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Common Summertime Emergencies - Part II

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If you don't get heat stroke, lightning struck or drown during the summer, you can get bitten or stung. Bee and wasp stings, can produce reactions ranging from local pain to life-threatening reactions called "anaphylaxis." If someone disturbs a nest or hive, bees and wasps may attack in a swarm, inflicting multiple stings. Victims of multiple stings will have more severe reactions from the venom's cumulative effects, even if they aren't allergic to bee stings.

A local reaction to a bee or wasp sting consists of instant pain, followed by swelling and redness, which is called a "wheal-and-flare reaction". Swelling can extend several inches beyond the sting site and can even encompass the extremity. Besides the local reaction, a person may experience a host of total-body effects depending upon his/her sensitivity to the venom. Some of those are:

- generalized edema,
- nausea,
- vomiting, and
- diarrhea.

If he/she has an allergic reaction, he/she may experience:

- urticaria (raised, red rash),
- pruritus (itching),
- respiratory distress with bronchospasm (difficulty breathing because of constriction of the airway) and
- laryngeal edema (throat swelling),
- hypotension (low blood pressure),
- loss of consciousness,
- cardiac arrhythmias (irregular heart beat), and
- cardiac arrest (the heart stops beating).

Provide basic first aid by quickly removing the stinger. Don't use tweezers; pinching the venom sac in the stinger would inject more venom. Instead, gently scrape or brush the stinger off with the edge of a knife blade, credit card, or needle. Then apply an ice pack to the site.

If the patient is having a mild reaction -- for example, just pruritus and urticaria -- ne/she may need treatment with an antihistamine (benadryl) only, but you should still obtain emergency medical assistance for her as soon as possible.

However, if he/she's wheezing, or you note facial swelling and respiratory distress -- signs of a severe allergic reaction -- administer epinephrine at once, if it's available, then call 911. Find out if he/she's had an allergic reaction to bee or wasp stings in the past; if so, she may be carrying an epinephrine kit.

Anyone who's had an allergic reaction to an insect sting should carry an epinephrine emergency kit (available by prescription) at all times and they should to wear a medical-alert bracelet.

Snake Bites

In warm weather, snakes become more active. Most are nonvenomous, but one or more species of poisonous snakes can be found in nearly every state. Snakes are most likely to bite defensively when suddenly confronted by a human at close range.

In the United States, most snakebite emergencies are caused by rattlesnakes, copperheads, and water moccasins. Coral snakes, found mostly in the south and southwest, account for less than 1% of bites. You can recognize a poisonous snake by its fangs and triangular head (which houses the venom glands). In the United States, only 9 to 15 people die of snakebites per year. Victims are usually young children, the elderly, and patients who don't get adequate treatment.

The first step in treating snakebite is to determine if venom has been injected (envenomated). The signs and symptoms to look for depend on the type and amount of venom injected, the bite location, and the victim's age, size, and general health.

Local signs and symptoms of envenomation are:

- one or more puncture wounds in the skin (depending on number of fangs and number of strikes) and
- pain,
- edema, and
- erythema (redness) or
- ecchymoses (bruising) adjacent to the bite site.

Up to 36 hours later, vesicles or hemorrhagic spots may appear. Systemic responses include a minty, rubbery, or metallic taste in the mouth; tingling or numbness of the

scalp, face, and lips; muscle twitching; nausea; vomiting; hypotension; muscle weakness; seizures; and coagulopathy and disseminated intravascular coagulation. Some of these symptoms, however, can result from the victim's anxiety and panic about being bitten by a snake. If the bite site shows no evidence of local tissue edema or redness within 8 hours, progression to systemic injury is unlikely.

Your first intervention is to move the victim to a safe area away from the snake and have him stay still in a comfortable position, to slow the circulation of venom. Next, remove any jewelry or constricting clothing before edema occurs. To limit spread of the venom, splint and immobilize the affected limb and keep it below heart level, if possible. Keep the victim warm and keep him calm. Don't offer alcohol or stimulants such as beverages containing caffeine, because these will accelerate the absorption of venom. Get the victim to the hospital as soon as possible.

If you can't get him to a hospital quickly and the bite is on an arm or leg, consider applying a 2-to-4-cm-wide constricting band between the wound and the heart to slow blood flow. Don't apply it as tightly as a tourniquet.

Ticks

Ticks once were just a nuisance, but with the emergence of Lyme's Disease, tick bites are a more serious matter. While Lyme's disease is caused by only one type of tick -- the deer tick -- precautions should be taken to keep all ticks off the body. Various commercially available repellants are available. Dusting the pants legs with sulfur powder will keep almost all ticks away from the lower extremity.

Staying safe

By being aware of our environment, including the weather and other living creatures that occupy the world with us, we can avoid many environmental emergencies or deal appropriately with them if they occur. Here are some ways you can prevent or minimize the risk of common summer emergencies.

Heat-related illness

Eat or drink foods and fluids that contain sodium and electrolytes, such as commercially available sports drinks, during strenuous exercise.

Avoid sitting or standing in one place for too long in the heat. Flex or contract muscles frequently while standing to assist venous return to the heart.

Limit sun exposure and use sunscreen (SPF 15 to 30).

Take frequent rest breaks and avoid strenuous activity at the hottest time of the day.

Wear lightweight, light-colored, loose-fitting clothing and a hat.

Lightning Strike

Pay attention to weather forecasts when participating in outdoor activities.

If you hear thunder, seek shelter in a building or enclosed vehicle. Lightning can strike even when the sky is clear.

Don't stand under a tall tree or tall object in an open area; lightning is attracted to the highest point and can splash over onto nearby people. Also avoid entrances to caves and small, isolated sheds. A forest of densely spaced trees offers more protection.

Get out of and away from the water (that includes indoor showers and bathtubs).

Avoid touching or standing near metal objects, including metal fencing, golf clubs, and bicycles.

Don't stand near open doors, windows, fireplaces, metal fixtures, or pipes; lightning can flash through the structure.

Turn off electrical appliances and equipment.

Don't talk on the telephone; lightning can strike through the telephone line.

Snakebite

Use extreme caution in areas known to be the habitat of snakes: swamps, caves, rocks, ledges, tall grass, wood piles, bushes, heavy underbrush, and crevices. Wear boots and protective clothing, such as rugged trousers and heavy gloves. Use a walking stick or trekking poles while walking or hiking, especially on warm nights when snakes are most active. Don't hike alone.

Don't place your hands or feet in areas that haven't been inspected.

If you encounter a snake, don't handle or harass it. Stay out of striking distance.

Remember that snakes are capable of envenomation at birth; young snakes aren't harmless!

Because of the bite reflex, a dead or decapitated snake can inflict a bite for up to an hour after death. Don't handle a snake if you're transporting it for identification. Carry it in a sealed container.

Remember, it's your life and it's your health.