

A Primer on Summer Safety

- [Sunburn](#)
- [Bites From Mosquitoes and Ticks](#)
- [Bee Stings](#)
- [Heat Illness](#)
- [Burns From Fireworks and Grills](#)
- [Foodborne Illness](#)
- [Poison Ivy, Poison Oak, and Poison Sumac](#)
- [Poisoning in Children](#)

By Michelle Meadows

When it comes to summer, Olivia Kane, 36, mostly remembers the happy times: eating crabs on the beach, chasing flickering fireflies at night, and playing softball with friends. But there are other memories the Arlington, Va., resident wishes she could forget. Like the rash from poison ivy that broke out on her face, neck, and arms two days before she had to walk down the aisle in her sister's wedding. Or the time she went to the beach to get a tan before high school graduation. "What I got was a bright red sunburn," she says. "I had blistered cheeks, a blistered chest, and I was the graduation speaker."

But her worst summer memory was when she took a sip from a can of soda and gulped down a bee that had crawled into the can when she wasn't looking. "I knew I swallowed something," Kane says. "I got so hysterical that I threw up." Out came the bee, and she went straight to the emergency room where she was treated for difficulty breathing.

Experts say there's a lot people can do to minimize the risks of health problems related to summertime activities. "While treatment with FDA-approved products is good, prevention is even better," says Jonathan Wilkin, M.D., director of the Food and Drug Administration's Division of Dermatologic and Dental Drug Products. So before you pack your swimsuit or hit the hiking trail this year, brush up on these summer hazards.

Sunburn

As a child in Pratt, Kan., Linda Talbott got frequent, blistering sunburns while playing outside all day. Then in her college years, it was cool to be tanned. "Everyone wanted a tan, and I thought tanned skin looked beautiful," Talbott says. "But it's not beautiful when you're 65 and you've had melanoma."

In 1997, Talbott noticed a dark spot under her left eye. "I thought it was mascara, but it grew to the size of a raisin and started to bleed" after about six weeks. Her doctor said it was melanoma, a serious form of skin cancer. Another lesion on her cheek, previously misdiagnosed as an age spot, also turned out to be malignant. She needed immediate surgery on her face to remove the cancerous tissue and save her life.

Everyone is at risk for skin cancer, but especially people with light skin color, light hair or eye color, a

family history of skin cancer, chronic sun exposure, a history of sunburns early in life, or freckles, according to the American Cancer Society. Rays from artificial sources of light such as tanning booths also increase the risk of skin cancer.

What you can do: Remember to limit sun exposure, wear protective clothing, and use sunscreen. Sunscreen should be applied 30 minutes before going outdoors and reapplied at least every two hours. Use water-resistant sunscreen with a sun protection factor (SPF) of 15 or higher. The FDA regulates sunscreen as an over-the-counter (OTC) drug and is working on a proposed rule that will specify testing procedures for determining levels of UVA protection in sunscreen products. It will also include labeling for UVA protection to complement existing SPF labeling for UVB. So in the future, consumers will be able to choose a sunscreen based on both UVB and UVA protection levels. Sunscreen is formulated to protect the skin against the sun's ultraviolet light (UV), not to help the skin tan.

Some medications can increase sensitivity to the sun. Examples are tetracycline antibiotics, sulfonamides such as Bactrim, non-steroidal anti-inflammatory drugs such as ibuprofen, and some fluoroquinolones. Cosmetics that contain alpha hydroxy acids (AHAs) may also increase sun sensitivity and the possibility of sunburn. Examples are glycolic acid and lactic acid. It is important to protect your skin from the sun while using AHA-containing products and for a week after discontinuing their use.

According to the American Academy of Dermatology (AAD), along with regularly using sunscreen, it's smart to wear wide-brimmed hats and seek shade under a beach umbrella or a tree. Sunscreens alone may not always protect you. And don't forget sunglasses, which protect the sensitive skin around the eyes and may reduce the long-term risk of developing cataracts. People who wear UV-absorbing contact lenses still should wear UV-absorbing sunglasses since contact lenses don't completely cover the eye.

