

Mosquito-borne Diseases

There are no human vaccines or specific treatments for mosquito-borne viruses in Georgia. Most infections are asymptomatic or mild, and symptoms go away on their own. Some people develop swelling of the brain (encephalitis) and require hospitalization. Severe cases can result in coma or death.

West Nile virus (WNV)

- WNV is a bird disease that can be spread by mosquitoes to humans and other animals. Horses can become infected with WNV and die.
- Symptoms in humans are usually mild and include fever, headache, and fatigue. It may take several months to recover completely. Some cases result in more serious disease that can include encephalitis, meningitis, paralysis, or death.
- Most cases occur in late summer or early fall.
- People over age 50 are most at risk for developing serious illness if infected.

Eastern Equine Encephalitis (EEE)

- EEE is a bird disease spread by mosquitoes to humans and other

animals. Horses can become infected with EEE and die.

- EEE is a rare disease, but it is more severe than WNV, as about half of EEE cases are fatal.
- People over age 50 and under age 15 are most at risk for developing serious illness if infected.

St. Louis Encephalitis (SLE)

- SLE is a bird disease that is spread by mosquitoes to humans and other animals.
- Symptoms are usually mild, but severe cases can cause encephalitis and/or death.
- Infants and those over age 50 are most at risk for developing serious illness if infected.

LaCrosse Encephalitis (LAC)

- LAC is a disease of small mammals spread by mosquitoes to humans.
- It is usually a mild disease with fever, headache, nausea, and/or vomiting. Severe illness or death is rare.
- Children under age 16 are most susceptible to LAC.

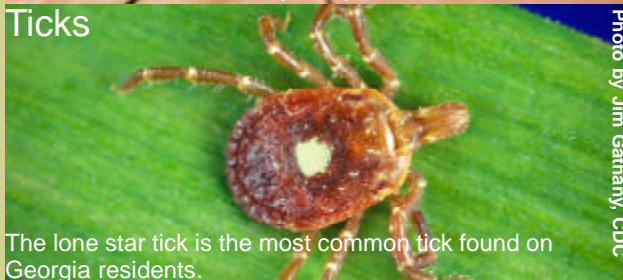
Mosquitoes



The southern house mosquito spreads WNV.

Photo by Jim Gathany, CDC

Ticks



The lone star tick is the most common tick found on Georgia residents.

Photo by Jim Gathany, CDC

How To Remove A Tick

Grasp the tick as close to the skin surface as possible with fine-tipped tweezers. Pull the tick straight out slowly. Wash and treat the bite area with a disinfectant. See your doctor if you develop early symptoms of tick-borne disease within the next 30 days. DO NOT squeeze the tick, twist the tick, light the tick on fire, or cover the tick in petroleum jelly, nail polish, alcohol, or kerosene. These "home remedies" may increase the chances of transmitting the bacteria and becoming infected with a tick-borne illness. Save the tick in rubbing alcohol and call the Georgia Poison Center at 404.616.9000 or 1.800.222.1222 for information about tick identification and testing.

Tick-borne Diseases

If you become ill within 30 days after being bitten by a tick or exposure to tick-infested areas, see your doctor. Tick-borne diseases can be treated with antibiotics, but early treatment is important. Serious illness or death can occur if not treated promptly.

Rocky Mountain spotted fever

- The most common tick-borne disease in Georgia, caused by the bacterium *Rickettsia rickettsii*.
- Symptoms may include high fever, rash (on palms and soles), headache, muscle pain, and sometimes nausea or vomiting.
- Symptoms appear 3 to 14 days after tick bite.

Human monocytic ehrlichiosis

- Caused by the bacterium *Ehrlichia chaffeensis*.
- Symptoms include fever, headache, weakness, and sometimes a rash.
- Symptoms appear 7 to 21 days after tick bite.

Lyme disease

- A rare disease in Georgia caused by the bacterium *Borrelia burgdorferi*.
- Early symptoms may include a bull's-eye shaped rash, fever, weakness, headache, chills, and muscle and joint pain.
- Late symptoms may include arthritis or meningitis.
- Symptoms appear 3 to 30 days after tick bite.

Southern tick-associated rash illness (STARI)

- A rare disease caused by the bacterium *Borrelia lonestari*.
- Symptoms are similar to those of early Lyme disease and include a bull's-eye shaped rash.

Mosquitoes and Ticks



and the diseases they spread

Remember

gardening hunting hiking stargazing

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camping grilling out working playing

you and your

lounging biking picnicking

family are

exercising sunbathing walking

outdoors

Don't Make Your Home A Home For MOSQUITOES

Don't Get "Bugged" By Mosquitoes And Ticks!

