

Pediatric Tachycardia With a Pulse Algorithm

- Sinus Tachycardia
- Unstable Tachyarrhythmia
- Stable Tachyarrhythmia

Identify and treat the cause of the tachyarrhythmia

Keep airway open and assist breathing
Provide oxygen
Monitor rhythm, BP, and O2 Saturation
Establish IV/IO access
12-lead ECG if possible

Synchronized cardioversion

- 0.5-1 J/kg (increase to 2 J/kg if needed)
- Use sedation if possible

Adenosine

- 0.1 mg/kg IV/IO (Max. 6 mg)
- May give 2nd dose of 0.2 mg/kg IV/IO (Max. 12 mg)

**Adenosine should be given rapid IV bolus.

Antiarrhythmics:

- Amiodarone** 5mg/kg IV over 20-60 min
- Procainamide** 15 mg/kg IV over 30-60 minutes

**Amiodarone and Procainamide are not typically given together.

Sinus Tachycardia

- Identify cause of tachycardia (fever, hypovolemia, etc.)
- Rate variability.
- Typically < 220 for infants
- Typically < 180 for children

Treat the cause.

Evaluate EKG
Tachyarrhythmia Present?

UNSTABLE?
Hypotension
Altered LOC
Signs of Shock

UNSTABLE

QRS normal (≤ 0.09 sec) | QRS wide (> 0.09 sec)

Check QRS width

Supraventricular Tachycardia (SVT) (Most common tachyarrhythmia)

- Usually abrupt onset
- Usually no rate variability
- No P-waves
- Typically ≥ 220 for infants
- Typically ≥ 180 for children

- IV/IO access if not done yet
- Adenosine**
- Synchronized cardioversion** if adenosine is ineffective or no vascular access.

Presume VT

Perform **Synchronized Cardioversion**
Expert Consultation

STABLE

QRS normal (≤ 0.09 sec) | QRS wide (> 0.09 sec)

Check QRS width

Supraventricular Tachycardia (SVT) (Most common tachyarrhythmia)

- Usually abrupt onset
- Usually no rate variability
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Vagal Maneuvers

- IV/IO access
- Consider Adenosine**

Ventricular Tachycardia

- Typically underlying heart disease

Adenosine if the rhythm is regular and uniform QRS morphology

Expert Consultation