

SODIUM BICARBONATE (generic)

ACTION: Systemic hydrogen ion buffer; aids in the correction of metabolic acidosis

INDICATIONS:

1. Tissue acidosis and acidemia resulting from cardiac arrest and cardiopulmonary resuscitation
2. Pre-existing metabolic acidosis or hyperkalemia
3. Agitation delirium associated with cocaine or methamphetamine use.
4. Tricyclic antidepressant (TCA) overdose and toxicity; including: amitriptyline (Elavil, Endep), amitriptyline w/ perphenazine (Triavil, Etrafon), amitriptyline w/ chlordiazepoxide (Limbitrol), amoxapin (Asendin), clomipramine (Anafranil), desipramine (Norpramin, Pertofrane), doxepin (Adapin, Sinequan), imipramine (Tofranil, Janamine), maprotiline (Ludiomil), nortriptyline (Pamelor, Aventyl), protriptyline (Vivactil), trimipramine (Surmontil)

CONTRAINDICATIONS:

1. None; when used in the treatment of metabolic acidosis

PRECAUTIONS:

1. Use of sodium bicarbonate in short duration cardiac arrest is not usually indicated if adequate ventilation and effective chest compressions are performed.
2. May precipitate with administration with other medications. Flush tubing well between administrations of other drugs.
3. May be given to adults with TCA overdoses prior to medical control contact. All other patients require a physician order.

ADVERSE REACTIONS/SIDE EFFECTS:

1. May cause hypernatremia, hyperosmolality, hypokalemia, and hypocalcaemia
2. Fluid retention

ADMINISTRATION:

1. In TCA overdose:
 - A. Administer an initial dose of 1-2 mEq/kg IV or IO push prior to physician contact.
 - B. If bradyarrhythmias, multifocal PVC's, V-tach, conduction delays, varying degrees of heart block, hypotension, or widened QRS (≥ 100 ms) is present, consult a physician early in treatment as additional doses of sodium bicarbonate may be necessary.
2. In cardiac arrest, metabolic acidosis, or hyperkalemia: After 10 minutes in non-perfusing rhythm, administer initial dose of 1 amp (50 mEq) IV or IO push. Administer an additional amp (50 mEq) every 10 minutes until ROSC or until the arrest is called in the field.
3. Notify medical control that sodium bicarbonate has been given.
4. Contact Medical Control Physician for agitation delirium orders.

PEDIATRIC CONSIDERATIONS:

1. Do not give to patients < 12 years without physician order.
2. Initial dose is 1.0 mEq/kg IV or IO.

SPECIAL NOTES:

1. In cardiac arrests of short duration, adequate ventilation and effective chest compressions limit accumulation of CO₂, thus, in the early phases of resuscitation, buffer agents are generally unnecessary.