpful to rest during the noontime hours, which are the hottest of the day. Wearing breathable clothing and a hat will also help to keep you cooler when taking part in physical activities on hot and humid days.

Heat Stroke

Heat stroke is a life-threatening emergency, and victims can die in just 30 minutes so help must be given quickly. Heat stroke is caused by an increase in the body temperature to about 104° (41°C). Temperatures over 105° can lead to death. This increase in temperature causes the brain to overheat. There are two types of heat stroke: fluid depleted (slow onset) and fluid intact (fast onset).

**Fluid depleted (slow)-** The person has heat exhaustion, but continues to function in a situation. Eventually the lack of fluid will minimize the body's active heat loss capabilities to such an extent that the internal temperature will begin to rise.

**Fluid intact (fast)-** The person is under extreme heat in a challenging situation, this overwhelms the body's active heat mechanisms even though fluid levels are sufficient.

Symptoms:

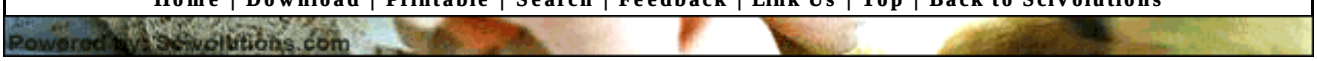
- Hot and Red skin. Some victims will have hot dry skin (common in the elderly) and others will have hot wet skin (if, for example, they were previously suffering heat exhaustion) in all cases, however the skin should look red
- Pale skin
- Pulse and respiratory rates increase
- Decreased urine output
- Argumentative
- Disoriented
- Increased temperature
- Combative
- Hallucinations
- Dilated and unresponsive pupils
- Seizures, which may lead to the person becoming comatose

Treatment MUST begin immediately

- The most important thing to do is begin to lower the body temperature. Gently move the person to a shady or cooler spot and remove all non-cotton or un-breathable clothing. If possible, try moving the person to somewhere where medical assistance will be available. (Drive to the hospital, or a spot where an emergency team will be able to locate you and take over.)
- Pour cool (NOT cold) water over the person's extremities. If water is limited cool off the head and neck area first. Also, try fanning the person to increase air circulation and speed up sweat evaporation. If available place ice packs at the neck, armpits, and groin In That Order!
- While cooling the person off you should massage the extremities, which helps propel the cooled blood back into the persons core which will in turn lower their temperature.
- After their temperature has dropped to 102° then stop trying to cool them down, as hypothermia may begin and cause the person to shiver, which would generate more heat. Monitor them closely to make sure their temperature does not begin to rise again.
- If the person is able, begin to replace the fluids they have lost by giving them small sips of water or **ORS**. Sometimes, because they are temporarily mentally impaired it is impossible to get them to ingest fluids. In cases like that, continue the cooling process and try to get them to an emergency room.
- In more severe cases, CPR will need to be performed.
- Get the person to an emergency room as soon possible!! Your quick actions can save their life.

Heat stroke, like all other heat related illnesses is preventable by drinking an ample amount of fluids (not just water, as electrolytes will need to be replaced as well) when you are exposed to heat, or are being physically active. Remember, it is nearly impossible to drink too much water on hot days when you're active, and that your body absorbs it better when taken in in small amounts. It is also important not to rely solely on your body to tell you when you're thirsty as sometimes you become overwhelmed to quickly. So to stay safe drink often, not because you're thirsty but because you know you should.





## ORS Ingredients

### ORS INGREDIENTS

- 1 liter (quart) of drinking water
- 2 tablespoons of sugar or honey
- ¼ teaspoon of salt
- ¼ teaspoon of baking soda (if you don't have any add another ¼ of salt
- You may also add ½ cup of orange juice or some mashed banana to help improve the flavor and replenish potassium levels (which can help ease muscle cramps)

Drink some every 5 minutes or so, until symptoms disappear. Adults and large children should drink about 3 liters (quarts) a day until they feel well.

# Hydrocolloids

## What are they and how do they work?

Wouldn't it be great if you didn't have to worry about getting scars from your wounds and burns? Wouldn't it be great if you had hospital style dressings at home? Wouldn't it be great if you had a wound dressing the made the pain go away? What if I told you that this was all possible, and easy to obtain? All of the above are features of a Hydrocolloid. Dressings that, up until recently, were used only in hospitals for burns, minor wounds, and surgery patients.

Hydrocolloids are a thin dressing that is placed directly over the wound. Although it adheres to your skin, it will not adhere to the wound, which makes removal much less painful. The hydrocolloid is covered with a special absorbent material that absorbs fluid from the wound, and allows excess fluid to evaporate but at the same time is impermeable to oxygen, water, bacteria and other germs. In this way the hydrocolloid creates a moist humid wound environment, which promotes faster healing and helps prevent scarring. Because the wound is moist, no hard scab is formed. Hydrocolloids are the most natural way for the body to heal itself, and also the least damaging, as scabs leave scars and can be broken thus opening the body to new infection and damage.

When the dressing is applied to the wound the person will notice that almost immediately the pain will lessen or go away. The hydrocolloid can be left there for up to several days. If it falls off, it means that the wound has produced more fluid than the dressing could handle, and a new dressing is needed. When the dressing is removed, the wound itself and the new tissues being formed will not be disturbed, although a residue from the dressing may be left on the surrounding skin. This should be gently cleaned off before a new dressing is applied.

These dressings work best on wounds that are superficial granulated wounds that are releasing a low to medium amount of fluid. If you are bleeding heavily these dressing will not help you. If your wound needs a higher absorbency dressing you may want to try a hydrocolloid powder or paste, ask your doctor where you can find these and if they are right for your wound. If your wound has become infected do NOT use these dressings! Their safety has not yet been proven on clinically infected wounds!

In a study that involved laceration, abrasion and small operating incision patients, a hydrocolloid dressing was compared with a non-adherent dressing. The results were as follows. Although the healing time was the same for both groups, the patients using the hydrocolloids won out overall. Those using the hydrocolloids experienced less pain, and were able to carry out normal daily activities (such as bathing) without disturbing the wound or the dressings.

# Hypothermia

## What is Hypothermia?

Hypothermia is a condition in which the body temperature drops below normal. This condition is brought on usually by staying in a cool place for an extended period of time. It is often a problem found in older people who may have other illnesses or be taking medications that interfere with their bodies ability to regulate temperature. Alcohol also has an effect on the body temperature. The usual temperature of the body is about 98.6 degrees F (37 C), in cases of hypothermia the temperature drops below 96 degree F (35.5 C). it may not seem like a big difference but it can do severe damage to your body. Bad cases of hypothermia can cause an irregular heartbeat which in turn leads to heart failure and death.

## What should you look for?

If someone claims they are unusually cold then take their temperature with a thermometer. Many oral thermometers will not record temperatures below what's just about normal. If no temperature can be determined try using a rectal or internal thermometer to get a more exact temperature. If no temperature shows up or it is below 96 degrees F then call 911 for emergency help. You may have to keep a close eye on older people who may be reluctant to complain if they feel cold. If they do not state they are cold but you see some of the below signs you should take action.

- Confusion or sleepiness
- Slow, slurred speech
- Shallow breathing
- Excessive shivering or no shivering, stiffness in the arms or legs
- Poor control over body movements or slow reactions
- Weak pulse or low blood pressure
- Cold rooms, or signs that the person has been in a cold place
- A change in the way a person looks or behaves in cold weather

## Treatment and recovery:

The first and most important step is to make the person warm and dry. Those suffering from hypothermia must get medical help, but it' important to keep the person warm until help can be received. At the hospital the doctors will warm the body from the inside out, most likely by giving them warm fluids intravenously.

If help is not available, move the person to a warmer location, and if possible wrap them in a warm blanket to prevent further heat loss. Also try using your own body heat. Lie next to the victim but be gentle and do not handle them roughly. Rubbing the arms or legs to generate warmth may make the problem worse.

Recovery depends on the temperature your body drops to. If the temperature has not gone below 90 F (32.2 C) then the chance of total recovery is good. But if it falls n between 90 (32.2 C) and 80 F (26.6 C) then most people will recover but some permanent damage is likely. If the body temperature falls below 80 F then most victims will not recover.

## Prevention:

If you are on body temperature affecting medications, or you get cold easily don't let your home get too cool. If you are ill it is also important to keep the house warm enough that you don't make it worse. If you keep the house cool because of the price of heat, don't. Some states have programs to fund heating to protect against things like accidental hypothermia. If you have low income and don't use lots of money on heat contact your local power companies to talk about getting help. You could also "weatherize" your home by heating only the rooms that are used the most.

As mentioned before the elderly are often vulnerable to hypothermia and even in nursing homes they may be at risk. If the temperature is lowered too much, those who are sick or on medication may find it difficult to keep warm.

Another thing that is important to consider that many people overlook is the wind chill. Wind chill is the brisk wind that makes people loose heat faster. On some days the temperature may be fairly warm, but the wind chill could be low enough to make you stay indoors or dress warmly.

Some illnesses also make people more susceptible to hypothermia such as memory disorders, slow thyroid, or other hormonal disorders, strokes or other disorders that cause paralysis and reduce awareness. Severe arthritis, Parkinson's disease and others that limit activity and conditions that curb the normal blood flow can also cause problems. Medicines used to treat nausea, depression and anxiety, as well as some over the counter cold medicines also affect heat loss. Make sure to consult your doctor if you have any questions.



# Influenza

## What is Influenza?

Influenza- the Flu

Each year in the United States there are millions of people infected with the flu and about 20,000 flu related deaths. Luckily, we have ways to treat this illness; unluckily the virus changes every year. Because this happens and there are several strains going around at once, doctors can only select a few strains to make a vaccine from. To help immunize people from the virus, a flu shot must be taken every year. The flu spreads quickly and easily, via coughing or sneezing on your hands, or other things that people touch. The virus spends 1 to 4 days incubating before the symptoms arise:

## Symptoms:

- Coughing- which may start dry and become more 'wet'. This cough may last for up to 2 weeks and in smokers it may lead to bronchitis and pneumonia.
- Chills and sweating
- Nasal congestion (runny nose, stuffy nose)
- Tiredness and weakness (may last for a week or so even after the person has recovered)
- Sore throat
- Vomiting and diarrhea in children 6 and younger.
- Loss of appetite
- Muscle aches and pains, especially in the arms, legs, and back.
- Fever of 101 F or more (up to 104/106 F). This fever can last for a day, or as long as a week.

If you have the flu you are contagious for about 5-7 days after the start of symptoms.

## When to call the doctor:

You should call your doctor if:

- The fever goes away and then comes back a few days later, or if it persists for more than 4 days.
- You feel especially concerned. Trust your instinct and see a doctor for advice.
- If your cough becomes wheezy, or you have trouble breathing. If you begin coughing up blood or yellow-green colored mucus you also want to see a doctor.
- If you have a chronic illness like diabetes, asthma, kidney, blood, heart, or lung problems.
- If you're suffering from severe confusion, seizures/convulsions, loss of consciousness, spasms, bleeding, heart irregularity, ear pain, or prolonged headache.

## Risk?

You are at high risk for the flu if:

- You're 50 or older.
- You work in a hospital or nursing home where you may be exposed to people with the virus.
- If you have a chronic illness (diabetes asthma, kidney, blood, heart, or lung problems).
- If you are taking medications that suppress your immune system. Such as medications for an organ transplant.
- You will be in your second or third trimester or pregnancy during flu season.

Your children are at risk if:

- They have asthma or a chronic disease that affects their breathing, like cardiovascular disease.
- They are taking medications that suppress their immune systems.

- They are around people who are at high risk for catching the flu.
- They have sickle cell anemia, or Reye's syndrome.

