

Medication: Adenosine	PDN: 6900.05	Last Updated: March 7 2023	PMD: Andrew Travers*	PDC: Tanya Fraser*	Page 1 of 2
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## ADENOSINE

### 1.0 Classification

- Class V antiarrhythmic; naturally occurring nucleoside.

### 2.0 Mechanism of Action

- Slows AV node conduction.

### 3.0 Indications

- Stable narrow-complex SVT
- Unstable narrow-complex re-entry tachycardia while preparing for cardioversion.
- Regular and monomorphic wide-complex tachycardia, thought to be, or previously defined as, re-entry SVT.

### 4.0 Contraindications

- Irregular, polymorphic wide-complex tachycardia
- Known hypersensitivity
- Drug-induced tachycardia
- 2<sup>nd</sup> or 3<sup>rd</sup> degree heart block
- Wolff-Parkinson-White with wide-complex or atrial fibrillation

### 5.0 Precautions

- Patients with unstable angina may be at greater risk for major side effects.

### 6.0 Route

- May be given IV

### 7.0 Dosage

#### Adult

- 6 mg IV rapid bolus followed by 20 mL normal saline flush; may be repeated in 1-2 minutes (if symptoms persist) as a second dose of 12 mg IV rapid bolus with 20 mL normal saline flush.

#### Pediatric 50 kg (110 lb) or more

- 6 mg IV rapid bolus followed by 20 mL normal saline flush; may be repeated in 1-2 minutes (if symptoms persist) as a second dose of 12 mg IV rapid bolus with 20 mL normal saline flush.

#### Pediatric less than 50 kg (110 lb)

- 0.1 mg/kg (maximum of 6 mg) IV rapid bolus followed by 5 mL normal saline flush; may be repeated in 1-2 minutes (if symptoms persist) as a second dose of 0.2 mg/kg (maximum of 12 mg) IV rapid bolus with 5 mL normal saline flush.

### 8.0 Supplied

- 6 mg prefilled syringe

### 9.0 May Be Given By

- ACP/CCP

### 10.0 Adverse Effects

- Chest pressure
- Dizziness
- Dyspnea
- Nausea
- Feeling of impending doom
- Transient bradycardia

### **11.0 Special Notes**

- Adenosine often causes arrhythmias, lasting only a few seconds, at the time of cardioversion including PVCs, PACs, bradycardia, AV blocks, or asystole. If arrhythmia persists, initiate appropriate treatment.
- Due to the very short half-life of adenosine, it should only be administered through an IV port close to the patient with the flush administered through a proximal port (one port upstream from where adenosine was administered).
- Pregnancy category C [if the patient will benefit from a Category C drug, it is generally used]

### **12.0 References**

- Adult Cardiac Arrhythmia Clinical Practice Guideline
- Compendium of Pharmaceuticals and Specialties (CPS)

\*Electronically Signed

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