

II. ANAPHYLAXIS STATISTICS

Risk and Incidence of Anaphylactic Reactions

- The number of people in the U.S. with allergic sensitivities that put them at risk for anaphylaxis may be as high as 45 million.⁵¹ Actual incidence is unknown, because anaphylaxis is underreported due to lack of a standardized, internationally accepted definition and inconsistencies in diagnosis.

At-Risk for Anaphylaxis

- Up to 5% of the U.S. population (15 million Americans, based on the present population of 300 million) may be allergic to insect stings.^{51,52}
 - 25% of adults are sensitized to insect venom.⁵³
 - 48 to 67 percent of people who have had a reaction to an insect sting could have a repeat reaction. In general, second reactions are more severe than the first.⁵⁴
 - 40 to 100 anaphylactic deaths from insect stings occur each year.^{52,55}
- Approximately 12 million Americans have food allergies.⁵²
 - The incidence of food allergy is increasing.⁵⁶
 - At least 1.1 percent (3.3 million) Americans are allergic to peanuts or tree nuts.⁵⁷
 - The prevalence of peanut allergy in American children under five years of age doubled between 1999 and 2004.⁵⁸
 - Each year, 30,000 Americans require emergency room treatment for food allergies, and 100-200 Americans die from allergic reactions to food.⁵⁷
 - Based on the present population of 300 million and the epidemiology of food allergies, an estimated 32,400 food-induced anaphylactic episodes can occur in the U.S. each year, resulting in about 2000 hospitalizations and 150-200 deaths.⁵⁹
- An estimated 3 to 18 million people are allergic to latex.^{52,60}
 - Almost half of patients allergic to natural rubber latex are also allergic to fruits including avocado, banana, kiwi and chestnut.⁶¹
 - Because of their increased exposure to latex gloves, health care workers have about a 10% risk of latex allergy.⁶²
 - Between 1988 and 1992, the FDA received reports of more than 1000 systemic allergic reactions to latex, 15 of which were fatal.⁶³
 - Latex sensitivity declined in 81% to 100% of health care workers after latex was removed from the workplace and/or workers were taught to avoid it.^{64,65}
- 0.7 to 10 percent (as many as 30 million people, based on the present U.S. population of 300 million) are allergic to penicillin.⁵¹
 - Penicillin is responsible for an estimated 75 percent of anaphylaxis deaths in the U.S.⁵⁵
 - Most deaths from penicillin have occurred among individuals with no history of allergy.⁶⁶
 - Anaphylactic reactions during anesthesia range from 1 in 3,500 to 1 in 25,000 cases, most often from neuromuscular blocking agents.^{67,68}
- People with asthma are at increased risk for anaphylactic reactions to food and for anaphylactoid reactions to radiocontrast media (intravenous dyes used in xray diagnostic tests).^{66,69,70}

- People with allergies are at increased risk for anaphylaxis from insect venom, latex and exercise and for anaphylactoid reactions to radiocontrast media, but not for reactions to medications.^{66,71}

Incidence

- Anaphylaxis occurs at a rate of 50 to 2,000 episodes per 100,000 people in the U.S.⁷²
 - Anaphylaxis causes approximately 1500 deaths in the U.S. annually.⁵⁵
 - A majority of anaphylaxis victims have pre-existing allergies.^{71, 73}
 - The cause of anaphylaxis is unidentified in one-third to two-thirds of patients.^{71,73}
 - There were 1.03 million allergy-related emergency department visits each year from 1993 to 2004.⁷⁴

Importance of Carrying and Using Epinephrine

- Studies of fatal anaphylactic reactions to food have found that most of the episodes occurred away from home, and most of the victims did not have epinephrine with them.^{69,70}
- In a study of fatal and nonfatal anaphylaxis, none of those who died received epinephrine before the onset of severe respiratory symptoms, whereas all of the survivors received epinephrine before or within five minutes of developing severe symptoms.⁷⁵

Speed of Potentially-Fatal Anaphylaxis

- It takes only one to two minutes for a mild allergic reaction to escalate to anaphylaxis.⁷⁶
- The faster the onset of an anaphylactic reaction, the greater the likelihood that it will be severe.⁶⁶

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