



Safe Hands
Medical Emergencies
& First Aid Training

Medical Emergencies Training

Welcome

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Objectives

To understand:

The importance of early recognition of the 'sick' patient

The causes and prevention of cardio respiratory arrest

The **AMPLE** history

The **ABCDE** assessment

The role of the healthcare professional

“embed human factors, avoid complacency like the plague!”

Sir Stephen Moss

Medical Emergency Kit



Patient Assessment Chart



Patient Assessment & Management Chart

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1.	Patient Name:	Date:	Time:
Patient History: A – Allergies M – Medications P – Past Medical History L – Last Meal / Drink E – Event			
2.	Patient A, B, C, D & E Assessment (please tick ✓)		
Airway	Patient unable to maintain airway Patient unable to speak in full sentences	Lip/tongue swelling	Stridor (Inspiratory) Snoring/Gurgling
Breathing	Abnormal Resp Rate (<12 / >20)	Work of Breathing (laboured)	Wheeze (Expiratory)
Circulation	Colour – Pale, Ashen	Chest Pain/Tightness/ Heaviness/Crushing Sensation	CRT (>2 sec), Systolic BP <90mmHG
Disability	Check ACVPU (Alert, Confusion (New), Voice, Pain, Unresponsive)	Blood sugar (<4 mmol)	Posturing/Seizing
Exposure	Rash	Swelling/Bruising	Blood loss
3.	Signs & Symptoms NB. Not all may be present	Treatment Includes O2 @ 15lt PM +/- 999	Treatment Contraindications
A	Sudden onset, Lip / Tongue Swelling Choking, Presence of Stridor, Unable to Cough / Talk	Adrenaline Autoinjector or Adrenalin 1:1000 (Hold in place for 10 secs): Over 12 yrs - 500 micrograms IM (0.5ml) 6 – 12 yrs - 300 micrograms IM (0.3ml) < 6 yrs - 150 micrograms IM (0.15 mL) Every 5 mins if required	Ability to cough
B	Laboured Breathing, Expiratory wheeze ↑ RR or ↓ RR (moderate to severe)	Salbutamol 1 puff every 0.5–1 minute for up to 10 doses, each dose to be inhaled separately via a spacer; repeat every 10–20 minutes or when required.	
C	Chest Tightness/Heaviness/Crushing Sensation or pain which may radiate to Neck/Jaw, arm(s), Back or Epigastrium (Severe Indigestion) Sweating, Pallor Nausea/vomiting Breathlessness	Aspirin 300mg chewed or dispersed in a small amount of water GTN 2 puffs sublingual repeated in 5 mins if indicated and BP is stable	Allergy, Active Peptic Ulceration, Haemophilia, Bleeding Disorders, Severe Cardiac Failure (analgesic dose) ↓BP / CRT > 2 secs, aortic stenosis; cardiac tamponade; constrictive pericarditis; hypertrophic cardiomyopathy; hypovolaemia; marked anaemia; mitral stenosis; raised intracranial pressure due to cerebral haemorrhage; raised intracranial pressure due to head trauma; toxic pulmonary oedema
D	Shaking/Trembling, Sweating Slurred speech, Vagueness Double vision, Confusion Unconsciousness Limb weakness Jerking movements of limb(s) Tongue biting, Sudden Collapse, Rigidity, Cyanosis	Sugary Drink / Hypostop Gel Buccally (if alert) Glucagon (if ↓ level of consciousness) 0.5mg = 1mth - 8yrs (Body Weight up to 25kg) 1mg = 9yrs and above (Body Weight 25kg >) Consider Recovery Position Think FAST test Support head/prevent further injury Seizure lasting > 5 mins give: Buccal Midazolam 10mg > 10yrs 7.5mg 5 yrs - 9 yrs 5mg 1 yr - 4 yrs 2.5mg 3mths - 11 mths Repeat after a further 10 minutes if seizure does not terminate after initial dose – no more than 2 doses	Not Alert CNS depression; compromised airway; severe respiratory depression
E	Urticaria – associated with life threatening changes in A &/or B & / or C	Adrenaline Autoinjector or Adrenaline (doses as above) IM every 5 mins if required.	



The AMPLE History



A

Allergies

M

Medications

P

Past Medical History

L

Last Ate/Drank

E

Event -

Signs (What you see)

Symptoms (What the patient tells you)

A

Airway

B

Breathing

C

Circulation

D

Disability

E

Exposure

- History
- Complete initial assessment
- Treat life-threatening problems
- Reassessment
- Call for help early

Avoid Hypoxia at all costs:-

- Never lose the airway
- Never ignore noise in the airway
- Always monitor respiratory rate & ensure ventilation is maintained
- High flow O2 for all Medical Emergencies

ABCDE – Approach Airway - treatment



Airway blocked by vomit.



ABCDE Approach Airway – treatment



Airway blocked by the tongue.



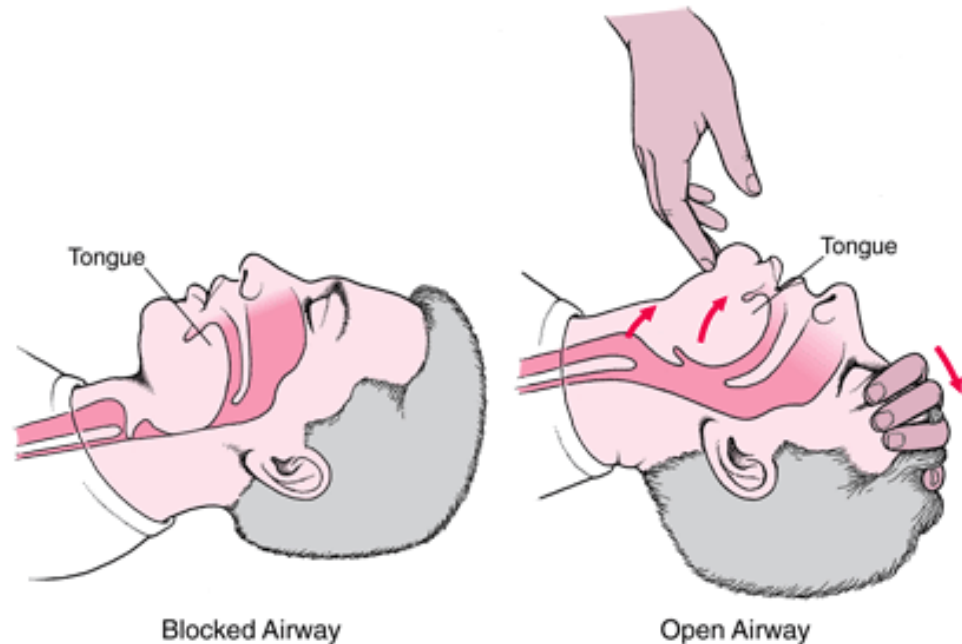
❖ Look for obstruction

Remove with:

- Two finger sweep
- Suction

❖ Airway opening

- Head tilt, chin lift
- Jaw Thrust



❖ Oxygen

- Can they speak in full sentences
- Noisy breathing - Stridor
- Is there any lip or tongue swelling

- Often happens whilst eating / drinking
- **Ask “are you choking?”**

Mild choking:

- Can cough and answer your question

Severe choking:

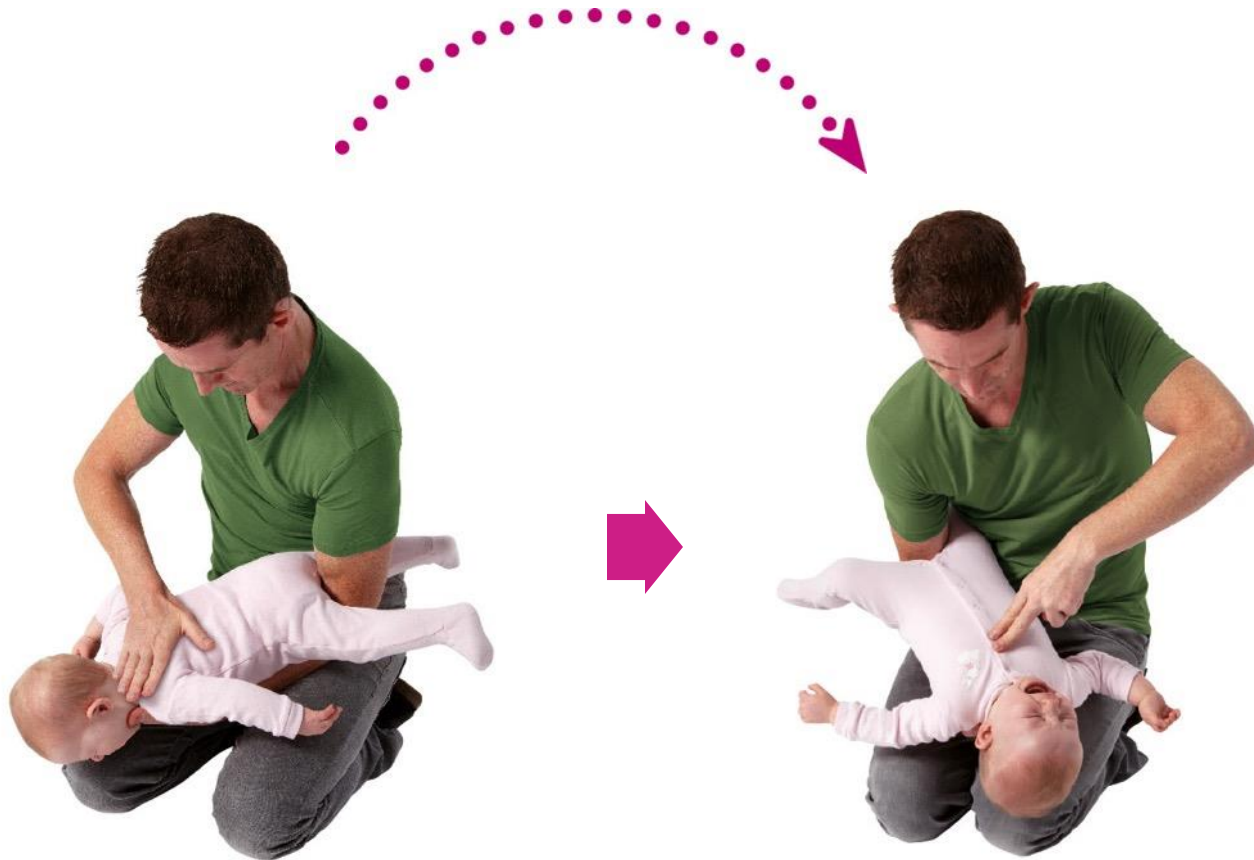
- Weakening cough
- Unable to speak – may ‘nod’ in response to your question.
- Struggling or unable to breathe.
- Distressed look on the face.
- Will become unconscious if untreated.



ABCDE approach **Airway** - Choking adult or child > 1yr



ABCDE approach **Airway** – assessment choking baby < 1 yr



5 Back Blows

5 Chest Thrusts

Anaphylaxis has three main characteristics:

1. A rapid onset – the casualty usually becomes very ill, very quickly.
2. A life-threatening **Airway, Breathing** or **Circulation** problem *(or a combination of them)*.
3. A skin rash, flushing and/or swelling *(but not all casualties have this)*.



Airway recognition:

- Swelling of the tongue, lips or throat. A feeling of the throat ‘closing up’.
- A hoarse voice or loud pitched, noisy breathing.

Breathing recognition:

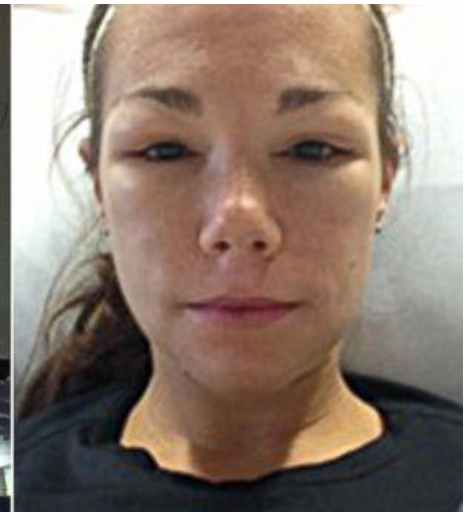
- Difficult, wheezy breathing or a ‘tight chest’.