**Treatment?**

- Non-aspirin pain relievers may be given (Tylenol for children, ibuprofen for teens and adults) to help ease fever, muscle and headaches.
- Drink plenty of fluids to keep yourself hydrated and keep mucus and other fluids from getting too thick and increasing breathing problems. Water, juice and chicken soup are tasty remedies.
- Get lots of rest! This will help your body channel all it's energy into helping you get better and killing the flu virus.
- Antiviral medicines can be used, but antibiotics are useless against influenza and should not be taken. They are only helpful after the acute phase is over and bacterial complications have become present.
- Wash your hands frequently, to keep them bacteria free and keep from spreading the virus to others.

**Prevention?**

The best way to avoid getting the flu virus is to receive the proper treatment if you are a high risk person, or if you are around high risk people. Getting a flu shot each year before flu season will give you a 70-90% chance of not contracting the virus. This should be done before flu season as it takes adults about 2 weeks to form the antibodies after receiving the vaccine. The shots are administered from mid-October to mid-November. It is also important to note that you CANNOT contract influenza from the flu shot. Soreness at the injection site or a slight fever for a day or so may occur in young children who have not been exposed to it before, but these are only side effects. It is also good to note that you should not receive a vaccination shot if:

- You are severely allergic to eggs, as the flu viruses are grown in hens' eggs. These reactions are rare.
- You are in the first trimester of your pregnancy, unless your doctor advises you otherwise.

If you cannot receive a vaccination there are drugs that can protect against a disease, these are known as antivirals. If you have questions about these you should talk to your doctor before flu season begins. If you have received a vaccination, after flu season has begun and you are at high risk of becoming infected with the virus (chronic illness, age 50+, young children, etc) then you should look into taking these drugs until your body has made the antibodies and has had time to build up a defense against the virus.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Insect & Snake Bites

### Why are they dangerous?

Insect bites and stings carry the risk of allergic reactions, infections and skin injury. The bites introduce a venom to the body that will often cause the skin around the bite to swell and itch. When bites are received wash the area with water and soap, then apply antibacterial cream and a bandage. Below are directions for caring for more specific types of bites.

For information of **Human and Animal** bites go to **bites**.

### Insect bites:

1. If the reaction is mild, apply a paste made from baking soda and water, wet cloth or ice (in a bag or cloth to avoid cold injuries)

2. If **allergic** reaction seems to be taking place seek medical help as soon as possible, severe reactions should get help immediately.

3. Seek medical help if bite becomes infected, or looks like it might.

### Spider bites

1. Keep the bitten area still and hanging down

2. Apply ice (in a bag or cloth. Do not apply directly to skin)

3. Seek medical attention to ensure spider is not poisonous.

4. If shock occurs take the necessary medical steps.

Bites from Black Widow or Brown Recluse spiders may cause nausea, fever, pain and local skin reactions, like blisters. Spider bites may take hours or days to show any of these reactions.

### Tick Bite

A doctor should always look at tick bites, as many ticks carry Lyme Disease, a disease which causes the brain to swell. These bites usually leave a circular skin bump behind.

Because there are several different kinds of ticks, and different diseases they can transmit, we have developed a page dedicated to this topic. Click **Here** for the page.

### Snake Bites

When you receive a snake bite, your body is introduced to, at times, a powerful venom. It is very important to get immediate medical attention if any of the following symptoms occur.

1. Hives

2. Swelling lips, tongue, throat and or eyes

3. Slurred speech

4. Coughing, difficulty breathing, wheezing

5. Numbness and cramping

6. Nausea and vomiting

7. Anxiety, confusion, or unconsciousness

If you can, try to identify the snake, or take note of it's appearance. This will help doctors determine if the snake is poisonous. If you can't find it, don't bother looking for it. Don't give the person anything to eat or drink, especially alcoholic beverages. If you think the snake was poisonous then you may apply a *light* tourniquet 2-4 inches above and below the bite area.

Most snakes are not poisonous, and poisonous snakes are not found in Maine or Alaska, but you should still have these bites inspected so you can prevent the spread of bacteria and infection. Getting medical attention quickly is important because the anti-venom serums are ineffective if they are not administered within 12 hours.

**Bee Stings:**

If someone is stung by a bee, the first step is to remove the stinger if it is still present in the skin (this only occurs with the honeybee, who dies shortly after stinging.). This should be done by using tweezers, or, if no tweezers are available, scrape it out with a fingernail, or card. It is important never to squeeze a stinger when removing it, as more venom will be injected into the bite. Then wash the bite area with an antibacterial soap then you may apply an antibacterial cream if you want. After the area has been washed, apply ice wrapped in a cloth or in a bag to the skin (do not apply ice directly as it may freeze the skin and cause more damage), the ice will help minimize the pain and swelling.

If you are not allergic to bee stings, you may experience anything from a mild irritation and itching to the swelling of the entire part of the body that was stung.

If you're allergic to bee stings, you could be subject to a very serious (although rare) allergic reaction known as Anaphylactic shock. This reaction can be life threatening and should be taken very seriously. All cases of anaphylactic shock and suspected shock should report to the emergency room as soon as possible. Most allergic reactions to bee stings are not this serious, and vary from person to person, although many people allergic to stings tend to have worse allergic reactions each time they are stung.

**How do you treat serious reactions (anaphylactic and non anaphylactic)?**

If you know you're allergic to bee stings, it's wise to carry the self-injectable antidote epinephrine, better known as adrenalin. These prescription kits are sold under the names Ana-Kit, EpiPen, and EpiPen Jr. (for children), among others. These syringes are injected into the front of the thigh, or a muscle and work to constrict the blood vessels before more damage can be done. Most of the kits come with only one syringe and on occasion more than one dose is needed. Because bee stings can happen at almost any time during the spring, summer, and early fall it is important to keep several kits on hand, especially if medical help is out of reach, for example camping trips, hikes, and on vacations where territory and bugs are unfamiliar. Keep kits at home and in the car, and if your child is allergic, leave a kit with the school nurse. Although this drug may stop a reaction and make you seem alright it is very important to go to your doctor anyway as soon as possible to be sure. In some cases the epinephrine is not enough and intravenous fluids or other treatments are needed. ALL cases of anaphylactic shock, or suspected cases should report to the emergency room immediately! The longer you wait the more damaging the effects.

If you or someone you know or live with is at risk of going into anaphylactic shock it is important to know how to use the syringes. Ask your doctor for information about classes you can attend to learn how, when, and where to administer these shots and save a life. It is also advised that a Medic Alert bracelet or necklace be worn.

**Signs of anaphylactic shock:**

Reactions of this kind usually occur seconds or minutes after the sting is received, although a few cases have not reacted for up to 12 hours. When one goes into anaphylactic shock, the blood vessels dilate and begin to leak into the surrounding tissues, which may affect some organs. Below are signs and symptoms to look for.

- The skin is the first place to look. Hives, itching, swelling, redness and a stinging or burning sensation may appear. On the flip side, skin may also appear extremely pale.
- Because the blood vessels are leaking a person may feel lightheaded or faint. Some people will lose consciousness because of a rapid drop in blood pressure.
- Sometimes the throat, nose, and mouth become swollen and breathing passages become obstructed. The first signs of this are usually hoarseness or a lump in the throat. In some cases the swelling is so bad the air supply is cut off and the person experiences severe respiratory distress.
- Another respiratory problem could be the constricting of the airways, giving someone the chess tightness, wheezing and shortness of breath commonly associated with asthma.
- People may experience cramping (in women pelvic cramps may develop), diarrhea and nausea and vomiting.
- Especially if the allergen was swallowed, the gastrointestinal tract often reacts.
- Sweating
- Rapid pulse

**Causes of anaphylactic shock:**

It is important to note that this allergic reaction (which, again, is very rare), is not caused only by bee stings. This reaction can be sparked by an injection, inhaling, swallowing, and being exposed to an allergen that the person is known to be allergic to. Injected allergens could be bee stings, as mentioned, certain vaccines prepared on an egg medium, penicillin, dyes used in diagnostic x-rays, and allergen extracts used in the diagnosis and treatment of allergic conditions. They can also be sparked by food allergies, even if only a small bite is taken. Skin contact with foods rarely causes an anaphylactic reaction. Foods that are commonly associated with this reaction are peanuts and nuts, seafood, and in children particularly, eggs and cows milk. Inhaled anaphylactic reactions are rare, but have occurred from the inhalation of particles from rubber and latex gloves.

**Prevention of anaphylactic shock:**

The most important part of prevention is avoiding the allergen as best as you can. For food allergies and insect bites this may be particularly difficult as food is presented in many different ways, and insects are all around you. For some people immunotherapy is key. This therapy introduces small amounts of the allergen to the person and increases the dose over time. This is a lengthy treatment and takes at least five years, however it can be an invaluable form of protection as it is almost 100% effective.

If your allergy involves bee stings it is important to note a few things about the bees. Honeybees can only sting you once, their stingers get stuck in the skin and they must tear away that part of their abdomen to escape. The bee dies shortly after delivering the sting. Luckily honeybees are not aggressive, like some of their relatives, wasps, hornets, and yellow jackets tend to be, these bees will only sting if they are disturbed or injured. The most common sting from these bees is when they are stepped on. The best way to avoid that is to keep shoes on while walking or playing in areas where honeybees forage, such as clover patches and flowerbeds.

Another few things to note about bees (and other stinging insects), is that they are attracted to bright colors and strong scents. Insects seeking nectar are drawn towards bright colors, and perfumes. If you are allergic to these stings it is recommended that you avoid hairspray, perfumes, and colognes and, in the case of bees, bug spray. Bug spray will not deter bees, and since the scent is strong they may even be attracted. You should also avoid areas where food is open to the environment such as garbage cans, dumps, picnic areas etc. Another interesting fact about bees and color, is that black is an irritant to bees, while blue is a comforting color, it is important to remember this when selecting bathing attire



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Ticks

Summertime is an open hunting season for all types of biting insects, and ticks are some of the most dangerous. Different kinds of ticks can transmit several kinds of diseases to the people they bite, such as Rocky Mountain Fever and Lyme disease. In the following section we'll teach you how to protect yourself from ticks, and what to do if you are bit by one. This section also includes a brief discussion on the symptoms and treatments of Lyme disease.

First off there are three kinds of ticks you need to worry about:

**Brown dog ticks**: These are the most widespread ticks, as they can be found all over the world. Luckily these ticks prefer dogs to people, so humans are rarely bit by them. Unluckily if your pet has a large infestation of them, they risk suffering from anemia.

**American dog ticks**: These ticks are most abundant in eastern North America and usually bite humans, dogs, and wildlife. These ticks are known to carry the organism that causes Rocky Mountain Fever.

**Lone star ticks**: These ticks are found from TX to OK, eastward to the Atlantic coast, and from Mexico to Central and South America. These ticks are also known to pass along Rocky Mountain Fever.

**Deer ticks**: These are the guys to watch out for. Found all over America deer ticks are usually found on white tailed deer, and are then spread to humans who pass though an area frequented by deer. These ticks are much smaller than most other ticks (which are about the size of a pencil eraser), as they are only about the size of a sesame seed.

Secondly, here's how you avoid getting bit by a tick:

- Tuck your pant legs into your socks or shoes and tuck your shirt into your pants. Because ticks usually climb from the ground up, this will keep them on the outside of your clothes where it will be easier to find them.
- Wear light colored clothing. It will be easier to spot any ticks that grab on to you.
- Put the buddy system to good use. You and your companions should inspect each other often for ticks when you are in their habitat, and do a thorough search when you return home.
- Since ticks like to attach themselves to the head and neck, be sure you check that area out completely.
- If you work in an area where ticks are commonly found, then avoid wearing your work clothing home, as any attached ticks could then be brought into your home.
- Also, check any pets that go outside and frolic in grassy, brushy, or wooded areas as ticks may be transferred from them to you.
- And lastly wear insect repellents. DEET repellents (DEET no more than 30%) can be applied to the skin, and a stronger Permethrin tick repellant and pesticide (not allowed in some states) may be applied directly to clothing (shoes, socks, cuffs and pant legs are most effective), tents and other gear or apparel. This pesticide should last about two weeks and two launderings.

