

A large, white, serif 'RX' logo is centered within a dark gray square box in the top right corner of the page.

Drug Name: **Diazepam**
Trade Name: **Valium, Diastat**
Class:

Benzodiazepine (nonbarbiturate sedative-hypnotic agent)
Anticonvulsant
Skeletal Muscle Relaxant
Schedule IV Controlled Substance

Mechanism of Action:

Acts at the level of the limbic, thalamic, and hypothalamic regions of the CNS through potentiation of GABA (inhibitory neurotransmitter).

Decreases neural cell activity in all regions of CNS.

Anxiety is decreased by inhibiting cortical and limbic arousal.

Promotes relaxation through inhibition of spinal motor reflex pathway, also depresses muscle & motor nerve function directly.

As an anticonvulsant, augments presynaptic inhibitions of neurons, limiting the spread of electrical activity. However, they do not alter the electrical activity of the seizure's focus.

Indications:

- Major motor seizures
- Status Epilepticus
- Acute anxiety
- Skeletal muscle relaxant
- Management of alcohol withdrawal symptoms
- Vertigo

Contraindications:

- Shock
- Coma
- Respiratory Depression
- Hypersensitivity
- Closed Angle Glaucoma

Precautions:

- Reduced dose for Geriatrics (some sources advocate 50%)
- Use caution when administering to patients with: Hepatic dysfunction
- Current Substance Abuse (CNS depressants, including alcohol)
- Renal insufficiency
- History of drug addiction
- Parkinson's Disease
- Myasthenia gravis
- Pregnancy (D)

Dosage:

Adults: (No faster than 5 mg/min)

- Seizures: 2-10 mg slow IV (5-10mg rectally). **Max 20 mg**
- Behavioral Emergencies: 2-5 mg slow IV every 5-10 minutes or IM repeated once in 20 minutes, **Max 20 mg**
- Sedation/Cardioversion/Pacing/ Muscle spasm/ Labrynthitis/Vertigo /Inner ear signs and symptoms: 2-5 mg slow IV every 5-10 minutes **Max 10 mg**

DRUG: DIAZEPAM

RX

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Dosage:

Pediatrics:

- Seizures—0.2- 0.3 mg/kg slow IV/IO (every 5 min.)
0.5 mg/kg PR. **Max 10 mg**
- Sedation/Cardioversion/Pacing/Painful Procedure/Spasm: 0.2- 0.3 mg/kg slow IV/IO every 5-10 min. **Max 10 mg**

Valium can be given IM, but absorption via this route is variable.

Onset:

IV—5 min

Duration:

IV—15-60 min

Side Effects:

- CNS Depression
- Dizziness
- Drowsiness

Minor:

- Lethargy
- Ataxia

Major:

- Respiratory Depression
- Apnea
- Hypotension
- Cardiac Arrest
- Valium Rage

Interactions:

Incompatible with all other drugs, NS flush should precede and follow administration.

Additive with other CNS depressants

PEARLS:

When administering diazepam rectally, REMOVE THE NEEDLE & LUBRICATE THE SYRINGE. The syringe must be inserted 3-5 cm, injected slowly (count slowly to three), removed slowly (count slowly to three), and the buttocks held together (again count slowly to three). Avoid injecting the medication into a stool mass.

Diazepam pushed rapidly will have more “dramatic” effects than pushed slowly.

When giving an IM injection of diazepam, use a large muscle mass (i.e. gluteal). Versed or Ativan are both more readily absorbed through the muscle mass, and may be considered a better choice in certain situations.

“Diastat” is a pre-filled tube of Diazepam specifically designed for rectal administration. It is pre-measured, and is often made available to parents by their family physician to administer to children with severe seizure disorders. Preliminary studies show it **MAY** have less incidence of respiratory depression, but all precautions still apply.

Physician Preference: While Versed is preferred in cases without IV access due to rapid absorption IM and IN, Diazepam is still acceptable as well. If unable to control seizures after max dose of any single benzodiazepine, call medical control to continue with another benzodiazepine.