Circulation recognition:

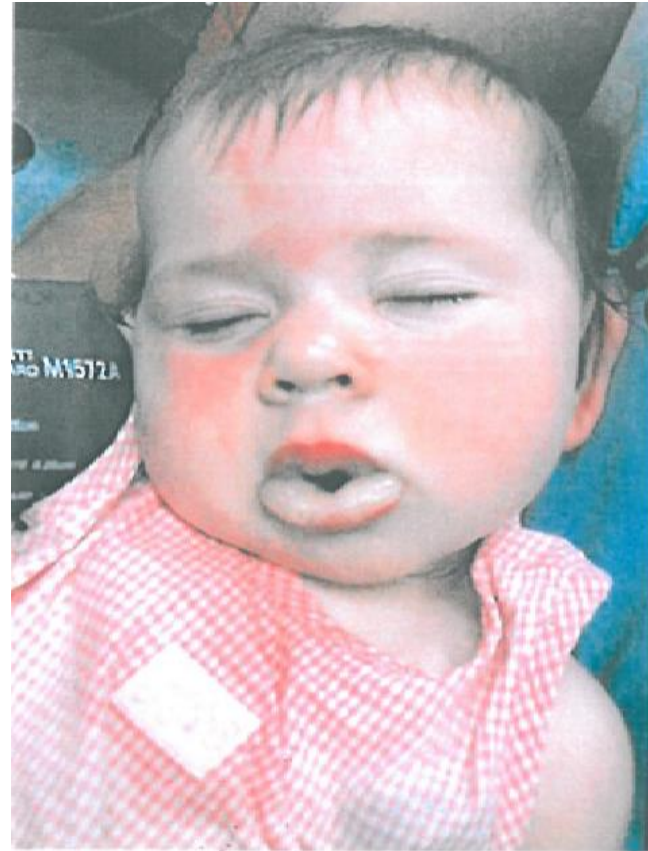
- Dizziness, feeling faint or passing out, particularly if sat upright.
- Pale, cold, clammy skin and fast pulse.
- The rash may disappear.
- Nausea, vomiting, stomach cramps, diarrhoea.



ABCDE Approach - Anaphylaxis



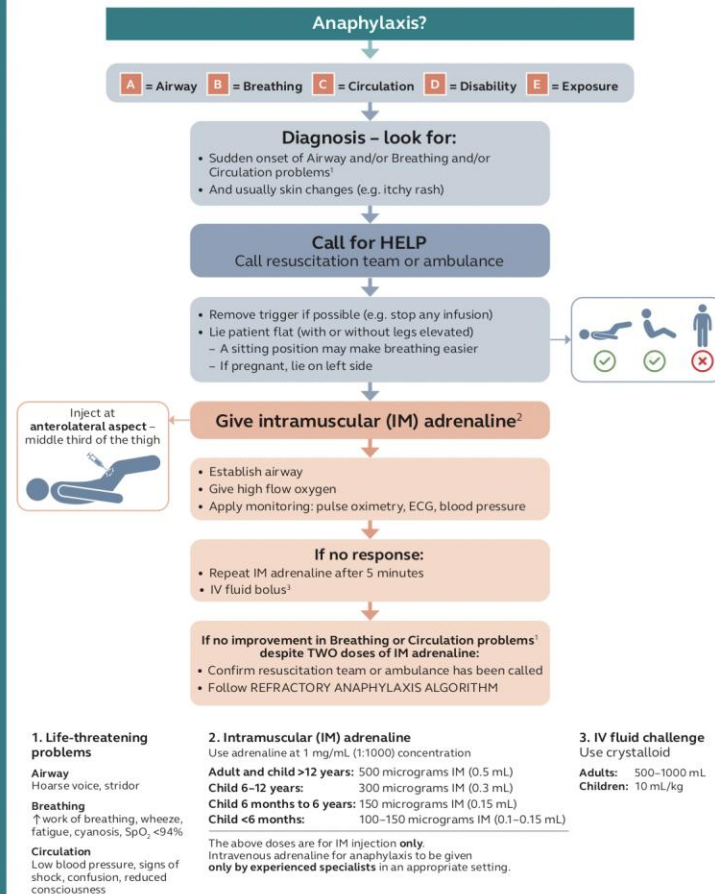
ABCDE Approach - Anaphylaxis



Skin Changes



Anaphylaxis



- Adrenaline doses:-

▪ Adult and child over 12yrs	500 micrograms IM (0.5ml)
▪ Child 6yrs-12yrs	300 micrograms IM (0.3ml)
▪ Child 6 months – 6yrs	150 micrograms (0.15ml)
▪ Child < 6months	100 – 150 micrograms IM (0.1-0.15ml)
- Oxygen – High Flow, using a mask with an oxygen reservoir
- Ambulance – state ANAPHYLAXIS

Repeat the IM adrenaline dose after 5 minutes if there is no improvement in the patient's condition continue to give IM adrenaline after every 5 minutes while life-threatening cardiovascular and respiratory features persist.

