

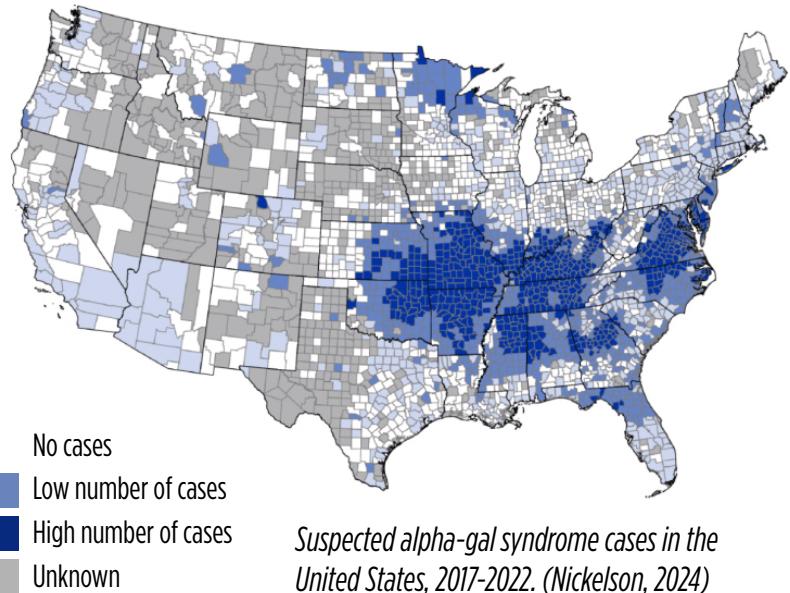
# Alpha-Gal Awareness

## Introduction

Alpha-gal syndrome (AGS) is a food allergy to mammal meat and other products made from mammals. It is caused by a tick bite and is sometimes called a tick bite meat allergy or a red meat allergy.

Symptoms are different for different people. They can range from mild to life-threatening. There is no known cure, so finding out early or preventing AGS is important.

Learning about AGS and ways to prevent tick bites can lower the risk of serious symptoms. This guide covers alpha-gal syndrome symptoms, testing, and prevention tips. For more help with meal planning, cooking, and shopping to avoid alpha-gal, check out MU Extension publications *Cooking with Alpha-Gal Syndrome* (N1351) and *Shopping for Alpha-Gal Syndrome* (N1352).



## Mammal Meat and Ticks

Red meat from mammals like beef, pork, rabbit, venison and sheep has a carbohydrate called alpha-gal. These molecules are also found in dairy foods and mammalian byproducts. Alpha-gal is also found in the saliva of the lone star tick. When this tick bites a person, it can transfer alpha-gal, potentially causing alpha-gal syndrome.

The lone star tick is common in the south and central U.S., including Missouri. Missouri has one of the higher rates of AGS.

## Symptoms

Two to six hours after eating meat, dairy or mammal byproducts, a person with AGS might have an allergic reaction. Common symptoms include hives and/or stomach problems, but breathing symptoms can also occur.

## Testing Tools

There are four steps to an AGS diagnosis. Your healthcare provider will typically:

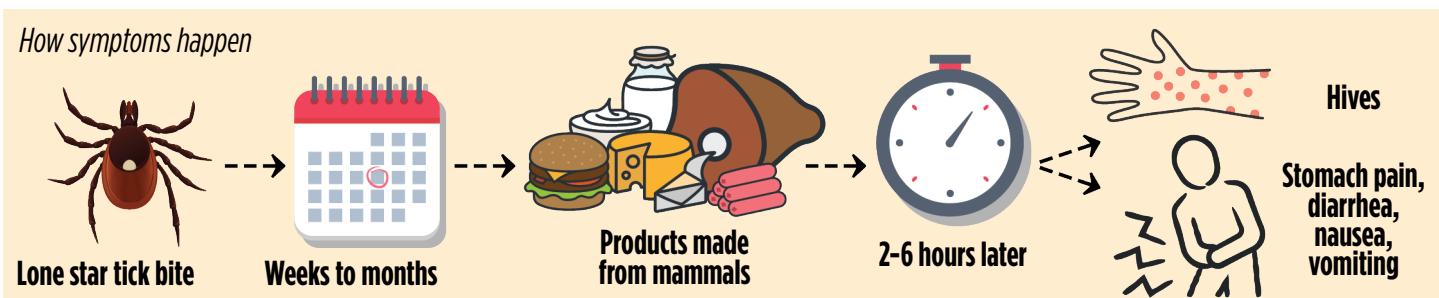
1. Look at your medical history
2. Do a physical exam
3. Take a blood test that checks levels of IgE allergen response
4. Watch for reactions to mammal meat foods and products



## Did You Know?

Many people with AGS report both waking up at night with stomach problems and a history of tick bites or outdoor hobbies.

The symptoms of AGS can change over time. People who avoid tick bites may see their reactions decrease. Yet, new tick bites can make the allergy worse and lead to stronger reactions.



## Common Symptoms of Alpha-gal Syndrome Reaction

- Hives or itchy rash
- Nausea or vomiting
- Heartburn or indigestion
- Diarrhea
- Drop in blood pressure
- Cough, shortness of breath, or difficulty breathing
- Swelling of the lips, throat, tongue, or eyelids
- Dizziness or faintness
- Severe stomach pain

## Prevention

Stopping tick bites is key to getting AGS under control. People with AGS should also avoid being bitten again. Repeated bites can make the allergy worse.

Ticks can bite at any time of year, but most bites happen from April to September. To avoid ticks:

- Stay away from grassy, brushy and wooded areas whenever possible.
- Walk in the center of trails while hiking.
- Wear light-colored clothing so you can spot ticks more easily.
- Tuck your pant legs into your socks or tape them.
- Use EPA-approved insect repellents on exposed skin, such as those with DEET or picaridin.
- Treat clothing and gear with products having 0.5% permethrin or buy pre-treated items.
- The CDC has more [information on their website](#).

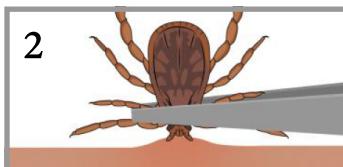
### After being outside:

- Check your clothes, gear, and pets for ticks.
- Take a shower and change clothes as soon as you can.
- Remove any attached ticks right away.
- If not washing immediately, dry your clothes on high heat for 10 minutes to kill any ticks that might still be on them.

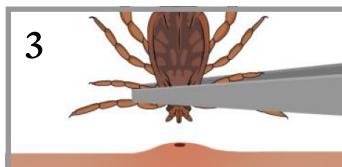
## Steps to Remove Ticks



Check for ticks



Grab tick close to skin



Pull out straight and dispose



Wash hands and bite

## More resources and agencies

Missouri Department of Conservation

Missouri Department of Health and Senior Services

Center for Disease Control and Prevention

## Sources

- McGill S., Hashash, J. G., & Platts-Mills, T. A. (2023). AGA clinical practice update on alpha-gal syndrome for the GI clinician: Commentary. *Journal of Clinical Gastroenterology and Hepatology*. 2. 891-896. [View source online](#).
- Missouri Department of Health and Senior Services (2023). Missouri tickborne disease story map. Retrieved from [View source online](#).
- Nickelson, P. F. (2024). Alpha-gal syndrome: Important information for Missouri healthcare and public health professionals. Missouri Department of Health and Senior Services Health Advisory. [View source online](#).

