

AUTHORIZED BY: CPC Quality of Care Committee
ISSUE DATE: June 2002
CATEGORY: ACP Medications
TITLE: **Sodium Bicarbonate**

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- Other Names:**
- NaHCO_3
- Classifications:**
- Alkalizer (buffer)
- Pharmacodynamics:**
- Neutralizes and buffers excessive body acids
- Onset:**
- Immediate
- Peak:**
- Immediate
- Duration:**
- pH dependent
- Indications:**
- Treatment of metabolic acidosis
 - Known or suspected hyperkalemia
 - Overdose of tricyclic anti-depressants (i.e. Amitriptyline/Elavil)
 - Overdose of salicylates
- Contraindications:**
- Suspected metabolic or respiratory alkalosis
 - Hypocalcemia
- Precautions:**
- May cause tissue necrosis or sloughing at the IV site if infiltration occurs
 - Routine use during CPR is not recommended.
 - In certain circumstances such as pre-existing metabolic acidosis, hyperkalemia, TCA overdose or prolonged cardiac arrest, the administration of sodium bicarbonate may be considered.
 - Should be used with extreme caution in edematous or sodium retaining conditions (CHF), in renal insufficiency and in patients receiving corticosteroids or corticotropin.
- Adverse Reactions:**
- Metabolic Alkalosis – hypoxia due to left-upward shift of the oxyhemoglobin curve (O_2 not readily released to the cell at the tissue level)
 - Tetany (Neuromuscular hyperactivity)
 - Paradoxical worsening of metabolic acidosis – especially in the patient not being adequately ventilated
 - Headaches
 - Confusion
 - Hypokalemia
- Drug Interactions:**
- Compatible with NS and dextrose solutions
 - Incompatible with Ringer Lactate solutions
- Preparations:**
- 50 mEq of 8.4% solution in 50 cc (preload)
- Special Considerations:**
- Routine use of Sodium Bicarbonate not recommend per the 2015 ACLS Guidelines. Class III, LOE B
- References:**
- Compendium of Pharmaceuticals and Specialties 2013
 - 2015 AHA Guidelines :ACLS

NOTE: *The information contained herein does not supersede or negate the MoHLTC Provincial Medical Directives and should only serve as general information about the medication itself. Administration of this medication requires BHP contact.*