

Name(s)

- **Generic:** gabapentin (GA ba pen tin) | **Brand:** Neurontin, Gralise

Therapeutic Category

- **Anticonvulsant** | GABA Analog

Dosage Form & Strength

- **Caps:** 100 mg, 300 mg, 400 mg | **Solutions:** 250 mg/5 mL, 300 mg/6 mL | **Tabts:** 600 mg, 800 mg

Indication(s)

1. **Focal (Partial) Seizures:** IR formulation only. Used in addition to other treatments for patients with partial seizures with or w/o secondary generalization from pediatric patients 3 years of age to adults with epilepsy
2. **Postherpetic neuralgia (PHN):** Management of PHN in adult patients.
 - OFF LABEL | **Neuropathic pain:** Treatment of non-PHN pain such as polyneuropathy and spinal cord injury pain.
 - OFF LABEL | **Fibromyalgia:** An alternative agent for treating fibromyalgia related pain and sleep disturbances.
 - OFF LABEL | **Alcohol dependence:** In moderate to severe disorders.
 - OFF LABEL | Others (Consult most current literature): Chronic refractory cough, hiccups, chronic pruritis, and restless legs syndrome (RLS), social anxiety disorder, menopause related vasomotor symptoms

Adult Dosing by Indication(s)

1. **Focal (Partial) Seizures:** Range is 300-1200 mg PO tid. When starting initiate 300 mg PO tid, max 3600 mg/day.
2. **Postherpetic neuralgia (PHN):** Range is 300-600 mg PO tid. When starting initiate 300 mg PO qd for 1 day, then 300 mg PO tid, max 1800 mg/day.
 - OFF LABEL | **Neuropathic pain:** Range is 300-1200 mg PO tid. When starting initiate 300 mg PO bid for 1 day, then 300 mg PO tid, max 3600 mg/day.
 - OFF LABEL | **Fibromyalgia:** Range is 400-800 mg PO tid. When starting initiate 300 mg PO qd for 1 day, then 300 mg PO tid, then titrate to patient response. Max 2400 mg/day.
 - OFF LABEL | **Alcohol dependence:** Range is 300-600 mg PO tid. When starting initiate 300 mg PO qd for 1 day, then 300 mg PO tid. Max 1800 mg/day.
 - OFF LABEL | Others (Consult most current literature): Chronic refractory cough, hiccups, chronic pruritis, and restless legs syndrome (RLS), social anxiety disorder, and menopause related vasomotor symptoms

Pediatric Dosing by Indication(s)

1. **Focal (Partial) Seizures:** **3-4 yo:** Typical dose is 40 mg/kg/day PO divided tid. Initiate 10-15 mg/kg/day PO divided tid, titrate up over 3 days to a max of 50 mg/kg/day. **5-11 yo:** Typical dose is 25-35 mg/kg/day PO divided tid. Initiate 10-15 mg/kg/day PO divided tid, titrate up over 3 days to a max of 50 mg/kg/day. **12 yo and up:** Typical dose is 300-800 mg PO tid. Max 3600 mg/day.

Mechanism of Action & Pharmacology

- **MOA:** Exact mechanism is unknown. Gabapentin's chemical structure is similar to GABA but does not influence GABA degradation and uptake. The drug's appears to have high affinity binding sites throughout the brain. It



modulates excitatory neurotransmitter release by blocking voltage-dependent calcium channels which possess the alpha-2-delta-1 subunit. | **Absorption** is a variable. It is saturable and dose dependent. | **Distribution**: ~58 L where concentrations are 20% of the plasma concentrations | Not **metabolized** | **Excretion** is in the urine and proportional to renal function | **Time to Peak** in adults for IR formulations is between 2-4 hours 8 hours for ER formulations. In infants (1 month) to children (12 years) the IR formulation is between 2-3 hours | **Half-Life Elimination** in adults is 5-7 hours and increases in patients w/ decreased renal function. In infants (1 month) to children (12 years) ~4.7 hours | Gabapentin is <3% **protein bound**

Special Populations / Considerations

- **Pregnancy**: Caution due to risk of embryo-fetal toxicity and death seen in animal studies. | **Lactation**: May use while breastfeeding. | **Discontinuing therapy**: Taper dose down over 7 days. | **Renal impairment**: Decrease dose accordingly as CrCl decreases. | **Hepatic impairment**: No adjustments needed. | **Storage**: Solution should be refrigerated (36-46°F).

