

Risk of anaphylaxis after vaccination low

December 8, 2015

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Article type: [News](#)

Topics: [Pharmacology](#)

- McNeil MM, et al. J Allergy Clin Immunol. Oct. 6, 2015, www.jacionline.org/article/S0091-6749%2815%2901160-4/abstract.

Anaphylaxis after vaccination was rare in all age groups, and no cases were identified in children younger than 4 years old, according to an analysis of Vaccine Safety Datalink (VSD) data from 2009-'11 and a review of medical records.

An Institute of Medicine committee recently concluded that evidence supports a causal relationship between anaphylaxis and several vaccines, including measles-mumps-rubella, varicella and influenza. The only population-based study on the risk of life-threatening allergic reactions from vaccines used VSD data from 1991-'97. Since then, the recommended immunization schedules have changed.

The authors of this study analyzed VSD data from Jan. 1, 2009, through Dec. 31, 2011, to estimate the incidence of anaphylaxis after vaccination in children and adults, and to describe demographic and clinical characteristics of confirmed cases. They identified potential cases of anaphylaxis using diagnosis and procedure codes. Then, they reviewed charts of potential cases to determine if they met the Brighton Collaboration criteria for anaphylaxis as well as if they had a history of or were treated for atopic conditions.

A total of 25,173,965 vaccine doses were administered at 17,606,500 visits. Researchers identified 33 confirmed vaccine-triggered anaphylaxis cases for a rate of 1.31 per million vaccine doses. No deaths were reported.

It was difficult to determine rates for individual vaccines because most were given with other vaccines. Among vaccines given alone, those that most frequently caused anaphylaxis were inactivated trivalent influenza vaccine (1.35 cases per million doses) and inactivated monovalent influenza vaccine (1.83 cases per million doses).

In addition, 28 (85%) of the cases had a history of atopic disease. Symptoms occurred within 30 minutes for eight cases, 30-120 minutes for eight cases and two to four hours for 10 cases.

The authors noted that although epinephrine is the recommended treatment for anaphylaxis, it was given to only 15 (45%) cases, while 28 (85%) cases were treated with antihistamines and 17 (52%) with corticosteroids.

They concluded that although anaphylaxis after vaccination is rare, vaccine providers should be prepared to treat the potentially life-threatening allergic reaction.

Resources

- [Centers for Disease Control and Prevention immunization schedules](#)
- [AAP policy, "Recommendations for Prevention and Control of Influenza in Children, 2015–2016"](#)
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