



## EMS System for Metropolitan Oklahoma City and Tulsa 2024 Medical Control Board Treatment Protocols



Approved 11/08/23, Effective 1/15/24, replaces all prior versions

### 16B – ADENOSINE (ADENOCARD®)

#### PARAMEDIC

**Class:** Anti-Tachydysrhythmic (Purine Nucleoside)

**Actions/Pharmacodynamics:** Slows electrical conduction through the cardiac atrioventricular (AV) node, with ability to interrupt reentry pathways through the AV and sinoatrial (SA) nodes. Adenosine is administered to convert paroxysmal supraventricular tachycardia (PSVT) to normal sinus rhythm.

**Indications:** Tachycardia - Stable (5F)  
PSVT (sustained regular, narrow-complex tachycardia >150 bpm in adults) & systolic BP  $\geq$  100mmHg, failed valsalva maneuver.

**Contraindications:** 2<sup>nd</sup>/3<sup>rd</sup> degree AV Blocks (may induce asystole)  
Known Wolff-Parkinson-White Syndrome (may increase heart rate)  
Known Sick Sinus Syndrome (may induce asystole)  
Bradycardia (may induce symptomatic hypotension)

**Pharmacokinetics:** Onset of action within 10-20 seconds after IV administration. Very rapid metabolism (and duration of effect) within 10-20 seconds after IV administration.

**Side Effects:** Common, though transient, symptoms include chest pain, palpitations of irregular bradycardia, dyspnea, lightheadedness, numbness, and sweating. A constellation of these side effects may produce significant patient apprehension and/or sense of impending doom. The patient should be advised of these possibilities prior to adenosine administration and given reassurance such symptoms will be short-lived in duration of seconds. Transient asystolic or profound, irregular bradycardic rhythms may be observed on ECG monitoring.

**Dosage:** Tachycardia - Stable - Adult (5F) (PSVT as described above)  
12 mg rapid IVP (1 – 2 seconds) followed rapidly by 10 mL saline flush.  
May repeat once at 12 mg.

**\*\*OLMC Order Only for use in pediatric patients.**

**OLMC may direct use of adenosine in evaluating etiology of regular, monomorphic wide complex tachycardia.**

**How Supplied:** 12 mg/4 mL in prefilled syringe.  
(Always check concentration and dose per container at time of patient medication administration)