

## Adult Medication Facts

**Adenosine-** Slows sinus rate and conduction through AV node  
**Indications-** Utilized for most narrow QRS tachyarrhythmias and SVT.  
**Dose-** 6mg IV rapid push followed immediately by flush. Follow up dose of 12mg if no response after 1 -2 minutes. May repeat times 1 dose.

**Caution-** Can cause a brief period of heart block. May cause facial flushing.

**Atropine-** Parasympathetic antagonist; parasympathetic blocker  
**Indications-** Symptomatic bradycardia  
**Dose- *Symptomatic Bradycardia***- 0.5-1 mg IV, may repeat every 3-5 minutes with max dose of  $\leq 2.5$ mg. (Doses  $>2.5$ mg produces complete vagal blockade)  
***Asystole/bradycardic pulseless electrical activity (PEA)***- 1 mg IV, may repeat every 3-5 minutes, to a total dose  $\leq 2.5$ mg

**Caution-** Use cautiously with Mobitz Type II second degree block and third degree block with new wide QRS. Giving a smaller than recommended dose may cause paradoxical cardiac slowing.

**Amiodarone-** Inhibits alpha- and beta-receptors. Contains vagolytic and calcium channel blocking properties. Lengthens action potential duration.  
**Indications-** Cardiac arrest: Pulseless VT, VF  
**Dose-** Initial bolus of 300mg IV diluted in 20-30ml of NS or D5W  
Repeat boluses of 150mg IV every 3-5 minutes

**Calcium chloride-** Electrolyte, increases force of cardiac contraction,

necessary

element for cardiac contractility and blood coagulation

**Indications-** Hypocalcemia, hypocalcemia secondary to blood transfusions, calcium channel blocker toxicity, magnesium toxicity, hyperkalemia, antidote for beta-blocker toxicity

**Dose- Hypocalcemia** – 500mg- 1gm IV. May be repeated in extreme hypocalcemia.

**Magnesium toxicity-** 500 mg slow IV push

**Calcium channel blocker toxicity-** 2mg-4mg slow IV push. Stop if bradycardia develops.

**Hyperkalemia-** 8-16mg/kg IV over 10 minutes

**Caution-** Calcium should never be given peripherally, as extravasation and severe calcium burns and tissue death may result.

**Epinephrine-** Stimulates alpha, beta-1, and beta-2 receptors

**Indications-** Cardiac Arrest: VF, VT, asystole, PEA, symptomatic bradycardia.

**Dose-** 1 mg. (10ml) of 1:10,000 solution followed by 20ml fluid flush

May repeat every 3-5 minutes. 0.2 mg/kg may be used.

**Caution-** Use with care, adult patients have a completely different response than children

**Potassium chloride-** Electrolyte

**Indications-** Hypokalemia, Hypokalemia in the presence of cardiac rhythm irregularities

**Dose-** 10-20meq in 25-50ml D5W IV administered over 2 hours, preferably via central line.

**Caution-** The adult population has increased sensitivity to low levels of potassium which may cause increased risk for cardiac irritability and arrhythmias. In addition, Potassium

can induce myocardial diastolic arrest (e.g., cardioplegia solutions); therefore, rapid administration must be avoided.

**Magnesium sulfate-** antiarrhythmic, electrolyte. Slows SA node impulse. High doses may initiate cardiac arrest in diastole.

**Indications-** drug-induced Torsades de pointes, even in presence of normal magnesium levels. Not recommended during cardiac arrest unless torsades de pointes noted or magnesium deficiency present.

**Dose- Drug induced torsades-** Loading dose of 1-2gm in minimum 50ml D5W over 5-60 minutes followed by 0.5-1gm/hour IV

**Cardiac Arrest-** 1-2gm mixed with 10ml of D5W IV push

**Caution** – use cautiously in patients receiving digitalis, those in renal failure or with renal impairment, and preexisting heart block. May produce hypotension, flushing, bradycardia, heart block, decreased LOC and drowsiness.

**Normal electrolyte levels for adult cardiac patients (greater than 18 years of age). Replace for values:**

**Potassium – Less than 4.0 mEq/L**

**Magnesium – Less than 2.0 mEq/L**

**Ionized Calcium - Less than 1.0 mmol/L**

#### References

Aehlert, B. (2002). *ACLS Quick Review Study Guide* (second ed.). St. Louis, Missouri, 63146: Mosby, Inc. (Original work published 1994)

Metheny, N. (2000). *Fluid & electrolyte balance* (Fourth ed.). Philadelphia, New York, Baltimore: Lippincott. (Original work published 1992)

Created by Sonja Park RN & Stephen Roth MD, MPH  
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