

# DRUG CARDS | DAILY



NAME(S): **Generic:** furosemide (fyoor OH se mide) | **Brand:** Lasix

THERAPEUTIC CATEGORY: Antihypertensive | Loop Diuretic

DOSAGE FORM & STRENGTH: **Tablets:** 20 mg, 40 mg, 80 mg | **Solution:** 8 mg/mL, 10 mg/mL | **Injection:** 10 mg/mL

## INDICATION(S) & DOSING(S): ADULTS

1. **Edema: [PO dosing]** Range is 40-120 mg/day. Initiate between 20-80 mg PO for 1 dose, then increase by 20-40 mg q6-8h with a max of 600 mg/day. **[IM/IV dosing]** Range is 20-40 mg IM/IV for 1 dose, then increase by 20 mg q2h OR initiate at 0.1 mg/kg/dose IV for 1 dose then 0.1 mg/kg/h followed by doubling the dose q2h up to 0.4 mg/kg/h.
2. **Pulmonary Edema (acute):** General dosing is 80 mg IV q1h. When initiating start at 40 mg IV for 1 dose.
3. **Hypertension:** General dosing is b/t 10-40 mg PO bid. When initiating start at 40 mg PO bid.
  - **OFF LABEL | Hypercalcemia:** General dosing at 120 mg/day PO divided qd-tid. Initiated at 80-100 mg IM/IV q1-2h given w/ saline.

## INDICATION(S) & DOSING(S): PEDIATRICS

1. **Edema: [neonates, PO dosing]** Dosing range is 1-4 mg/kg PO qd-bid. Initiate at 2 mg/kg po for 1 dose then dose increase of 1-2 mg/kg/dose q6-8h. Max dose of 6 mg/kg/dose. **[infants/children, PO dosing]** Dosing range is 1-6 mg/kg PO q12-24h. Initiate at 2 mg/kg PO for 1 dose. Increase dose by 1-2 mg/kg/dose q6-8h with a max of 6 mg/kg/dose. **[neonates IM/IV]** Dose range of 0.5-1 mg/kg/dose IM/IV q8-24h. Initiate at 1 mg/kg/dose IM/IV for 1 dose then increase by 1 mg/kg/dose q2h. Max dose of 2 mg/kg/dose. **[infants/children, IM/IV dosing]** Dosing range 0.5-2 mg/kg/dose IM/IV q6-12h. Initiate at 1 mg/kg/dose IM/IV for 1 dose. Increase by 1 mg/kg/dose q2h. Max of 6 mg/kg/dose. OR 0.5 mg/kg/h with titrations based on clinical response.
  - **OFF LABEL | Hypercalcemia:** Dose range is 25-50 mg IM/IV q4h administered w/ saline.

## MECHANISM OF ACTION & PHARMACOLOGY

- **MOA:** Interferes with the chloride-binding co-transport system causing a natriuretic effect. Inhibits sodium and chloride resorption in the ascending loop of Henle and proximal and distal renal tubules. | Minimally **metabolized** hepatically. | 50% (po) and 80% (iv) **excreted** in the urine w/in 24 hours and **excreted** in the feces as the unchanged drug. | The **onset of action** for diuresis occurs in 30-60 minutes. Symptomatic improvement of acute pulmonary edema occurs w/in 15-20 minutes. **Peak effect** is 1-2 hours (sl) and 0.5 hours (iv). | **Duration of action** is 6-8 hours (po) or 2 hours (iv). | In patients with normal renal function the **half-life elimination** is 0.5-2 hours. If the patients has end-stage renal disease (ESRD) it's 9 hours. | Furosemide is 91-99% **protein bound** primarily to albumin.

## SPECIAL POPULATIONS & CONSIDERATIONS

- **Renally impaired:** Contraindicated in anuria. | **Hepatically impaired:** dosing is not defined but caution advised. | **Caution in:** Patients w/ electrolyte imbalances, elderly patients, premature neonates, severe renal/hepatic disease, & pts w/ gout/SLE/diabetes. | **Pregnancy/Lactation:** Fetal harm not expected but possible risk. Consider alternative when breastfeeding though risk is not expected based on drug properties.



## SIDE EFFECTS

- **General:** Increased urinary freq, dizziness, lightheadedness, headache, blurred vision, abdominal cramps, constipation, n/v/d, orthostatic hypotension, & bladder spasms.

**BLACK BOX WARNING: Fluid and Electrolyte loss** – A potent diuretic in excessive amounts may cause profound diuresis with water and electrolyte depletion. Doses should be individualized and scheduled under medical supervision.

## DRUG INTERACTIONS

- **Concerns:** Furosemide is an (organic anion transporter 1&3) OAT1 and OAT3 substrate; may cause hypocalcemia, hypokalemia, hyponatremia, ototoxicity, and others.
- **Contraindicated drugs:** Desmopressin, isocarboxazid.
- **Drugs to avoid:** armodafinil, atomoxetine, budesonide, caffeine, cisplatin, clonidine, guanfacine, lithium, prednisone, prednisolone, albuterol, aspirin, and others.

