

Anaphylaxis

Pathophysiology, Risks, Manifestations, Management

What is Anaphylaxis?

It is a severe immediate hypersensitivity reaction to an allergen, such as certain drugs, foods, and insect bite or sting.

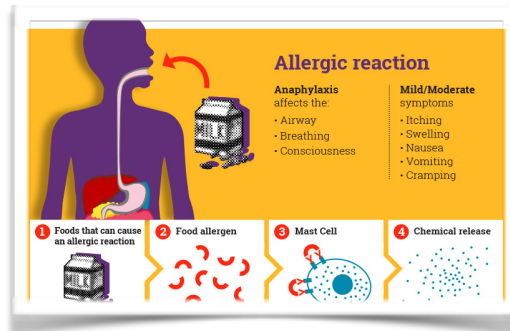
Anaphylaxis is caused by the IgE-mediated mast cell degranulation. This process results in release of inflammatory immune mediators causing increased vascular permeability, increased mucus production, peripheral dilation, and bronchial smooth muscle contraction.

Risk Factors

- Sensitization: being exposed to or ingesting allergens who are highly sensitized to them are at greater risk of having anaphylactic reaction.
- Family/Personal History: having a family history of allergic diseases increases the likelihood of developing anaphylaxis. Also, having previous anaphylactic reactions and atopic conditions increases the risk of having anaphylaxis.

Management

- If you are ever experiencing an anaphylactic shock, you need to minimize exposure to the allergen as much as possible.
- Inject epinephrin (EpiPen) by the intramuscularly route in the vests laterals muscle (outer thigh). After injection, it is best to lie on your back with your lower limbs elevated.
- It is crucial that you call 911 or go to the nearest emergency department as soon as possible.
- At the hospital, nurses will monitor your vital signs (blood pressure, heart beat, and oxygenation). When indicated, supplemental oxygen and fluid will be administered and, if necessary, cardiopulmonary resuscitation will be performed.



Skin

Redness, hives/welts, itching, swelling, and wheal/flare reactions



Gastrointestinal

Nausea, vomiting, diarrhea, and abdominal cramps



Cardiovascular

Hypotension, dysrhythmias, tachycardia, and cardiac arrest



Respiratory

Wheezing, stridor, hoarseness, and coughing



Neurological

Headache, dizziness, and paresthesia