



**GENERIC NAME: SODIUM BICARBONATE 8.4%**

**BRAND NAME:** Sodium Bicarbonate 8.4%

**CLASS:** buffer

**Mechanism of Action:**

Buffers  $H^+$  and increases pH

**Indications and Field Use:**

Pre-existing metabolic acidosis Overdose of aspirin, cyclic antidepressants (alkalinization of blood) Cardiac arrest after other interventions and ventilation is adequate

**Contraindications:**

Alkalosis

**Adverse Reactions:**

**CV:** Congestive heart failure, edema secondary to sodium overload. **Metabolic:** Hyperosmolarity, metabolic alkalosis, hypernatremia, in cardiac arrest may cause extracellular

alkalosis and intracellular acidosis.

## NOTES ON ADMINISTRATION

Incompatibilities/Drug Interactions: Incompatible with other drug infusions

### Adult Dosage:

**Pre-existing Metabolic Acidosis or Alkalinization of Blood:** 50-100 mEq IV per medical control authority. **Infusion:** 50 mEq of sodium bicarbonate/250 ml of D5W NS or as determined by medical control.

**Cardiac arrest:** First dose usually 0.5 - 1 mEq/kg (or as determined by blood gas analysis), with subsequent doses of 0.5 mEq/kg every 10 minutes in cardiac arrest after other standard treatment (defibrillation, CPR, intubation, ventilation and more than one trial of epinephrine) has been used.

### Pediatric Dosage:

0.5 - 1 mEq/kg IV or IO slowly, if ventilation is adequate according to medical control authority. Can contribute to acidosis and cause fluid overload.

### Neonatal Dosage:

1 mEq/kg IV or IO of 4.2% slowly. Waste 25 ml of 8.4% solution and add 25 ml of D5W NS from IV bag, each ml will contain 0.5 mEq of sodium bicarbonate

### Routes of Administration:

IV bolus; IV infusion For IV infusion to be monitored on interfacility transports, infusion pump is required

## **Onset of Action:**

Seconds

## **Peak Effects:**

1-2 minutes

## **Duration of Action:**

10 minutes

## **Dosage Forms/Packaging:**

50 mEq/50 ml prefilled syringes

## **Arizona Drug Box Supply:**

PARAMEDIC: 2 prefilled syringes

## **Special Notes:**

- > Flush tubing before and after administration, **especially** with concurrent use of calcium chloride.
- > Sodium bicarbonate administration should be considered only for treatment of documented severe acidosis associated with prolonged cardiac arrest or an unstable hemodynamic state, hyperkalemia or certain overdoses (i.e. cyclic antidepressants, ASA, phenobarbital, etc.).
- > In premature infants hyperosmolarity from undiluted sodium bicarbonate has been correlated with an increased risk for periventricular-intraventricular hemorrhage.
- > **Severe** tissue necrosis can occur with extravasation.