I got bit anyway, how do I remove the tick?

Ticks should be removed as soon as possible to avoid contracting the diseases many of them carry.

- Using a pair of tweezers, get as close to your skin and its head as you can and slowly and gently pull the tick out.
- If you grab and squeeze to hard then the head and mouthparts may break off and remain in your skin. If this happens then seek medical help to have them removed.
- Once the tick has been removed, you may want to save it in a small jar to have it tested and identified. (if you chose to do this put an alcohol soaked cotton swab in with the tick for preservation purposes)
- After this then you should wash the bite area with soap and water and apply an

antiseptic ointment.

A note on Rocky Mountain Fever:

Symptoms usually begin within 2-12 days after the bite.

- Headache
- Muscle and back pains
- Chills
- Fever
- A “measles like” rash that begins at the wrists and ankles and then spreads to the rest of the body.

**This illness can be fatal if not treated properly**

A note on Lyme Disease:

First of all, you are only able to contract Lyme disease from a deer tick, and that is only if they bite you. It is commonly believed that a deer tick needs to be attached to you (biting) for about 24 hours for the disease to be transmitted. If you have been bitten and are unsure about the length of time they were attached you may want to save the tick and send it off for testing.

- Symptoms can appear within three days or a couple months of the bite.

- One of the first signs of Lyme disease is a rash in the shape of a bulls-eye, although it is important to note that the rash may not appear at the site of the bite, and may only last for a few hours, so photographing it may be necessary. It is also important to note that as many as 50% of the people who have contracted Lyme will not see a rash. If you do see a rash get medical attention as soon as possible.
- Then next stage of L.D. is the flu-like stage. Those who do not see a rash may go directly to this stage. The person infected will feel achy, tired, stiff, and they may experience a low-grade fever and sleep pattern changes. It’s good to note that in young children, the only sign may be irritability and a change in sleep habits. It is also helpful to know that runny noses are not associated with L.D. and your ailment may just be a virus.
- Both of these phases will go away without treatment but this does NOT mean you are cured. The disease has just become dormant and will resurface again in the future causing greater problems including becoming chronic.

Lyme Disease can be a debilitating illness if ignored or treated incorrectly. It can be fatal, but that is only in rare cases. There are several treatments for this disease and if you think you may have become exposed to it then it is important to check with your doctor and discuss the options at hand.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Lightning

### What to do around lightning...

All thunderstorms produce lightning and, in the United States alone, an average of 80 people are killed and hundreds more are injured each year. To avoid getting struck, take the following precautions.

- Understand that if you hear thunder, you risk being struck by lightning if you are outdoors. Lightning can strike as far as 10 miles from any rainfall or storm clouds.
- Keep an eye on the sky when participating in outdoor activities, or planning them. Also make sure to listen to the weather forecast before you go out.
- Do not resume activities until at least 30 minutes since the last thunder or lightning was seen or heard.
- If you hear thunder or see lightning get to a safe place at once. The safest places are inside a sturdy building. But if you don't have one around...
    - A hard topped metal vehicle is ok, just be sure to keep the windows closed and not to touch any of the metal in the car.
    - If you're in the woods, stand under a cluster of smaller trees that are close together and assume the following position. Crouch down on the balls of your feet, put your hands on your knees and bend your head down. Make yourself the smallest target possible and minimize your contact with the ground. NEVER lie flat on the ground, no matter where you are.
    - If you're in a place where there are hills and ravines, move into a ravine and assume the position above.
    - If you are in a field assume the position above.
- Stay away from things like:
    - Tall isolated trees
    - Small shacks/sheds/unstable buildings
    - Towers/utility poles
    - Stages
    - Boats, pools, and anything else in or very close to open water.
    - Small metal vehicles like scooters, bikes, motorcycles, and golf carts.
    - Anything metal like bleachers, fences, rails, scaffolding, pipes etc, lightning/electricity can travel a long way through metal.
    - Clotheslines are also good transmitters of electricity.
    - Golf courses, golf clubs, carts, metal golf cleats etc. Every year golfers are killed and injured because they do not get off the courses in time.
    - Other people. If you are in a group spread out several yards away from each other.
- If you feel your hair stand on end, beware! You may be about to be struck by lighting.

### What To Do if someone is struck.

A lightning strike has a different effect on the body than an electric shock and therefore is treated differently. Unlike electric shock, lightning has less effect on the internal nerves and muscles and the people struck carry no electrical charge, which means that they are safe to touch. Similar to electrical shock, the person may be mildly or severely burned. Strike victims need immediate attention and aid, and those that appear "dead" can often be revived and should be attended to first. Quickly (but not too roughly) shake all victims lying on the ground, if they respond in any way move on to the next victim. If people are breathing on their own they will probably be ok, so lay them on their side in the recovery position. Even if they are unconscious they should be alright. You also want to move the victims to a safer place, as the storm is still a threat as lightning CAN strike the same place twice.

Lightning fatalities are usually due to cardiac arrest, or a heart attack. By performing **CPR,** or rescue breathing, depending on whether you can find a pulse or not. If you have several victims at hand, attend to those without a pulse first. If you are not the only person giving aid, or the victims are breathing on their own, call 911 as soon as possible. If you have several victims not breathing, or without a pulse, move them close together and go between the two, giving CPR to both of them. The people who are not breathing should recover quickly and be able to breath on their own after a few minutes of rescue breathing.

It is also good to know that the lightning bolt does not have to hit you to kill you. If the ground is wet, the electricity will travel out a short distance in waves that can affect those standing on the ground. People can be killed by this and are to be treated the same as if they had been directly struck by lightning.

Although most lightning strike victims recover, many are left with disabilities, which is why it is so important to heed the warning signs of an oncoming storm.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**

Contents



## Lost In The Woods

### What To Have When Going In The Woods...

Getting lost is a scary thing, and being lost in the woods is especially frightening. Use these simple rules and instructions to help get yourself found when you're in a sticky situation.

First of all it's important to have a first aid/survival kit with you whenever you're going to be hiking or camping in the woods. This kit should be lightweight and small.

### What To Have When Going In The Woods... [Children]

The following kit is an example of what a child should carry.

- A Zip Lock sandwich bag for the container (this bag can also be used as a sort of drinking water cup)
- Some high energy trail mix or a Power bar (in a separate zip lock bag)
- A good whistle that can be heard over a mile away (three short blasts will translate into S.O.S for searchers)
- A signal flag that should be about 5x10 inches and a bright color and made of a durable material (like a bright colored trash bag.
- A reflector to send signals. This can be a small compact mirror, or a piece of tin foil wrapped around a piece of cardboard (avoid sharp edges)
- A large sized brightly colored Poncho or garbage bag with a pre-cut "head slot". This will protect the child from bad weather as well as help keep in body heat to ward of hypothermia
- A couple adhesive bandages for any minor cuts and scrapes they pick up along the way.
- A small pocket flashlight.

### What To Have When Going In The Woods... [Adults]

This kit is advised for adults.

- Store the supplies in two or three half or whole sized Zip Lock sandwich bags to keep them safe from the elements
- One bag should contain supplies for more serious injuries, like deep wounds. For these keep a small roll (a couple feet) of cling (self adhering) and tube gauze, and 4 non-stick gauze pads.
- Another bag (which can be combined with the one above if you'd like) should contain dressings and supplies for minor wounds. One extra large bandage, 5 or so plastic adhesive bandages, 2 fingertip bandages, and some knuckle and butterfly (wound closure) bandages.
- The third bag should contain medications and cleaning supplies. 4 alcohol prep pads (individually wrapped), a small hydrocortisone (anti-itch) cream tube, some antibacterial ointment, tylenol, ibuprofen, and aspirin should be brought for fever and pain relief. Bring enough for two doses, and remember that aspirin should not be given to children. You may want to bring diarrhea medicine as well, just in case.
- Other things you should bring are a throwaway brightly colored Poncho, a good high powered whistle, a Power bar or trail mix snack, and a hypothermia blanket. These blankets are large but extremely compact and will keep you warm and alive if you are lost or stuck somewhere with an injury.

### Now, what to do if you are lost:

- First off, Don't Panic! If you can follow these directions You Will Be Found!
- If you are with another person, or a pet, Stay together and do not become separated. Together you can keep each other calm, and warm (by huddling close for body heat) until help arrives.
- Stay in one place, and Hug A Tree. Hugging a tree will help calm you down and if you stay with that tree you can't get lost any further or fall down and get hurt. Do not climb that tree though. The people who are out looking for you are looking on the ground, not up in the trees. You also

take the risk of getting hurt if you fall from the tree. Make sure the spot you pick is not a hiding place, we can't find you if you're hiding. If you can, pick a spot near a clearing or section of lower trees. But don't wander trying to find one. Do not try and find your way back, you may just get more lost.

- Keep Warm! This rule is VERY important! Keep all your clothing on, and cover up all exposed skin that you can. Hats are a wonderful way of staying warm, bring one with you when you're hiking or camping. The worst danger you face while being lost is **Hypothermia**. It's a scary thing, but it can easily be avoided. If you get cold, put on your poncho, or garbage bag, make sure you put a head hole in it first though, so you can breathe! Also try and stay as dry as you can.
- It's scary to be lost, and kind of embarrassing too. But, it happens to lots of people, and it's usually not your fault. Don't be afraid that your parents will be angry at you for being lost. They miss you very much and are very very worried about you. They and hundreds of other people who care about you and want to help are out looking for you, and it's your job to help them find you. This is actually pretty easy to do. Make yourself as big as you can. If you hear a helicopter or plane passing nearby lie down in a spot where you can see the open sky above you, move your arms and legs like you're making a snow angel, also, if you're wearing bright colors then it's even easier to see you so don't dress dark on days when you'll be out in the woods! Also, try not to lie on the ground for too long, as the ground is cold! Don't worry if they don't seem to see you, you'll still be found. If you can, you can also take sticks and stones lying around and make signs for any passing helicopters, such as a big S.O.S. or a X to show them where you are. If you don't have things like that near you, you could drag your foot through the dirt and make marks in the ground. You may also want to wave around your signal flag or attach it to a branch to it will catch in the wind and attract attention. Don't just start yelling for help, it takes lots of energy. Instead blow your whistle, it's loud and easier and takes less energy. If you think you hear someone coming towards you it's ok to yell out and call for help.
- About those noises... The woods can be scary, no doubt about it. But, they don't have to be. Remember that even though you may be smaller than some of the animals, none of them want to hurt you, and in fact, they're all afraid of you! If you hear something and you're afraid or you don't know what it is, yell and shout and blow your whistle. If it's an animal they'll run away and if it's a searcher they'll yell back. Whatever you do, do NOT run away. You risk getting even more lost, and getting hurt. This is an especially important rule at night when things can be extra scary.
- If you're still lost when it gets dark out, then get out your flashlight. It will help calm you down and make you feel safe, while at the same time it's a flashing signal that say's "HERE I AM!". People will keep looking for you, even at night, so if you hear something, yell and shout. It is ok to go to sleep. But make sure that you're wearing your poncho, or garbage bag, and do not lie on the cold ground. Instead pile branches, leaves, and moss together as a sort of mattress about 8 inches off the ground. It may not be too comfortable, but it will help keep you warmer. You can also use branches and leaves to make a bit of a blanket.
- Do not eat anything you aren't 100% sure of what it is. Sometimes berries that look like berries you normally eat, are not, and can make you sick. Don't eat any mushrooms, even if you think you know what they are. Water from a small stream or river should be ok to drink, if it looks clean. Don't drink from a big lake or river unless you absolutely have to.
- Congratulations, you will soon be found!! Don't panic and try not to be scared. Don't hide, and remember, no one will be angry at you, just very happy to see you!

