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Bites/Stings

Anaphylaxis

What is it?

> A life-threatening allergic reaction (anaphylaxis) can cause shock, a sudden drop in blood pressure and trouble breathing. In people who have an allergy, anaphylaxis can occur minutes after exposure to a specific allergy-causing substance (allergen). In some cases, there may be a delayed reaction, or anaphylaxis may occur without an obvious trigger.

Symptoms:

- Skin reactions, including hives, itching, and skin that becomes flushed or changes color
- Swelling of the face, eyes, lips or throat
- Narrowing of the airways, leading to wheezing and trouble breathing or swallowing
- A weak and rapid pulse
- Nausea, vomiting or diarrhea
- Dizziness, fainting or unconsciousness

Possible Triggers:

- Medications
- Latex
- Foods such as peanuts, tree nuts, fish and shellfish
- Insect stings from bees, yellow jackets, wasps, hornets and fire ants

Plan of Action:

- Immediately call 911 or your local medical emergency number.
- Ask if the person is carrying an epinephrine autoinjector (EpiPen, Auvi-Q, others) to treat an allergic attack.
- If the person needs to use an autoinjector, ask whether you should help inject the medication. This is usually done by pressing the autoinjector against the person's thigh.
- Have the person lie face up and be still.
- Loosen tight clothing and cover the person with a blanket. Don't give the person anything to drink.
- If there's vomiting or bleeding from the mouth, turn the person to the side to prevent choking.
- If there are no signs of breathing, coughing or movement, begin CPR. Do uninterrupted chest presses — about 100 every minute — until paramedics arrive.

- Get emergency treatment even if symptoms start to improve. After anaphylaxis, it's possible for symptoms to start again (recur). Monitoring in a hospital for several hours is usually necessary.

> If you're with someone having symptoms of anaphylaxis, don't wait to see whether symptoms get better. Seek emergency treatment right away. In severe cases, untreated anaphylaxis can lead to death within half an hour.

> An antihistamine pill, such as diphenhydramine (Benadryl), isn't enough to treat anaphylaxis. These medications can help relieve allergy symptoms, but they work too slowly in a severe reaction.

Animal Bites

What is it?

> **A bite or claw wound from an animal.**

Plan of Action:

To care for a minor animal bite or claw wound, such as one that only breaks the skin, take these steps:

- Wash the wound thoroughly with soap and water.
- Apply an antibiotic cream or ointment and cover the bite with a clean bandage.

Seek prompt medical care if:

- The wound is a deep puncture or you're not sure how serious it is.
- The skin is badly torn, crushed or bleeding significantly — first apply pressure with a bandage or clean cloth to stop the bleeding.
- You notice increasing swelling, redness, pain or oozing, which are warning signs of infection.

- You have questions about your risk of rabies or about rabies prevention. If the bite was caused by a cat or a dog, try to confirm that the animal's rabies vaccination is up to date. If the bite was caused by a wild animal, seek advice from your doctor about which animals are most likely to carry rabies.

- Bats often carry rabies and can infect humans without leaving obvious signs of a bite. This is why the Centers for Disease Control and Prevention recommends that people in contact with bats — or even those who are sleeping and awaken to find a bat in the bedroom — seek medical advice about rabies shots, even if they don't think they've been bitten.

- You haven't had a tetanus shot in the past 10 years — or five years if the wound is deep or dirty. You may need a booster shot.

Human Bites

What is it?

> A bite wound from a human.

Human bites can be as dangerous as or even more dangerous than animal bites because of the types of bacteria and viruses contained in the human mouth. Human bites that break the skin can become infected.

If someone cuts his or her knuckles on another person's teeth, as might happen in a fight, this is also considered a human bite. And a cut on the knuckles from your own teeth, such as from a fall, is considered a human bite.

Plan of Action:

To take care of a human bite that breaks the skin:

- Stop the bleeding by applying pressure with a clean, dry cloth.
- Wash the wound thoroughly with soap and water.
- Apply a clean bandage. Cover the affected area with a nonstick bandage.
- Seek emergency medical care.

If you haven't had a tetanus shot within five years, your doctor may recommend a booster. In this case, get the booster shot

within 48 hours of the injury.

