



## **Tachycardia**

*This protocol is for paramedic use only*

**Aliases:** SVT, V-tach, Supraventricular tachycardia, Ventricular Tachycardia, Uncontrolled Atrial Fibrillation, A-fib

This protocol is used for the care of patients with persistent tachycardia (ventricular rate greater than or equal to 150/minute) where the tachycardia is believed to be the primary cause of the patient's symptoms. It is not intended to treat tachycardia that is secondary to underlying conditions (i.e., dehydration, trauma or toxins). Consultation with online medical control should be considered for complex patients in whom the cause of the arrhythmia is not obvious. **SYNCHRONIZED CARディオVERSION PRECEDES DRUG THERAPY FOR UNSTABLE PATIENTS.** Unstable patients may be defined as those suffering a tachycardia with: hypotension, acutely altered mental status, signs of shock, significant ischemic chest discomfort, shortness of breath, or pulmonary edema that is likely due to the arrhythmia. Adenosine is only used for regular monomorphic rhythm tachycardia.

1. Follow the **General Pre-Hospital Care Protocol**.
2. Identify and treat reversible causes.
3. Determine if patient is stable or unstable.

### **UNSTABLE**

4. If time and condition allow prior to cardioversion, sedate per MCA selection. Refer to **Patient Sedation Procedure**.
5. For unstable patients with a **REGULAR NARROW OR WIDE** rhythm, perform synchronized cardioversion beginning at 100 J, increasing to 200 J, 300 J, 360 J. (Use manufacturers suggested biphasic energy dose, 100 J).
6. For unstable patients with an **IRREGULAR NARROW** rhythm, perform synchronized cardioversion beginning at 200 J, increasing to 300 J, 360 J. (Use manufacturers suggested biphasic energy dose, 120 – 200 J).
7. For patients that are unstable with an **IRREGULAR WIDE** rhythm, perform defibrillation beginning at 200 J, increasing to 300 J, 360 J. (Use manufacturers suggested biphasic energy dose 150 – 200 J).

### **STABLE**

8. Attempt Vagal Maneuvers
  - a. Ensure the patient is on oxygen and on a cardiac monitor.
  - b. Run ECG strip during the procedure.
  - c. Instruct the patient to cough forcefully several times or
  - d. Have the patient take a deep breath and bear down.
  - e. **DO NOT USE CAROTID MASSAGE.**
9. Start an IV NS KVO. A large bore antecubital IV should be secured whenever possible.
10. Obtain 12 lead ECG, if immediately available.
11. If the rhythm is regular, consider Adenosine 6 mg rapid IV push through the most proximal injection site. This should be followed immediately with 20 ml NS flush.

12. If conversion does not occur, administer Adenosine 12 mg IV using the same technique as stated above.



13. If rhythm is stable with narrow QRS contact medical control for possible orders.

14. If rhythm is stable with wide QRS administer Amiodarone **OR** Lidocaine per MCA Selection.

**Medication Options**  
**(Choose One)**

Amiodarone - 150 mg IV over 10 minutes

**OR**

Lidocaine - 1 mg/kg IV

15. If at any point a patient becomes unstable, perform synchronized cardioversion.

16. Administer Magnesium Sulfate 2 gm IV/IO for suspected torsades de pointes.








17. Per MCA selection, administer additional Amiodarone 150 mg IV over 10 minutes as needed to a maximum of 450 mg OR Lidocaine 0.5 -1.0 mg/kg IV push every 5 - 10 minutes to a maximum of 3 mg/kg.

**NOTES:**

1. Administration of Amiodarone is best accomplished by adding Amiodarone 150 mg to 100 or 250 ml of NS and infusing over approximately 10 minutes.
2. Administration of Magnesium Sulfate is best accomplished by adding Magnesium Sulfate 2gm to 100 or 250 ml of NS and infusing over approximately 10 minutes.

## ***Pulmonary Edema / CHF***

This protocol is to be followed for patients in acute respiratory distress situations, not chronic.

1. Follow **General Pre-Hospital Care Protocol**.
2. Initiate supplemental oxygen by non-rebreather mask.
3. Position patient upright with legs dependent, if possible.
-  4. Consider CPAP (if available) per **CPAP/BiPAP Procedure**.
-  5. Inquire of all patients (male and female) if they have taken Viagra (sildenafil citrate) or similar erectile dysfunction medications or medications used to treat pulmonary hypertension in the last 48 hours. If yes, **DO NOT ADMINISTER NITROGLYCERIN AND CONTACT MEDICAL CONTROL.** 
6. If BP above 100 mmHg, administer Nitroglycerin 0.4 mg SL. Repeat every 3-5 minutes if BP above 100 mmHg. Nitroglycerin may be administered prior to IV placement if the BP is above 120 mmHg. Continue administration in the presence of CPAP.
7. If wheezing, administer nebulized Albuterol 2.5 mg/3ml.
-  8. If indicated, consider an advanced airway.
9. Obtain 12-lead ECG if available. Follow local MCA transport protocol if ECG is positive for ST segment elevation myocardial infarction (STEMI) and alert hospital as soon as possible. (May be a BLS skill, per MCA selection, see **12 Lead ECG Procedure**)
-  10. If BP is less than 100 mmHg and signs/symptoms of shock, administer Epinephrine by push dose (dilute boluses) per **Epinephrine Protocol**.
  - a. Prepare (10 mcg/mL) by adding 1mL of 1mg/10mL Epinephrine in 9mL NS, then
  - b. Administer 1-2 mL every 2 to 5 minutes and titrate SBP greater than 90 mm/Hg.