**Note to Parents**:

- Try not to let your children get lost, but remember that if they do it's probably not your fault. It's easy to get lost and distracted on the trail. Teaching them to stay on the trail will help keep them from getting lost as will establishing a prominent landmark such as a hill, or the direction of the sun that will help them from getting disoriented.
- When your child has gotten lost it's important to realize and admit this. Stay calm. Call the local sheriff and rangers immediately and a search will be arranged. Teach your child to stay in one place if they're lost so that help can find them faster. Fast response is crucial as bad weather can wipe out the track your child might have left behind, and exposure and hypothermia are a very real threat to your child.
- Be open, accurate, and honest with the rangers and sheriff. Personal information will be kept confidential, and what you tell them may bring your child home sooner.



# Meningitis

## What is Meningitis/Classification:

Meningitis, some forms of which are known as the "college killer", can be a life threatening illness if treated incorrectly. First, what is it? Basically it is an inflammation of the delicate membranes (the meninges) that cover the brain. There are several kinds of meningitis, viral and bacterial.

**Viral meningitis** is more common, and is rarely fatal. If treated properly the person will make a full recovery. It is spread like the flu, by coughing, sneezing, or exchanging germs in other ways. Antibiotics cannot defeat the virus, but a vaccine may be available. Ask your doctor if you have questions.

**Bacterial meningitis** is less common, but is very dangerous and can be fatal. This form of meningitis is caused by a bacteria and is spread much the same way as viral meningitis. It cannot live outside the body for long, and cannot be picked up from water sources. Bacterial meningitis can kill in as little as 24 hours, or take as long as two days to become potentially fatal, so time is incredibly valuable if this illness is suspected. Irreversible brain damage can be caused in as little as couple hours in more severe cases. Antibiotics can be used to treat this virus, but no vaccine is currently available.

## Symptoms

In both cases the symptoms are flu-like, and may not appear all at once. (Non flu-like symptoms below are marked with an *. These symptoms may be signs of bacterial meningitis.)

- Coughing
- Sneezing
- Vomiting
- Headache
- Joint and muscle aches
- Seizures*
- Drowsiness
- Stiff neck and joints
- Dislike of light*
- Fever
- Septicemia*

And in young children:

- High pitched moaning or whimpering*
- Dislike of being handled*
- Fidgety and fretful*
- Very tired, weak, drowsy even when awake
- Blank starring expression*
- Arching back, and neck retraction*
- Fever with possibly cold hands and feet
- Refusing food or vomiting
- Pale blotchy skin.*
- Septicemia*

**Septicemia** is blood poisoning. This can develop very quickly and is marked by red blotchy rashes all over the body. As soon as a single rash is seen rush to the emergency room, or call for medical aid! These rashes will stay red (rather than turn white) when pressed upon. A simple test is to take a drinking glass and press it against the rash to see if it changes color. **This rash is a sign of bacterial meningitis**.

## Treatment

Leave treatment of meningitis up to the professionals. If you suspect a case of meningitis get the person to the doctor sooner rather than later. That can make all the difference! Meningitis can happen to anyone anywhere, and bacterial meningitis cases are most often found on college campuses among freshman.

**Recovery**

Recovery from bacterial meningitis is often a long, slow and painful process both physically and mentally for those involved. Meningitis can leave people with irreversible brain damage and loss of hearing among many other things.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**

Contents





## Near Drowning

Almost Drowning, or near drowning, is a frightening and potentially fatal thing, there are two kinds of this:

"Wet"- Where the person has taken water into their lungs, and the lungs function has been affected

"Dry"- Less common condition where the airways closed due to spasms induced by water.

When rescuing someone who has nearly drowned, make sure to watch out for your own safety as well, do not attempt a rescue that is beyond your abilities. Let other people help out as well, for example, if you are not physically strong do not attempt to remove someone larger than you from the water, let someone else do this while you wait onshore ready to begin resuscitation.

**Symptoms:**

- Pale cool skin
- Weak or absent pulse
- Labored or absent breathing
- Slightly conscious or unconscious
- Cyanosis (bluish discoloration of the skin)

**Treatment:**

- Asses the situation quickly, check vitals and if necessary begin **CPR**
- If needed treat for **Hypothermia**
- If needed treat for **Shock**
- If any neck or spinal injuries are suspected try not to move the person unless absolutely necessary. And call 911 for an ambulance.
- When they have begun breathing correctly and are not at risk of shock or hypothermia place them in the recovery position.

It is important to know that near drowning has a large affect of the respiratory system, and if the lungs have fluid in them it may lead to at best pneumonia and at worst a fatal condition known as "late drowning". If someone has suffered from near drowning they should go see as doctor as soon as possible.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

# Nosebleeds

## What are nosebleeds?

Nosebleeds are a common injury amongst people young and old. The nose is a part of the face rich in blood vessels and any trauma to the face can start a nosebleed. Nosebleeds are also common in dry climates and during the winter months when people are going from the cold to the dry heat of their homes. During these months the nose membranes become cracked and dry. This drying out of the membranes is what causes nosebleeds. People who are taking medications that prevent normal blood clotting are at a higher risk of getting a nosebleed. For these people only a light trauma could spark a nosebleed. Other factors that promote nosebleeds are alcohol abuse, infection, use of blood thinning medications, hypertension, allergic and non-allergic rhinitis, and less commonly, from inherited bleeding problems and tumors.

## Stopping the common nosebleed:

In most cases the common nosebleed is fairly easy to stop, and no medical help is needed.

1. Using a clean cloth, tissue or sterile gauze, pinch the nose together at the nostrils and firmly apply pressure towards the face. Hold like this for at least 8 minutes, or until the nose stops bleeding.
2. Have the person lean forward slightly or sit up straight. Do not let the person lean back, or blood may flow into the windpipe. Keep the head above the heart, or in other words, don't let the person lie down. If they must lie down try to keep their head elevated at a 45 degree angle.
3. Apply crushed ice in a bag or cloth to nose and cheeks. Make sure the ice is in a bag or cloth because direct application may cause frostbite to skin.

## How do you prevent the nose from bleeding again?

- Rest with your head elevated at a 30- 45 degree angle, or keep your head higher than your heart
- Avoid medications which will thin the blood (such as aspirin), but make sure to contact your doctor before stopping taking any prescribed medications.
- Do not smoke
- Try not to sneeze. If you must sneeze open your mouth to allow the air another way to escape to avoid upsetting the nose.
- Try not to strain. Heavy lifting/pulling/pushing should be avoided!
- Try to keep to a "cool diet" for 24 hours. Avoid hot liquids.
- Your doctor may recommend a lubricant for the inside of your nose if you are prone to recurrent nosebleeds. This is easily applied with a Q-tip or the tip of a finger. Make sure to coat the middle part of the nose especially, as it is the most vulnerable.
- If it does start up again attempt to clear the nose of clots by sniffing in forcefully. Nasal decongestant sprays may also be used, but if they are used for an extended period of time they may become addictive.
- And if all else fails repeat the above steps for stopping common nosebleeds.

## When to go to the doctor

If bleeding keeps occurring and you feel faint or weak from blood loss then you should report to your doctor, or local emergency room. There they may stop the bleeding with a heating instrument and blood tests may be taken to check for disorders. If bleeding still persists then the doctor may place nasal packs, which compress the blood vessels and stop the bleeding. And in rare situations surgery is needed to plug the nose and stop the bleeding.

## What are these nasal packs? What happens if I get them?

If your doctor has placed these packs within your nose you will need to return to the hospital in

2-5 days to have them removed. Nasal packs are made of a spongy material that compress the blood vessels and are usually only used when more conservative methods fail. When you go for your removal appointment make sure you have arranged rides to and from the hospital as you will be prescribed pain medications and antibiotics as needed. It is also advised that you continue to avoid blood-thinning medications unless otherwise noted by your doctor.

When these packs are placed, it isn't uncommon for the nose to drain some blood-tinged material. This can be caught by taping a folded piece of gauze under the nose like a mustache. In some cases your doctor will permit you to clean your nostrils with hydrogen peroxide soaked Q-tips.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Antibiotics

Antibiotics- the wonder-drug of the 20th century. These powerful drugs attack the bacterial infection in your system and within days the person afflicted feels remarkably better. Unfortunately these drugs require a dose of responsibility, and we have been taking them for granted for far too long. Nowadays it's all too common for a concerned parent to bring a child with a cold into the doctors' office and demand that they be put on antibiotics, and doctors are too often allowing themselves to be pressured into prescribing them. Each year about 50 million of the 150 million antibiotics prescribed to patients are unneeded for the illness to be cured. This needs to stop. Antibiotics are becoming obsolete because the bacteria they are fighting are becoming immune to them. The following will explain the current situation as well as provide tips and information about keeping your family safe from these "super bugs".

First off, it is important to note that **Antibodies only attack and affect illnesses caused by Bacteria.** They are totally useless against viruses, and when used to fight a virus often only provide a way for the bacteria in the body to learn to resist the drugs and grow stronger. To get more information on the differences between viruses and bacterial infections click **here**. Some illnesses that you should take antibodies for are

- Strep Throat
- Pneumonia
- TB (tuberculosis)
- Infections
- Lyme disease
- Legionnaires disease
- Meningitis (bacterial, not viral)
- Ear infections
- Sinus infections (some)

**Illnesses that you should NOT take antibiotics for are**

- Bronchitis
- **Common colds** (in children 90% of colds and flus are viral)
- **Influenza** (the flu)
- sore throats (with the exception of strep)
- coughs

However sometimes a viral illness will turn into a bacterial infection. when this happens consult your doctor. These are some signs to look for in children.

- Illness lasts longer than a week.

· high fever (which means your body is trying to fight back). If your child is younger than 6 months contact your doctor whether the fever is high or not.

· sinus pain, ear or toothache develops.

· cough of other symptom suddenly gets worse.

If you are prescribed antibiotics, it's very important that you do exactly as your doctor and pharmacist says. Take the pills when prescribed, and make sure you take the full dosage given to you. Stopping the medication early, even though you feel better is a bad idea as it is likely that only the weak bacteria would have been killed and the stronger bacteria has a chance to become immune to the antibiotics and return within a few weeks. Once this happens new drugs must be prescribed for you and your immune system will be weakened further. When your doctor tells you that you need antibiotics talk with them about it. See if you can take a shorter term prescription as opposed to a longer one, as shorter courses will give resistant bacteria less time to recover. Be sure to ask about anything you're unsure of. It is also important never to take drugs prescribed for someone else.

**Bacterial resistance**

So what is this resistance that keeps coming up? It's simple. It basically means that the antibiotics are no longer effective against these strains of the bacteria. This happens because in many cases not all the bacteria are killed after taking antibiotics- some of the strongest will survive. These few that survive become immune, or resistant, to the drugs. If the person gets ill again then they may need a different type of drug to cure the infection. The scary thing is that in 1994 some bacteria were found that could resist all available antibiotic drugs at that time- even the drugs used as a "last resort". Recently some illnesses that we thought we had defeated (TB) have come back, and this time they're able to resist our antibiotics. Because of this pharmacists and druggists have been working hard to come up with new drugs to protect us. Drug resistant strains can lead to prolonged hospital stays, complications and even death, and unfortunately drug resistant strains can spread fast. Currently about 30% of Strep throat infections are immune to penicillin, and the back up antibiotic, which forces doctors to use the "last resort" drugs, until recently the use of these drugs was rare.

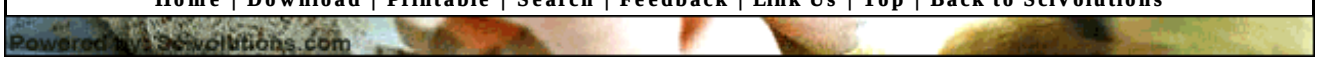
If people start using antibiotics only when they really need them we'll see a drop in the resistant strains of bacteria and hopefully we will once again have a steady upper hand on the infections. As a parent you'll be able to better protect your family by keeping they're use of antibiotics to a minimum. Only give them antibiotics for bacterial infections, and if you can avoid using antibacterial creams, ointments and bandages on cuts and wounds. Sterilizing the wound will not help, and may in fact do more damage. Instead wash the wound with a water and salt solution. Also avoid things like harsh alcohols, peroxides, and detergents, as they are damaging to healthy cells. Once you've washed the wound with water or solution apply a regular bandage and it should be fine. if you start to see the early signs of an infection (swelling, redness, tenderness) then call up your doctor and they may advise you to apply an antibacterial ointment.

