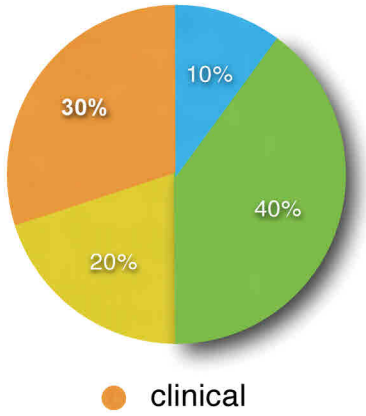
Anaphylaxis Examination

History: This patient is having an allergic reaction

Task: take a brief history, perform a physical examination, describe your management plan including drugs and doses.



Marking criteria	Not Completed	Partially Completed	Completed
Washes hands, introduction			
Assesses patient with a ABCDE approach			
Quickly determines severity of reaction and appropriateness of location/current treatment			
Comments on stridor if present			
Comments on facial/oral swellings (lips, tongue, oral phalanx)			
Avoids stimulating the gag reflex			
Applies oxygen			
Palpates the anterior neck, (gently)			
Auscultates the chest			
Checks pulse			
Asks for noninvasive monitoring (ECG, BP, SpO2), and temperature and BM			
Starts treatment immediately if not previously			
Asks for help early			
Obtains IV access +/- fluids			
Exposes patient and looks for urticaria			
Asks for history of events preceding reaction			
Takes a past medical history			
Takes a drug history			
Takes a allergy history			
Explains to patient the condition and avoids medial jargon			
Invites questions			
Summarizes findings and treats patient appropriately			
Comment on need to report drug and vaccine reaction to the Committee on Safety of Drugs			
Invites questions, Thanks patient			
Overall			

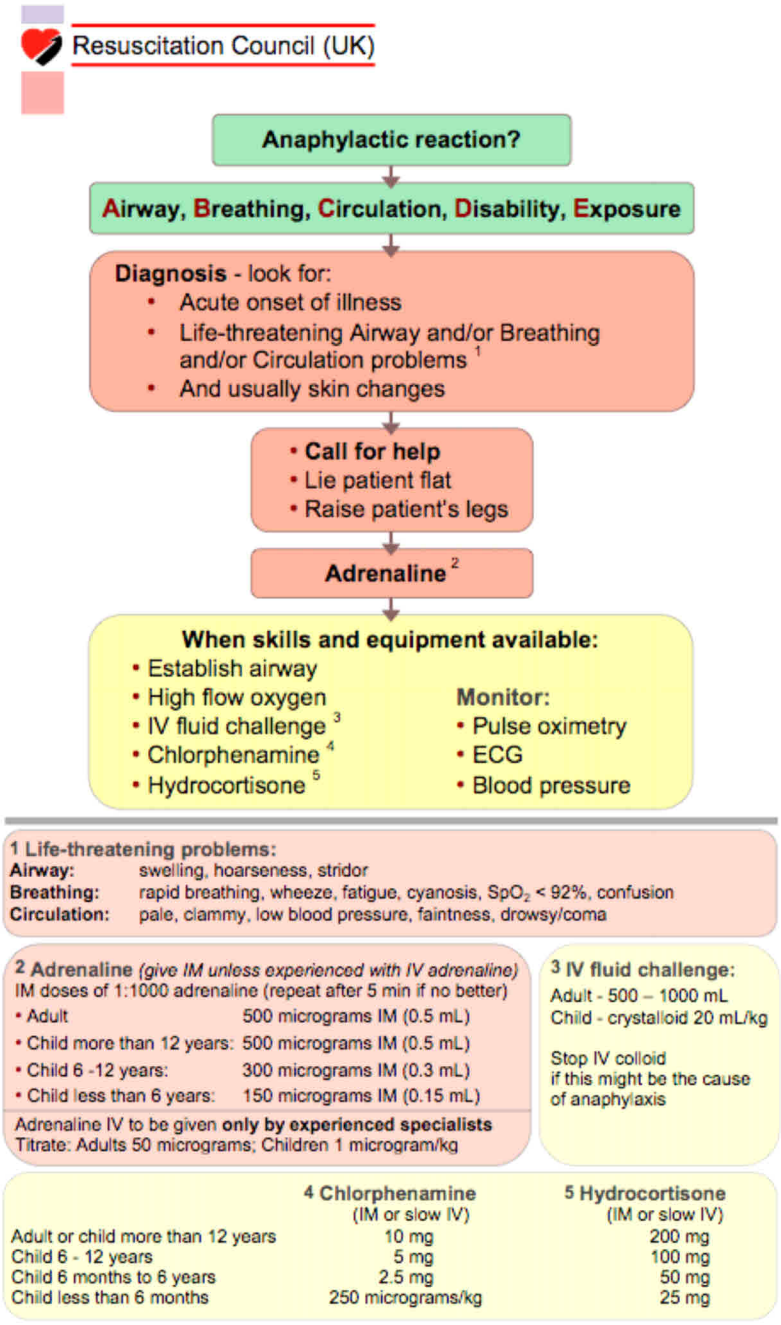
Anaphylaxis Examination

Level 1 Understanding (basic sciences)

What are the four classical mechanisms of hypersensitivity?

1. Crosslinking of two adjacent IgE molecules on mast cells and basophils
2. Reaction of IgG and IgM to cell-surface antigens resulting in complement activation and cytotoxicity
3. Soluble antigen -antibody complexes that activate the complement pathway
4. Activation of T lymphocytes (anaphylatoid), i.e. radiocontrast dyes, muscular depolerizing agents, opiates, dexrans

Non-immune mediated reactions are classed as anaphylactoid but the distinction may be academic as they both cause anaphylaxis.
Other hypersensitivity reactions: aspirin/NSAIDS modulation of cyclooxygenase arachidonic acid metabolism pathways



Level 2 Understanding (applied sciences)

Discuss the Resuscitation Council treatment for anaphylaxis:
See illustration opposite.
There is also evidence for H2 blockers
Cemetidine 300mg adult, 5-10mg/kg paeds

Level 3 Understanding (advanced sciences/management)

What concerns would you have with a patient on a beta blocker, TCA and MAOI who is having an allergic reaction requiring adrenaline?
Unopposed alpha-adrenergic stimulation resulting in severe hypertension

What are the risk factors for hypersensitivity reaction?
Patients with IHD, on beta blocker medication and atopic patients with hay-fever or asthma

In which patients are biphasic reactions more likely?
previous biphasic reaction, Food allergy related and asthmatics