Insect Bites and Stings

What is it?

> A bite or sting from any insect.

Most insect bites and stings are mild and can be treated at home. They might cause itching, swelling and stinging that go away in a day or two. Some bites or stings can transmit disease-causing bacteria, viruses or parasites. Stings from bees, yellow jackets, wasps, hornets and fire ants might cause a severe allergic reaction (anaphylaxis).

Plan of Action:

Mild reactions:

- Move to a safe area to avoid more bites or stings.
- Remove any stingers.
- Gently wash the area with soap and water.
- Apply a cloth dampened with cold water or filled with ice to the area of the bite or sting for 10 to 20 minutes. This helps reduce pain and swelling.
- If the injury is on an arm or leg, raise it.
- Apply to the affected area calamine lotion, baking soda paste, or 0.5% or 1% hydrocortisone cream. Do this several times a day

until your symptoms go away.

- Take an anti-itch medicine (antihistamine) by mouth to reduce itching. Options include nonprescription cetirizine, fexofenadine (Allegra Allergy), loratadine (Claritin).

- Take a nonprescription pain reliever as needed.

Seek medical care if the swelling gets worse, the site shows signs of infection, or you don't feel well.

When to seek emergency care:

> **Call 911 or your local medical emergency number** if anyone is having a serious reaction that suggests anaphylaxis, even if it's just one or two signs or symptoms:

- Trouble breathing

- Swelling of the lips, face, eyelids, or throat

- Dizziness, fainting, or unconsciousness

- A weak and rapid pulse

- Hives

- Nausea, vomiting or diarrhea

Take these actions immediately while waiting for medical help:

- Ask whether the injured person is carrying an epinephrine autoinjector (EpiPen, Auvi-Q, others).

- If yes, ask whether you should help inject the medication. This is usually done by pressing the autoinjector against the thigh and holding it in place for several seconds.
- Loosen tight clothing and cover the person with a blanket.
- Don't offer anything to drink.
- If needed, position the person to prevent choking on vomit.

Snakebites

What is it?

> A bite from any snake.

Most venomous snakes in North America have eyes like slits and are known as pit vipers. Their heads are triangular and they have fangs. One exception is the coral snake, which has a rounded head and round pupils. Nonvenomous snakes typically have rounded heads, round pupils and no fangs.

Symptoms:

- Pain
- Scratches
- Severe burning pain within 15-30 minutes
- Swelling
- Bruising
- Nausea
- Labored breathing
- Odd taste in the mouth

- Weakness
- Skin tingling

Sometimes, a venomous snake can bite without injecting venom. The result of these "dry bites" is irritation at the site.

> If a venomous snake bites you, call **911 or your local emergency number immediately**, especially if the bitten area changes color, begins to swell or is painful. Many emergency rooms stock antivenom drugs, which may help you.

If possible, take these steps while waiting for medical help:

- Move beyond the snake's striking distance.
- Remain still and calm to help slow the spread of venom.
- Remove jewelry and tight clothing before you start to swell.
- Position yourself, if possible, so that the bite is at or below the level of your heart.
- Clean the wound with soap and water. Cover it with a clean, dry dressing.

Caution

- Don't use a tourniquet or apply ice.
- Don't cut the wound or attempt to remove the venom.

- Don't drink caffeine or alcohol, which could speed your body's absorption of venom.

- Don't try to capture the snake. Try to remember its color and shape so that you can describe it, which will help in your treatment. If you have a smartphone with you and it won't delay your getting help, take a picture of the snake from a safe distance to help with identification.

Spider Bites

What is it?

> A bite from any spider.

Most spider bites cause only minor injury but there are a few spider species that can be dangerous.

Plan of Action:

Seek medical care immediately if:

- You were bitten by a dangerous spider, such as a black widow or a brown recluse
- You're unsure whether the bite was from a dangerous spider
- You have severe pain, abdominal cramping or a growing wound at the bite site
- You're having problems breathing or swallowing
- The area of the sore has spreading redness or red streaks.

To take care of a spider bite:

- Clean the wound with mild soap and water. Then apply an antibiotic ointment three times a day to help prevent infection.