Another thing to be careful about is whom the antibiotics are being administered for. Elderly people may be affected in a negative fashion by the powerful drugs, as the side effects may keep them bed ridden or in pain. People who are very vulnerable to antibiotic resistant bacteria should be extra careful about the drugs they take to sure the infection. If the person in question is any of the following be extra careful and ask lots of questions when consulting a doctor.

- Premature infants and very young children
- Elderly
- Burn victims
- Bone marrow transplants
- People with weakened immune systems, such as AIDs, Leukemia, Cancer etc patients.

For extra safety tips read about medication safety and awareness **here**.





## Choking

### Heimlich Maneuver:

This maneuver is used to stop someone from choking on a foreign object blocking the airway by removing the object. This simple first aid procedure forces air out of the lungs in an attempt to force the obstruction out of the airways. This procedure should be used on all conscious choking adults and children from ages 1-18. If the child is under a year old, the method is not recommended and should not be used. The Heimlich maneuver is a series of under the diaphragm abdominal thrusts, which force air from the lungs to create and artificial cough. This “cough” is intended to remove the obstruction from the airway. Each thrust should be given in attempt to remove the obstruction.

Although the Heimlich maneuver is simple and effective, it can be painful for and even injurious to the victim. It's something to be reserved for genuine emergencies, and should be performed only when the situation meets the following guidelines:

- The person cannot **talk**, **cough,** or **breathe**. (If the person is coughing, they're not choking, so don't perform it.)
- The person nods yes to the question, "**Are you choking?**"
- The person is **unconscious** and your attempts to breathe for them are blocked.

### Method 1: Perform it on a conscious person

**1.** Stand close behind the victim with **your thigh between their legs**. Some experts recommend that you stand sideways behind the victim (with your hip at a 90 degree angle to the victim's back). This enables you to brace your hip against their lower back or buttocks.

**2. Make a fist** with one hand, and place it thumb-first against the person's abdomen, **an inch (about 3 cm)** above the belly button.

**3.** Cover that fist with your other hand. Keeping your elbows out, sharply and quickly pull your fist **inwards and upwards**.

**4**. Be sure to perform this motion with sufficient force to dislodge the object; it often must be repeated **up to six times**. If the object remains stuck, lie the person on their back, and continue as if the person were unconscious (see **Method 2**). If someone else is present, have them call 911. If you're alone, proceed directly to **Method 2.**

### Method 2: Perform it on an unconscious person

**1.** Lower the person to the floor and **onto their back**. If another person is present, have them call 911.

**2**. **Open** their mouth and try to see the object.

**3. Sweep** your hooked finger across the back of their throat. Remove the object if you find it.

**4. Straddle** the person's thighs. This will put you in the correct position to do the thrust.

**5.** Place **the heel of your hand** over the person's abdomen just above their belly button, and cover that hand with your other one.

**6.** Keeping both arms straight, press **down, and forward** into the abdomen with a quick thrust. It may be necessary to repeat this up to four more times.

**7.** If the object hasn't popped out, again sweep your hooked finger across the back of their throat. Remove the object if you find it. **Call 911.**

**8**. **If the person vomits**, turn them on their side to avoid further blockage of the air pipe.

**Method 3: Perform first aid for a choking small child or infant**

Small children and infants have much more fragile bodies than the rest of us. The two methods below are designed to minimize damage to very young bones and tissue. Go to **Step 2** if only if **Step 1** is ineffective.

***Step 1:*** The "Over your Lap" method

**1. Find** a chair and sit on it.

**2.** Place the child/infant **face-down across your lap**, with their upper torso hanging over the side of your knee.

**3.** Using the heel of your hand, thump the child/infant firmly but gently **four times** between the shoulder blades. Be especially careful with infants. Increase the amount of force only if a gentle thump doesn't dislodge the object.

**4.** If you haven't dislodged the object with several thumps, call 911. If the victim is an infant or very small child, go on to **Step 2**.

***Step 2:*** The "Upside Down by the Ankles" method

**1.** Hold the victim **upside-down by the ankles**. You'll need to hold the both ankles in one hand, with your thumb around one leg, your three last fingers around the other leg, and your index finger in between their legs.

**2.** Thump the victim's back **between the shoulder blades** firmly but gently.

**Caution:** Don't search blindly in a small child or infant's mouth. You can accidentally push the object further down their throat. (Although you should remove the object if it's readily visible.) If the child vomits, turn their head to the side to keep them from choking further. If the child is unconscious, **call 911.**

**Method 4: Perform it on yourself**

**Your first move is to call 911**. Even though you can't speak, most 911 systems can trace you to your address. Leave the phone off the hook and perform one of the methods below. It requires some willpower to administer this painful technique on yourself, but your life may be at stake. You have a bit less than two minutes before you pass out.

***Step 1:*** Use your own hands

**1.** Make a fist with one hand, and place it **thumb-first** against your abdomen, just above the belly button.

**2**. Cover that fist with your other hand, and pull your fist **inwards and upwards** sharply**,** quickly and forcefully. Repeat several times if necessary.

***Step 2:*** Use a sharp-edged object

Use this method if **Step 1** doesn't dislodge the object.

**1.** Locate **a straight-backed chair** and place it firmly against a wall or angle it in a corner.

**2. If a chair isn't available**, use a sharp counter top, deck railing, staircase railing, or the sharp edge of a table, stove, or piano.

**3.** Run into the object. Attempt to meet it at the spot **just above your belly button**. Run at the object repeatedly and with as much force as you can muster until the object is dislodged.

The Heimlich maneuver is simple and effective on choking victims when used by itself. If you also know CPR, you'll have another powerful life-saving technique to use on an unconscious person. Your local hospital or city administration offices should be able to provide you with the location of CPR classes near you.

(Heimlich maneuver methods taken from www.learn2.com)






## The Common Cold

The common cold is a common annoyance to millions of people each year, particularly in the winter months. The cold, which can be caused by hundreds of different viruses, is an incredibly infectious respiratory infection that usually lasts about a week or so. Once you've become infected with the virus, it will take a couple days before symptoms start to appear. Once they do, be careful! the first three or four days of a cold are when you are contagious and most likely able to pass it on to other people. In most cases an over the counter medication is sufficient, but if you're afraid it may be a bacterial infection consult your doctor. The symptoms of the common cold are as follows.

**Symptoms**

- A 'sick' 'under the weather' feeling
- Sneezing
- Head and chest congestion
- Runny nose
- Post-nasal drip
- Sore throat
- Stiff joints and muscle aches
- Headaches
- Sleepy, weary, worn out
- Chills
- Fever (usually small)
- Watery eyes

**If ANY of these symptoms are present along with some the ones above you may have **Meningitis** get emergency medical help IMMEDIATELY.

· Seizures

· Red blotches on skin, different from being flushed, look somewhat like wounds. (Septicemia)

· Pale blotchy skin (in young children)

· *click the link above for more symptoms.*

**Also seek professional advice in these cases:**

- If an infant (under 3 months) is showing any of the symptoms
- If your throat is very sore, you have a high temperature and symptoms seem to be getting worse
- If you're having trouble breathing, or are wheezing
- If your temperature is very high- this may be a sign of pneumonia, get help immediately
- If you are pregnant or breastfeeding
- If the cold lasts for longer than 2 weeks and symptoms seem like they're getting worse

**Treatment**

Besides handy over the counter medications (Triaminic, vapor rubs etc), and lozenges (cough drops) for a sore throat there are many other things you can do to fight off a cold.

**Vapor** – By inhaling some vapor, you'll loosen up some of the congestion, which will make it easier to breathe and will help to clear out your system. Heat up some water so that it's steaming, and keep it near you so you can inhale the fumes. This may make it easier to fall asleep at night. You can also sit over the fumes, and by placing a towel over your head and the bowl you create a tent where the fumes

are trapped. If the fumes are hot enough you'll kill some of the germs off as well.

**Foods** - Fruits and vegetables are a must. Spicy foods may also help to clear out your system, as will garlic and onions. Avoid dairy products as they'll lead to the formation of more mucus, and try to leave large amounts of egg, starch, and sugar out of your diet for a while as well. If you're feeling nauseous avoid anything greasy. Try and eat nutritiously, it'll help you get better faster and make you healthier so that you have a better chance of fighting off future colds.

**Drink** - Water, water, everywhere- that's what you need to drink. Water helps you flush out your system, so it's absolutely vital to drink when you've got a cold. Juices, especially citrus drinks, are also good for you. Hot tea, will make you feel better as well- it's tasty and it has vapors which will help clear your nasal passages. Again avoid dairy. If you're nauseous a small amount of a slightly sweet soda-like ginger ale- will help settle your stomach.

**Other** - If you like natural remedies, try some Echinacea at the first sign of symptoms. This will stop the infection from reaching it's full potential and will therefore reduce the severity of the cold. Also avoid things like cigarettes during this time as they may aggravate your condition.

**Prevention**

It's difficult to avoid the common cold- particularly during the cold season- but you can do many things to lessen your chances of contracting it.

- Keep yourself healthy. Good diet, exercise, avoid smoking and drinking
- Wash your hands often- germs can survive for a few hours without a host, so anything you touch that someone who is sick has touched has potential to get you sick.
- If you're already sick cover your mouth and nose when you sneeze and cough, and keep your own hands clean. This will help stop the spreading of germs.



Contents

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## Corns and Calluses

Corns and Calluses are the most common conditions of the skin on your feet. They can be found anywhere on the foot, but usually occur over bony areas. This happens because the pressure and stress on those areas is greater and dead skin forms and collects there forming corns and calluses. While these conditions are painful, they are usually easy to correct.

There are many different types of corns and calluses, named and classified by their location on the foot. The two conditions are close to the same thing, as both are caused by excessive rubbing on a part of the foot. The main difference is that corns are found on the tops and in between toes, while calluses are found on the outside of the foot. Common causes for the rubbing and extra stress in these areas is incorrect padding in shoes, flat feet, bone spurs, and hammertoes. On rare occasions calluses are caused by a sweat gland that has become blocked up with dead skin and the nerve going to the gland becomes affected. Listed below are some of the more common kinds of corns and calluses.

- When it is under the big toe joint it is called a pinch callus.
- When it is on an exposed part of the toe it is called a hard corn.
- When it is in between the toes it is called a soft corn.
- When it is found at the end of a toe it is called a distal clavus.
- Calluses are often found on the heels, a high stress area. These calluses are prone to crack and fissure, which may lead them to become infected. However they are easy to manage.

### Treatment

Treatment of corns and calluses is easy, and the first thing you should do when they have developed is buy a better pair of shoes that will not rub in the same place. Shoes with a large toe box are recommended to avoiding corns and calluses in the toe area. Make sure you buy shoes that fit, avoid shoes that are too narrow or too wide. Low heeled shoes are also recommended for relieving pressure on the legions. Next you will want to get rid of the corns and calluses you have. Do NOT try to cut or burn off these legions! Home remedies, such as rubbing the area with a pumice stone, are effective, but they leave the skin rough and unsightly. Salicylic acid treatments can be dangerous. The paints and pastes may damage healthy skin as it removed the dead skin of the corn or callus, causing more damage, discomfort, and opening the body to infection. Here at SciVolutions we have come up with a way to remove corns and calluses and still keep you safe! The solution is our new corn and callus bandage kits. During the day you wear a special **Hydrocolloid** bandage (a dressing used in hospitals, click for more info.) over the affected area to soften the skin, keep it moist, and relieve some of the pain. At night, right before you go to sleep you apply a salicylic acid patch and foam covering to the area, cutting the acid patch to the needed size. At night your foot does not move around much, which means that the patch will stay in once place, and the acid will not affect the healthy skin around the corn or callus. This is the most effective and painless way to treat these painful problems. These pads SHOULD NOT be used by diabetics, people with poor circulation or blood supply, over open wounds or deep cuts, irritated or infected areas, on moles, warts, birthmarks, or (on or near) mucous membranes (mouth, nose, anus, genitals, lips, face). If after several days use pain and discomfort has not lessened, consult your doctor who may choose to remove the legion in a minor operation under local anesthesia.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Your Family Disaster Kit

**Why a Family Disaster Supplies Kit?** After a disaster, local officials and relief workers will be on the scene, but they cannot reach everyone immediately. You could get help in hours, or it may take days. Your family will cope best by preparing for disaster before it strikes. One way to prepare is by assembling a Disaster Supplies Kit. Store your kit in a convenient place known to all family members.