If you do get a sunburn, don't put ice or butter on it, says Bruce Bonanno, M.D., an emergency physician at Bayshore Community Hospital in Holmdel, N.J. "Use a cold compress, and if you don't have that, a pack of frozen vegetables will work." OTC pain relievers may also be helpful. Mild and moderate cases may be helped by topical corticosteroids such as hydrocortisone. Severe cases may require oral steroids such as prednisone.

Be on the lookout for moles that change color or size, bleed, or have an irregular, spreading edge--all potential signs of skin cancer.

Bites From Mosquitoes and Ticks

Rob Baxley, 32, of Savage, Md., never saw the tick, but thinks he came into contact with one when he helped his brother build a deck in June 2003. "Soon after that, I noticed a little red spot on my thigh," Baxley says. "But then it grew." He estimates the rash was about the size of a grapefruit when he went to the emergency room in mid-July.

About 80 percent of people who get Lyme disease develop a large rash that looks like a bull's-eye. Baxley experienced other classic Lyme disease symptoms, such as muscle aches and stiff joints. His doctor also found a similar rash on Baxley's calf.

After a blood test confirmed Lyme disease, Baxley took the oral antibiotic doxycycline, followed by intravenous treatment with a second antibiotic called Rocephin (ceftriaxone). In addition to the physical symptoms, he is also experiencing depression for the first time. "The whole thing is

frustrating," says Baxley. "It's taken a toll on the whole family."

Ticks are usually harmless. The biggest disease threat from tick bites is Lyme disease, which is caused by the bacterium *Borrelia burgdorferi*. The bacteria are transmitted to humans by the black-legged deer tick, which is about the size of a pinhead and usually lives on deer. According to the Centers for Disease Control and Prevention (CDC), there were 23,763 cases of Lyme disease reported nationwide in 2002.

Another insect-borne illness, West Nile virus, is transmitted by infected mosquitoes and usually produces mild symptoms in healthy people. But the illness can be serious for older people and those with compromised immune systems. In 2002, there were 4,156 cases of West Nile virus in humans reported to the CDC. Less than 1 percent of people infected with West Nile virus develop severe illness. The symptoms are flu-like and can include fever, headache, body aches, and skin rash.

What you can do: There are no vaccines on the market for West Nile virus or Lyme disease. If you're spending time in tall grass or woody areas, use insect repellent with DEET to ward off mosquitoes and ticks. But insect repellent should not be used on babies, and repellent used on children should contain no more than 10 percent DEET.

Check yourself and your children for ticks before bedtime. If you find a tick, remove it with tweezers, drop it in a plastic bag and throw it away. You don't have to save the tick to show it to doctors. People who want to get a tick tested for diseases or other information could check with their local health departments, but not all of them offer tick testing. The CDC recommends cleansing the area of the tick bite with antiseptic. Early removal is important because a tick generally has to be on the skin for 36 hours or more to transmit Lyme disease.

OTC antihistamines, such as Benadryl or Claritin, can bring itch relief. Topical anti-itch cream on the affected area also may help, especially for children, says Edward Lamay, M.D., a physician in the emergency department at Durham Regional Hospital in Durham, N.C. You may also want to keep their nails short. "Some kids scratch bites, break the skin, and then get a bacterial infection," Lamay says.

Bee Stings

In the summer of 2003, the Nebraska Poison Center in Omaha received a call about a 4-year-old girl who was stung on the tongue by a bee while sipping from a soda can. She was treated in the emergency room for swelling not only to the tongue, but to her lips and up to her eyes.

"It's a concern anytime there is swelling in the face or an area other than where the sting occurred," says Charles Pattavina, M.D., an emergency physician at The Miriam Hospital in Providence, R.I. Other symptoms of an allergic reaction are hives, itching, rash, difficulty breathing, and shock. Most reactions to bees are mild, but severe allergic reactions lead to between 40 and 50 deaths each year. An allergic reaction can occur even if a person has been stung before with no complications.