- Apply a cool compress over the bite for 15 minutes each hour. Use a clean cloth dampened with water or filled with ice. This helps reduce pain and swelling.
- If possible, elevate the affected area.
- Take an over-the-counter pain reliever as needed.
- If the wound is itchy, an antihistamine, such as diphenhydramine (Benadryl) or certirizine (Zyrtec) might help.

For pain and muscle spasms, your doctor might prescribe pain medicine, muscle relaxants or both. You might also need a tetanus shot.

Dangerous Spiders:

Black Widow spiders

You can usually identify a black widow spider by the red hourglass marking on its belly. In the United States, this spider is more common in the South. It's also found in Europe.

Signs and symptoms of a black widow spider bite can include:

- Redness, pain and swelling
- Severe abdominal rigidity or cramping
- Nausea, vomiting, tremors or sweating

Brown recluse spider

The brown recluse spider has a violin-shaped marking on its back, but this mark can be hard to see. This spider is commonly found in the southern half of the United States and in South America, where it is known as the brown spider.

Signs and symptoms of a brown recluse spider bite can include:

- At first, a mild pain
- Fever, chills and body aches
- A deep blue or purple area around the bite, which may develop a red ring around it

Tick Bites

What is it?

> A bite from a tick.

Most tick bites are painless and cause only minor signs and symptoms, such as a change in skin color, swelling or a sore on the skin.

But some ticks transmit bacteria that cause illnesses, including Lyme disease, and Rocky Mountain spotted fever.

In general, to transmit Lyme disease a tick needs to be attached to a person's skin for at least 36 hours. Other infections can be transferred in a few hours or even a few minutes.

Plan of Action:

- **Remove the tick promptly and carefully.** Use fine-tipped forceps or tweezers to grasp the tick as close to the skin as possible. Gently pull out the tick using a slow and steady upward motion. Avoid twisting or squeezing the tick. Do not handle the tick with bare hands. Do not use petroleum jelly, fingernail polish or a hot match to remove a tick.

- **Secure the tick and take a picture.** A picture of the tick can help you and your health care provider identify what type it is and whether you are at risk of a transmitted disease. You can trap the tick in a piece of tape for disposal in the garbage. Your provider may want to see the tick or a photo if you develop new symptoms.

- **Wash your hands and the bite site.** Use warm water and soap, rubbing alcohol, or an iodine scrub.

When to Seek Emergency Care:

- A severe headache
- Difficulty breathing
- Paralysis
- Heart palpitations

When to Contact Your Doctor:

- **You aren't able to completely remove the tick.** The longer the tick remains attached to the skin, the greater the risk of getting a disease from it. Your skin may also get irritated.
- **The rash gets bigger.** A small bump may appear at the site of the tick bite. This is typical. If it develops into a larger rash or you develop a rash anywhere, possibly with a bull's-eye pattern, it may indicate Lyme disease. The rash usually appears within 3 to 14 days.

  Consult your provider even if the rash disappears because you may still be at risk of having the disease. Your risk of contracting a disease from a tick bite depends on where you live or travel to, how much time you spend outside in woody and grassy areas, and how well you protect yourself.

- **You develop flu-like signs and symptoms.** Fever, chills, fatigue, muscle and joint pain, and a headache may accompany the rash.

- **You think the bite site is infected.** Signs and symptoms include pain, change in skin color or oozing from the site.

- **You think you were bitten by a deer tick.** You may need antibiotics.

If possible, bring the tick, or a photo of the tick, with you to your doctor's appointment.

Cold-Related Emergencies

Frostbite

What is it?

> When skin and underlying tissues freeze after being exposed to very cold temperatures.

The areas most likely to be affected are the fingertips, toes, earlobes, cheeks, chin and tip of the nose.