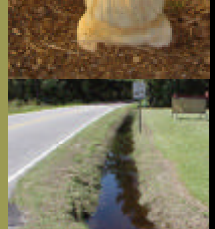
- Wear light-colored clothing so that ticks can be seen easily and removed.
- Weather permitting, wear long pants, a long-sleeved shirt with tight-fitting cuffs, and a hat when hiking, camping, or visiting tick-infested areas, or when mosquitoes are biting.
- Tuck pants into socks and shirt into pants, and wear a hat. Pull long hair back.
- When hiking, walk in the center of the trail to avoid overhanging grasses, weeds, and brush.
- Use insect repellent with DEET on exposed skin and products containing permethrin on clothes. Follow label directions. Do not use products that contain more than 10% DEET on children, or more than 30% DEET on adults. Consult a physician before using DEET on infants or pregnant women. Wash treated skin when mosquito and tick exposure has ended.
- Do tick checks frequently during the day and a full body tick check at the end of the day. Use a mirror and check behind ears, behind knees, underarms, and groin. Ask someone to help you check your back and scalp. Take a shower and wash your hair before going to bed.
- Do not sit directly on the ground—use a blanket or towel.
- Remove excess brush and keep grass mowed around the house.
- Ask your veterinarian about the West Nile vaccine for horses and for suggestions about how to protect your pets against mosquitoes and ticks. Do not allow outdoor pets on furniture or bedding.

Mosquitoes only need a very small amount of water on which to lay their eggs, and many places around your home can breed mosquitoes. Once they hatch, they don't fly far from home, which means if you provide breeding grounds you will have adult mosquitoes! Eliminate all standing water from your property to prevent mosquito bites.



Spraying For Mosquitoes

The spraying of pesticides to control adult mosquito populations (called "adulticiding") is **not** the most effective or the most cost-efficient method of mosquito control. The best way to control mosquitoes is to prevent them from breeding or to eliminate them before they become adults (called "larviciding"). Larvicide can be purchased at home improvement and discount stores. **You** can have a significant effect on local mosquito populations if you reduce mosquito-breeding areas on your property. Mosquito control varies greatly throughout the state because it is done at the local level. If you have specific questions about mosquito control in your area, contact your county health department or public works.



- Store wheelbarrows, tubs, buckets, barrels, and kiddie pools upside down so that water cannot accumulate in them.
- Do not leave saucers under flowerpots outside, or dump the saucers once a week.
- Dump rain barrels once a week, or screen or cover them, or treat with larvicide.
- Change the water in birdbaths and small wading pools at least once a week. Aerate ornamental ponds, stock them with mosquito-eating fish, or treat with larvicide.
- If garbage cans are stored outside, make sure they have tight-fitting lids that do not hold pockets of water.
- Properly maintain swimming pools and ensure that swimming pool covers do not allow rainwater to collect on them.
- Ensure that water does not pool in boats stored outside or on their covers.
- Keep children's toys inside.
- Make sure roof gutters drain properly. Clean clogged gutters in the spring and fall.
- Make sure your home and porch have tight-fitting screens that keep mosquitoes out.
- Clean up trash along the roadway.
- Dispose of old tires properly and drill holes in tire swings so water can drain.
- Do not leave pet food out (discard if your pet does not eat it all right away to deter rats and other vermin) and change the water bowl daily.
- Fill in any low places in the yard if water stands there for several days.
- Throw larvicide into retention/detention ponds and other small bodies of water that cannot be drained.
- Contact your county public health department or mosquito control for help with controlling mosquito problems.



keep yourself and your family safe

The Creepy Crawly Facts

Mosquitoes

- Only female mosquitoes bite.
- Not all kinds of mosquitoes bite humans, many feed only on animals.
- Mosquitoes need water to breed. Almost anything that will hold water for one week can breed mosquitoes.
- The mosquitoes that carry West Nile virus do not fly far from where they breed.

Ticks

- Ticks are commonly found in shady areas, moist ground litter, tall grass, brush, low tree branches, and along trails in the woods. They are also found in backyards that back up to woody areas.
- Ticks do not fly or jump.
- Not all ticks carry diseases.
- Ticks must be attached for a few hours to transmit disease.



For more information about mosquito- and tick-borne diseases, visit our website at <http://www.health.state.ga.us/epi/vbd/index.asp>. Or, you may contact the Georgia Division of Public Health at 404-657-2588 or gaepinfo@dhr.state.ga.us.