

DRUG CARDS | DAILY



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GENERIC

hyoscyamine (hye oh SYE a meen)

BRAND

Levsin

CLASSIFICATION

Antimuscarinic | Anticholinergic | Antispasmodic

FORM & STRENGTH

TABS: 0.125 mg, 0.375 mg, (0.25 mg ER & .125 IR [Symax DuoTab]) | ODT TAB: 0.125 mg | INJ: 0.5 mg/mL | SOL & ELIXER: 0.125 mg/mL | CAPS: 0.375 mg

INDICATIONS & DOSING | ADULTS

**** TX RANGE AND DOSING ARE THE SAME FOR ALL THESE INDICATIONS ****

1). SPASMS (GI OR BLADDER)

- Tx range [IR] 0.125-0.25 mg PO/SL q4h prn
- [ER] 0.375 mg PO q8-12h

2). ADJUNCTIVE TX FOR: IBS, PUD, BILIARY COLIC, & RENAL COLIC

- Tx range [IR] 0.125-0.25 mg PO/SL q4h prn
- [ER] 0.375 mg PO q8-12h

3). RHINITIS

- Tx range [IR] 0.125-0.25 mg PO/SL q4h prn
- [ER] 0.375 mg PO q8-12h

! ADDITIONAL NOTES

- Max 1.5 mg/day
- Do not crush/chew ER formulations

INDICATIONS & DOSING | PEDIATRICS

1). INFANTILE COLIC

- <2 years of age
- Use 0.125 mg mL SOL

3.4-4.9 kg

- 4 drops PO q4h prn
- Max of 24 drops per 24h

5-6.9 kg

- 5 drops PO q4h prn
- Max of 30 drops per 24h

7-9.9 kg

- 6 drops PO q4h prn
- Max of 36 drops per 24h

>10 kg

- 8 drops PO q4h prn
- Max of 40 drops per 24h

2). SPASMS (GI OR BLADDER)

- 2-11 years of age

- ELIXER
- Using 0.125 mg/mL
- Max of 30 mL/day

10-19 kg

- 1.25 mL (0.03 mg) PO 4h prn

20-39 kg

- 2.5 mL (0.06 mg) PO 4h prn

40-49 kg

- 3.75 mL (0.09 mg) PO 4h prn

>50 kg

- 5 mL (0.125 mg) PO 4h prn

- 2-11 years of age

- TABS
- 1/2-1 tab PO/SL q4h prn
- Max of 0.75 mg/day

- 12 years of age and older

- TABS (IR)
- 0.125-0.25 PO/SL q4h prn
- Max of 1.5 mg/day

- ER FORMULATIONS

- 0.375 mg PO q8-12h
- Max of 1.5 mg/day
- Do not crush/chew

MOA & PHARMACOKINETICS

MECHANISM OF ACTION:

Acetylcholine receptor antagonist primarily antagonizing cholinergic stimuli at muscarinic receptors. Minimal to no effect at nicotinic receptors. DEC (salivation, gastric secretions, esophageal sphincter pressure, ureter/bladder tone & contractions).

ABSORPTION:

Complete bioavailability from GI w/ PO admin. ER forms are 81-92% bioavailable. Conventional dosage forms onset b/t 20-30 min w/ peak in 30-60 min. SL or SOL onset b/t 5-20 min w/ peak b/t 30-60 min. ER onset b/t 20-30 min w/ peak in 40-90 min. INJ onset b/t 2-3 min w/ peak in 15-30 min. IR duration is 4 hours w/ ER for 12 hours. Food does not affect absorption.

DISTRIBUTION:

All throughout body. Crosses blood-brain barrier. Distributed into breast milk and found in placental tissues. 50% protein bound.

METABOLISM:

Partially hepatically metabolized via CYP enzymes.

ELIMINATION:

30-50% in urine as unchanged drug. T1/2 b/t 2-3.5 hours for IR and 7.5 hours if ER forms.

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SPECIAL POPULATIONS & CONSIDERATIONS

Prolonged elimination in pts w/ renal impairment. Contraindicated if glaucoma, GI obstruction, severe ulcerative colitis, prostatic hypertrophy, MI or toxic megacolon. Caution in pts w/ renal/hepatic impairment or if fever, hyperthyroidism, infants/young children/elderly, HTN, CAD, CHF, GERD, pulmonary dz, and diarrhea. Caution during pregnancy and lactation.

SIDE EFFECTS | COMMON

Xerstomia, dry eyes, urinary retention, constipation, confusion, memory impairment, nervousness, flushing, blurred vision, loss of taste, abdominal pain, n/v, insomnia, fever, impotence, dizziness, and lactation suppression.

SIDE EFFECTS | SERIOUS

Hallucination, anticholinergic psychosis, increase in intraocular pressure, heat stroke, and anaphylaxis.

