

Alpha-gal syndrome: Foods to Avoid

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Alpha-gal syndrome typically presents with abdominal pain, diarrhea, nausea or vomiting. But it can also lead to swelling of the face or throat, voice changes, difficulty breathing, hives, or fainting, according to recent article “[AGA Clinical Practice Update on Alpha-Gal Syndrome for the GI Clinician: Commentary.](#)” by McGill and colleagues.¹

According to the authors, the syndrome is an IgE-mediated reaction that can occur hours after eating beef, pork, other mammalian meat, or mammalian-derived products.

“A history of awakening at night from sleep with GI distress may suggest alpha-gal given the typical hours in delay from alpha-gal ingestion to reaction.”

Investigators believe alpha-gal syndrome occurs after an individual is bitten by an infected tick or develops a parasitic infection. “In the United States, the Lone Star tick, an ectoparasite whose principal host is deer, is strongly implicated,” the authors write.

Individuals with alpha-gal syndrome should take preventative measures to avoid further tick bites because “additional tick bites may worsen the allergy.”

McGill and colleague summarized the proposed pathophysiology. “When the sensitized human eats mammalian meat or mammalian-derived products, the antigen alpha-gal is absorbed by the GI tract bound to fat in a glycolipid, and incorporated into chylomicrons, which enter the circulation in roughly 2 hours.”

“When the antigen alpha-gal then binds to IgE antibodies present on mast cells that richly populate the GI tract, these mast cells degranulate and release their abundant supplies of histamine and other mediators,” the authors explain.

“These mediators in turn can act on sensory nerve endings to cause pain on intestinal smooth muscles to cause contractions, and on mucous glands to secrete mucous,” the authors write.

Food to avoid for alpha-gal syndrome patients

The American Gastroenterological Association has offered guidance on foods to avoid for patients with alpha-gal syndrome. They include:

- Pork, beef, venison, and other mammalian meat - in essence, any animal with hair;
- Products made from these mammals, such as lard, butter, milk, and others should be avoided;
- Aerosolized alpha-gal (i.e., from frying bacon or beef products);
- Gelatin derived from the collagen in pig or cow bones such as marshmallows, gummy bears, gelatin candies, and desserts also may be problematic.

Fish, seafood, turkey, chicken, and other fowl are acceptable for patients with alpha-gal syndrome.

In cases of accidental exposure, patients can take diphenhydramine, 25 milligram tablets. Self-injectable epinephrine might help if respiratory compromised.

The authors suggest, “Gastroenterology clinicians should be aware of the diagnosis and management of alpha-gal syndrome because a subset of alpha-gal allergic patients show GI symptoms such as abdominal pain, diarrhea, nausea, or vomiting without skin changes or anaphylaxis.”

Related Articles:

[Tick bite induces red meat allergy](#)

[European ixodes tick found to carry alpha gal protein associated with red meat allergy](#)

References:

1. McGill SK, Hashash JG, Platts-Mills TA. AGA Clinical Practice Update on Alpha-Gal Syndrome for the GI Clinician: Commentary. Clin Gastroenterol Hepatol. Apr 2023;21(4):891-896. doi:10.1016/j.cgh.2022.12.035

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