Alpha-gal Syndrome: Myths and Facts

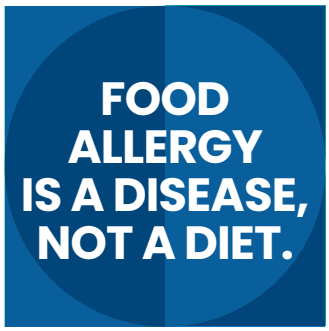
Not just a 'red meat' food allergy

What Is Alpha-gal Syndrome?

Alpha-gal syndrome (AGS) is caused when a carbohydrate known as galactose-α-1,3-galactose commonly referred to as alpha-gal is introduced into the body through the saliva of a tick, causing the body to develop an immune response.

Myth: It's just a red meat allergy.

Fact: Alpha-gal syndrome is frequently described as a "red meat allergy," but that label does not reflect the full scope of the condition. People with alpha-gal syndrome can react to any mammalian meat—including pork, lamb, and venison—as well as mammal-derived ingredients like dairy, gelatin, and certain medications. Pork is one of the most common triggers in alpha-gal syndrome. Because pork was framed as "the other white meat" in marketing campaigns, people don't realize that pork is fully mammalian and contains alpha-gal. Pork can cause reactions as severe as beef.



Myth: People with alpha-gal syndrome can just avoid red meat.

Fact: Alpha-gal syndrome is not just a food allergy—it's a systemic sensitivity to mammal-derived substances. For people who work with mammalian animals or products (farmers, veterinarians, ranchers, meat processors, lab workers, wildlife professionals), exposure can occur through animal dander, blood, serum, or bodily fluids. For some, continued exposure can be life-threatening, making it impossible to safely continue their profession.

Some individuals sensitized to alpha-gal will also get symptoms from ingestion of dairy products or ingredients such as gelatin. People may also react to alpha-gal present in certain vaccines, medications, medical products, and personal care items made with mammal-derived components. A small percentage of people with alpha-gal syndrome will even experience symptoms when they are in the presence of fumes from grilling due to inhalation of meat fat droplets.

Myth: This isn't affecting our food supply or rural economy.

Fact: AGS is already impacting farmers, ranchers, hunters, and growers, especially in regions where livestock agriculture dominates. Consequences include loss of skilled labor, early retirement or forced job changes, increased healthcare costs, and safety risks for workers to remain exposed. Because AGS often strikes adults in their prime working years, its ripple effects extend beyond individuals to families,

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farms, and local economies.

Myth: Food allergy reactions always begin with hives and difficulty breathing.

Fact: While alpha-gal syndrome is an IgE-mediated food allergy, reactions look different than typical food allergy. Unlike most IgE-mediated allergies that cause hives or swelling, alpha-gal syndrome reactions are often delayed 2-6 hours after eating and often present primarily as gastrointestinal symptoms—intense abdominal pain, nausea, vomiting, or diarrhea. This presentation leads many people and clinicians to dismiss it as food poisoning or a digestive issue rather than recognizing it as an allergic response. Some people do experience hives or anaphylaxis, but the delayed, GI-focused reaction is common and frequently misdiagnosed.

Myth: Only one type of tick causes alpha-gal syndrome.

Fact: Multiple tick species can cause AGS. In the United States, the lone star tick is most often linked to the condition, but other ticks—including the black legged tick—have also been connected to cases.

Myth: Only people in the areas where lone star ticks live are at risk for developing alpha-gal syndrome.

Fact: Tick ranges are expanding driven by climate change, warmer winters, wildlife migration, and suburban sprawl. As a result, regions that historically never saw AGS cases are now reporting them, catching clinicians and residents unprepared. Many people develop the condition outside of traditionally "high-risk" zones.

Myth: Alpha-gal syndrome is extremely rare.

Fact: Between 2010 and 2022, 110,000 cases of alpha-gal syndrome were identified, but this may only be the tip of the iceberg. AGS is not a reportable disease in most states, which means that these diagnoses do not have to be reported to the CDC. As a result, the true number of cases is likely much higher. According to the CDC, as many as 450,000 people may be affected.

Myth: You cannot prevent alpha-gal syndrome.

Fact: Because alpha-gal syndrome is transmitted by a tick bite, avoiding tick exposure reduces the risk of developing AGS.

Learn more, including the discussion of alpha-gal syndrome in FARE's *National Indicator Report on Food Allergy,* and sign up for FARE updates at **FoodAllergy.org/AGS**

About FARE

FARE (Food Allergy Research & Education) is the leading nonprofit organization that empowers the food allergy patient across the journey of managing their disease. FARE delivers innovation by focusing on three strategic pillars—research, education, and advocacy. FARE's initiatives strive for a future free from food allergy through effective policies and legislation, novel strategies toward prevention, diagnosis, and treatment, and building awareness and community. To learn more, visit **FoodAllergy.org**

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