

<b>Medication:</b> Sodium Bicarbonate	<b>PDN:</b> 6909.07	<b>Last Updated:</b> August 21 2025	<b>PMD:</b> Andrew Travers*	<b>PDC:</b> Chloe Koen Butt*	Page 1 of 2
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## **SODIUM BICARBONATE (Bicarb)**

### **1.0 Classification**

- Alkalinizing agent; electrolyte

### **2.0 Mechanism of Action**

- Increases plasma bicarbonate which buffers metabolic acidosis.

### **3.0 Indications**

- Cardiac arrest patients with pre-existing or suspected hyperkalemia (renal failure).
- Cardiac arrest patients with suspected ASA overdose.
- Cardiac arrest patients with suspected DKA.
- Sodium channel blocker overdose (e.g., Tricyclic Antidepressant or cocaine overdose) with wide complex tachycardia, hemodynamic instability, or cardiac arrest.

### **4.0 Contraindications**

- None

### **5.0 Precautions**

- It is important to maintain adequate ventilation to ensure CO<sub>2</sub> elimination.
- Sodium bicarbonate deactivates epinephrine and dopamine therefore cannot be given through the same line.
- Sodium bicarbonate should not be administered with calcium chloride simultaneously as a precipitate can form which may clog the line.
- Extravasation of sodium bicarbonate may cause tissue necrosis.

### **6.0 Route**

- May be given IV/IO

### **7.0 Dosage**

#### **Adult**

- 1 mEq/kg initially, then 0.5 mEq/kg every 10 minutes as needed (persisting wide complex QRS, hemodynamic instability or cardiac arrest).

#### **Pediatric**

- 1 mEq/kg slow push, then 0.5 mEq/kg every 10 minutes as needed (persisting wide complex QRS, hemodynamic instability or cardiac arrest).

### **8.0 Supplied**

- 50 mEq in 50 mL preloaded syringe

### **9.0 May Be Given By**

- In cardiac arrest: PCP with additional approved activities/ACP/CCP
- For wide complex tachycardia due to sodium channel blocker OD: PCP with additional approved

activities (with CSP consult)/ACP/CCP

## **10.0 Adverse Effects**

- None

## **11.0 Special Notes**

- Always flush the line between doses of bicarbonate and calcium to avoid precipitation.
- Routine administration of sodium bicarbonate for DKA is not recommended.
- Routine administration of sodium bicarbonate for cardiac arrest is not recommended.
- Irrigate the IV/IO line before and after infusion.
- Patients may be placed on a sodium bicarbonate infusion during interfacility transfers for conditions such as TCA overdose or rhabdomyolysis.
- Pregnancy category C [if the patient will benefit from a Category C drug, it is generally used]

## **12.0 References**

- Cardiac Arrest Adult Clinical Practice Guideline
- Toxicological Emergencies Clinical Practice Guideline
- Compendium of Pharmaceuticals and Specialties (CPS)

\*Electronically Signed

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