ABCDE Approach Anaphylaxis – treatment



- oxygen
- ambulance
- adrenaline



Equipment for drawing up adrenaline:-

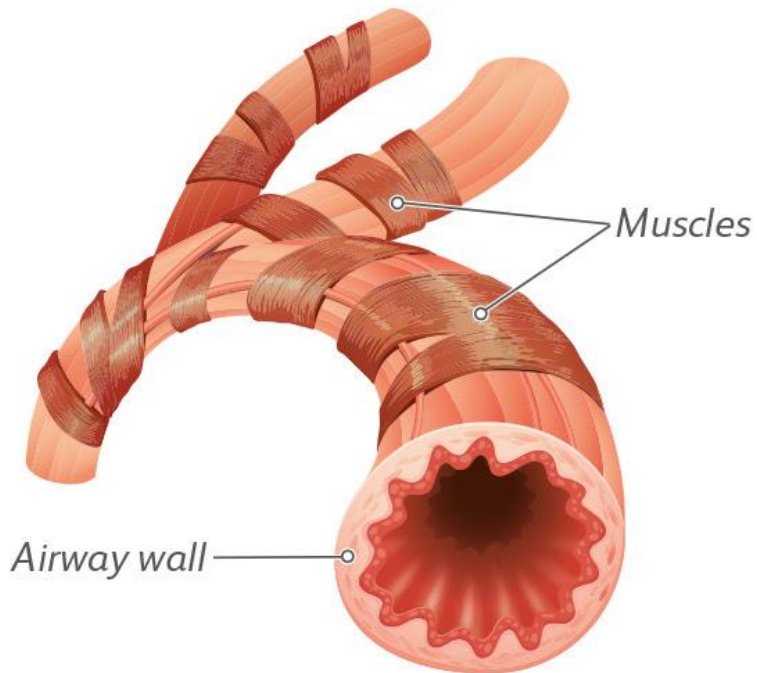
- 1ml syringe
- A 25mm needle is best and is suitable for all ages, in some adults a longer needle may be needed (38mm)



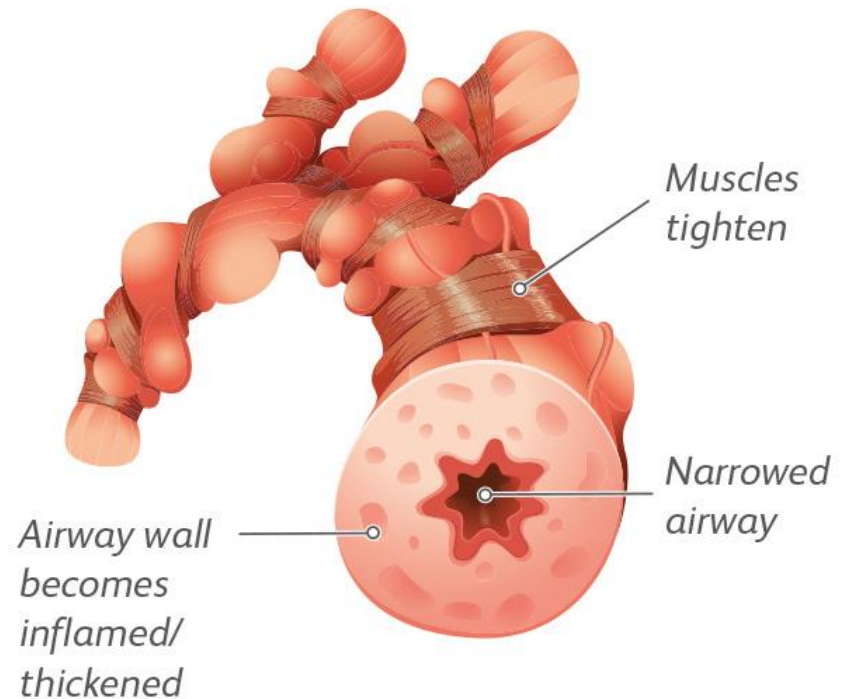
- respiratory rate
(12 – 20 breaths per minute for adults)
- work of breathing
- listen – wheeze



Normal airway



Airway during asthma attack



Dilate then Oxygenate

- Ambulance
- Oxygen
- Salbutamol (Blue Inhaler)
- Spacer



ABCDE Approach Airway – treatment



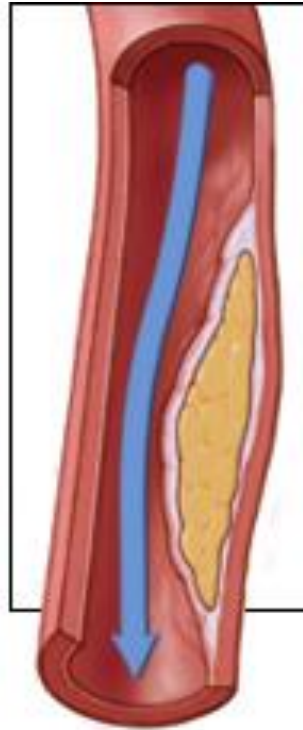
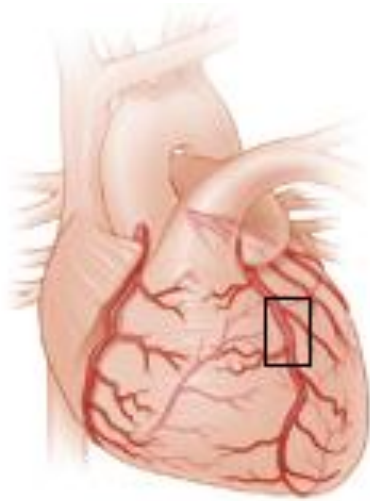
ABCDE Approach Breathing



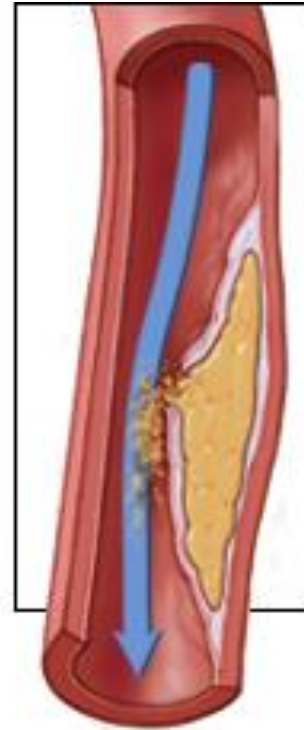
- Check patient's colour – pale, ashen colour, clammy
- CRT “Thumb Test” should be < 2 secs
 - good indication of blood pressure
 - CRT >2 secs or systolic blood pressure <90mmHg (abnormal)
- Chest tightness / pain / discomfort / heaviness / crushing sensation