Signs/Symptoms:

- Cold skin with a prickly feeling
- Numbness
- Skin that looks red, white, bluish-white, grayish-yellow, purplish, brown or ashen
- Hard or waxy-looking skin
- Clumsiness due to joint and muscle stiffness
- Blistering after rewarming (severe cases)

3 Stages of Frostbite:

Step 1: Frostnip

- A mild form of frostbite

- Continued coldness leads to numbness in affected areas
- As your skin warms, you may feel pain or tingling
- Does not cause permanent damage

Step 2: Superficial Frostbite

- Slight changes in skin color
- Skin may begin to feel warm - a sign of serious skin involvement
- As your skin warms, you may feel stinging, burning, and swelling
- Fluid-filled blister(s) may appear 12 to 36 hours after rewarming the skin

Step 3: Deep (Severe) Frostbite

- Skin turns white or blue-gray
- Loss of all sensation of cold, pain, or discomfort in the area
- Joints or muscles may stop working
- Large blisters form 24 to 48 hours after rewarming
- The tissue turns black and hard as it dies

Plan of Action:

You can treat mild frostbite (frostnip) yourself. All other frostbite requires medical attention. First-aid steps for frostbite are as follows:

- **Check for hypothermia.** Get emergency medical help if you suspect hypothermia. Signs of hypothermia include intense shivering, drowsiness, confusion, fumbling hands and slurred speech.

- **Protect your skin from further damage.** If there's any chance the affected areas will freeze again, don't thaw them. If they're already thawed, wrap them up so that they don't refreeze.

  If you're outside, warm frostbitten hands by tucking them into your armpits. Protect your face, nose or ears by covering the area with dry, gloved hands. Don't rub the affected skin with snow or anything else. And don't walk on frostbitten feet or toes if possible.

- **Get out of the cold.** Once you're in a warm space, remove wet clothes and wrap up in a warm blanket.

- **Gently rewarm frostbitten areas.** Soak frostbitten fingers, toes or other extremities in warm water — 105 to 110 F (about 40 to 43 C). If a thermometer isn't available, test the water by placing an uninjured hand or elbow in it — it should feel very warm, not hot. Soak for 20 to 30 minutes or until the skin becomes its normal color or loses its numbness. For the face or ears, apply a warm, wet washcloth.

  Don't rewarm frostbitten skin with direct heat, such as a stove, heat lamp, fireplace or heating pad. This can cause burns.

- **Drink warm liquids.** Tea, coffee, hot chocolate or soup can help warm you from the inside. Don't drink alcohol.

- **Consider pain medicine.** If you're in pain, consider an over-the-counter pain reliever.

- **Know what to expect as skin thaws.** You'll feel tingling and burning as the skin warms and normal blood flow returns. Take care to not break any blisters that may form on the affected skin. Seek medical help for anything more serious than mild frostbite.

Hypothermia

What is it?

> Occurs when your body loses heat faster than it can produce heat and your body temperature falls below 95 F (35 C).

Hypothermia is often caused by exposure to cold weather or immersion in a cold body of water. It can also be caused by ongoing exposure to indoor temperatures below 50 F (10 C). You could be at increased risk if you're also exhausted or dehydrated.

Symptoms:

Signs and symptoms of hypothermia usually develop slowly and may include:

- Shivering, though this may stop as body temperature drops
- Slurred speech or mumbling
- Slow, shallow breathing
- Weak pulse
- Clumsiness or lack of coordination
- Drowsiness or very low energy
- Confusion or memory loss

- Loss of consciousness
- Bright red, cold skin (in infants)

Plan of Action:

> If you suspect someone has hypothermia, **call 911 or your local emergency number.**

Then immediately take these steps:

- Gently move the person out of the cold. If going indoors isn't possible, protect the person from the wind, especially around the neck and head. Insulate the individual from the cold ground.
- Gently remove wet clothing. Replace wet things with warm, dry coats or blankets.
- If further warming is needed, do so gradually. For example, apply warm, dry compresses to the center of the body — neck, chest and groin. The CDC says another option is using an electric blanket, if available. If you use hot water bottles or a chemical hot pack, first wrap it in a towel before applying.
- Offer the person warm, sweet, nonalcoholic drinks.
- Begin CPR if the person shows no signs of life, such as breathing, coughing or movement.

Caution:

>

Do not rewarm the person too quickly, such as with a heatinglamp or hot bath.

Don't attempt to warm the arms and legs. Heating or massaging the limbs of someone in this condition can stress the heart and lungs.

Don't give the person alcohol or cigarettes. Alcohol hinders the rewarming process, and tobacco products interfere with circulation that is needed for rewarming.

