**Medical Control Guideline: DRUG REFERENCE – SODIUM BICARBONATE** **Ref. No. 1317.39**

**Classification**

Electrolyte / Alkalinizing Agent

**LA County Prehospital Indications**

Cardiac Arrest – Non-Traumatic: suspected hyperkalemia, patients with renal failure
Cardiac Dysrhythmia: suspected hyperkalemia causing bradycardia
Overdose / Poisoning / Ingestion: suspected tricyclic overdose with ECG changes
Traumatic Injury: suspected hyperkalemia in the setting of crush injury or potential for development of crush syndrome (administer prior to release of crushed tissue)

**Other Common Indications (Not authorized for EMS administration in LA County)**

None

**Adult Dose**

**50mEq (50mL) slow IV/IO push**
For crush injury repeat x1 for persistent ECG abnormalities

**Pediatric Dose**

**1mEq/kg (1mEq/mL) slow IV push**, dose per *MCG 1309*
For crush injury, repeat x1 for persistent ECG abnormalities

**Mechanism of Action**

Increases blood and urinary pH by releasing a bicarbonate ion, which in turn neutralizes hydrogen ion concentration.

**Pharmacokinetics**

Onset is < 15 min (observed < 5 for tricyclic overdose); clinical effect in < 15 min; duration is 1-2 hr

**Contraindications**

Evidence of pulmonary edema
Hypernatremia or hypocalcemia

**Interactions**

Precipitates to form calcium carbonate (chalk) when used with calcium chloride or calcium gluconate. Administer calcium chloride and sodium bicarbonate separately.
Can reduce potency of epinephrine, flush line after administration.

**Adverse Effects**

Extracellular alkalosis
Tissue damage if IV infiltrates
Pulmonary edema

**Prehospital Considerations**

- Multiple doses may be needed in TCA overdose when indicated