

Anaphylaxis: How to recognize and respond to a severe allergic reaction

Reviewed by SickKids Staff | Last updated: March 23, 2021

Anaphylaxis is a severe reaction to an allergen. Learn how to prevent and identify anaphylaxis and how to respond when someone has an anaphylactic reaction.

Key points

- Anaphylaxis is a severe reaction to an allergen such as certain foods, medications and insect bites or stings.
- Common symptoms of anaphylaxis include difficulty breathing, dizziness, hives, swelling of the face and vomiting. If left untreated, anaphylaxis can be life threatening.
- If someone has anaphylaxis, call 911 or go to your nearest emergency department immediately.
- If it is your child's first episode of anaphylaxis, see an allergist for a full assessment. Your child should be prescribed an epinephrine auto-injector, which they should carry with them at all times.



What is anaphylaxis?

Anaphylaxis is a severe [allergic reaction](#) to certain substances called allergens. When an allergen enters the body of a child with an allergy, the child's immune system treats it as an invader and overreacts. This reaction happens a few minutes to an hour after the child is

exposed to an allergen and can be life threatening.

Signs and symptoms of anaphylaxis

The signs and symptoms of anaphylaxis may include sudden onset of:

- [hives](#), itching, redness of the skin
- swollen eyes, lips, tongue or face
- difficulty breathing, throat constriction (tightening) or difficulty swallowing
- abdominal (belly) pain, nausea, [vomiting](#) or [diarrhea](#)
- coughing
- stuffy and/or runny nose, watery eyes, sneezing
- [fainting](#), confusion, light-headedness or dizziness
- rapid or irregular heartbeats
- cold, clammy, sweaty skin
- voice changes

Common causes of anaphylaxis

Common allergens include foods, such as peanuts, tree nuts or eggs; insect bites or stings, such as bee stings, and drugs, such as penicillin.

An allergen can enter the body in different ways.

- A child may eat or inhale (breathe in) an allergen. It is best to speak to your child's allergist about the inhaled allergens that would be a problem for your child, as not all of these allergens will cause a severe reaction.
- A child might receive a medication that contains an allergen.

When the body is exposed to an allergen, it releases chemicals called histamines. These and other chemicals released by the body cause the common signs and symptoms of anaphylaxis.

How to prevent repeated episodes of anaphylaxis

The best way to prevent anaphylaxis is for your child to avoid known allergens that they are allergic to. Many people are not aware of an allergy until they are exposed to an allergen and have an allergic reaction.

Following their first episode of anaphylaxis, your child should see an allergist. This is a doctor who specializes in diagnosing and treating allergies.

The allergist will try to figure out the allergen responsible for your child's anaphylaxis and may also prescribe an [epinephrine](#) auto-injector such as an EpiPen or Allerject. Your child should

carry this medication with them at all times in case of an emergency. Ideally, your child will carry one auto-injector and a second will be readily available nearby.

Your child should also wear a [MedicAlert](#) or similar bracelet that indicates their allergies. Talk to your child's school or daycare about creating an anaphylaxis emergency plan for your child.

Complications of anaphylaxis

Anaphylaxis may cause tightening or blockage of your child's airway, making it difficult for your child to breathe. It can also lead to a drop in blood pressure. These symptoms can lead to death if not treated.

What you can do for your child during anaphylaxis

Anaphylaxis is a medical emergency. If you suspect your child is having anaphylaxis, call 911 or go to the emergency department right away.

- If your child has an emergency anaphylaxis medication, such as an epinephrine auto-injector, inject it right away. You can give a second dose of epinephrine as early as five minutes after the first dose if there is no improvement in symptoms.
- Call 911 or take your child to your nearest emergency department.
- Calm and reassure your child and have them lie down.
- Check your child's airway and breathing. Strained breathing or talking, a hoarse voice or high-pitched breathing sounds are all signs that your child's throat may be swollen.
- Do not give any medication by mouth if your child is having trouble breathing.

Because symptoms can disappear and then return within a few hours (even with treatment), a child with anaphylaxis will likely stay in the hospital for a period of observation after any anaphylactic reaction.

If this is your child's first time having anaphylaxis, they should get a referral to an allergist for a full assessment. They should also receive a prescription for an epinephrine auto-injector.

When and how to call 911

Use this video to teach your child how to call 911 and ask for help if someone is having an anaphylactic reaction. They will also learn about other situations in which they should call 911, as well as when not to call 911.

Go to:

https://www.youtube.com/embed/JdKG_L5YuB8

Virtual care services for children

Boomerang Health was opened by SickKids to provide communities in Ontario with greater access to community-based services for children and adolescents. For more information on virtual care services in Ontario to support a child with allergies, visit [Boomerang Health](#) powered by SickKids.

Please visit [AboutKidsHealth.ca](#) for more child health information.

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