

Assess with ABCDE approach – recognise and treat reversible causes
 Oxygen if SpO₂ < 94%, respiratory rate, heart rate, CRT, cardiac monitoring, blood pressure, vascular access, AVPU

Signs of circulation?

NO

Follow **ADVANCED LIFE SUPPORT ALGORITHM**

Decompensated – seek expert help
Signs of vital organ perfusion compromise:
 Reduced LOC, tachypnoea, bradycardia /tachycardia, BP < 5th centile*, CRT > 2 secs, weak or impalpable peripheral pulses

YES

Compensated
 Normal LOC, +/- respiratory distress and signs of circulatory compromise, BP > 5th centile*

Bradycardia
 < 1 year < 80 min⁻¹
 > 1 year < 60 min⁻¹
 Optimal oxygenation with positive pressure ventilation if required
If unconscious and HR < 60 min⁻¹ despite oxygenation, start chest compressions
No response to oxygenation:
 If vagal stimulation possible cause – atropine
 If no response to oxygenation or atropine consider adrenaline
Pacing – very rarely required and guided by aetiology.

Tachycardia

Narrow complex	Broad complex
<p>Sinus tachycardia Infant < 220 min⁻¹ Child < 180 min⁻¹ Gradual onset</p> <p>Treat the cause: Physiological response: – Crying – Exercise – Anxiety/fear – Pain</p> <p>Identify precipitant Compensatory mechanism: – Respiratory/circulatory failure – Hypovolaemia – Sepsis – Anaemia</p>	<p>SVT Infant > 220 min⁻¹ Child > 180 min⁻¹ Abrupt onset</p> <p>Synchronised cardioversion with appropriate sedation + analgesia (e.g. IM/intranasal ketamine if delay in IV access) Chemical cardioversion may be 1st choice if suitable IV access is in place and delay in synchronised cardioversion. Adenosine Consider amiodarone before 3rd shock</p>
	<p>VT Could be VT or SVT, if unsure treat as VT</p> <p>If conscious: Synchronised cardioversion with appropriate sedation + analgesia (e.g. IM/intranasal ketamine if delay in IV access, <i>do not delay cardioversion</i>).</p> <p>If unconscious: Immediate synchronised cardioversion Consider amiodarone before 3rd shock</p>

Monitor for clinical deterioration and seek expert help
Treat the cause:
 If bradycardia, consider oxygenation and vagal tone
 If SVT, consider vagal manoeuvres
 Reassess
 Consider adenosine

Drug	Atropine	Adrenaline	Adenosine	Amiodarone	Synchronised cardioversion	Magnesium
Treatment	<p>Up to 11 years: 20 mcg kg⁻¹.</p> <p>12-17 years: 300–600 mcg, larger doses may be used in emergency.</p>	<p>For bradycardia: 10 mcg kg⁻¹ repeat if necessary.</p>	<p>Up to 1 year: 150 mcg kg⁻¹, increase 50–100 mcg kg⁻¹ every 1–2 min. Maximum single dose: Neonates 300 mcg kg⁻¹, Infants 500 mcg kg⁻¹</p> <p>1–11 years: 100 mcg kg⁻¹ increase 50–100 mcg kg⁻¹ every 1–2 min. Maximum single dose: 500 mcg kg⁻¹ (max. 12 mg)</p> <p>12–17 years: 3 mg IV, if required increase to 6 mg after 1–2 min, then 12 mg after 1–2 min</p>	<p>5 mg kg⁻¹ – by SLOW IV infusion (> 20 min) before 3rd cardioversion in discussion with paediatric cardiologist/expert</p>	<p>With appropriate sedation + analgesia (e.g. IM/intranasal Ketamine if delay in IV access + airway management) – IV access attempts must not delay cardioversion</p> <p>1st shock: 1 J kg⁻¹</p> <p>2nd shock: 2 J kg⁻¹, consider up to 4 J kg⁻¹</p>	<p>25–50 mg kg⁻¹ Maximum per dose 2 g to be given over 10–15 min, may be repeated once if necessary, in Torsades de pointes VT</p>

Age	*Systolic BP 5th centile mmHg
1 month	50
1 year	70
5 years	75
10 years	80