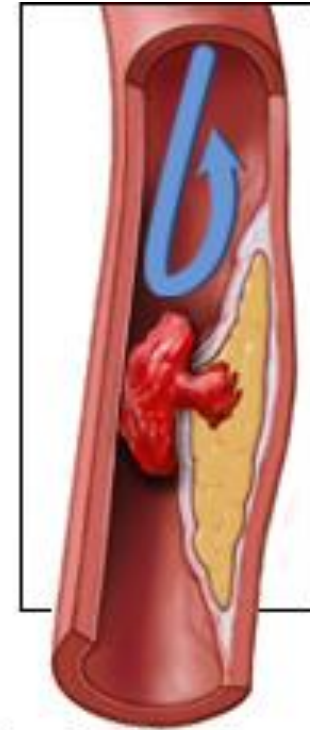
ABCDE Approach **Circulation** – heart attack



Plaque with
fibrous cap

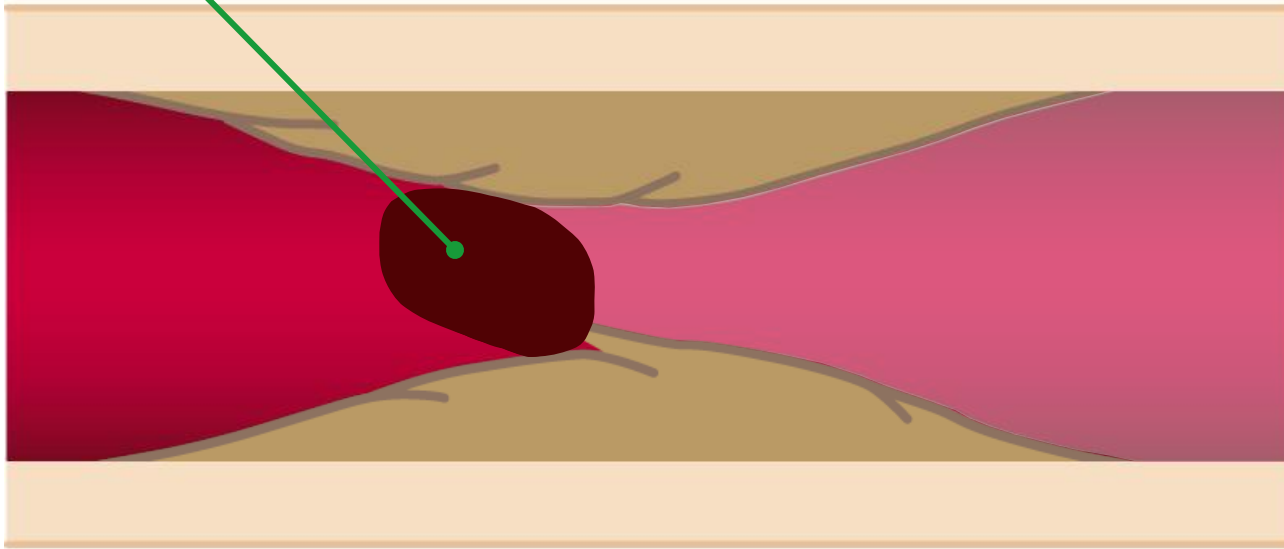


Cap
ruptures



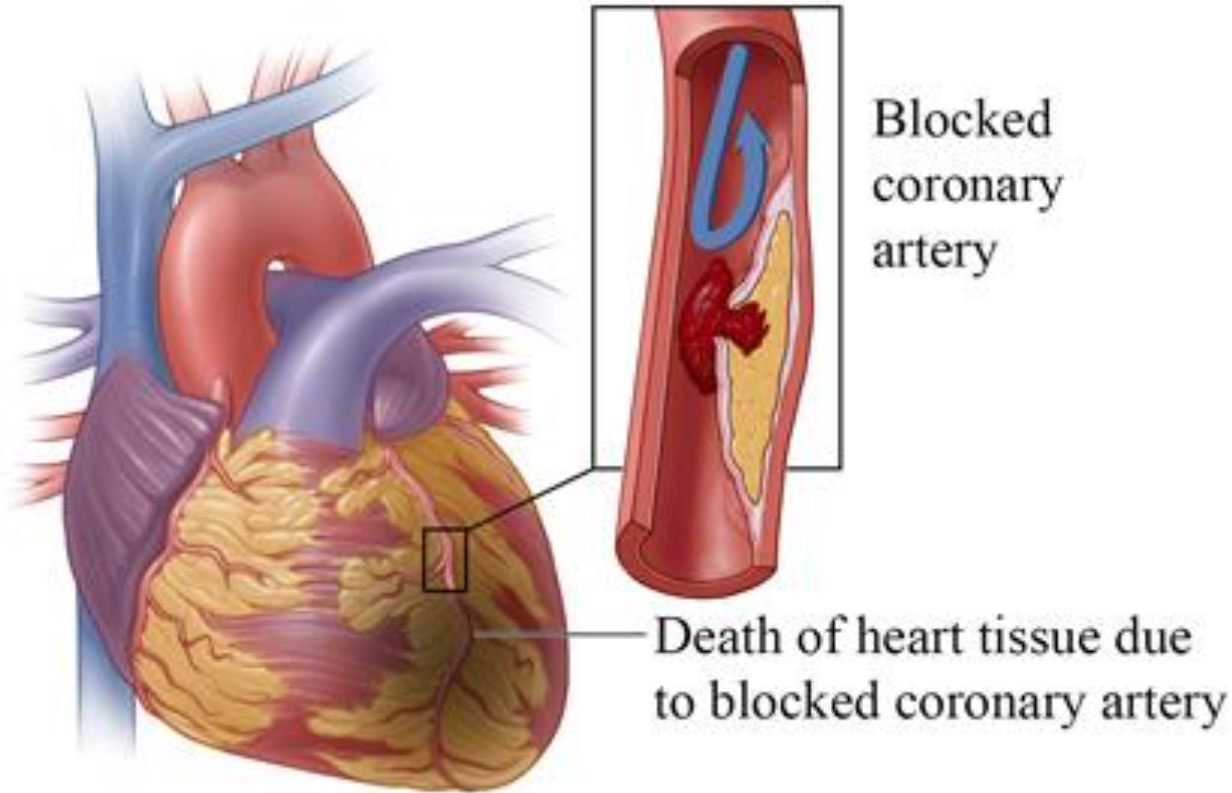
Blood clot forms
around the rupture,
blocking the artery

