

DRUG CARDS | DAILY



NAME(S): **Generic**: alendronate (a LEN dro nate) | **Brand**: Fosamax, Binosto

PHARMACOLOGIC & THERAPEUTIC CLASS: Bisphosphonate | Bone Resorption Inhibitor

DOSAGE FORM & STRENGTH: **Tab**: 5 mg, 10 mg, 35 mg, 40 mg, 70 mg | **Tab/Soln**: 70 mg (Binosto) | **Soln**: 70 mg/75 mL

INDICATION(S) & DOSING(S): ADULTS

* **GENERAL NOTES**:

- (1) Ca and Vit-D supplementation if inadequate dietary intake.
- (2) Admin w/ water qd 30 min before first food/drink/med and avoid lying down for 30 minutes.
- (3) D/c after 3-5 years in low risk pts. Reassessments every 3-5 years and may consider a drug holiday of 5 years if pt becomes low to moderate risk and appears stable after 5 years of treatment. If drug holiday is initiated reassess every 2-4 years in order to determine if there is a need to resume treatment. Resume treatment in pts w/ fracture or significant bone mineral density (BMD) loss.

1. **Osteoporosis in Men and Postmenopausal Women**: Tx Dose 70 mg PO every week. Alternative dosing of 10 mg PO qd.
2. **Postmenopausal Prevention of osteoporosis**: Tx Dose 5 mg PO every week. Alternative dosing of 5 mg PO qd. Admin w/ water qd 30 min before first food/drink/med and avoid lying down for 30 minutes.
3. **Steroid-induced Osteoporosis**: Tx Dose 5 mg PO qd. If the pt is postmenopausal and off estrogen alternative treatment is 10 mg PO qd. Admin w/ water qd 30 min before first food/drink/med and avoid lying down for 30 minutes.
4. **Paget Bone Disease**: Tx Dose 40 mg PO qd for 6 months. Admin w/ water qd 30 min before first food/drink/med and avoid lying down for 30 minutes.

INDICATION(S) & DOSING(S): PEDIATRICS

- **OFF LABEL | Osteogenesis Imperfecta**:
 - **2 years of age and older | <40 kg**: 5 mg PO qd w/ water 30 minutes before first food/drink/med. Ca and Vit-D supplementation if inadequate dietary intake. Reassess if tx is needed every 1-4 years.
 - **2 years of age and older | >40 kg**: 10 mg PO qd w/ water 30 minutes before first food/drink/med. Ca and Vit-D supplementation if inadequate dietary intake. Reassess if tx is needed every 1-4 years.

MECHANISM OF ACTION & PHARMACOLOGY

- **MOA**: Alendronate works through the reducing bone resorption and turnover by inhibiting osteoclast activity. | Poor **bioavailability** b/t 0.59-0.64%. | The **onset of action** is ~1 month. | Not **metabolized** via CYP450 enzymes. | **Eliminated** through the urine. | **Half-life elimination** is >10 years. | 78% **protein bound**.

SPECIAL POPULATIONS & CONSIDERATIONS

- **Renally Impaired**: Avoid use if CrCl <35. | **Hepatically Impaired**: No adjustments required. | **Food**: Bioavailability decreases b/t 40-60% if given b/t 0.5-1 hour prior to a meal/coffee/juice. | **Contraindicated** if hypocalcemia, CrCl <35, abnormal esophageal peristalsis or stricture, risk of aspiration, or inability to remain upright for 30 min.



| **Caution** if GI disease, poor oral hygiene, dental disease, anemia, coagulation disorder, recent chemotherapy, and mineral metabolism disturbances. | **Pregnancy**: Caution is advised. No teratogenicity risk expected but chances of incomplete ossification and low birth weight. | **Lactation**: Caution due to limited data.

SIDE EFFECTS

- **Common**: Heartburn, upset stomach, nausea, diarrhea, constipation, & bone/muscle/joint/stomach pain.
- **Serious**: pain/burning under ribs or back, jaw pain/numbness/swelling, severe chest/joint/bone/muscle pain.