What you can do: To keep bees away, wear light-colored clothing and avoid scented soaps and perfumes. Don't leave food, drinks, and garbage out uncovered. Treat a bee sting by scraping the stinger away in a side-to-side motion with a credit card or fingernail, and then washing the area with soap and water. Pulling the stinger or using tweezers may push more venom into the skin. For any bug bite or sting, ice or a cold compress and OTC pain-relieving creams or oral medications can help.

Because bees puncture the skin with their stingers, there is a risk of tetanus infection. After getting

the regular series of childhood tetanus shots, adults should have a tetanus booster shot every 10 years.

Watch for signs of allergic reaction to stings, which typically happen within the first few hours. If you or your child has ever had an allergic reaction to a sting, experts recommend carrying epinephrine, a prescription hormone given by injection to support blood pressure, increase heart rate, and relax airways.

Heat Illness

In August 2001, Tracey Jaurena, an athletic trainer in Coalinga, Calif., was working on a football field when a friend called her cell phone number. The caller said Jaurena's son Abe, 12, had collapsed during practice nearby with his youth football league.

"When I got there, Abe's face was blotchy and I kept calling his name, but he couldn't answer me," she says. Jaurena cooled Abe down until emergency workers arrived and he was treated for dehydration at the hospital. Jaurena believes Abe got sick because it was at least 95 F that day, the players were inappropriately dressed in full uniform, and Abe hadn't had a water break in close to an hour. "It was also the third day of football practice and it's important to acclimate athletes to the weather," she says.

During heat illness, the body's cooling system shuts down. Body temperature goes up, which inhibits the ability to sweat. Mild symptoms of heat exhaustion include thirst, fatigue, and cramps in the legs or abdomen. Left untreated, heat exhaustion can progress to heat stroke. Serious heat-related symptoms include dizziness, headaches, nausea, rapid heartbeat, vomiting, decreased alertness, and a temperature as high as 105 F or more. In severe cases, the liver, kidneys, and brain may be damaged. About 400 people die each year from heat exposure, according to the CDC.

The risk of heat illness goes up during exertion and sports and with certain health conditions such as diabetes, obesity, and heart disease. Alcohol use also increases the risk. So do medications that slow sweat production such as antihistamines, tricyclic antidepressants, and diuretics used to treat water retention, high blood pressure, and some liver and kidney conditions.

People ages 65 and older and young children are especially vulnerable to heat illness. During the summer of 2003, at least 42 children in the United States died after being left in hot cars, according to Jan Null, a meteorologist in San Francisco who tracks heat-related deaths. What some people don't realize is that the temperature inside a car can climb much higher than temperatures outside during a sunny day. Heat stroke in children can occur within minutes, even if a car window is opened slightly.

What you can do: Air conditioning is the No. 1 protective factor against heat illness. If you don't have air conditioning, spend time in public facilities, such as libraries and malls that have air conditioning. Reduce strenuous activities or do them during early mornings and evenings when it's cooler. If you're outside for long stretches of time, carry a water bottle, drink fluids regularly, and don't push your limits. People who play sports should wear light, loose-fitting clothes and drink water or sports drinks before, during, and after activity. If you see someone experiencing heat illness, have the person lie down in a cool place and elevate the legs. Use water, wet towels, and fanning to help cool the person down until emergency help comes.

Burns From Fireworks and Grills

Sia Karpinski, 10, of Akron, Ohio, hasn't been interested in playing with sparklers since July 4, 2002,

when she stepped on a discarded sparkler while in bare feet. She was treated for serious burns at the Burn Center at Akron Children's Hospital as an outpatient for about six weeks.

The U.S. Consumer Product Safety Commission estimates that about 8,800 people were treated in emergency rooms in 2002 for injuries associated with fireworks. Most injuries involved the hands, head, and eyes. Lee Duffner, M.D., an ophthalmologist in Hollywood, Fla., says, "Unfortunately, I've treated burns of the cornea and eyelids and hemorrhages inside the eye caused by hand-held sparklers and other fireworks."

Mary Mondozzi, a nurse at the Akron Children's Hospital Burn Center, says she also sees burns from grills and campfires. "Children get hurt playing around grills or they get burned when they throw objects into campfires," she says.