Heat-Related Emergencies

Burns

What is it?

> Tissue damage from hot liquids, the sun, flames, chemicals, electricity, steam and other causes.

Plan of Action:

Minor Burns

- **Cool the burn.** Hold the area under cool (not cold) running water for about 10 minutes. If the burn is on the face, apply a cool, wet cloth until the pain eases. For a mouth burn from hot food or drink, put a piece of ice in the mouth for a few minutes.
- **Remove rings or other tight items from the burned area.** Try to do this quickly and gently, before the area swells.
- **Don't break blisters.** Blisters help protect against infection. If a blister does break, gently clean the area with water and apply an antibiotic ointment.
- **Apply lotion.** After the burn is cooled, apply a lotion, such as one with aloe vera or cocoa butter. This helps prevent drying and provides relief.
- **Bandage the burn.** Cover the burn with a clean bandage. Wrap it loosely to avoid putting pressure on burned skin. Bandaging keeps air off the area, reduces pain and protects

blistered skin.

- **If needed, take a nonprescription pain reliever,** such as ibuprofen (Advil, Motrin IB, others), naproxen sodium (Aleve) or acetaminophen (Tylenol, others).

For major burns until emergency help arrives:

- **Protect the burned person from further harm.** If you can do so safely, make sure the person you're helping is not in contact with the source of the burn. For electrical burns, make sure the power source is off before you approach the burned person. Don't try to remove clothing stuck in the burn.
- **Make certain that the person burned is breathing.** If needed, begin rescue breathing if you know how.
- **Remove jewelry, belts and other tight items,** especially from the burned area and the neck. Burned areas swell quickly.
- **Cover the burn.** Loosely cover the area with gauze or a clean cloth.
- **Raise the burned area.** Lift the wound above heart level if possible.
- **Watch for signs of shock.** Signs and symptoms include cool, clammy skin, weak pulse and shallow breathing.

When to seek emergency care:

Call 911 or seek immediate care for major burns, which:

- Are deep, involving all layers of the skin
- Cause the skin to be dry and leathery
- May appear charred or have patches of white, brown or black
- Are larger than 3 inches (about 8 centimeters) in diameter
- Cover the hands, feet, face, groin, buttocks or a major joint, or encircles an arm or leg
- Are accompanied by smoke inhalation
- Begin swelling very quickly

Electrical burns, including those caused by lightning, and major chemical burns need emergency medical care. A minor burn might need emergency care if it affects the eyes, mouth, hands or genital areas. Babies and older adults might need emergency care for minor burns as well.

Dehydration

What is it?

> When the body loses too much water or fluids.

What causes it?

- Heat exposure
- Too much exercise
- Vomiting
- Diarrhea
- Decreased fluid intake

Signs/Symptoms:

- Weakness
- Thirst or dry mouth
- Dizziness
- Confusion
- Less urination than usual

Plan of Action:

- Contact a healthcare provider if you suspect someone is dehydrated

The best first aid for dehydration is prevention: encourage everyone to drink enough to stay hydrated.

> If dehydration isn't addressed early enough, it can lead to life threatening medical conditions such as shock.

Heat Cramps

What is it?

> Painful, involuntary muscle spasms that usually occur during heavy exercise in hot environments. The spasms may be more intense and more prolonged than typical nighttime leg cramps.

Muscles most often affected include those of your calves, arms, abdominal wall and back, although heat cramps may involve any muscle group involved in exercise.

Plan of Action:

If you suspect heat cramps

- Rest briefly and cool down
- Drink clear juice or an electrolyte-containing sports drink
- Practice gentle, range-of-motion stretching and gentle massage of the affected muscle group
- Don't resume strenuous activity for several hours or longer after heat cramps go away
- Call your doctor if your cramps don't go away within one hour or so

Heat Exhaustion

What is it?

> The body's response to an excessive loss of water and salt, usually through excessive sweating.

Symptoms:

- Cool, moist skin with goose bumps when in the heat
- Heavy sweating
- Faintness
- Dizziness
- Fatigue
- Weak, rapid pulse
- Low blood pressure upon standing
- Muscle cramps
- Nausea or vomiting
- Headache
- Extreme thirst

- Mild confusion
- Decreased urine output

Plan of Action:

Untreated, heat exhaustion can lead to heatstroke, which is a life-threatening condition.

