

ALL ABOUT ALPHA-GAL SYNDROME

(Mammalian meat allergy, alpha-gal allergy, red meat allergy, tick bite meat allergy)



Department
of Health

About Alpha-Gal Syndrome

Alpha-gal syndrome (AGS) is a serious allergy that could be lifelong. It can occur after a tick bite, even if the tick is removed right away. Preventing tick bites is extremely important.

AGS is also known as red meat allergy, alpha-gal allergy, mammalian meat allergy, or tick bite meat allergy. It causes allergic reactions to a sugar molecule found in the meat of mammals, like beef, pork, and lamb.

What Causes this Allergy?

- The saliva of some tick species naturally contains a sugar molecule called alpha-gal. (This sugar is also natural in some food and animal products).
- When a tick bites, it can pass this sugar into your body through its saliva.
- After getting bitten, some people become sensitive to this sugar and develop AGS, an allergy to foods that contain the sugar. In New York State, this allergic reaction happens most often when people are bitten by lone star ticks.

How and Where Could I Get AGS?

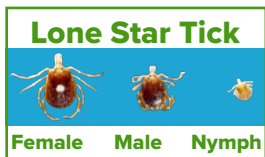


Image courtesy of JL Occi.

New York State (NYS) residents are diagnosed with AGS every year, especially on Long Island where lone star ticks are common. In NYS, the syndrome is usually caused by lone star tick bites, but other kinds of ticks can cause the same type of reaction, or allergy.

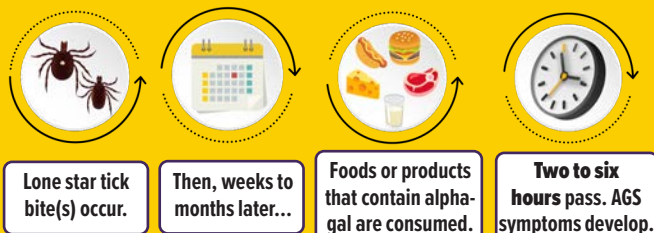
Lone star ticks do not always have a white dot. They look different depending on their stage of development but all stages can cause AGS.

Who is at Risk for AGS?

- Anyone can be at risk for AGS, but especially those who work or spend time outdoors.
- People of all ages can develop AGS, but most cases have been reported in adults.
- Not everyone who gets bitten by a lone star tick will develop AGS.

What Does AGS Look Like?

AGS symptoms can range from mild to severe. They are usually delayed. **Symptoms appear 2-6 hours** after consuming products that contain alpha-gal.



Symptoms can include:

 Digestive symptoms: stomach pain, nausea, vomiting, diarrhea, heartburn, and indigestion	 Rash or hives, swelling of the lips, throat, tongue, or eyelids. Cough, shortness of breath, wheezing, and difficulty breathing	 Severe symptoms can include: A drop in blood pressure, dizziness, feeling faint/fainting, severe stomach pain, and/or anaphylaxis—a medical emergency that can be life-threatening.
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Anyone who has a severe allergic reaction should seek emergency medical care right away.

How to Diagnose and Manage AGS:

- AGS should be diagnosed and managed under the care of an allergist or a health care provider familiar with AGS.
- To diagnose AGS, a health care provider needs a detailed patient history, a medical examination, and a blood test. This test looks for the specific antibodies your immune system creates after a tick bite. Your immune response can cause an allergy to red meat and dairy products.
- A positive blood test (alpha-gal-specific IgE test) alone does not automatically mean you have AGS. Some people have a positive blood test but never experience symptoms.

How Can I Prevent Symptoms if I Already Have AGS?



Avoid foods with alpha-gal, like meat from mammals—beef, pork, rabbit, lamb, and venison. You may also need to avoid some mammalian products, including gelatin and milk products. A complete list can be found at [CDC's Fast Facts: Products That May Contain Alpha-gal](#).



You can still eat meat that does not contain alpha-gal, including poultry (like chicken and turkey) and fish.

How to Prevent Tick Bites:

- Consider using an EPA-registered repellent on your skin.
- Use permethrin on your clothing and gear. Permethrin is an insecticide spray or wash for clothing and gear.
- Wear light-colored clothes. Tuck pants into socks or boots. Tuck shirts into pants.
- Avoid tick-heavy places and walk in the center of trails.
- Regularly check for ticks when outdoors and at home.
- To kill ticks, put clothing in the dryer on high heat—for at least 10 minutes.
- Shower after spending time outdoors.
- Remove attached ticks right away. Don't wait.
- Be sure to include outdoor pets in a tick check.

WATCH:
How to
remove a tick

