

# DRUG CARDS | DAILY



**NAME(S):** **Generic:** diazepam (dye AZ e pam) | **Brand:** Valium, Diastat, Voltoco

**PHARMACOLOGIC & THERAPEUTIC CLASS:** Benzodiazepine | Anticonvulsant

**DOSAGE FORM & STRENGTH:** **Tab**s: 2 mg, 5 mg, 10 mg | **Soln:** 10 mg/2 mL (Autoinjector), 5 mg/5 mL (PO & Injection) | **Nasal Liq (Voltoco):** 5 mg/0.1 mL, 7.5 mg/0.1 mL, 10 mg/0.1 mL | **Rectal Gel (Diastat):** 2.5 mg, 10 mg, 20 mg | **Concentrated Soln:** 5 mg/mL

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

- Anxiety:** Tx range 2-10 mg PO bid-qid. Alternatively IM/IV is 2-10 mg q3-4h prn.
- Pre-Op Sedation:** 10 mg IM for 1 dose initiated prior to surgery.
- Procedural Sedation:**
  - Cardioversion** - Tx dose 5-15 mg IV for 1 dose initiated 5-10 min prior to procedure.
  - Endoscopy** - Tx dose is up to 20 mg IV for 1 dose initiated 30 minutes prior to procedure. Alternatively IM dosing is 5-10 mg for 1 dose.
- Acute Alcohol Withdrawal:** Tx dose 5 mg PO three to four times daily prn. Initiate 10 mg PO 3-4 times daily for 24 hours. Alternatively IM or IV dosing is 10 mg for 1 dose w/ 5-10 mg every 3-4 hours prn.
- Muscle Spasm:** Tx range 2-10 mg PO 2-4 times daily. Alternatively IM or IV dosing is 5-10 mg q 3-4h prn.
- Adjunct Tx of Seizure Disorders:** Tx range 2-10 mg PO 2-4 times daily.
- Status Epilepticus:** Tx range 5-10 mg IV q5-10min prn up to a max of 30 mg/total dose.
  - OFF LABEL | **Confusional Arousals, Sleep Terrors, & Sleep Walking:** Tx dose 5-10 mg PO qhs.
  - OFF LABEL | **Adjunct Tx of Serotonin Syndrome:** Tx dose 5-10 mg PO q30-60min prn. Alternatively IM or IV dosing is 5-10 mg every 10 minutes prn.

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

- Anxiety:**
  - 6 months to 12 years of age** - Tx range 0.12-0.8 mg/kg/day PO divided q6-8h. Alternatively IM/IV dosing tx range is 0.04-0.2 mg/kg/dose q2-4h up to a max of 0.6 mg/kg/8h.
  - 13 years of age and up** - Tx range 2-10 mg PO 2-4 times daily. Alternatively IM/IV is 2-10 mg q3-4h prn.
- Muscle Spasm:** Same age ranges and dosing as in anxiety.
- Adjunct Tx of Tetanus:**
  - 1 month to 4 years of age - Tx dose 1-2 mg IM/IV q3-4h prn.
  - 5 years of age and up - Tx dose 5-10 mg IM/IV q3-4h prn.
- Status Epilepticus:**
  - 1 month to 12 years of age** - Tx dose 0.1-0.3 mg/kg/dose IV q5-10min prn. The max total dose for 1 month to 4 years of age is 5 mg. The max total dose for 5 years to 12 years of age is 10 mg.
  - 13 years of age and up** - Tx dose 5-10 mg IV q10-15min prn w/ a max total dose of 30 mg.

## MECHANISM OF ACTION & PHARMACOLOGY

- MOA:** Enhancement of GABA's inhibitory effects on neuronal excitability through stereospecific binding to neuronal GABA sites w/in the CNS (including the limbic system). Diazepam increases chloride ion permeability by binding to benzodiazepine receptors located on postsynaptic GABA neurons which leads to a less excitable state



(hyperpolarization & stabilization). The effect appears to be linked to GABA-A and not GABA-B receptors. | Well-**absorbed** at >90%. | Hepatically **metabolized** via the CYP3A4 and 2C19 pathways. | **Excreted** through the urine. | The **onset of action** in pediatrics when delivered IV is 4-5 mins. | The **time to peak** when taken orally is between 1.5-2.5 hours. Food lengthens the time for the peak effect when taken orally. IV is ~1.5 hours. IM is around 1 hour. Rectal is around 1.5 hours. | **Duration of action** in peds is b/t 60-120 minutes. | The **half-life elimination** is highly variable based on route of administration and the half-life is elongated when multiple doses are given. In infants and children it is b/t 18-30 hours. In adults it is b/t 33-72 hours with the lower range being for IV doses and the longer range in PO doses. | 84-98% **protein bound**.

#### SPECIAL POPULATIONS & CONSIDERATIONS

- **Hepatic Impairment:** 2-5 fold increase in half-life. Increased volume of distribution. Decrease of clearance. | **Elderly:** Starting at a half-life of 20 hours at 20 years of age; the half-life is increases by 1 hour for each year. Volume of distribution increases. Clearance decreases. | **Contraindication and Caution** if severe hepatic impairment. Should avoid abrupt w/d if high doses or prolonged usage. Caution in mild-moderate hepatic impairment, renal impairment, pulmonary impairment, alcohol use, hx of seizures, in elderly, and in depression. | **Pregnancy:** Teratogenic effects have been observed w/ diazepam such as an increase of premature births and low birth weights. W/d symptoms may also occur w/in days to weeks after birth. Not recommended.