If you suspect heat exhaustion, take these steps immediately:

- Move the person out of the heat and into a shady or air-conditioned place.
- Lay the person down and elevate the legs and feet slightly.
- Remove tight or heavy clothing.
- Have the person sip chilled water, a decaffeinated sports drink containing electrolytes or other nonalcoholic beverage without caffeine.
- Cool the person by spraying or sponging with cool water and fanning.
- Monitor the person carefully.

> Contact a health care provider if signs or symptoms worsen or if the person doesn't improve after taking first-aid measures.

Call 911 or your local emergency number if the person's condition gets worse, especially if he or she experiences:

- Fainting
- Agitation
- Confusion
- Seizures
- Inability to drink
- Core body temperature — measured by rectal thermometer — of 104 F (40 C) (heatstroke)

Heatstroke

What is it?

> The most serious heat-related illness. It occurs when the body can no longer control it's temperature when exposed to excessively high temperatures.

Symptoms:

- Fever of 104 degrees Fahrenheit (40 degrees Celsius) or greater
- Changes in mental status or behavior, such as confusion, agitation and slurred speech
- Hot, dry skin or heavy sweating
- Nausea and vomiting
- Flushed skin
- Rapid pulse
- Rapid breathing
- Headache
- Fainting
- Seizure

- Coma

When to Seek Emergency Care:

> **If you suspect heatstroke, call 911 or your local emergency number.**

Move the person out of the heat right away. Cool the person by whatever means available. For example:

- Put the person in a cool tub of water or a cool shower.
- Spray the person with a garden hose.
- Sponge the person with cool water.
- Fan the person while misting with cool water.
- Place ice packs or cool wet towels on the neck, armpits, and groin.
- Cover the person with cool damp sheets.

If the person is conscious, offer chilled water, a sports drink containing electrolytes, or other nonalcoholic beverage without caffeine.

Begin CPR if the person loses consciousness and shows no signs of circulation, such as breathing, coughing, or movement.

Sunburn

What is it?

> To burn or discolor from the sun.

Symptoms:

The affected skin will be:

- Painful
- Inflamed
- Hot to the touch
- Blisters might develop
- You may also experience headache, fever or nausea

Plan of Action:

Seek immediate medical care if you are sunburned and experience:

- A fever over 103 degrees Fahrenheit (39.4 degrees Celsius) with vomiting
- Confusion

- An infection in the sunburned area
- Dehydration

If you have a sunburn:

- **Take a pain reliever** such as ibuprofen (Advil, Motrin IB, others) or acetaminophen (Tylenol, others) as soon as possible after getting too much sun. Or try a gel pain reliever that you rub on the skin.
- **Cool the skin.** Apply to the affected skin a clean towel dampened with cool tap water. Or take a cool bath with. Add about 2 ounces (60 grams) of baking soda to the tub. Cool the skin for about 10 minutes several times a day.
- **Apply a moisturizer, lotion or gel.** An aloe vera lotion or gel or calamine lotion can be soothing. Try cooling the product in the refrigerator before applying. Avoid products that contain alcohol.
- **Drink extra water** for a day to help prevent dehydration.
- **Leave blisters alone.** An intact blister can help the skin heal. If a blister does break, trim off the dead skin with a clean, small scissors. Gently clean the area with mild soap and water. Then apply an antibiotic ointment to the wound and cover it with a nonstick bandage.
- **Protect yourself from further sun exposure** while your skin heals from the sunburn.

- **Apply a soothing medicated cream.** For mild to moderate sunburn, apply nonprescription 1% hydrocortisone cream to the affected area three times a day for three days. Try cooling the product in the refrigerator before applying.

- **Treat sunburned eyes** by covering them with a clean towel dampened with cool tap water. Don't wear contacts until your eye symptoms have gone away. Don't rub your eyes.

> Seek medical care for large blisters or those that form on the face, hands or genitals. Also seek medical help if you have worsening pain, headache, confusion, nausea, fever, chills, eye pain or vision changes, or signs of infection, such as blisters with swelling, pus or streaks.