

FUROSEMIDE [LASIX]

DRUG CLASSIFICATION	Potent Loop Diuretic Sulfonamide; Sulfonic Acid Derivative Vasodilator; Antihypertensive Agent
MECHANISM OF ACTION	Furosemide increases urine output via the kidneys through direct action on nephron cells and indirect modification of renal filtrate contents. By inhibiting the reabsorption of sodium and chloride in the ascending loop of Henle and the proximal and distal renal tubules, Furosemide interferes with the chloride-binding cotransport system which, produces its natriuretic effect. Intravenously, furosemide has a fast onset, which takes effect within about 5 minutes.
CLINICAL INDICATIONS	Moderate-to-Severe CHF / Pulmonary Edema Symptomatic Hypertension with Mechanical Circulatory Support Device
STANDARD CONTRAINDICATIONS	Hypersensitivity to Furosemide, Sulfonamide-Derivatives, or Other Relative Components Conditions Associated with Acute or Chronic Anuria
POTENTIAL ADVERSE EFFECTS	Orthostatic Hypotension / Hyperglycemia / Electrolyte Imbalance / Urination Changes / Headache / Dizziness / GI-Discomfort / Nausea / Dry Mouth / Excessive Thirst / Tinnitus
GENERAL RISKS & PRECAUTION	1) Administration of Furosemide may result in transient increase of thyroid hormones, followed by an overall decrease in total thyroid hormone levels. 2) Use extreme caution in patients with cirrhosis due to the increased risk of exacerbated electrolyte imbalance and hepatic encephalopathy. 3) Use caution in patients with prediabetes or diabetes mellitus due to increased risk of alteration in glucose control. 4) Use extreme caution when treating patients with known or suspected conditions associated with primary adrenal insufficiency, including Addison disease. 5) If possible, avoid use in patients that present with uncorrected states of electrolyte depletion, hypovolemia, dehydration, or hypotension; otherwise use extreme caution. 6) If possible, avoid use in patients if they have any condition associated with renal or hepatic insufficiency; otherwise, use extreme caution. 7) Diuretics have NOT been shown to improve the outcomes of EMS patients with pulmonary edema and are therefore, no longer routinely recommended.
PROTOCOL INDEX	CHF / Pulmonary Edema (AC-5) Total Artificial Heart (AC-15) Pediatric Pulmonary Edema / CHF (PC-3)

MEDICATION ADMINISTRATION

ADULT

PEDIATRIC

Moderate-to-Severe CHF / Pulmonary Edema
40 mg [IV/IO]

Total Artificial Heart with SBP \geq 150 mmHg
40 mg [IV/IO]; Maintain SBP \geq 90 mmHg.
May assist patient taking their antihypertensive medication.

PRIOR CONSULTATION BY MEDICAL CONTROL REQUIRED

Moderate-to-Severe CHF / Pulmonary Edema
1 mg / kg [IV/IO]

***** Treatment may vary depending on the underlying cause which may include the Lasix therapy if advised during consultation by Medical Control.**