What you can do: Stick with public firework displays handled by professionals. Children should always be closely supervised when food is being cooked indoors or outdoors. Be aware that gas leaks, blocked tubes, and overfilled propane tanks cause most gas grill fires and explosions. "Teach children to cover their faces, stop, drop, and roll if their clothes catch fire," Mondozzi says.

Generally, minor burns smaller than a person's palm can be treated at home. But burns bigger than that, and burns on the hands, feet, face, genitals, and major joints usually require emergency treatment. "For a minor injury, run cool water over it and cover it with a clean, dry cloth," says Mondozzi. Don't apply ice, which can worsen a burn. Don't apply petroleum jelly or butter, which can hold heat in the tissue. Consult your family doctor if a minor burn does not heal in a couple of days or if there are signs of infection, such as redness and swelling.

Foodborne Illness

Summer is prime time for weddings, picnics, graduation parties, and family cookouts. And feeding the large groups involved can make food safety especially challenging. Last June, at least 81 students from E.C. Drury High School in Milton, Ontario, reported signs of food poisoning after a graduation celebration. Many had bloody diarrhea. In July, stool samples confirmed *E. coli* as the cause of illness, though the exact food source of the bacterium was not confirmed. Known sources of *E. coli* include undercooked beef, sausage, and contaminated produce.

Typical signs of foodborne illness include nausea, vomiting, cramps, and diarrhea. In serious cases, high fever, bloody stool, and prolonged vomiting may occur. Young children, pregnant women, older people, and those with compromised immune systems are hit hardest.

Bacteria, whether in food or in the air, grow faster in warmer weather. Don't just worry about the potato salad or egg dishes, says Marlene Clark, a registered dietician at Cedars-Sinai Medical Center. "You have to be careful with any food, including melons and lettuce," she says. Since 1996, the FDA has responded to 14 outbreaks of foodborne illness for which fresh lettuce or fresh tomatoes were the confirmed or suspected source. The causes included *E. coli*, salmonella, cyclospora, and hepatitis A virus.

What you can do: It seems so basic, but not everyone does it. Wash hands well and often with soap and water, especially after using the bathroom and before cooking or eating. Also wash surfaces when cooking, keep raw food separate from cooked food, marinate food in the refrigerator, cook food thoroughly, and refrigerate or freeze food promptly. The FDA suggests never leaving food out for more than one hour when the temperature is above 90 F. Any other time, don't leave food out for more than two hours. "Keep hot food hot and cold food cold," Clark adds. "Wash off fruits and

vegetables with cool running water." Also, scrub fruits with rough surfaces like cantaloupe with a soft brush.

When you are packing food for a picnic, place cold food in a cooler with plenty of ice or commercial freezing gels. Cold food should be held at or below 40 F and the cooler should be stored in shade. Hot food should be wrapped well, placed in an insulated container, and kept at or above 140 F.

Those hit by a foodborne illness must stay hydrated so they could try chewing on ice chips or sipping clear fluid after vomiting has stopped. In the next day or so, eat only light foods such as bananas, rice, applesauce, toast, crackers, and soup. Seek emergency treatment if severe pain accompanies the illness, if vomiting doesn't stop in a couple of hours, or if bloody diarrhea is experienced.

Poison Ivy, Poison Oak, and Poison Sumac

Betsy Dunphy, 44, enjoys living in a woody area in Herndon, Va. But she could do without the poison ivy. She once missed a week of work when a rash from the vine spread all over her face and chest. In the summer of 2002, she developed a poison ivy rash on her wrist after moving azalea plants, and was careful to keep it from spreading.

Rashes from poison ivy, oak, or sumac are all caused by urushiol, a substance in the sap of the plants. Poison plant rashes can't be spread from person to person, but it's possible to pick up a rash from urushiol that sticks to clothing, tools, balls, and pets.

What you can do: Dunphy says she's been able to avoid an outbreak in the last two years mainly by learning what poison ivy looks like and avoiding it. According to the American Academy of Dermatology, while "leaves of three, beware of me," is the old saying, "leaflets of three, beware of me" is even better because each leaf has three smaller leaflets.

