AHA ACLS Adult Tachycardia Algorithm

(With A Pulse)

Tachyarrhythmia typically seen when the heart rate is ≥ 150/min
Is the tachyarrhythmia causing the symptoms?

The priority should be to identify and treat the underlying cause

- Maintain patent airway; assist breathing if necessary
- Apply oxygen (if hypoxemic); monitor pulse oximetry
- Apply cardiac monitor; monitor blood pressure
- **Start IV and obtain 12-lead ECG if possible**

Is the Tachyarrhythmia causing:

- Hypotension?
- Altered mental status?
- Signs of shock?
- Ischemic chest discomfort?
- Acute heart failure?

Yes →

Synchronized Cardioversion

- Consider sedation
- May use **adenosine** for regular narrow complex tachyarrhythmia

No ↓

Is the QRS Wide ≥ 0.12 second

Yes →

- May use **adenosine** only if regular and monomorphic
- Consider **antiarrhythmic** infusion
- Consider expert consultation

No ↓

- **Vagal Maneuvers (if rate is regular)**
- **Adenosine (if rate is regular)**
- β-Blocker or calcium channel blocker
- Consider expert consultation

If refractory, consider

- Underlying cause
- Need to increase energy level for next cardioversion
- Addition of antiarrhythmic
- Expert Consultation

Synchronized Cardioversion Doses

NEW: AHA recommends referring to your specific device's recommended energy level to maximize first shock success.

Initial recommended doses:

- Narrow regular: 50-100 J
- Narrow irregular: 120-200 biphasic or 200 J Monophasic
- Wide regular: 100J
- Wide irregular: defibrillation dose (not synchronized)

Adenosine IV Dose:

First dose 6mg rapid IV push and NS flush
Second dose: 12 mg if needed

Antiarrhythmics that may be considered

Amiodarone
Procainamide
Sotalol

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