

# TACHYCARDIA (With a Pulse)

## UPDATED 1/2024

### ALL PROVIDERS

- Focused history and physical exam
  - Assess blood glucose level
- Continuous ECG, ETCO<sub>2</sub>, blood pressure, and pulse oximetry monitoring
- Acquire and transmit a 12 lead EKG if possible.
  - Ensure to capture/print 4- or 12-lead EKG prior to, during, and after any maneuver or medication administration to evaluate its effectiveness.
- Key Considerations**
  - Pregnancy >20 weeks gestation - Place wedge-shaped cushion or multiple pillows under patient's right hip.
  - Pediatric lowest acceptable systolic blood pressures are:
    - birth to 1 month = 60mmHg
    - 1 month to 1 year = 70mmHg
    - 1 year to 10 years = 70mmHg + (age x 2)
    - 10 years and older = 90mmHg.

#### ADULT

**PEDIATRIC (<15 years of Age)**  
**NOTE: Pediatric weight based dosing should not exceed Adult dosing.**

#### AEMT

- Vascular access and fluid therapy
- Supraventricular Tachycardia (SVT)**
- Obtain a 12 Lead EKG, if possible
- Maneuvers to increase vagal tone: Valsalva, ice pack to face, Trendelenburg, urination, etc.)

#### AEMT

- Vascular access and fluid therapy
- Supraventricular Tachycardia (SVT)**
  - Infants: rate usually greater than 220 bpm with no variation
  - Children: rate usually greater than 180 bpm with no variation
- Obtain a 12 Lead EKG is possible, if possible
- Maneuvers to increase vagal tone: Valsalva, ice pack to face, Trendelenburg, urination, etc.)

#### PARAMEDIC

- Supraventricular Tachycardia (SVT)**
- Adenosine**
  - **Initial dose: 6 mg IV followed immediately by a 20cc NS or LR rapid push**
  - **May repeat once: 12mg IV followed immediately by a 20cc NS or LR rapid push**

#### Stable Wide Complex (QRS > 120 msec) Tachycardia

- Transport to ED with IV in place and careful monitoring

#### PARAMEDIC

- Supraventricular Tachycardia (SVT)**
- Adenosine**
  - Indicated for patients with prior known SVT who have responded to adenosine previously
    - **Initial dose: 0.1mg/kg IV (to max 6mg) followed immediately by a 10cc NS or LR rapid push**
    - **May repeat once: 0.2mg/kg IV (to max 12mg) followed immediately by a 10cc NS or LR rapid push**

**Unstable Tachycardia – Synchronized  
Cardioversion**

***Signs/Symptoms of Unstable Tachycardia***

- Acute cardiac chest pain
- Acute congestive heart failure / pulmonary edema
- Altered mental status
- SBP <90 mm Hg
- Cool, Clammy or Pale skin
- Weak or Thready pulse

**Synchronized Cardioversion**

- Initial dose: 100J
- Repeat doses: 200J
- Consider pretreating with a benzodiazepine and analgesic **ONCE** but do not delay cardioversion
  - Fentanyl - 50-100mcg
  - Lorazepam - 1mg**OR**
  - Midazolam - 2.5mg

**Stable Wide Complex (QRS > 120 msec)  
Tachycardia**

- Transport to ED with IV in place and careful monitoring

**Unstable Tachycardia – Synchronized  
Cardioversion**

***Signs/Symptoms of Unstable Tachycardia***

- Acute congestive heart failure / pulmonary edema
- Altered mental status
- Low BP for age
- Cool, Clammy, or Pale skin
- Weak or Thready pulse

**Synchronized Cardioversion**

- Initial energy dose is 0.5-1 J/kg
- If no response, double energy dose to 2 J/kg
- Consider pretreating with a benzodiazepine and analgesic **ONCE** but do not delay cardioversion
  - Fentanyl - 1mcg/kg
  - Lorazepam - 0.05mg/kg**OR**
  - Midazolam - 0.1mg/kg