PATIENT EDUCATION

Anaphylaxis: Recognise It. React Fast. Save a Life.

A plain-language guide for patients, parents and caregivers

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Based on WAO 2020 & EAACI 2021 Guidelines

MEDICAL EMERGENCY

Anaphylaxis is a life-threatening allergic reaction that can kill within minutes. Early recognition and immediate treatment with adrenaline (epinephrine) are the only things that can prevent death.

1. What is Anaphylaxis?

The word anaphylaxis literally means "against protection" — coined in 1902 by Charles Richet and Paul Portier. It is your immune system doing the exact opposite of its job: instead of protecting you, it launches a massive, life-threatening response to something it incorrectly identifies as dangerous.

Medically defined as a **severe, life-threatening, systemic hypersensitivity reaction**, anaphylaxis can affect your skin, airways, heart, blood pressure, and gut — often all at once — and it strikes fast, usually within minutes of exposure to a trigger.

More common than you think. Reported incidence ranges up to 761 cases per 100,000 people per year in children. For food-induced anaphylaxis, prevalence among children is between 0.3% and 1.2%. The numbers are rising — and yet it remains underdiagnosed and poorly treated.

2. How to Recognise It: The Warning Signs

You do **not** need all the classic symptoms to diagnose anaphylaxis. Act when a combination of symptoms appears suddenly after a possible exposure. Here is what to watch for:

SKIN & MOUTH	BREATHING	CIRCULATION	GUT & OTHER

Hives (urticaria) Flushing or redness Swollen lips/tongue/throat Itching all over Angioedema	Difficulty breathing Wheezing Stridor (noisy breathing) Tight throat Hoarse voice	Dizziness / fainting Rapid or weak pulse Pale or bluish skin Loss of consciousness Low blood pressure	Severe abdominal cramps Vomiting or diarrhoea Feeling of doom Anxiety / confusion Incontinence

CRITICAL POINT

Skin symptoms may be completely absent. A person can have anaphylaxis with only breathing difficulty or a sudden drop in blood pressure after allergen exposure — and it still counts. Do not wait for a rash.

Symptoms by age group

Infants & toddlers: Cannot describe symptoms. Look for unusual crying, vomiting, redness, or refusal to feed after eating something new.

Young children: Most commonly show skin symptoms (hives, redness) and respiratory symptoms like cough and wheezing.

Teenagers & adults: More likely to experience dizziness, fainting, and a drop in blood pressure alongside skin or breathing symptoms.

Elderly patients: Face a higher risk of death, particularly from medication- or insect-venom-triggered reactions.

3. What Triggers Anaphylaxis?

In children, **food is by far the most common trigger** — accounting for nearly 75% of cases. The younger the child, the more likely food is the cause. Common triggers include:

Food	Cow's milk	Hen's egg	Peanut	Tree nuts	Wheat	Shellfish / prawns	Fish	Soy
Drugs	Antibiotics	NSAIDs	Radiocontrast dye	Vaccines				
Environmental	Insect stings	Latex	Exercise	Idiopathic				

DID YOU KNOW?

Almost half of all anaphylaxis episodes happen at home. Schools, restaurants, and hospitals account for much of the rest — which is exactly why preparedness everywhere matters.

Co-factors that make it worse

Sometimes an allergen alone may not be enough to trigger a reaction — but combined with certain co-factors, it can push the body over the edge. These include **exercise, acute infection or fever, emotional stress, alcohol, certain medications** (like beta-blockers or NSAIDs), and in women, the premenstrual phase.

4. What To Do: Step-by-Step Emergency Response

Time is everything. Every second of delay in giving adrenaline worsens the outcome. Follow these steps immediately:

1. **Recognise it and call for help**
   If you suspect anaphylaxis, shout for help and call emergency services immediately. Do not wait to see if it gets worse.
2. **Remove the trigger if possible**
   Stop any medication being administered. Remove a stinger. Do not make the person vomit if they swallowed the trigger.
3. **Inject adrenaline (epinephrine) — this is the FIRST-LINE treatment**
   Inject into the outer mid-thigh muscle (intramuscular). Note the time. IM adrenaline works in ~8 minutes; subcutaneous (SC) takes 34 minutes and is NOT recommended.
4. **Position the patient correctly**
   Lay them flat on their back with legs raised. If breathing with difficulty, they may sit up slightly. Never let a patient stand or sit up suddenly — this can cause cardiac arrest.
5. **Give oxygen if available**
   Supplemental oxygen helps, especially if there is breathing difficulty.
6. **Repeat adrenaline if needed**
   A second dose can be given 5–15 minutes later if there is no improvement. Biphasic reactions can occur hours later — hospital observation is essential.
7. **Begin CPR if the person is unresponsive**
   Continue until emergency services arrive.

> COMMON MISTAKE
>
> **Antihistamines and steroids are NOT first-line treatments.** They work too slowly. Adrenaline is the only drug that saves lives in anaphylaxis. Antihistamines treat hives — they do not treat anaphylaxis.

Adrenaline Dosage Guide

Standard dose: **0.01 mg per kg of body weight**, maximum 0.5 mg, using 1 mg/mL (1:1000) adrenaline.

Age / Weight	Dose	Volume (1:1000)
Infants under 10 kg	0.01 mg/kg	0.01 mL/kg
Children 1–5 years	0.15 mg	0.15 mL

Children 6–12 years	0.3 mg	0.3 mL
Teenagers and adults	0.5 mg	0.5 mL

5. After the Emergency: Long-Term Planning

Surviving anaphylaxis is not the end of the road — it is the beginning of a plan. Everyone who has had anaphylaxis needs a comprehensive follow-up with an allergist.

Identify your trigger: Detailed history, skin prick tests, and blood tests (specific IgE) help pinpoint the cause.

Get a written action plan: Your doctor should provide a personalised, written emergency action plan for you, your family, school, or workplace.

Carry an adrenaline auto-injector: EpiPens or similar devices allow patients to self-administer adrenaline in seconds. In India, discuss customised alternatives with your allergist.

Wear a medical alert identification: A medical bracelet or card can alert bystanders and emergency responders even if you are unconscious.

Consider allergen immunotherapy: For triggers like insect venom or certain foods, a specialist may offer desensitisation to gradually reduce your sensitivity.

KEY TAKEAWAYS

→ Anaphylaxis is more common than most people realise — and it is rising.

→ Early detection is the single most important factor in survival.

→ You do not need skin symptoms to have anaphylaxis.

→ Adrenaline is the only first-line treatment — give it fast, into the thigh.

→ Antihistamines and steroids do not replace adrenaline.

→ Every patient needs post-discharge referral to an allergist.

→ 48% of reactions happen at home — prepare your household.

6. Building a Prepared Home and School

Every home and school with an at-risk child should have an anaphylaxis emergency kit readily accessible. Based on Australian guidelines (adapted for India), this includes:

• At least 3 vials of adrenaline (1:1000) — check expiry dates regularly

• Three 1 mL syringes

• Alcohol swabs

• Notepad and pen to record time of injection and symptoms

• Laminated emergency guidelines posted in a visible location

FOR PARENTS & SCHOOLS

Train all caregivers, teachers, and school nurses to recognise anaphylaxis and administer adrenaline. Practice is as important as having the drug. A reaction can escalate from mild to life-threatening in under 10 minutes.

This article is written for educational purposes and is based on guidelines from the World Allergy Organization (WAO 2020) and the European Academy of Allergy and Clinical Immunology (EAACI 2021). It is not a substitute for professional medical advice. Always consult a qualified allergist or physician for diagnosis and personalised treatment.