Side Effects

- **Common**: Dizziness, somnolence, n/v/d, fatigue, weight gain, back pain, depression, peripheral edema, and others.
- **Serious**: Depression, suicidal thought/behaviors, Stevens-Johnson syndrome, angioedema, respiratory depression, w/d seizures if abrupt d/c, and others.

Drug Interactions

- **Concerns**: Antiepileptic agent, binds to polyvalent cations, & CNS depression
- **Contraindicated**: Bupropion and metoclopramide
- **General**: Pain or cough relievers (codeine, hydrocodone), sleep and anxiety meds (alprazolam, lorazepam, zolpidem), muscle relaxants (carisoprodol, cyclobenzaprine), and antihistamines (cetirizine, diphenhydramine)

Monitoring Parameters

- Baseline creatine (Cr), behaviors, s/sx of depression, suicidality

Patient Counseling Information

- Gabapentin is used to treat nerve pain in adults or partial seizures in children and adults.
- Gabapentin can cause life-threatening breathing issues especially if you have breathing disorders or medications that can slow breathing or cause drowsiness.

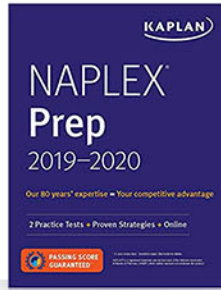
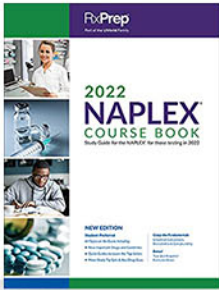
Reference(s)

- <https://online.epocrates.com/drugs/102110/gabapentin/Monograph>
- <https://www.drugs.com/ppa/gabapentin.html>
- <https://www.webmd.com/drugs/2/drug-14208-8217/gabapentin-oral/gabapentin-oral/details>

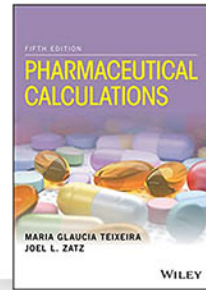
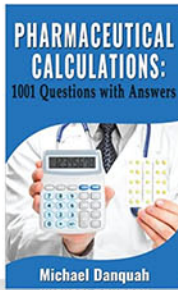
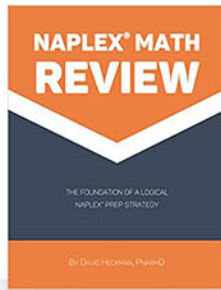
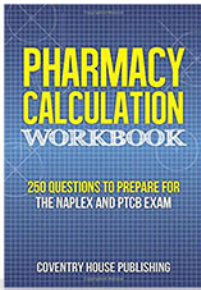


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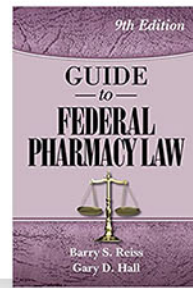
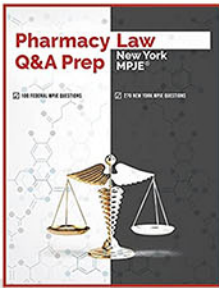
Comprehensive (NAPLEX)



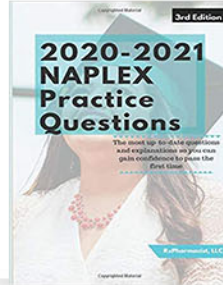
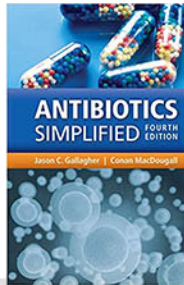
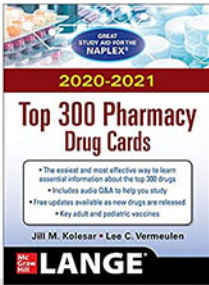
Calculations (NAPLEX)



Pharmacy Law (MPJE)



Supplemental



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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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