

# Beware of Bug Bites and Stings

**W**arm weather makes it easier to spend more time outdoors, but it also brings out the bugs. Ticks are usually harmless. But a tick bite can lead to Lyme disease, which is caused by the bacterium *Borrelia burgdorferi*. The bacteria are transmitted to people by the black-legged deer tick, which is about the size of a pinhead and usually lives on deer. Infected ticks can also cause other diseases, such as Rocky Mountain spotted fever.

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.

Most reactions to bees and other stinging insects are mild, but severe allergic reactions can be deadly. An allergic reaction can occur even if a person has been stung before with no complications.

Here are tips for preventing and treating bites and stings.

## What can I do to keep insects away?

- Use structural barriers such as window screens and netting.
- Avoid wooded, brushy, and grassy areas when possible.
- Don't wear heavily scented soaps and perfumes.
- Use caution eating outside and drinking; don't leave drinks and garbage cans uncovered.
- Don't wear bright colors, which attract bees.
- Wear long sleeves and long pants when possible.
- Tuck pant legs into socks or shoes.

- Wear a hat for extra protection.
- Get rid of containers with standing water that give mosquitoes a breeding ground. Examples include water in flowerpots and outdoor pet dishes.
- Use insect repellent if nonchemical methods are ineffective and you spend time in tall grass and woody areas.
- Treat camping gear, clothes, and shoes with permethrin, which repels and kills ticks, mosquitoes, and other insects. Clothing that is pre-treated with permethrin is also commercially available.

## What's the proper way to use insect repellent?

It's okay to use insect repellent and sunscreen at the same time. The general recommendation is to apply sunscreen first, followed by repellent. There are also some combination products that contain both insect repellent and sunscreen. FDA regulates sunscreen as an over-the-counter (OTC) drug. The Environmental Protection Agency (EPA) regulates insect repellent products.

- Use insect repellent that contains active ingredients that have been



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registered with EPA. An EPA registration number on the product label means the product has been evaluated by EPA to ensure that it will not pose unreasonable harmful effects on people and the environment.

- Spray insect repellent on clothes or skin, but not on the face.
- Don't use insect repellent on babies. Repellent used on older children should contain no more than 10 percent DEET. Oil of eucalyptus products should not be used in children under 3 years.
- Don't use insect repellent that's meant for people on your pets.
- Use insect repellent according to the labeled instructions.
- Avoid applying it to children's hands, around the eyes, or to areas where there are cuts and irritated skin.
- Store insect repellent out of children's reach.
- Wash the repellent off with soap and water and contact a Poison Control Center (1-800-222-1222) if you (or your child) experience a reaction to insect repellent.
- After returning indoors, wash skin with soap and water to remove repellent.

### What's the best way to remove a bee stinger?

It's best to scrape a stinger away in a side-to-side motion with a straight-edged object like a credit card. Don't use tweezers because it may push more venom into the skin. After removing a stinger, wash the area with soap and water. You can apply ice or another cold compress to help reduce swelling.

### What should I do if I find a tick on me or my child?

Wearing light-colored clothing makes it easier to spot ticks. Check for ticks after outdoor activities. If you find a tick, remove it with tweezers. Grasp the tick as close to the skin as possible and pull it straight out. Then drop it in a plastic bag, seal it up, and throw it away. Early removal of a tick is important because a tick generally has to be on the skin for 36 hours to transmit Lyme disease. People who want to get a tick tested for disease or other information could check with their local health departments to see if they offer tick testing. After removing a tick, you can cleanse the area of the tick bite with antiseptic, such as rubbing alcohol or soap and water.

### What can be done for itching and pain from bites and stings?

Oral OTC antihistamines can bring itch relief. Oral OTC drugs, such as ibuprofen and acetaminophen, can provide relief of pain from bites and stings.

In addition, there are many topical OTC drugs that are applied to the skin and can provide itch and pain relief. Some of these topical OTC drugs are labeled as "external analgesics" or "topical analgesics." They contain ingredients such as hydrocortisone, pramoxine, and lidocaine. There are also topical OTC drugs labeled as "skin protectants" that provide itch relief for insect bites and stings. These products contain ingredients such as colloidal oatmeal and sodium bicarbonate.

Keep kids' nails short. If they scratch the area and break the skin, it can lead to a bacterial infection that will require treatment with antibiotics.

### When is medical attention needed?

Most bites and stings are minor and can be treated at home. But you should seek medical attention if you experience the following symptoms:


**Signs of allergic reaction:** Some people can experience anaphylaxis, a severe, life-threatening allergic reaction. This is a medical emergency that warrants calling 9-1-1 immediately. Signs of an allergic reaction, which may occur within seconds to minutes, include sneezing, wheezing, hives, nausea, vomiting, diarrhea, sudden anxiety, dizziness, difficulty breathing, chest tightness, and itching or swelling of the eyes, lips, or other areas of the face. If you or your child has ever had an allergic reaction to a sting or bite, you should be evaluated by an allergist. In some cases, you may be advised to wear a medical identification tag that states the allergy, and to carry epinephrine, a medication used to treat serious or life-threatening allergic reactions. Sometimes allergy shots may also be recommended.

**Symptoms of Lyme disease:** Lyme disease, which is transmitted through the bite of an infected tick, can cause fever, headaches, fatigue, and a skin rash that looks like a circular red patch, or "bull's-eye." Left untreated, infection can spread to the joints, heart, and nervous system. It is rarely, if ever, fatal. Patients who are treated with antibiotics in the early stages of the infection usually recover rapidly and completely. Antibiotics commonly used for oral treatment include doxycycline, amoxicillin, or cefuroxime axetil (Ceftin). People with certain illnesses related to the heart or the nervous system require intravenous treatment with drugs such as ceftriaxone or penicillin.

**Symptoms of West Nile virus:** West Nile virus, which is transmitted by infected mosquitoes, can produce flu-like symptoms including fever, headache, body aches, and skin rash. While most infected individuals have mild disease

and recover spontaneously, infection can be serious or even fatal. There is no specific treatment for West Nile virus.

**Symptoms of Rocky Mountain spotted fever:** Initial symptoms may include fever, nausea, vomiting, severe headache, muscle pain, and lack of appetite. The characteristic red, spotted rash of Rocky Mountain spotted fever is usually not seen until the sixth day or later after symptoms begin. But as many as 10 percent to 15 percent of patients may never develop a rash. Rocky Mountain spotted fever is treated with antibiotics.

**Signs of infection:** It is normal for a bite or sting to result in redness of the affected area and minor swelling. But if a bite or sting becomes infected, a fever may develop or the redness or soreness may worsen. In cases of infection, an antibiotic is the typical treatment. 

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### For More Information

Beware of Ticks ... & Lyme Disease  
[www.fda.gov/consumer/updates/lymedisease062707.html](http://www.fda.gov/consumer/updates/lymedisease062707.html)

West Nile Virus  
[www.fda.gov/oc/opacom/hottopics/westnile.html](http://www.fda.gov/oc/opacom/hottopics/westnile.html)

Updated Information Regarding Insect Repellents  
[www.cdc.gov/ncidod/dvbid/westnile/repellentupdates.htm](http://www.cdc.gov/ncidod/dvbid/westnile/repellentupdates.htm)

Insect Repellent Use and Safety in Children  
[www.fda.gov/cder/emergency/repellants.htm](http://www.fda.gov/cder/emergency/repellants.htm)

Spider Bites  
[www.umm.edu/non\\_trauma/spider.htm](http://www.umm.edu/non_trauma/spider.htm)