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Researchers Find Certain Blood Types Protective Against Red Meat Allergy

Research presented at the 2018 AAAAI/WAO Joint Congress suggests that people with B or AB blood types may be less prone to alpha-gal, or red meat, allergy.

Orlando, FL - Red meat allergy is a recently recognized allergic reaction to the substance galactose- α -1, 3-galactose (alpha-gal). New research suggests that some blood types may have a protective effect against the allergy.

The abstract, “B Antigen Protects Against the Development of α -Gal-Mediated Red Meat Allergy,” presented at the 2018 American Academy of Allergy, Asthma & Immunology (AAAAI) and World Allergy Organization (WAO) Joint Congress concluded that people with blood type B or AB may be five times less likely to be diagnosed with red meat allergy.

“The molecular structure of alpha-gal is similar to that of the B antigen, a carbohydrate found on blood cells of people with B or AB blood types,” said author Jonathan R. Brestoff, MD, PhD, MPH. “We hypothesized that people who express the B antigen have immune systems that are trained to ignore alpha-gal because it looks like an innocuous self-antigen. If that is correct, then people who make the B antigen should be less likely to undergo allergic sensitization to alpha-gal and, subsequently, protected from developing red meat allergy.”

The researchers observed and compared the frequencies of blood types O, A, B and AB in a group of 280 people, 92 of which had a red meat allergy. They expected people with B or AB blood types would make up about 20% of the total cases of red meat allergy. Instead, they observed that only 4.35% of the red meat allergy patients had a blood type with the B antigen.

“Patients expressing the B antigen were much less likely than those without the B antigen (blood types O or A) to react to alpha-gal,” said Brestoff. “In fact, patients with B or AB blood types were five times less likely to have been diagnosed with red meat allergy.”

The scientists noted that more research is needed to confirm the exact protective mechanism. To learn more about alpha-gal allergy, [visit aaaai.org](http://visit.aaaai.org). Research presented at the AAAAI/WAO Joint Congress, March 2-5 in Orlando, Florida, is published in an [online supplement to *The Journal of Allergy and Clinical Immunology*, an official journal of the AAAAI.](#)

The American Academy of Allergy, Asthma & Immunology ([AAAAI](http://aaaai.org)) represents allergists, asthma specialists, clinical immunologists, allied health professionals and others with a special interest in the research and treatment of allergic and immunologic diseases. Established in 1943, the AAAAI has more than 7,000 members in the United States, Canada and 72 other countries.

The AAAAI's [Find an Allergist/Immunologist](#) service is a trusted resource to help you find a specialist close to home.

The World Allergy Organization ([WAO](#)) is an international alliance of 97 regional and national allergy, asthma, and immunology societies. Through collaboration with its Member Societies WAO provides a wide range of educational and outreach programs, symposia and lectureships to allergists/immunologists around the world and conducts initiatives related to clinical practice, service provision, and physical training in order to better understand and address the challenges facing allergists/immunologists worldwide.

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