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Module 3: Reaction YouTube Video

Anaphylactic response is also known as an immunological response. This response can come from everyday things such as foods, medications, and insects, which are known as allergens. Allergic response can be systemic or localized. Allergies can be passed from parent to child. The most common allergen is pets, then shellfish followed by peanuts. Allergies have increased through the years, and it is not completely understood why this is occurring. The pathophysiology of anaphylactic shock is related to a person's body reaction to foreign substances. The foreign substances that are introduced to the body interact with the mast cells within the individual. It is important to know that as antigen molecules enter the blood stream, they began to interact with IgE- Immunoglobulin E antibodies. The union of antigen and antibodies creates the biochemical events. The IgE sends a signal which release enzymes, which then leads to a large amount of calcium to release to the cells. Mast and basal cells release a variety of compounds, and this is called degranulation.

Anaphylaxis ranges with clinical symptoms that can be mild, moderate, severe, protracted, and biphasic. You will experience the following physiological effects from anaphylaxis: vasodilation, vascular permeability, muscular contraction, and myocardial depression. The cutaneous anaphylactic responses are hives, itching and flushing, and often appear first. The respiratory anaphylactic response is when an individual begins to experience things as such shortness of breath, wheezing and cough. The Gastrointestinal responses are cramping in the abdominal region, diarrhea, and vomiting. The heart will also respond to anaphylaxis through tachycardia. The facial region response when anaphylaxis occurs is runny nose, swelling of the eyes, and swelling of the mouth region. Individuals can also experience dizziness, loss of consciousness, headache, and anxiety, especially when experiencing shock. It is important to know that anaphylaxis shock is a medical emergency and can reappear 72 hours after initial exposure.

In order to properly treat anaphylaxis, you must act quickly through self-administering epinephrine. The key ingredient in epinephrine is adrenaline. Epinephrine acts quickly to get to organ sites to counter the effects of chemical mediators. Once the chemical mediators are counteracted the heart will be stimulated and the muscle contraction of the lungs will relax. Not in all cases will the patient respond to one dose of epinephrine and will need two doses of this medications to counteract the chemical mediators. You would administer a second dose if there was no improvement of anaphylaxis symptoms within 5 minutes of the first dose. It is important to recognize that having a second dose could be life saving and should be considered for patients that have a history of anaphylaxis. Often this self-administration saves individuals lives until they can get to a doctor or hospital for further care.