

HEALTHEAST MEDICAL TRANSPORTATION
MEDICAL OPERATIONS MANUAL

ADENOSINE (ADENOCARD)

Drug Classification: Antiarrhythmic

BACKGROUND

Pharmacodynamics

Alters the movement of potassium in the action potential of the heart, which slows the conduction of electrical impulses at the AV node. Adenosine has a half-life of <10 seconds.

Indications

- Stable reentry SVT.¹
- May be tried in regular non-differentiated wide-complex tachycardia with a pulse.

Contraindications

- Second or third degree heart block, except in patients with a functioning pacemaker.
- Sick Sinus Syndrome, except in patients with a functioning pacemaker.

Cautions

- Obstructive lung disease
- Acute bronchospasm
- Frequently followed by several seconds of asystole.

DOSAGE and ADMINISTRATION

1. Administer this medication by rapid IV push, preferably in a large-bore, peripheral IV as close to the heart as possible (i.e., antecubital fossa), immediately followed by a 20 mL saline flush.
2. Elevate the accessed extremity when administering this medication.

ADULT	PEDIATRICS (less than 60 kg)
<ol style="list-style-type: none">3. Give 6 mg adenosine first.²4. If PSVT continues and symptoms are not improved after 1 to 2 minutes administer a second dose at 12 mg.	<ol style="list-style-type: none">3. Give 0.1 mg/kg (up to 6 mg) first.²4. If PSVT continues and symptoms are not improved after 1 to 2 minutes administer a second dose at 0.2 mg/kg.

ADVERSE EFFECTS

- Dyspnea and bronchoconstriction (especially in patients with asthma and COPD)
- Palpitations and chest pain
- Hypotension
- Facial flushing and headache

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- At the time of conversion, a variety of rhythms may appear on the ECG² Short-lasting first, second, or third degree block or *transient* asystole may result after administration. Due to the drug's short half-life, these effects are generally self-limiting.
- At a dose of 12 mg, there are usually no hemodynamic side effects (i.e., hypotension).

NOTES

¹ Adenosine does not convert atrial fibrillation, atrial flutter, or ventricular tachycardia.

² After administration of this medication, a rhythm other than PSVT may be evident (i.e., A-fib with RVR). In these cases, treatment plans should be altered to treat the appropriate rhythm.

REFERENCE GUIDELINE:

2H Paroxysmal Supraventricular Tachycardia

2I Wide Complex Tachycardia