Place the supplies you'd most likely need for an evacuation in an easy- to-carry container. These supplies are listed with an *. Remember that disasters happen anytime and anywhere. And when disaster strikes, you may not have much time to respond. An earthquake, flood, winter storm, tornado, or other disaster could cut off basic services -gas, h2o, electricity, phone -for days.

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**WATER** Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments and intense physical activity can double that amount. Children, nursing mothers and ill people will need more. Store one gallon of water per person per day (two quarts for drinking, two quarts for food preparation/sanitation)* Keep at least a three-day supply of water for each person in your household. Change your stored water supply every six months so it stays fresh.

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**FOOD** Store at least a three-day supply of non-perishable food. Select foods that require no refrigeration, preparation or cooking and little or no water. If you must heat food, pack a can of sterno. Select food items that are compact and lightweight. Canned juices, milk, soup (if powdered, store extra water) Rotate your stored food every six months. Keep items in air-tight plastic bags.

· Ready-to-eat canned meats, fruits and vegetables

- Staples--sugar, salt, pepper
- High energy foods--peanut butter, jelly, crackers, granola bars, trail mix
- Foods for infants, elderly persons or persons on special diets
- Comfort/stress foods--cookies, hard candy, sweetened cereals, lollipops, instant coffee, tea bags

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First aid, ask your physician or pharmacist about storing prescription medications.

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**TOOLS & SUPPLIES** Keep the items that you would most likely need during an evacuation in an easy-to-carry container--suggested items are marked with an *. Possible containers include a large, covered trash container; a camping backpack; or a duffle bag.

- Mess kits, or paper cups, plates and plastic utensils*
- Emergency preparedness manual*
- Battery-operated radio and extra batteries* Replace batteries at least once a year.
- Flashlight and extra batteries*
- Cash or traveler's checks, change*
- Nonelectric can opener, utility knife*
- Fire extinguisher: small canister, ABC type
- Tube tent
- Pliers
- Tape

- Strike anywhere, waterproof matches
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil
- Needles, thread
- Shut-off wrench, to turn off household gas and water
- Whistle
- Plastic sheeting
- Map of the area (for locating shelters)

---

**SANITATION**

- Toilet paper, towelettes*
- Soap, liquid detergent*
- Feminine supplies* / Personal hygiene items*
- Plastic garbage bags, ties (for personal sanitation uses)
- Plastic bucket with tight lid
- Disinfectant / Household chlorine bleach

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**CLOTHING & BEDDING** Include at least one complete change of clothing and footwear per person. Re-think your kit and family needs at least once a year, update clothes.

· Sturdy shoes or work boots*

- Hat and gloves
- Rain gear*
- Thermal underwear
- Blankets or sleeping bags*

---

**SPECIAL ITEMS** Remember family members with special needs, such as infants and elderly or disabled persons.

**For Baby***:

- Formula / Powdered milk
- Diapers
- Bottles
- Medications

**For Adults*:**

- Prescription medications (heart medicines, insulin, antibiotics etc)
- Contact lenses and supplies / Extra eye glasses
- Entertainment--games and books.

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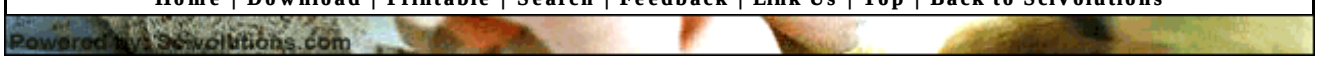
**IMPORTANT DOCUMENTS** Keep these records in a waterproof, portable container:

- Will, insurance policies, contracts, deeds, stocks and bonds
- Passports, social security cards, immunization records
- Bank account numbers / Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)





## Fever

A fever is what happens when your body temperature rises higher than the average 98.6 degrees Fahrenheit (37 Centigrade). Fevers can be caused by many things, and range in severity from mild to potentially fatal. Some more common causes are:

- **Bacterial and viral infections** (colds, flu's, strep...)
- Sore and Strep throats
- Urinary tract infections and inflammatory bowel disease
- Earaches
- **Shock**
- Respiratory infections (tonsillitis, laryngitis, bronchitis)
- Some medications, such as those for high blood pressure, antibiotics, antihistamines etc. Ask your doctor if you think your medication may cause fever.
- Mononucleosis (mono)
- More serious things like pneumonia, **meningitis**, appendicitis, tuberculosis, cancer, leukemia, AIDS & HIV
- Hodgkin's disease and Non-Hodgkin's lymphoma
- Rheumatoid diseases, and Juvenile rheumatoid arthritis
- Heat related illnesses such as **heatstroke**.

It is also good to keep in mind that fever may not always be caused by illness, but instead by normal everyday factors. Things like hot foods, excessive clothing layers, exercise, excitement and anxiety, and menstrual cycles in women can all raise the body temperature by several degrees. In the case of strenuous exercise the temperature may even go up as high as 107 degrees, which in older children and adults is ok if it only lasts a short while. It is also normal for children to have higher body temperatures than adults- so high fevers in children and infants when only a minor infection is present is not uncommon. It is good to note that while high fevers are not directly linked to brain damage some children may have a febrile **seizure** as a result of a fever which may cause brain damage.

Fevers that are 102 or under are considered low-grade and can be treated at home by drinking lots of fluids and resting. If your fever is higher than 102 then it's considered a high-grade fever and your doctor should be notified. Fevers also behave in different ways; sometimes they jump high quickly then drops down again (known as spiking) and other times they increase and decrease in a regular fashion (known as cyclic). Bouts of chills and shivers often accompany fevers, but the person should not be heavily bundled up in blankets as this will raise their body temperature further. Instead cover them lightly and administer some fever relief medicine (if the fever is heat induced, like heatstroke, DO NOT administer any medications).

Sometimes a fever just seems to appear and hang around for a few days or even a few weeks for no apparent reason. If this happens contact your doctor, this often happens because of a 'hidden' infection.

Treatment

Fevers can often be treated at home, even if a trip to the doctors is necessary. Here are a few things you can do to help ease the discomfort of the person suffering from the fever.

- Administer some fever reducing medicine, but make certain that if the person is a child under age 18 the medicine contains NO ASPIRIN. Also do not give any medication if fever is heat induced. If person is having a seizure or is unconscious, administer no medication and contact your doctor (or 911) immediately.
- Allow the person to rest
- Give them lots of fluids to drink, such as juice and warm tea with honey. If they feel nauseas give them some clear cool sweet soda like ginger ale.
- Give the person a bath in lukewarm water (about 98 degrees Fahrenheit) this will help cool them down a little. Do not use coldwater, it will add to their discomfort and will not be any more

helpful than lukewarm water. Do not use rubbing alcohol as it's absorbed by the skin and may send the person into shock

- If they have the chills, cover them lightly and administer fever-reducing medicine. Heavy blankets and hot drinks will cause their body temperature to rise higher.
- If they are suffering a fever induced by a heat related illness go **here** for treatment.

**Home | Download | Printable | Search | Feedback | Link Us | Top | Back to SciVolutions**


Contents

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## Headaches

Headaches are a very common and troublesome occurrence and can be quite painful for the individual involved. Usually they are only minor health concerns, and can easily be treated with over the counter pain reducers such as ibuprofen or aspirin. However, if the headaches persist for days, are present with other symptoms and reoccur often you should consult your doctor to make certain there is no underlying problem. The two most common headaches are tension and sinus headaches. Sinus headaches are caused by things like **allergies**, head **colds**, and hay fever. Tension headaches are usually brought on by stress, excessive noise, poor posture, too much caffeine, eyestrain the grinding and clenching of teeth at night, and added tension in the scalp and neck muscles. Both of these can be treated with over the counter pain medication. Migraines are much more serious headaches.

**OK, you have a headache, which one do you have?**

- A dull, steady pain that feels like a band tightening around your head, you have a **tension headache**.
- A steady pain in the area behind your face that gets worse if you bend forward and is accompanied by congestion, you have a **sinus headache.**
- A throbbing pain around one red, watery eye, with nasal congestion on that side of your face, you have a **cluster headache**.
- Throbbing begins on one side, and causes nausea, you have a **migraine**.

Treatment

As mentioned before both sinus and tension headaches can be treated with mild pain killers, although for some sinus headaches—which usually accompany colds or allergies—your doctor may recommend a decongestant or antibiotic (the antibiotic is not being prescribed for the headache, but for the sinus infection that's causing the headache) instead.

Other simple ways to help relieve pain are to drink a cup or herbal tea (chamomile, lemon etc), take a nap, or (for tension or migraine headaches) gently massage your face with your fingertips. Do this by gently massaging your temples with a circular motion; repeat in the hollows at the sides of your eyes (by your nose), behind your ears, and over your neck.

When to seek further professional advice

- a severe headache is accompanied by vomiting or other severe symptoms
- after a head injury, you are drowsy, with dizziness and other symptoms

**MIGRANES**

Migraines are the worst most painful sort of headaches. These headaches are fierce and severe and can last for several hours or a couple days. Migraines are caused by the constricting and swelling of blood vessels on one side of the brain, and it is thought that they may be genetic, this, however, is still uncertain.

**Signs and Symptoms**

Migraines are often preceded by

· Feelings of **nausea** and sickness

· Blurred vision

- Flashing lights in front of the eyes

Once they have begun, migraines...

- Start as a sharp throbbing pain on one side of the head which may spread as the headache worsens.

- The person may become very nauseas which may lead to vomiting

- The person may be very sensitive to light, noise, and certain foods.

**Treatment**

There are many different treatments available by prescription from your doctor. Usually these medications are prescribed when the migraines are very severe or you suffer 2 or more each month. Another thing you can do to help ease the pain is gently massage your face with your fingertips. Do this by gently massaging your temples in a circular motion; repeat in the hollows at the sides of your eyes (by your nose), behind your ears, and over your neck.

People suffering from migraines have identified the following foods and other things which have been found to trigger migraines.

- Foods with caffeine (coffee, soda, chocolate)

- Citrus fruit

- Aged cheese

- Processed meat

- MSG (food additive)

- Red wine

- Foods with high levels of magnesium

- Missing meals

- Stuffy rooms

- Dry wind

- Changes in season or altitude

- Birth-control pills or other hormonal changes

- They may also occur after intense emotional periods, such as anger or excitement.



Contents

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## Indigestion

Indigestion is a common, usually harmless, discomfort that virtually everyone will feel at some point in his or her lifetime. Indigestion is the pain or sick feeling one occasionally experiences after eating. It is caused by:

- Over-eating
- Eating too quickly, and not chewing enough
- Eating while stressed
- Drinking excessive alcohol
- Eating food that disagrees with you (ex: spicy foods make some people feel sick)
- Frequent use of pain relievers and other medications when taken without food.
- Chronic indigestion can also be brought on by smoking and obesity

**Signs of indigestion are:**

- Heartburn
- Nausea (mild to strong) or vomiting
- Gas or burping
- Abdominal pressure (bloating)
- Flatulence

It is good to note that while indigestion is usually harmless it can be a symptom of a more serious problem. If you get indigestion daily, or suspect it may be a result of something more serious, consult your doctor. You should also consult a health professional if:

· Any abdominal pain continues for six hours or longer.