#### SIDE EFFECTS

- **Common:** Drowsiness, ataxia, confusion, depression, rash, irritability, tremor, libido changes, and others.
- **Serious:** Suicidality, bradycardia, syncope, seizures, dependency, respiratory depression, and others.

**BLACK BOX WARNING: Concomitant Opioid Use** – Benzodiazepines used w/ opioids may lead to profound sedation, coma, respiratory depression, and death. **Abuse/Misuse/Addiction** – Exposure to this can lead to overdose or death when used with other meds, drugs of abuse, and alcohol. **Dependence & Withdrawal Rxns** – Physical dependence may occur and symptoms of w/d occur when medication is d/c'd. A gradual taper should occur when d/c'ing pt off high doses or prolonged usage.

#### DRUG INTERACTIONS

- **Considerations for DI:** CYP2C19 and CYP3A4 substrate, antiepileptic agent, CNS depression, hypotensive effects.
- **Some Contraindicated Drug(s) & Drug(s) of Note:** Do not use w/ bupropion and metoclopramide. Avoid use w/ alprazolam and other BNZs, gabapentin, grapefruit, hydrocodone, fentanyl, paliperidone, and others. Monitor w/ 5-HTP, armodafinil, baclofen, butalbital, clonidine, clopidogrel, phenytoin, zonisamide, and others.

#### MONITORING PARAMETERS

- LFTs in prolonged use, HR, respiratory rate, BP, mental status, Cr, BUN, and osmol gap.

#### PATIENT COUNSELING INFORMATION

- Diazepam is commonly used to treat **anxiety, seizures, alcohol withdrawal, and muscle spasms**.
- Can be taken **with or without food**.
- **Can cause addiction/dependency** and patients should be monitored for s/sx of abuse/misuse/addiction.
- **Grapefruit or grapefruit juice** may increase the chances of experiencing side effects with diazepam.

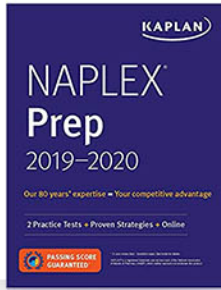
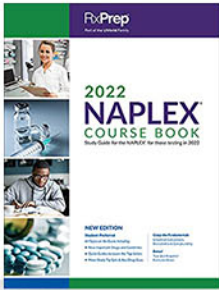
#### REFERENCE(S) & RESOURCE(S)

1. <https://online.epocrates.com/drugs/19210/diazepam/Monograph>
2. <https://www.drugs.com/ppa/diazepam.html>
3. <https://www.webmd.com/drugs/2/drug-6306/diazepam-oral/details>

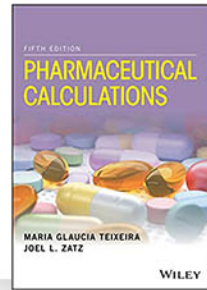
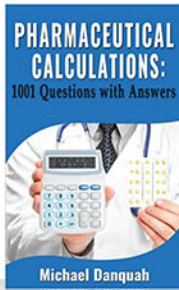
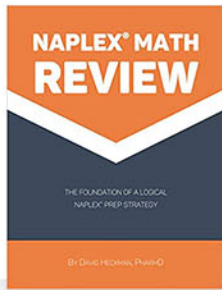
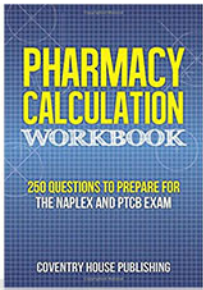


# PREPARE FOR SUCCESS!

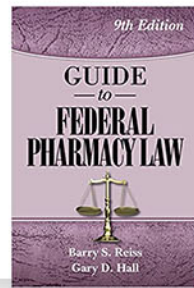
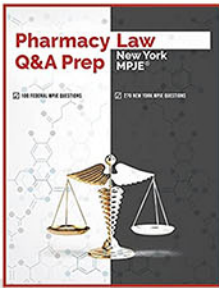
## Comprehensive (NAPLEX)



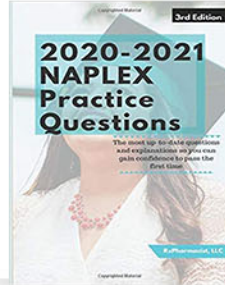
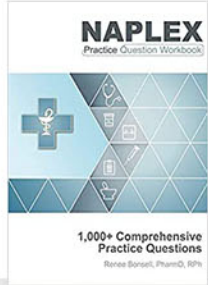
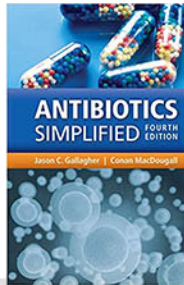
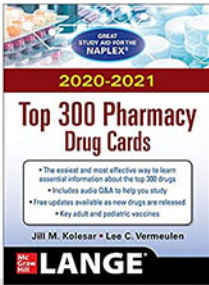
## Calculations (NAPLEX)



## Pharmacy Law (MPJE)



## Supplemental



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# 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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