

ADENOSINE (Adenocard)

EMSAC AUGUST 2026

ACTION (Antiarrhythmic)

- Transient ~~Decreases conduction through the~~ atrioventricular (AV) node blockade, slowing/interrupting re-entry pathways.
- Half life ~10 seconds
- ~~Interrupts and may convert paroxysmal supraventricular tachycardia (PSVT).~~

INDICATIONS

- Hemodynamically stable paroxysmal supraventricular tachycardia (PSVT), if vagal maneuvers are ineffective
- Hemodynamically unstable PSVT, if cardioversion is ineffective ~~as substitute for cardioversion~~
- Hemodynamically stable VT with a pulse (**Pediatric only**)

CONTRAINDICATIONS

- Known allergy hypersensitivity to adenosine
- 2nd or 3rd degree AV block or sick sinus syndrome (without pacemaker)
- Atrial fibrillation/flutter ~~Atrial fibrillation/flutter with history of pre-excitation Wolff-Parkinson-White (WPW) syndrome — risk of ventricular fibrillation~~
- Polymorphic wide complex tachycardia
- ~~Do not use Adenosine on a patient with a known history of WPW~~

PRECAUTIONS

- | | |
|---|---|
| • Transient asystole (up to 20 to 30 secs) | • Transient asystole (up to 20 to 30 secs) |
| • Facial flushing and headaches | • Facial flushing and headaches |
| • Chest pressure | • Chest pressure |

POTENTIAL SIDE EFFECTS

- Transient asystole (up to 20-30 seconds)
- Facial flushing and headaches
- Chest pressure

ADULT DOSE/ROUTE

- First dose: 6-12 mg rapid IVP/IO followed with 10 ml Normal Saline flush.
- If first dose is ineffective, repeat with 12 mg rapid IVP/IO. ~~*May repeat 12mg x 1 if still ineffective.~~

PEDIATRIC DOSE/ROUTE (≤ 14 years of age, ≤ 40kg, whichever comes first)

- First dose: 0.1 mg/kg rapid IVP/IO followed by 10ml NS flush (max first dose 6 mg).
- If first dose is ineffective, repeat with 0.2 mg/kg rapid IVP/IO* (max second dose 12 mg). ~~May repeat 0.2 mg/kg x 1 if still ineffective.~~

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NOTES:

- ~~• Clinically evaluate patients—adult and pediatric—to distinguish primary tachyarrhythmias such as PSVT—from patient conditions leading to sinus tachycardias.~~
- IV preferred route, ideally at, or proximal to, the antecubital fossa
- Record continuous ECG/rhythm strip before, during and after administration and place cardioversion/defibrillator pads in place before administration
- Warn the patients: brief chest tightness, flushing and a “sense of dread” are expected and transient
- Push as fast as possible. Drug is rapidly metabolized and less effective when pushed slowly.
- ~~• Adenosine is blocked by methylxanthines (caffeine) and potentiated by dipyridamole and carbamazepine.~~