Blood Clot



Heart Attack

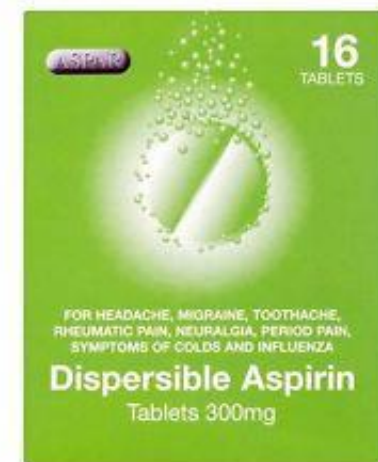
ABCDE Approach **Circulation** – heart attack



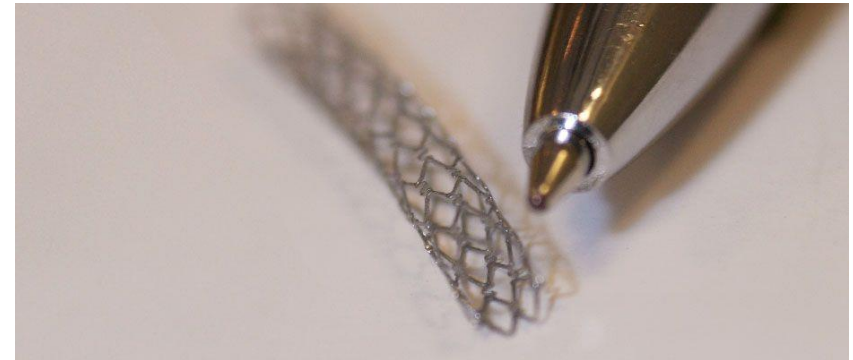
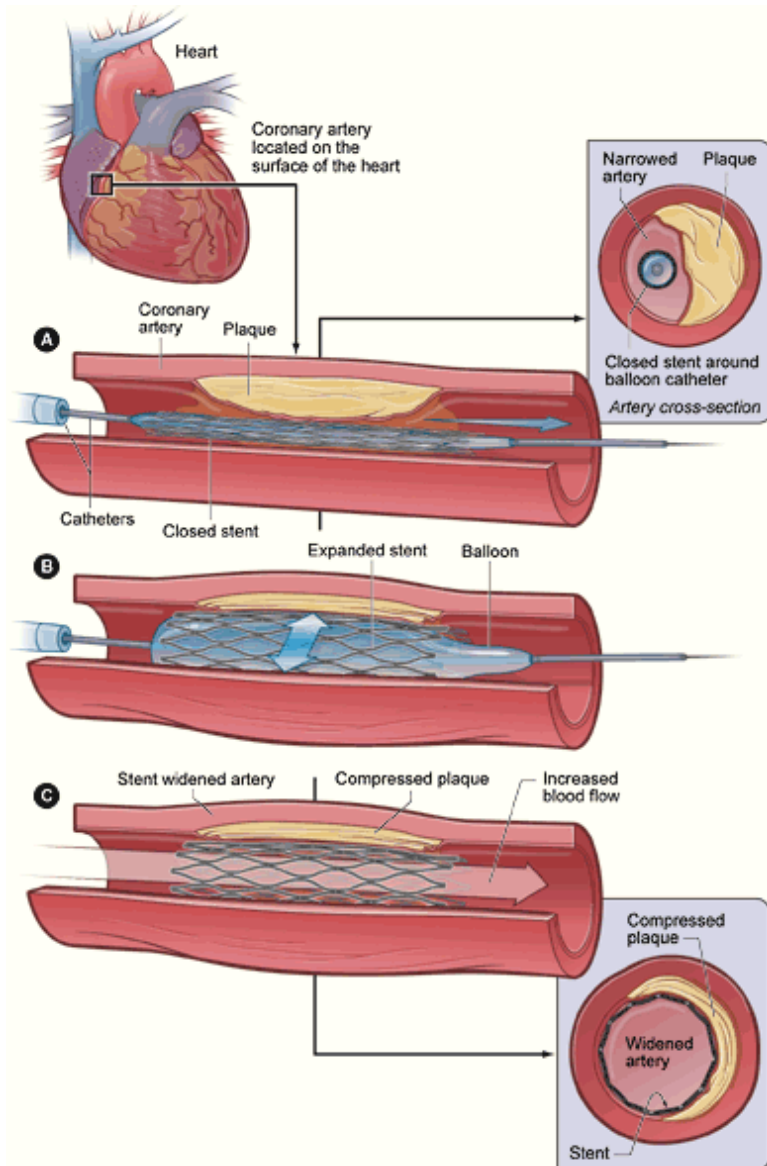
- Ambulance
- Oxygen
- Aspirin / Disprin **300mg DISPERSIBLE**
- GTN if no contraindications



