



Jackson Hole Fire/EMS Operations Manual

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Title: **Medication Protocol:
Sodium Bicarbonate**

Division: 17

Article: 1.30

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SODIUM BICARBONATE (Medication Protocol)

EMT-INTERMEDIATE PROVIDERS

IT IS UNDERSTOOD THAT THIS MEDICATION MAY BE ADMINISTERED ONLY AFTER VOICE AUTHORIZATION HAS BEEN GRANTED EITHER BY A WYOMING LICENSED PHYSICIAN OR A PHYSICIAN SUPPORT PERSON (PA) ACTING AS THE AGENT OF A WYOMING LICENSED PHYSICIAN, OR BY A WYOMING LICENSED REGISTERED NURSE; RELAYING THE AUTHORIZATION FROM A WYOMING LICENSED PHYSICIAN WITH WHOM THE NURSE HAS DIRECT COMMUNICATIONS VIA RADIO OR TELEPHONE.

PARAMEDIC PROVIDERS

STANDING ORDER

CLASS: Buffer, alkalinizing agent, electrolyte supplement

**PHARMACOLOGY/
ACTIONS:** Sodium bicarbonate reacts with hydrogen ions to form water and carbon dioxide and thereby can act to buffer metabolic acidosis. As the plasma hydrogen ion concentration decreases, blood pH rises

ONSET/DURATION: Onset: 2-10 min Duration: 30-60 min

**USE IN FIELD/
INDICATIONS:**

- Tricyclic antidepressant overdose with wide QRS/hypotension
- Known or suspected hyperkalemia (Dialysis patient in extremis)
- Alkalinization for treatment of specific toxidromes/rhabdomyolysis (with medical control consultation)

CONTRAINDICATIONS: None if patient in extremis. Metabolic and respiratory alkalosis. Routine use in cardiac arrest.

SIDE EFFECTS: Metabolic alkalosis, hypoxia, rise in intracellular Pco₂ and increase tissue acidosis, electrolyte imbalance (hyponatremia).

DRUG INTERACTIONS: Alkalinization of urine may shorten elimination half-lives of certain drugs. Vasopressors may be deactivated.

ROUTE: IV, IO

DOSAGE:	ADULT	PEDIATRIC (<45 kg)
	1 mEq/kg IV; repeat with 0.5 mEq/kg q 10 min as needed	Same as adult; infuse slowly and only if ventilations are adequate

PREGNANCY SAFETY: Category C – give only if potential benefits justifies risk to fetus

COMMENTS: Bicarb administration produces carbon dioxide, which crosses cell membranes more rapidly than bicarbonate (potentially worsening intracellular acidosis). Bicarb may worsen CHF. Maintain adequate ventilation (gas exchange) to correct most underlying metabolic/respirator acidosis states.