· You have repeated bouts of severe indigestion.

· Your indigestion always follows after you consume dairy products.

· You are experiencing other symptoms along with the indigestion

**Treatments**

There are many over the counter treatments for indigestion, and when purchasing one you should make sure it matches your symptoms. If you get reoccurring indigestion your doctor may prescribe something else for you to take, or another course of action.

**Prevention**

You can also do things in your everyday life to help you avoid indigestion, for example, watch your weight, avoid over eating/drinking, chew slowly, and do not smoke. Avoiding fatty and highly spiced foods will help, as will eating fruits with digestive enzymes such as kiwi or pineapple. Also if you're a frequent gum chewer, give it a break and see if your indigestion ceases. Drinking tea may help to calm your stomach, however, add only a minimal amount of sugar. After eating take time to relax, drink lots of fluids during the day (water is best) and fewer liquids during meal times.

## Lice

Lice are a common annoyance found most often amongst school children. These parasites live by infesting humans and sucking their blood. There are three types of lice—head, body, and pubic. Pubic lice, or crabs, are found in the pubic hair regions and are spread through close personal contact as well as sexual contact. Body lice are usually found on persons who do not regularly change clothes and are the only lice that are related to bad hygiene. Head lice are the most common kind, and are very popular amongst children as it is easy for them to jump from head to head and spread rapidly throughout schools. As soon as lice are discovered they should be treated to avoid further spreading of the parasite. If your child has lice you should notify your school officials as soon as possible to make sure that it hasn't begun to spread.

**What to look for:**

- Head lice: intense itching on the scalp, especially behind the ears and at the nape of the neck. Head lice are pretty easy to see, they're roughly the size of a sesame seed and are white. Their seeds are smaller and harder to see.
- Body lice: unexplained scratch marks on the body, hives, eczema, and red pimples.
- Pubic lice: continual itching around the pubic area.

**Treatments:**

To treat head lice, you can go to your pharmacy to get some good over the counter treatments. These treatments are usually shampoos, which will kill the existing lice and any eggs. In the meantime, it is advisable that people infected with lice stay away from others to avoid spreading the lice. Continually wash and sterilize all bed linen, clothing and towels and face washers.

To treat body lice, wash the entire body with soap and water. If this is not effective, you may have to use an insecticide preparation, which usually kills all the lice. As above, wash all clothing and bed linen, towels and face washers.

Pubic lice are treatable by over-the-counter preparations and the same applies as above. Also you should let any partners know about the lice so they can take all the necessary treatments and precautions.

**See a doctor if:**

Scratching has led to infection or the lice will not go away.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print



## Medicine Safety

Understanding how your medicines work, and being alert to the following things can save your life, and help avoid medicinal mishaps. Medicine safety is no joke, read below for tips to keep you safe and informed.

**When you're still in the doctor's office:**

Questions to ask your doctor and other tips...

· Ask your doctor for the medicine that offers the best balance of price and results or outcomes. This tells your doctor in a clear way that treatment goals need to be set, evaluated, communicated and achieved.

· If you're older (over 60) or have kidney disease be certain to ask if the new medications being prescribed will be removed by the kidneys. If this will happen your doctor will most likely want to adjust the dosage.

· Be sure to discuss with your doctor how often you'll need to take the medication. Be honest, if you don't think you'll remember three times a day perhaps there's another medicine for the same problem you'll only need to take once a day. You should *always* take your medicine as directed on the bottle.

· Ask for the name of the disease the medicine treats to be put on the label. This way if you're taking several medicines you won't risk getting them confused. It will also give the pharmacist an extra check when it comes to filling prescriptions and making sure they're giving you the correct drugs.

· You may wish to ask about side effects, if a certain drug will make you dizzy or tired and you need to take it in the mornings before work, you way want to try a different drug that will allow you to function properly. Some drugs have side effects that are worse than the thing they've been prescribed to cure, so knowing this may make you decide to use a different drug.

· It's also important to find out how soon you can expect to see results and what you should do if the medication doesn't seem to be working.

· While talking with your doctor, show him that you're really interested in your health, and making sure you understand what he or she is telling you. take notes, repeat directions and other information, and ask questions- even if you think they may seem foolish or trivial. Feel free to also inquire as to whether they have any printed information on your medicines on hand. It shows your doctor you care and keeps you safe and informed. To make sure you don't forget something you may want to bring a list of questions with you before you visit the doctors office.

***When you go to the pharmacy:***

- When your pharmacist hands you your prescription bag it's often stapled shut- open it up before you walk away. Inside it is your prescription and a brief patient info sheet. Your pharmacist can give you lots of information, and answer your questions about your medications. So if you have any questions about the medication, interactions, or other directions your doctor might have failed to mention, take this opportunity to ask them.
- Read the label when you look at your prescription. It seems simple, but many people don't do it. Reading the label will give you very valuable information- such as taking the medicine with food, and not taking it along with other medications. Ask if you should avoid certain foods, beverages, other medicines, or activities while you are taking the drug. Question anything you don't understand or that doesn't seem right. Be especially alert to unexpected changes, such as receiving a prescription refill that seems to have a different strength or appearance from your original prescription. If you have questions don't hesitate- Ask.

- Use the same pharmacy for all your medicines. Again this seems simple, but again it's something overlooked by many people. Using different pharmacies means that when having prescriptions filled for new drugs a single pharmacy might not have a list off all the medications you're currently taking. This makes it easy for mistakes to happen. You could be prescribed a medicine by one pharmacy that will interact with one you're already taking that comes from a different pharmacy. Medicine reactions can be very dangerous, so use one pharmacy for all your medicine needs to keep yourself safe. It also gives you an opportunity to develop an good relationship with your pharmacist, they'll be familiar with your medicines which will further decrease the risk of error.
- Another way to avoid interactions is by having your medications mapped. This shows all the drugs you're taking, prescription, non-prescription and herbal, lists side effects, interaction notices, and maps out a logical daily routine for taking your medicine. All of this is on a single sheet of paper as opposed to the multiple pieces of paper that you get for individual prescriptions that you need to organize yourself. This is a fast and simple way to keep you safe and give your doctor and pharmacist and extra final check.
- If a medicine you're on is life sustaining, or you're deathly allergic to a certain type of medicine, you may want to invest in a medicine alert bracelet, tag, or card. These can be worn or kept in a wallet and if anything happens to you they'll let the medical response teams know what they need to do to help you.

***When you get home:***

- Organize your medicines, if you've had them mapped then you've got a handy daily schedule telling you when you need to take your medicine. makes several copies of this in case one gets lost. If you keep a profile of the drugs you take be sure to keep it updated. Make a list of everything you're taking- prescription, non-prescription, herbal, medicinal foods, etc- and share it with your doctor and pharmacist this will help prevent drug interactions.
- Learn the names, doses, and strength, of the drugs you take.
- Take your medications exactly as your doctor and the label on the bottle prescribe. Doing this ensures that the medicine will work the way it's supposed to, and keeps you safe from bad interactions and other complications. Don't take to little, as it lessens the effect of the medicine, and don't take too much as it could be toxic. Occasionally missing a pill is also big deal- some medicines really do need to be taken every day. talk to your doctor to find out about how your medicines will react if missed. Also make sure that you finish a prescription you've been given unless instructed otherwise. If you're unsure if you were supposed to finish it or not call your doctor.
- If you realize you have more questions once you get home, don't hesitate to call your doctor or pharmacist. It is also important to call them before adding any other drugs (even non-prescription and herbal) to your daily drug regiment. If you're doctor or pharmacist won't make time to answer your questions you may want to consider finding some new health care providers who will make time for your questions- which ARE important.

**Reactions**

- If you think you may have had a reaction, no matter how minor –a headache which wasn't in the listed side effects, a sudden appearance of a rash, etc- call your doctor immediately to set up an appointment. If the reaction seems moderate to severe call 911 or have a friend drive you to the nearest ER. Even if it turns out to be a false alarm, always be aware of things like that. Also, when you go to the doctor don't just tell them about the new medicine you've been taking, give them a list of everything so that they can check for drug interactions. If you've had a reaction your medications need to be changed, so don't hesitate. Minor reactions will get steadily worse and lead to bigger problems.
- If you are older and on medications, be careful. Some medications can make the elderly and those with a weak immune system miserable. The side effects of many drugs will leave these people bedridden, sick, and generally unhappy. the elderly especially are at risk because as you age your body adapts and reacts differently to medications. So if 6 years ago you took a medicine that worked for you very well, and you start taking it again, now as a senior citizen, you may see and feel considerably different. In situations like this you may not think to ask your doctor many questions about the drug because you've taken it before. But it's important to understand that while the drug hasn't changed your body has, and the two will interact differently and the medicine needs to be reevaluated to make sure it is the correct medication for your current state and situation.

**Traveling Safely with Medications**

- **Many medications can cause "photosensitivity," or increased sensitivity to sunlight.** Even if you don't usually **sunburn**, taking medications that cause this reaction could greatly increase your chances of getting a bad burn. Your pharmacist can advise you about whether your medication can cause photosensitivity and recommend the right SPF (skin protection factor) for your skin type.

- **If you are flying, keep your medications in your carry-on luggage so that you have access to them during your flight and will not lose them in the event that your luggage gets lost**. Plus, keeping your medications with you helps prevent exposure to extreme temperatures in the baggage compartment, which can alter the drug's effectiveness. Keep in mind that airport security requires that your medications be transported in their original, labeled containers.

- **If your medication requires you to use a syringe - insulin, for instance - you may need to carry your prescription with you to ensure that you can pass through airport security.** The American Diabetes Association recommends that people with diabetes be prepared to provide airport security personnel with copies of prescriptions for diabetes medications and supplies as well as complete contact information for the doctor who prescribes the insulin.

- **Make sure that you carry your doctor's and your pharmacy's phone numbers with you when you are away from home**. In case you lose your medications, you may need a new prescription. You should also keep on hand a list of all your prescriptions.

- **If you are traveling through several time zones, consult with your doctor or pharmacist to work out a specific plan for adjusting the timing and dosage of your medications.** This will prevent you from taking too much or too little.

- **If you are visiting a foreign country, beware of buying "over-the-counter" medications**. Many medicines that are available by prescription in the United States are available "over the counter" in other countries. Some of these medications could have different ingredients, and may not undergo comparable quality control. Buying these medications could put you at risk for allergic reactions, drug interactions, or other problems.

- **If you are visiting a hot, humid climate, be sure to keep your medications in a cool, dry place out of direct sunlight**. Never store medications in the glove compartment of your car. Also, because of the heat and humidity that build up in a bathroom, it is the worst place to store medication whether you are at home or on the road.

- Take along more medication than the number of days you've planned to be away. This will allow you to be prepared for unexpected delays.



Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Muscle Cramps

Muscle cramps are common discomforts that everyone has had to deal with at one time or another. Here are some signs of a muscle cramp :

- A sharp, sudden, painful spasm, or tightening of a muscle, (especially common in the legs).
- Muscle hardness
- Twitching of the muscle
- Persistent cramping pains in lower abdominal muscles
- Sometimes occurring when a muscle contracts with great intensity and stays contracted, refusing to stretch out again.

**Causes**

Imbalances in certain minerals, body fluids, hormones, and chemicals which allow the lengthening and contracting of our muscles to occur can prompt spasms and cramps. As well as this, malfunctions in the nervous system itself can also cause problems. Excessive physical activity and hormonal imbalances causes us to sweat , which brings about the loss of many essential minerals (such as potassium) our muscles need.

Traditional Treatment

· For everyday muscle cramps, there really isn't any medication specifically for them. Try to stretch the muscle and massage out the cramp it you can.