MONITORING PARAMETERS: BUN/Cr, serum CO2, **electrolytes**, CBC, Plt, LFTs, **urine/blood glucose**

## PATIENT COUNSELING INFORMATION

- Furosemide is used to treat **fluid retention** and **HTN** by preventing the body from absorbing too much salt.
- **Do not use if** you are unable to urinate or have kidney disease, enlarged prostate, bladder obstruction, gout, lupus, or diabetes.
- If a **dose is missed** take the medication as soon as you can but skip the dose if it is almost time for the next dose. Do not take 2 doses at a time.

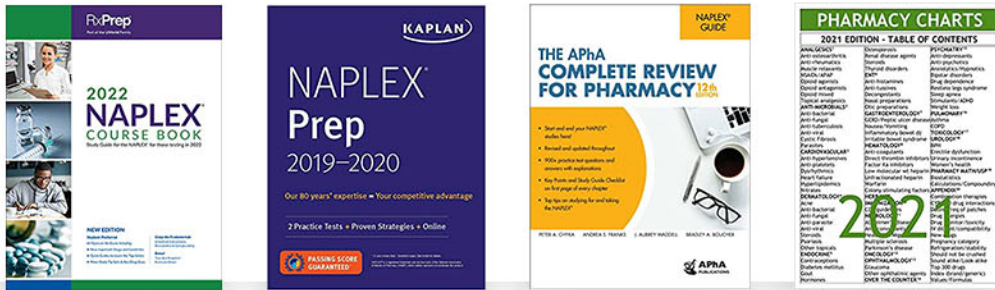
## REFERENCE(S)

1. <https://online.epocrates.com/drugs/21110/furosemide/Monograph>
2. <https://www.drugs.com/ppa/furosemide.html>
3. <https://www.webmd.com/drugs/2/drug-5512-8043/furosemide-oral/furosemide-oral/details>

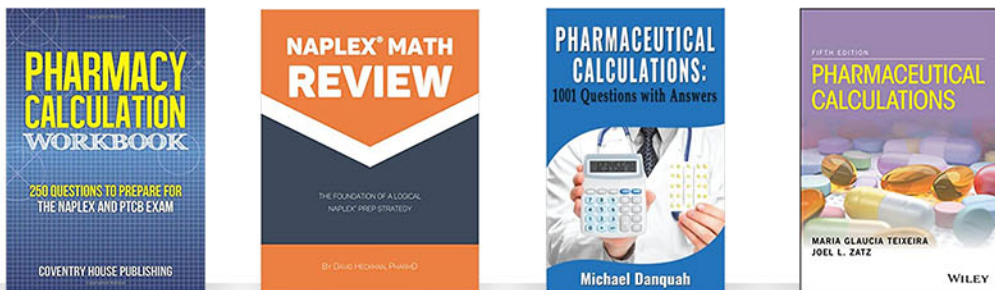


# PREPARE FOR SUCCESS!

## Comprehensive (NAPLEX)



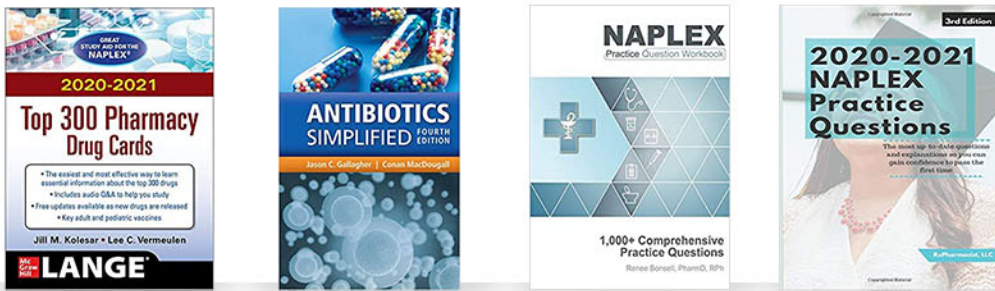
## Calculations (NAPLEX)



## Pharmacy Law (MPJE)



## Supplemental



# DRUG CARDS DAILY

Monday at 7 am EST  
(6 am CST, 4 am PST)

## HEY NEW GRAD!

So you landed that perfect job offer or got the perfect match for your PGY1 and now the **ONLY** thing standing in your way is passing the NAPLEX and MPJE.

Here are some NAPLEX & MPJE prep recommendations to help you do everything you can to **pass the first time!**

## HEY STUDENT!

When I was P1 one of the best pieces of advice I got from those before me was to use a NAPLEX Prep book while learning each topic.

This helps focus your learning and the repetition helps to retain info and indirectly prepare you for the NAPLEX

### DISCLAIMERS

This page contains affiliate links. Buying something through a link will provide a small monetary commission to Drug Cards Daily at no cost to you! This is done to keep Drug Cards Daily going and to provide as much free content to people like you! Thank you so very much for your support! Also, images are property of their respective parties and can be removed by contacting Drug Cards Daily.



@drugcardsdaily