DRUG INTERACTIONS

- **Considerations for DI**: Binds to polyvalent cations, risks of GI mucosal injury and bleed, and hypocalcemia.
- **Some Contraindicated Drug(s) & Drug(s) of Note**: Aspirin, bumetanide, methotrexate, naproxen, calcium citrate, and others.

MONITORING PARAMETERS

- Cr, BMD at baseline and periodically thereafter, Ca at baseline, and Mg, PO4 periodically.

PATIENT COUNSELING INFORMATION

- Alendronate is commonly used in the **prevention** and **treatment** of various types of **osteoporosis**.
- Alendronate is to be **taken whole** and **should not be crushed or chewed**.
- Taken **with water** (6-8 ounces) and **before first food/beverage/med** of the day.
- After taking alendronate **remain upright for at least 30 minutes**. Only works well if taken on empty stomach.

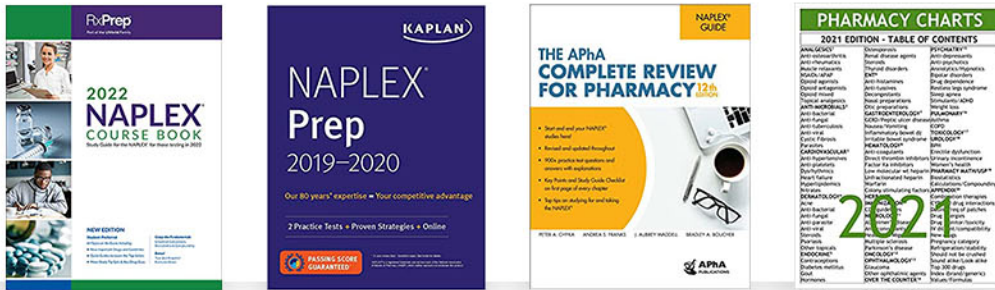
REFERENCE(S) & RESOURCE(S)

1. <https://online.epocrates.com/drugs/76810/alendronate/Monograph>
2. <https://www.drugs.com/monograph/alendronate.html>
3. <https://www.webmd.com/drugs/2/drug-1257-8310/alendronate-oral/alendronate-weekly-oral/details>

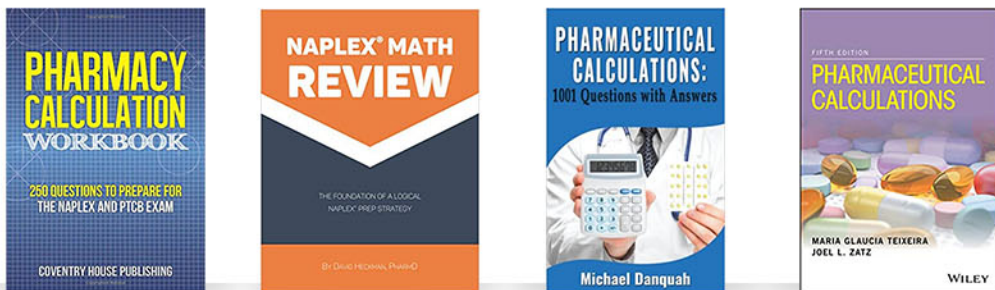


PREPARE FOR SUCCESS!

Comprehensive (NAPLEX)



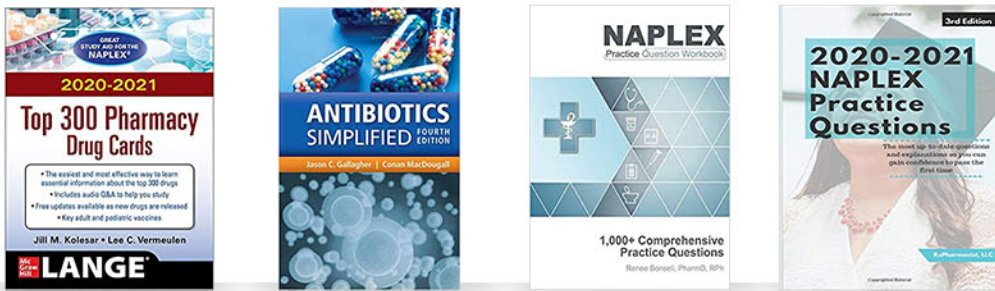
Calculations (NAPLEX)



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

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