· Muscle cramps can also be caused by a lack of potassium and vitamin E, so eating something like bananas or pineapple can help to replenish the minerals you've lost. Calcium is also thought to help prevent muscle cramps, so drink your milk!

· If you take vitamin E supplements it will help prevent nighttime muscle cramps, which can be quite an annoyance.

Prevention

· Drink 6 to 8 cups of water every day.

· Be sure to get enough potassium, vitamin E, and calcium into your system.

· Be sure to warm up before exercising.

When to seek further professional advice

· If you suffer from frequent or severe cramps, see your doctor. And severe cramps in your chest, shoulders, or arms can be symptoms of a heart attack; call immediately for medical help.

· Your muscle cramp lasts more than an hour.

· Your cramp is in your chest or arms.

Contents

**Tools**: Add Page To Favorites | Add Site To Favorites | Make Homepage | Print

## Nausea and Vomiting

Old or young, when you feel sick, there are few things worse than feeling nauseous and vomiting. Nausea itself is an uneasiness of the stomach, which may or may not lead to vomiting. And although they may feel it, they are symptoms of diseases rather than diseases themselves. They are usually a result of things like:

- Viral and bacterial infections like **colds** and **flu's**
- Food poisoning
- Over eating and **indigestion**
- Certain smells and odors
- Intense pain
- High **fever**
- Emotional stress (like fear or excitement)
- Motion sickness, seasickness, and dizziness
- Early pregnancy ("morning sickness")
- Cancer treatments like chemotherapy and radiation
- Exposure to toxins (poisons, chemicals)
- Blocked intestine (rather uncommon, and usually found in early infancy)
- Appendicitis
- Head injuries, like **concussions**, migraines, brain injury
- And sometimes they're a sign of more serious injuries like kidney and liver disorders, heart attacks, brain tumors, gall bladder disease, nervous system disorders, and some kinds of cancer.

Often, if you aren't sure of the cause you can determine it merely from the time when the feelings first occur. If it occurs right after a meal, indigestion, an ulcer, or a mental disorder (such as bulimia) could be to blame. One to eight hours after a meal could indicate food poisoning. Diseases like salmonella may take several days before any nausea is felt.

Luckily, in many cases both nausea and vomiting can be controlled to some degree. If you're feeling nauseous you can do the following to try and control or stop the feelings.

- Drink clear or cold drinks
- Eat light simple foods, like saltine crackers, which don't have a strong taste or odor. Take care to avoid sweet, greasy, and fried foods as they will only make you feel worse. Also do not mix hot and cold foods
- Eat slowly, and have small frequent meals throughout the day as opposed to three larger meals.
- Drink beverages slowly and take small sips, try to drink between meals instead of during them.
- Do not brush your teeth right after eating
- Avoid activities immediately after eating, instead rest after eating with your head elevated about twelve inches above your feet. Activity may increase nausea.
- If you feel nauseous when you wake up in the morning, have some crackers (like saltines) before getting up and moving about, or have a snack before bed that's high in protein (like cheese, or some lean slices of meat)

If you already feel nauseous and want to avoid the unpleasantness of vomiting, try these tips:

- Drink small amounts of sweet clear cool liquids, like ginger ale, fruit juice (try to avoid citrus—orange, grapefruit—drinks as they are too acidic), etc. Sweet liquids are good for calming the stomach.
- Eating cool sweet things like popsicles may also help to calm your stomach. However do not eat or drink too many sweet things, only have a little at a time or the condition may worsen.
- You can also get some prescription and non-prescription drugs to help control vomiting and nausea related to pregnancy, vertigo, and motion sickness, but make sure you speak with your doctor before starting on any new medication- even if it is over the counter. Also, if you're vomiting due to treatment of another kind (such as chemotherapy) your doctor may be able to prescribe something to control the nausea.

**If you do get sick**

In most cases vomiting is harmless, but sometimes it can indicate or even cause problems. With vomiting you should always be on the lookout for signs of dehydration, especially with children. Children need to be watched extra carefully because unlike adults, they can't easily recognize the signs and symptoms of **dehydration**. Here are a few of the symptoms to look out for.

- Dry lips or mouth
- Increased thirst
- Decreased urination, or urine that is dark in color.
- Sunken eyes
- Rapid breathing or pulse (mainly in infants)

If diarrhea occurs along with the vomiting, make sure to keep a very close watch on the person and give them small amounts of clear, cool, sweet drinks. Drinks with electrolytes (like a watered down sports drink)

Consult your doctor if

- Vomiting goes on for longer than one day (or if they are very young and it continues for a few hours)
- There is blood in the vomit.
- If the vomiting is occurring because of a known injury, like head trauma or infection.
- The child has not urinated in at 6 hours.
- The person acts confused, lazy or lethargic, and is less alert than usual.
- They have a fever of over 102 Fahrenheit
- Vomiting and diarrhea are present
- Severe abdominal pain is present
- Severe headache or stiff neck is present
- Feelings of nausea last for longer than one week.

With these exceptions, vomiting can be treated at home. Give the person small amounts of clear liquids, increasing the amount as feelings of nausea subside. This will discourage dehydration. Avoid solid foods until feelings of nausea have totally passed. Also discontinue taking any oral medications, as they may further upset the stomach, but make sure you check with your doctor before doing this.



## Rib Injuries

The ribs are fairly resistant to injury, but sometimes accidents happen. The most common injury is a rib fracture, and these are more commonly found in adults. The reason for this is that children have more elasticity in their bones, which causes them to break less easily. Another common injury to the ribs is muscle strains.

**Rib fractures:**

Rib Fractures are usually caused by a direct blow (or fall) to the ribs. Ribs 4-9 are the most commonly broken because they would receive the most pressure in the event of a direct blow. The following are symptoms of a broken rib:

- Severe localized pain
- Sharp pain with any motion of the chest (breathing, coughing, sneezing, laughing)

See your doctor if any of the following things occur, as they may indicate complications from the fracture such as a pierced lung.

- You become short of breath, or your breathing is labored and difficult
- You become lightheaded
- The area swells
- When the injured area (place where the pain is greatest) is gently pressed a “crunching” sound is heard
- The pain seems very severe or “deep”
- There is pain in your abdomen
- You are coughing up blood
- There is blood in your urine

Remember, if you are unsure if you have broken a rib you should see a doctor to make sure. Also keep in mind that about 25% of rib fractures will not show up on an x-ray. These injuries cannot be cast, due to their position, but to ease the pain and discomfort a elastic ace bandage may be wrapped around the persons chest. If you are able to continue doing most of your everyday activities with only minimal pain it’s a good sign. If there is a deep pain, or you are unable to partake in everyday activities it may be a sign of a worse injury and you should consult your doctor.

**Treatment**

One of the first things you should do is apply ice to the injured area. Icing the injury early on can help reduce the inflammation and pain. Over the counter pain medication may also be given to ease the pain. If it hurts to breath and move, which is likely, then you should wrap and elastic ace bandage around the persons chest to help restrict movement. Discourage the person from taking deep breaths and partaking in activities (if you are hiking, take a break, and move slowly when you begin again). Encourage the person to take shallow breaths, go slowly, and rest often. Loosen the bandage around their waist once an hour and have them take a couple deep breaths, it may hurt, but it should be done anyway. Apply ice packs (wrapped in a cloth, rather than placed directly on the skin) for about 30 minutes every two hours for two or three days.

As for movement and activities, a simple rule applies: if it hurts, don’t do it. The injury should heal in 4-6 weeks depending on the severity of the break. The pain of the injury will gradually decrease.

**Muscle Strains**

Muscle strains are another common rib injury. The muscles affected in this injury are more often the muscles attached to the rib cage than the muscles along the chest wall. They can be injured by over stretching, or by sudden violent contractions. Sports like tennis, golf, baseball, and basketball can

cause this sort of aggravation. Occasionally strains are confused with a heart attack because of the severity and location of the pull.



## Skin Closure Strips

### What are Skin Closure Strips?

Skin closure strips are a relatively new alternative to stitches. They are used to comfortably secure, close and support small and long cuts and wounds while promoting fast natural healing. The strips themselves hold the lacerated skin firmly together while the breathable bandage creates a moist environment while protecting the wound from dirt, water, and germs. These kinds of sutures also help prevent scarring and risk of infection.

### What types of wounds are they used on?

These can be used on small and long cuts that need more support and are deeper or bleeding more profusely than a minor wound. In the case of animal **bites,** deep or puncture **wounds**, serious **burns**, and infected wounds always consult a doctor before applying the skin closure strips. Skin closure strips are not to be used over large areas of the body, or near the eyes. In medical emergencies always consult a doctor first.

### How do I apply and care for them?

First stop bleeding and then gently cleanse the wound and surrounding area (about 3 inches in each direction) with water before patting completely dry. For strips and bandage to work the skin needs to be free of oils, creams, and dirt. If you cannot clean out the wound do not use these strips.

Next apply strips as follows:

1. Hold the strips the long way and remove from package.
2. Remove the backing from one end of the strips and firmly place down next to and in the opposite direction of the wound.
3. Line up the skin edges of the cut and, after removing the center piece of backing paper, place firmly (but gently) across the pulled together skin.
4. Once secure remove the last piece of backing and place down on skin on other side of wound.

   The strips should be tight, but comfortable- too tight will only delay healing and cause further damage such as skin shearing and blistering.

5. Next remove bandage from its package and after removing the backing place over the wound in the opposite direction of the strips.
6. Change the bandage covering the strips daily or as needed, but leave the strips as they are. They will remain in place even when the covering bandage is removed.
7. Do not use for longer than one week unless advised by doctor.

If you have even a small worry that the wound could need stitches, or if the wound is bleeding profusely (even after skin closure has been applied), was caused by an animal bite, serious burn, or a puncture consult your doctor as soon as possible. If the wound becomes infected, swells, itches, is abnormally painful, has a burning sensation contact a doctor immediately and discontinue use.

Skin closure strips are also helpful after surgery or after stitches or staples have been removed. They provide extra support for the newly healed skin around the injured area.

### Removal

Removing the strips is also easy but should be done with care. Once you reach the wound site be extra careful. Lifting the strips from one end increases the risk of reopening the wound. Instead try holding each end of the strip and removing them at an even slow pace, this will remove some of the stress on the new skin and lower your chances of reopening the wound.


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Contents





## Viral Vs. Bacterial Infections

When it comes to getting sick, people want to do whatever they have to to feel better faster. Unfortunately that often involves ignoring your doctor and making a wrong decision. This happens because most people do not fully understand that viral and bacterial infections are two very different ailments and require very different treatments. To help you avoid this medicine mistake we've put together a page to make the differences between the two clearer.

| Bacteria | Similarities | Viruses |
|---|---|---|
| Non-living biological units, contain DNA but need to enter one of your living cells to reproduce. | Both can be "caught" the same way | Single-cell living organisms that can cause illness. Not all bacteria are harmful, and some are actually helpful. |
| Responsible for things like:<br><br>Common colds, flu, herpes, HIV, hepatitis etc... | | Responsible for things like:<br><br>Strep throat, ear and other infections, pneumonia, etc... |
| Viral Meningitis- is usually not life threatening and does not require antibiotics although you will need medical attention. | | Bacterial Meningitis- is extremely dangerous and can be fatal in as little as 24 hours. Antibiotics are needed. |
| Best cure, for many viruses is a good immune system. Antibiotics will do nothing, and will actually do more harm than good. Do NOT pressure your doctor for antibiotics. | | For many bacterial illnesses antibiotics are the best and only real way out. The problem may go away w/o antibiotics, but with them recovery time is faster and complications are fewer. |
| very common, children are prone to between 5-10 viral illnesses a year. | | Bacterial illnesses are less common, and it is unlikely that you will catch very many in a single year. |

For more information on how to deal with a bacterial infection, see our page on **antibiotics**. And because knowing the difference is literally a matter of life and death, also check out our **meningitis** page, where the differences between viral and bacterial meningitis are made clearer.