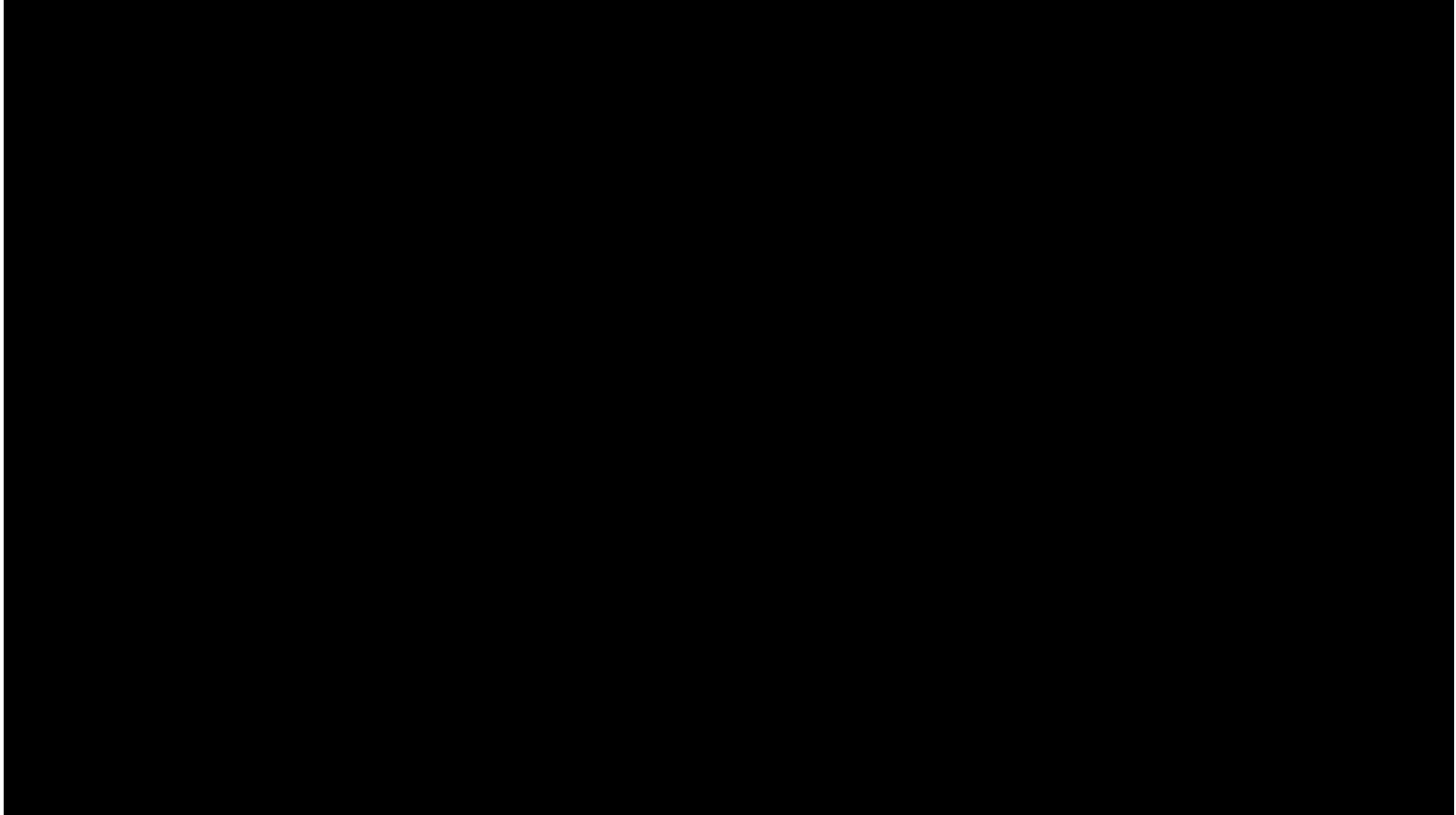
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ABCDE Approach **Circulation** – heart attack stenting



ABCDE Approach **Circulation** – heart attack stenting



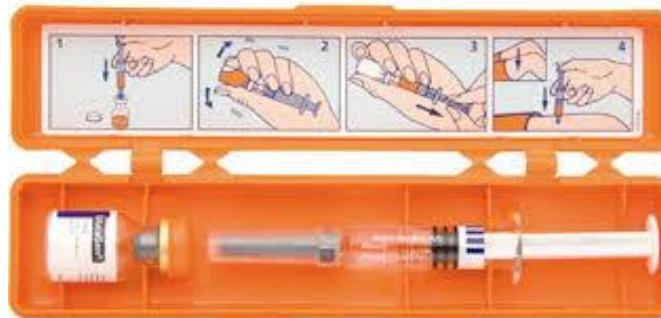
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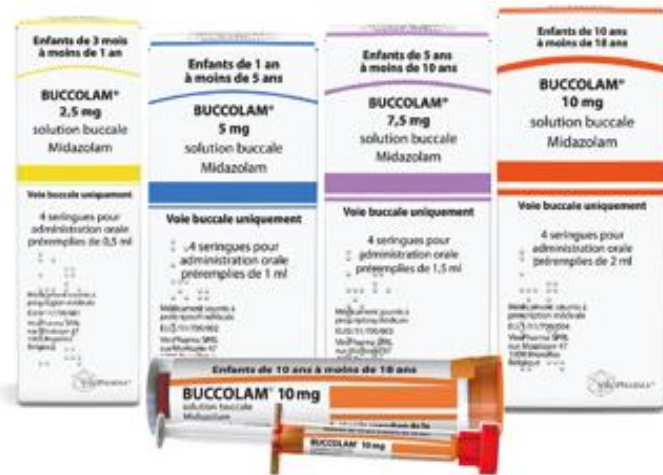
ABCDE Approach **Disability** – hypoglycaemia treatment



- Oxygen
- Ambulance?
- Glucogel/Hypostop
- Glucagon
- Recovery position



- Oxygen
- Ambulance
- Time the seizure
- Buccal midazolam



When seizure stops put patient in the recovery position and **check they are breathing regularly**

