**Adult Tachycardia With a Pulse Algorithm**

1. Assess appropriateness for clinical condition. Heart rate typically ≥150/min if tachyarrhythmia.

2. Identify and treat underlying cause
   - Maintain patent airway; assist breathing as necessary
   - Oxygen (if hypoxic)
   - Cardiac monitor to identify rhythm; monitor blood pressure and oximetry

3. **Persistent tachyarrhythmia causing:**
   - Hypotension?
   - Acute altered mental status?
   - Signs of shock?
   - Ischemic chest discomfort?
   - Acute heart failure?

4. Synchronized cardioversion
   - Consider sedation
   - If regular narrow complex, consider adenosine

5. Wide QRS? ≥0.12 second
   - Yes
     - IV access and 12-lead ECG if available
     - Vagal maneuvers
     - Adenosine (if regular)
     - β-Blocker or calcium channel blocker
     - Consider expert consultation
   - No

6. Consider antiarrhythmic infusion

7. • IV access and 12-lead ECG if available
   • Vagal maneuvers
   • Adenosine (if regular)
   • β-Blocker or calcium channel blocker
   • Consider expert consultation

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**Doses/Details**

**Synchronized cardioversion:**
- Initial recommended doses:
  - Narrow regular: 50-100 J
  - Narrow irregular: 120-200 J biphasic or 200 J monophasic
  - Wide regular: 100 J
  - Wide irregular: defibrillation dose (not synchronized)

**Adenosine IV dose:**
- First dose: 6 mg rapid IV push; follow with NS flush.
- Second dose: 12 mg if required.

**Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia**

**Procainamide IV dose:**
- 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17 mg/kg given.
- Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

**Amiodarone IV dose:**
- First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs.
- Follow by maintenance infusion of 1 mg/min for first 6 hours.

**Sotalol IV dose:**
- 100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

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