

# Printable Factsheet for Alpha-Gal Syndrome

Sources: *Annals of Allergy, Asthma & Immunology*, *Current Allergy and Asthma Reports*



From the bite of a Lone Star tick to an unexpected allergic reaction to meat, Illinois is among the top 13 states for positive cases of a dangerous and lesser-known food allergy called alpha-gal syndrome, according to a study in the *Annals of Allergy Asthma, & Immunology*.

## What is Alpha-Gal Syndrome?

Alpha-gal, or galactose- $\alpha$ -1,3-galactose, is a sugar molecule commonly found in mammals, excluding humans and primates such as apes and monkeys. For most people, this molecule doesn't typically present any health risks.

However, some people develop a condition known as alpha-gal syndrome (AGS), an allergic immune response to the molecule, which is found in red meat, such as beef, pork, venison, and lamb. In some cases, the allergic response may be mild, but others may experience life-threatening anaphylactic reactions.

AGS is thought to be from the bite of a Lone Star tick. Unlike other ticks that require various attachment times to transmit diseases, the Lone Star tick carries alpha-gal in its saliva, so an immune response can be triggered immediately upon getting the bite. Key identifiers of the Lone Star tick include one white dot in the center of the body on females and white spots or streaks along the outer edge of the body on males.



## What are the Symptoms of Alpha-Gal Syndrome?

Research in the journal *Current Allergy and Asthma Reports* indicates most people will develop the symptoms of AGS 3 to 6 hours after consuming meat products, such as beef, pork, or lamb, as opposed to certain food reactions that occur within minutes of exposure. The delayed onset of symptoms is a critical feature that distinguishes AGS from other food allergies.

The symptoms can vary in intensity and include:

- Hives
- Itching
- Swelling in the face or other parts of the body
- Wheezing, coughing, or shortness of breath
- Asthma attacks
- Abdominal discomfort, including cramping, bloating, diarrhea, and vomiting
- Rapid heart rate
- Low blood pressure
- Anaphylaxis, a severe allergic reaction requiring prompt medical care





## How is Alpha-Gal Syndrome Diagnosed?

A health care provider, usually an allergist, can perform a blood test to examine the presence of IgE antibodies to alpha-gal in the blood. Additionally, they may perform a skin prick test to identify allergies to certain meats and other mammalian products.

## How is Alpha-Gal Syndrome Treated?

Currently, there's no known cure for AGS, but people who reduce their consumption of red meat and other mammalian products can help lower the likelihood of experiencing reactions. Note: Alpha-gal may also be present in other items, so those with the allergy should carefully inspect the labels of all the products they consume or use for ingredients that may have origins in red meat.

Some reactions can be severe, so those with AGS may need to carry prescription epinephrine and other antihistamines at all times and require treatment at the emergency room.

## How to Remove a Tick

To reduce the chances of worsening the immune system's response to the alpha-gal molecule, it's essential to take aggressive preventative measures to avoid further tick bites.

## Where to Send for Tick Testing

- Results in 3 days: [tickreport.com](http://tickreport.com)
- Results in 24 hours: [ticknology.com](http://ticknology.com)

There is a fee for tick testing. Follow company directions for mailing. Tick testing is intended for diagnostic purposes.

Get FREE tick testing identification through INHS Medical Entomology Lab.

Visit: [medical-entomology.inhs.illinois.edu/research/free-tick-identifications/](http://medical-entomology.inhs.illinois.edu/research/free-tick-identifications/)

### How to Remove a Tick:

- Do not squeeze or twist the tick
- Do not cover the tick with any substance, including essential oils, soap, or oil
- Do not burn with a match

Attempts to burn or smother the tick may cause the tick to regurgitate pathogens, increasing the chances of infection.

Instead, do the following:

1. With fine-tipped tweezers, grasp the tick as close to the skin as possible.
2. Pull upward with firm, even pressure.
3. If the head remains in the skin, see if you can pull it out but don't dig and rip the skin.
4. Clean the bite area.
5. Keep the tick! It can be tested. Place it in a sealable bag to send it to a tick testing site. Do not crush it.

Check the rest of your body for more ticks.