**General Information about Anaphylaxis**

Anaphylaxis is a severe and potentially life-threatening allergic reaction. It is a reaction that involves the immune system and can occur within seconds to minutes of exposure to a trigger. Triggers can include a variety of substances, such as foods, biting/stinging insect venom, medications, latex, etc.

Anaphylaxis can be treated with an injection of epinephrine and a follow-up trip to an emergency room or urgent care. If you experience an anaphylactic reaction and do not have an epinephrine auto-injector on you, you must seek medical attention immediately. Anaphylaxis can be fatal if it is not treated as soon as possible.

**Signs and Symptoms of Anaphylaxis**

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| Organ System | Signs | Symptoms |
| Ocular | Eye redness or swelling (conjunctival injection or edema) | Eye itching  Eye watering |
| Upper Respiratory | Swelling of the nasal mucosa  Watery drainage  Throat or mouth swelling (edema) | Nasal congestion  Nasal itching  Sneezing  Runny nose  Sensation of a lump in the throat  Dysphasia (difficulty speaking)  Hoarseness |
| Lower Respiratory | Cyanosis (bluish color to the skin/lips)  Wheezing  Tachypnea (quick, shallow breathing)  Retractions (sunken appearance of the upper chest with breathing) | Dyspnea (difficulty breathing)  Stridor (high pitched breathing sound)  Cough  Chest tightness or pressure |
| Cardiovascular | Hypotension (drop in blood pressure)  Tachycardia (quick, weak pulse)  Skin is cold/clammy  Irregular heart rate/rhythm  Absent pulse  Loss of consciousness | Lightheadedness/Dizziness  Syncope (fainting due to low blood pressure)  Feeling a sense of impending doom  Palpitations (sensation of a pounding, fluttering, or fast-beating heart) |
| Skin | Presence of wheals on the skin (raised, red, itchy bumps)  Bodily swelling (edema) | Pruritis (bodily itching)  Flushing (redness and warmth) |
| Gastrointestinal | Loose stools that may be bloody | Nausea  Vomiting  Abdominal cramping  Diarrhea |

**When to use an Epinephrine Auto-Injector**

An epinephrine auto-injector must be used as instructed for symptoms consistent with a systemic (whole body) type 1 hypersensitivity reaction involving **2 or more organ systems.**

A type 1 hypersensitivity reaction is defined as an allergic reaction that is provoked by re-exposure to a specific type of antigen (allergen). The immune system’s response to the antigen releases immunoglobulin E antibodies into the body, which trigger a chain reaction that releases inflammatory chemicals into the bloodstream.

About 75% of systemic reactions involve one organ system, the skin. Patients may complain of skin flushing, itching on the skin, or hives on the skin. However, if this is a systemic reaction involving only ONE organ system (aka the skin), there is no indication to use an epinephrine auto-injector.

**If skin symptoms are accompanied by other systems involving another (or more) organ system(s),** this would be an indication to use an epinephrine autoinjector. For example, if the patient is experiencing the above skin symptoms (flushing, itching, hives on the body) IN ADDITION TO one or more of the following symptoms (see more details on the ‘Signs and Symptoms of Anaphylaxis’ Info Sheet), the patient will require use of an epinephrine autoinjector:

* Nasal Symptoms: runny nose, sneezing, nasal congestion, and/or nasal itching
* Throat Symptoms: throat itching, throat swelling, hoarseness, and/or difficulty speaking
* Chest Symptoms: difficulty breathing, taking shallow and quick breaths, wheezing/whistling sounds coming from the chest, sensation of chest tightness or pressure, and/or persistent cough
* Cardiovascular Symptoms: an impending sense of doom, drop in blood pressure, faintness/dizziness, loss of consciousness, palpitations, and/or (in extreme cases) stroke
* Gastrointestinal Symptoms: nausea, abdominal pain, vomiting, and/or diarrhea

In the (very rare) case that a patient is experiencing **no skin symptoms but is still experiencing the above symptoms,** there is indication to use the epinephrine auto-injector **sooner** rather than later.

If symptoms do not improve within 5 minutes of initial use of the epinephrine autoinjector, the patient must use their second epinephrine auto-injector.

This is why theentire 2 pack of epinephrine auto-injectors **must be brought to all injection appointments or carried at all times** if the patient has a food, medication, insect, or other potentially life-threatening allergy.

**If you ever use your epinephrine auto-injector, you MUST call 911 immediately or seek immediate medical attention at an emergency room or urgent care center. You then must call your physician later that day or first thing the next day to notify your physician of your reaction.**