ABCDE Approach **Disability** – Recovery position

1



2



3



4



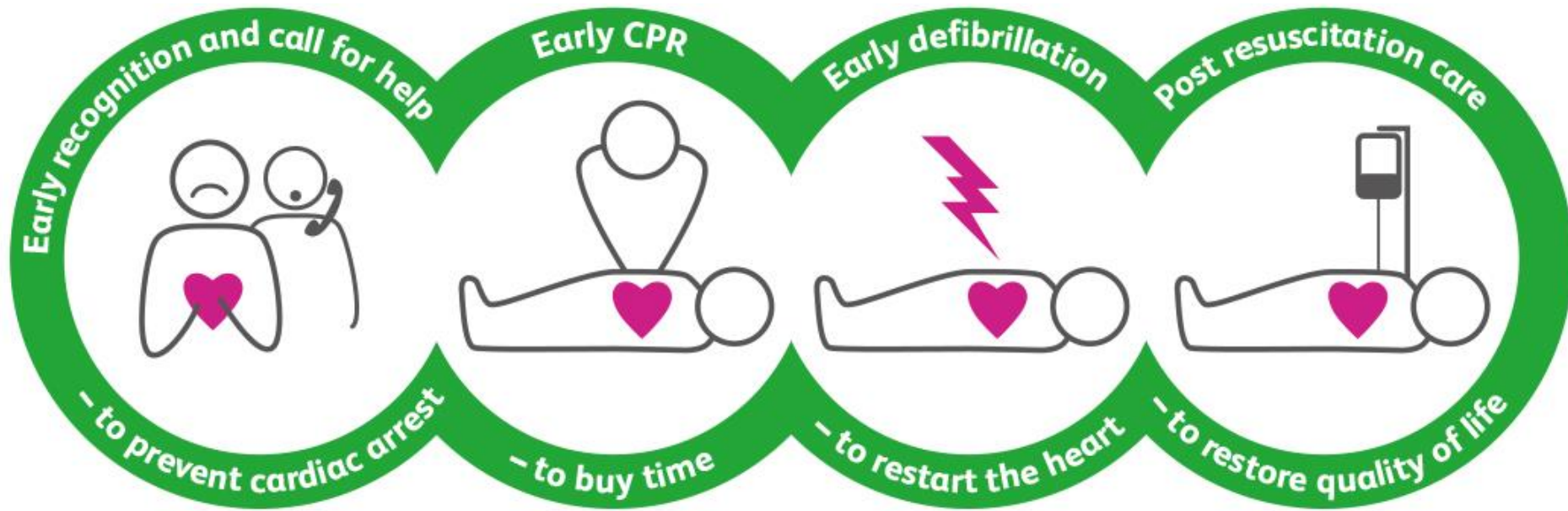
- Look for rashes
- Bruising / swelling
- Haemorrhage / bleeding
- Maintain patients temperature



Summary

- Early recognition may prevent cardiorespiratory arrest
- Some patients have warning signs before cardio respiratory arrest
- Take an **AMPLE** history and use the **ABCDE** assessment to recognise and treat patients at risk of cardiorespiratory arrest

Chain of survival

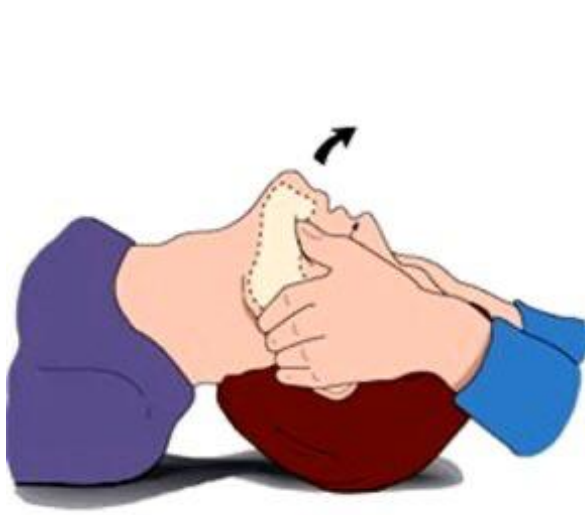


SSS AB

- **S**cene safety
- **S**timulation
- **S**hout for help
- **A**irway
- **B**reathing



Open the airway



Jaw thrust



Chin lift

- Jaw Thrust
- Head tilt & Chin lift

Is the person breathing?

- Look for chest movement
- Listen for 'normal' breath sounds
- Feel for expired air
- Assess for no more than 10 seconds



Defibrillation

- Attach defibrillator immediately and shock if indicated

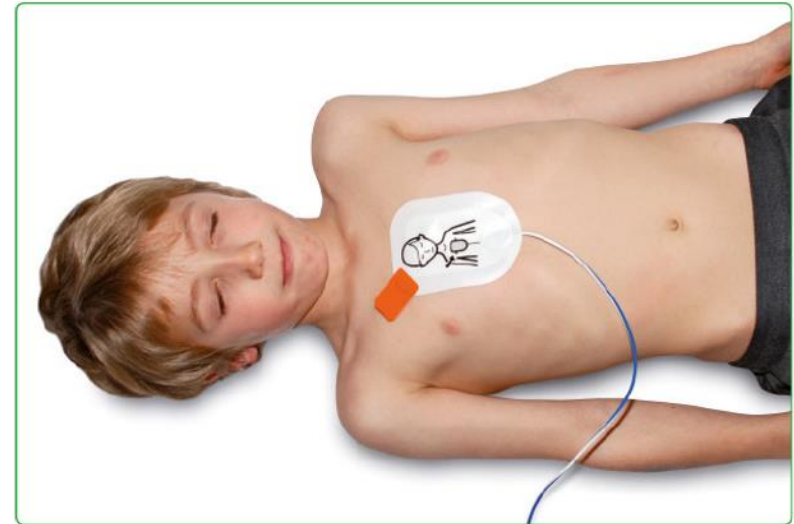
Applying defibrillator pads and delivering a shock from an AED/defibrillator is unlikely to be an aerosol-generating procedure and can be undertaken with the healthcare provider wearing droplet-precaution PPE (fluid-resistant surgical mask, eye protection, short-sleeved apron and gloves).

Rule of 'Ps'



- Pendants
- Pacemakers
- Perspiration
- Patches
- Piercings





CPR

- Start chest compressions (continuous until bag-mask device arrives).
- If not on the patient already, place an oxygen mask and give oxygen (15lt). Leave the mask on the patient until a bag-mask device arrives.

CPR

- Once a bag-mask device arrives, proceed with a compression:ventilation ratio of 30:2
- Ensure there is a viral filter (HME filter or HEPA filter) between the self-inflating bag and airway (mask, supraglottic airway, tracheal tube) to filter exhaled breaths



CPR

- Position your shoulders vertically above the victim's chest and press down on the sternum to a depth of **5–6 cm**
- **30:2** (Continuous chest compressions until bag-valve-mask arrives then **30:2**)
- After each compression, release all the pressure on the chest without losing contact between your hands and the sternum (**Recoil**)
- Repeat at a rate of **100–120 min**

Ventricular Fibrillation







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Thank you!

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