DRUG INTERACTIONS | CONSIDERATIONS

anticholinergic effects
binds to polyvalent cations
CNS depression
delays gastric emptying
gastric alkalinizer
drugs that require rapid onset
can alter absorption of drugs

DRUG INTERACTIONS | DRUGS OF NOTE

CONTRAINDICATED:	AVOID:	MONITOR:	CAUTION:
potassium acid phosphate	clozapine	alprazolam	amitriptyline
potassium chloride	doxylamine	calcium carbonate	amoxicillin
potassium citrate	glucagon	digoxin	bromocriptine
potassium phosphate	hydrocodone	hydromorphone	ciprofloxacin
	promethazine	ketoconazole	dicyclomine
		magnesium citrate	levetiracetam

MONITORING PARAMETERS

Generally not required. May consider monitoring renal fxn in geriatric pts. Can monitor for GI lesions if concomitantly used w/ potassium chloride.

PATIENT COUNSELING

Commonly used to treat spasms of the GI and bladder, to control IBS and other stomach and intestinal disorders, and used to dry excessive salivation/sweating and runny nose.

There is a risk for fever or heat stroke due to decreased sweating especially when exercising or if in high heat environments.

Can impair mental alertness or physical coordination so exercise caution when driving or operating machinery.

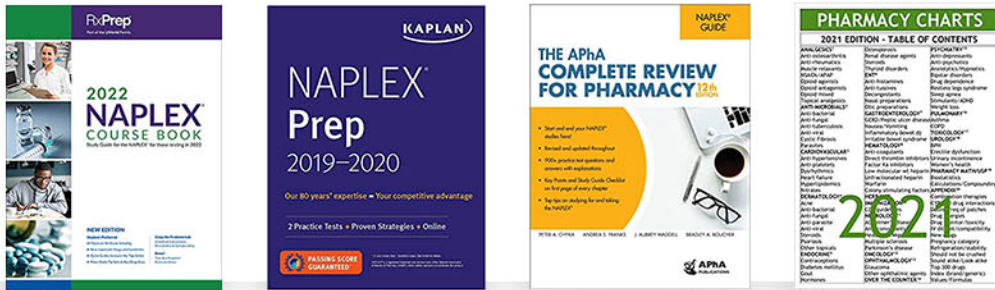
If a dose is missed it should be taken as soon as remembered but skip the dose if it is near the time you normally take your next dose. Do not double up doses.

REFERENCES

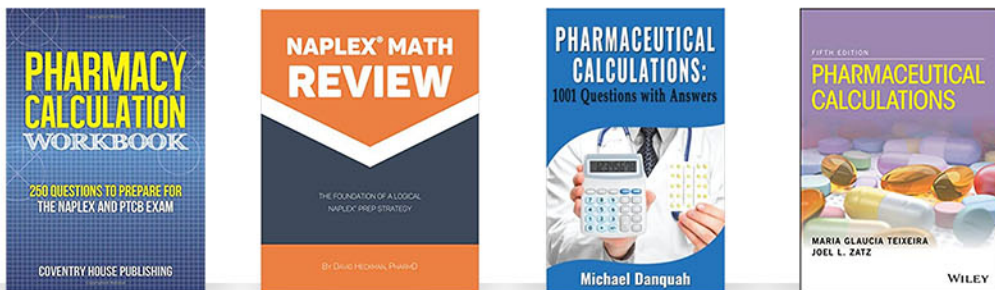
- 1). <https://online.epocrates.com/drugs/23210/hyoscyamine/Monograph>
- 2). <https://www.drugs.com/monograph/hyoscyamine.html#preparations>
- 3). <https://www.webmd.com/drugs/2/drug-6428-8004/hyoscyamine-sulfate-oral/hyoscyamine-oral/details>

PREPARE FOR SUCCESS!

Comprehensive (NAPLEX)



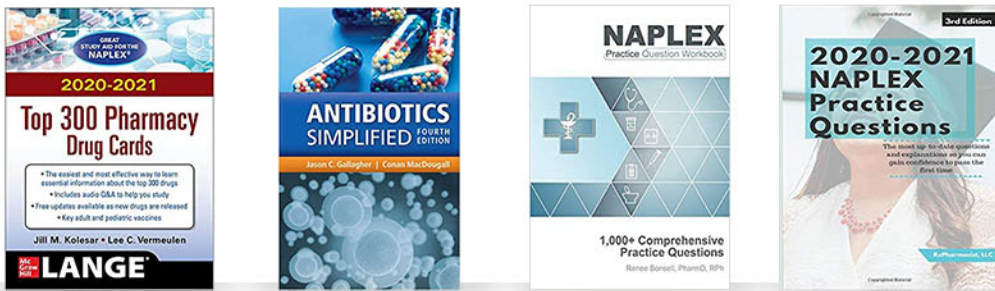
Calculations (NAPLEX)



Pharmacy Law (MPJE)



Supplemental



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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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