

Southern Illinois Regional EMS System

JJ-26 SODIUM BICARBONATE

Class:

- Buffer, alkalinizing agent, electrolyte replacement.

Description:

- Sodium bicarbonate reacts with hydrogen ions to form water and carbon dioxide and thereby can act to buffer metabolic acidosis.

Onset and Duration:

- Onset: 2-10 minutes
- Duration: 30-60 minutes

Indications:

- Drug intoxications:
 - Barbiturates
 - Salicylates
 - Methyl Alcohol
- Metabolic Acidosis
- Alkalinization for treatment of specific intoxications/rhabdomyolysis
- Diabetic Ketoacidosis

Contraindications:

- In patients with chlorine loss from vomiting and gastrointestinal suction.
- Metabolic and respiratory alkalosis
- Severe pulmonary edema
- Hypocalcemia
- Hypokalemia
- Hypernatremia
- When administration of sodium could be detrimental

Adverse Reactions:

- Metabolic alkalosis.
- Known sensitivity
- Rise in intracellular P_{CO_2} and increased tissue acidosis
- Electrolyte imbalance (Hypernatremia).
- Peripheral edema

Drug Interaction:

- Sodium bicarbonate may precipitate in calcium solutions
- Alkalinization of urine may shorten elimination half-lives of certain medications
- Vasopressors may be deactivated

How Supplied:

- (Adult) 50mEq in 50mL prefilled syringe
- (Pediatric) 5mEq in 10mL prefilled syringe

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JJ-24 SODIUM BICARBONATE (continued)

Dosage and Administration:

- Urgent Forms of Metabolic Acidosis:
 - Adult:
 - 0.5 mEq/kg IV/IO
 - May repeat in 10 minutes
 - Infuse slowly and only if ventilations are adequate
 - Pediatric:
 - Same as adult dosing
 - Infuse slowly and only if ventilations are adequate

Special Considerations:

- Pregnancy Category C
- When possible, blood gas analysis should guide bicarbonate administration
- Bicarbonate administration may increase edematous or sodium retaining states
- Sodium bicarbonate may worsen congestive heart failure
- Maintain adequate ventilation (gas exchange)