ANAPHYLAXIS

Adrenaline first · IM, into the thigh, now

ADRENALINE
IM 500 mcg

ADRENALINE IM 500 mcg (0.5 mL of 1:1000) into the ANTEROLATERAL THIGH. Repeat every 5 min if no better. Nothing else comes first - not steroids, not antihistamines.

RECOGNISE

sudden onset + AIRWAY / BREATHING / CIRCULATION problem

AIRWAY

Swelling of tongue / lips / throat, hoarse voice, stridor, difficulty swallowing.

BREATHING

Wheeze, tachypnoea, fatigue, cyanosis, SpO_2 < 94%, respiratory arrest.

CIRCULATION

Hypotension, tachycardia, pale / clammy, ↓ consciousness, cardiac arrest.

Skin / mucosal changes (flushing, urticaria, angio-oedema) support the diagnosis but are ABSENT in up to 20% - their absence does NOT exclude anaphylaxis.

IMMEDIATE MANAGEMENT

1	**Remove the trigger**	Stop the drug / infusion / colloid / latex. Do NOT delay treatment looking for it.
2	**ADRENALINE IM 500 mcg**	Anterolateral thigh. Repeat every 5 min if ABC problems persist.
3	**Position**	LIE FLAT with legs raised (sitting up kills - empty vena cava). Sit up only if breathing is the problem; pregnant = left lateral tilt.
4	**High-flow oxygen + fluids**	15 L/min via reservoir mask. Rapid IV crystalloid bolus 500-1000 mL (child 10 mL/kg), repeat as needed.
5	**Call for help**	Anaesthetics / ICU early for the airway. Get to a monitored area.

REFRACTORY

no better after 2 IM doses

- **Adrenaline INFUSION -** start IV adrenaline infusion, titrated - by someone experienced
- **More fluid -** large volumes are often needed (massive capillary leak)
- **Add vasopressor -** noradrenaline / vasopressin if still shocked
- **On a beta-blocker? -** give GLUCAGON 1-2 mg IV - adrenaline may not work

AFTER THE EMERGENCY

- **Observe -** 6-12 h; biphasic reactions occur in up to 5%, usually within 12 h
- **Mast cell tryptase -** 3 samples: ASAP, at 1-2 h, and > 24 h (baseline)
- **Before discharge -** 2 adrenaline auto-injectors + training; written action plan
- **Refer -** allergy clinic for every patient; document the trigger clearly

SECOND-LINE (after adrenaline, never instead): steroids are NO LONGER routinely recommended (Resus Council UK 2021) · antihistamines only for skin symptoms · nebulised salbutamol / adrenaline for persistent wheeze or stridor.

COMMON TRIGGERS

- **In hospital -** antibiotics (beta-lactams), NMBAs, contrast, chlorhexidine, latex, colloids, blood products
- **Community -** foods (nuts, shellfish, egg, milk), insect stings, NSAIDs, opiates
- **Perioperative -** think NMBA, chlorhexidine, antibiotic, latex - refer to an anaesthetic allergy clinic

MIMICS

- **Severe asthma -** wheeze without hypotension, urticaria or angio-oedema
- **Vasovagal -** bradycardia, pallor, quick recovery lying flat, no rash or wheeze
- **Others -** septic shock, ACE-inhibitor angio-oedema (no urticaria), scombroid, panic attack

PEARLS & PITFALLS

- IM into the thigh, not subcutaneous and not IV - IV adrenaline boluses cause arrhythmia and are for experts only.
- No rash does not mean no anaphylaxis - up to 20% have no skin signs at all.
- Do NOT sit the patient up or stand them up; sudden postural change during anaphylaxis has caused cardiac arrest.
- Delay is the commonest error: give adrenaline on suspicion, before the diagnosis is certain.

References: Resuscitation Council UK Anaphylaxis 2021 · WAO Anaphylaxis Guidance · NICE CG134.

Educational aid; verify doses against local protocol and patient factors.