"I also wash my garden tools regularly, especially if there is the slightest chance that they've come into contact with poison ivy," Dunphy says. If you know you will be working around poison ivy, wear long pants, long sleeves, boots, and gloves.

Hikers, emergency workers, and others who have a difficult time avoiding poison ivy may benefit from a product called Ivy Block, made by EnviroDerm Pharmaceuticals Inc., of Louisville, Ky. It's the only FDA-approved product for preventing or reducing the severity of rashes from poison ivy, oak, or sumac. The OTC lotion contains bentoquatam, a substance that forms a clay-like coating on the skin.

If you come into contact with poison ivy, oak, or sumac, wash the skin in cool water as soon as possible to prevent the spread of urushiol. If you get a rash, oatmeal baths and calamine lotion can dry up blisters and bring relief from itching. Treatment may include OTC or prescription corticosteroids and antihistamines.

Poisoning in Children

The parents of a 2-year-old boy called the Nebraska Regional Poison Center in Omaha last summer when he accidentally sprayed cleaning disinfectant into his eye. He developed a burn in the cornea. Another 2-year-old boy spent several days in the hospital and survived after drinking charcoal lighter fluid that had been left by the barbecue pit. In another case, a 3-year-old girl got into a bottle containing insecticide and died several days later.

"We see the calls go up every spring and summer," says Joan McVoy, a nurse at the poison center.

Children may accidentally ingest sunscreens, berries, cleaning solvents, insect repellents, pesticides, plants and mushrooms, and hydrocarbons in the form of gasoline, kerosene, and charcoal fluid.

The American Academy of Pediatrics (AAP) no longer recommends that syrup of ipecac be used routinely to induce vomiting in poisoning cases. The main reason that the AAP changed its recommendation in 2003 was that, although it seems to make sense to induce vomiting to empty the stomach contents after a poisoning, research hasn't shown that ipecac-induced vomiting is beneficial in improving the clinical outcome of accidental poisoning cases.

Other concerns are that the continued vomiting caused by ingesting ipecac could prevent children from keeping down the activated charcoal they may be given in the emergency room. Charcoal binds to poison and keeps it out of the bloodstream. "There are also some substances that you don't want coming back up because they do more damage, such as drain cleaner and other corrosives," says Arlene Solbeck, an FDA scientist.

The FDA is considering various positions on the safety and effectiveness of ipecac syrup and whether it should still be made available over-the-counter or switched to prescription status.

What you can do: Dangerous substances, including medication, should be kept out of reach of children. In addition, substances should be kept in their original containers to avoid confusion or mistakes. Children who have ingested poisonous substances may experience difficulty breathing, throat pain, or burns to the lips and mouth.

If you suspect that a child has ingested a poison, call the poison center immediately to relay the type of poison ingested and get advice on what to do. If you dial the nationwide poison help line--(800) 222-1222--you'll be connected to your regional poison center. Convulsions, loss of breathing, or loss of consciousness require calling 911 immediately. Take the poison with you to the emergency room, whether it's a part of a plant or the chemical's container.

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Skin Reactions

Henna tattoos: The Food and Drug Administration has received complaints from people who have received products marketed as henna temporary tattoos, especially so-called "black henna," at places such as salons and kiosks at beaches and fairs. There have been reports of allergic reactions, skin irritations, infections, and even scarring. "Black henna" may contain the added "coal tar" color, p-phenylenediamine, also known as PPD, which can cause allergic reactions in some people. Henna itself is made from a plant and typically produces a brown, orange-brown, or reddish-brown tint. Other ingredients must be added to produce other colors. Even brown shades of products marketed as henna may contain other ingredients intended to make them darker or make the stain last longer. While the FDA has approved henna for coloring hair, and PPD is used in cosmetics as a hair dye, neither of these color additives is approved for direct application to the skin.

Depilatories: The FDA also has received complaints about skin burns and scarring from some chemical hair removal products. If you use this type of product, always do a patch test in accordance with the directions, don't use it on broken or irritated skin, and keep the product away from eyes. Cosmetics don't go through FDA approval before they are marketed, though the agency can take action to get unsafe products off the market.