

# Nimoplit Injection

## Nimodipine (10 mg) Injection – Comprehensive Information

### Composition and Ingredients

Each vial contains:

- **Nimodipine (10 mg):** A calcium channel blocker specifically used to prevent and treat neurological complications caused by reduced blood flow to the brain.

### Indications and Uses

Nimodipine injection is primarily used for:

- **Prevention and Treatment of Cerebral Vasospasm:** Helps in reducing the narrowing of blood vessels in the brain following a subarachnoid hemorrhage (SAH).
- **Acute Ischemic Stroke:** Improves blood flow to affected brain areas, potentially minimizing damage.
- **Neurological Deficits After Brain Hemorrhage:** Aids in preventing complications such as cognitive decline and movement disorders due to reduced cerebral perfusion.
- **Post-Surgical Brain Injury Management:** Used to maintain adequate blood flow in neurosurgical patients.

### Mechanism of Action

- Nimodipine is a **dihydropyridine calcium channel blocker** that selectively dilates cerebral blood vessels.
- It prevents the influx of calcium ions into vascular smooth muscle cells, reducing vasoconstriction and improving oxygen supply to brain tissues.
- Unlike other calcium channel blockers, nimodipine primarily targets **cerebral arteries**, making it effective in reducing neurological complications after brain hemorrhages.

### Dosage and Administration

- **Route of Administration:** Administered as an **intravenous (IV) infusion** over a controlled period.
- **Standard Dosage:**
  - **Subarachnoid Hemorrhage (SAH):** Typically, **1 mg/hour IV infusion**, gradually increased to **2 mg/hour** if well tolerated.
  - Treatment is usually continued for **up to 14 days** post-hemorrhage.
- **Preparation:** Should be diluted with **5% dextrose or normal saline** before IV administration.
- **Missed Dose:** If a dose is missed, consult a healthcare provider before resuming treatment.

### Precautions and Warnings

- **Hypotension Risk:** Can cause significant blood pressure drops, especially in patients with pre-existing cardiovascular conditions.
- **Liver Dysfunction:** Dose adjustment may be required in patients with impaired liver function.
- **Use in Pregnancy and Lactation:** Should be used with caution under medical supervision.
- **Intravenous Use Only:** Should never be administered as a **bolus injection** due to the risk of severe hypotension.
- **Interaction with CYP3A4 Inhibitors:** Avoid concomitant use with drugs like ketoconazole, erythromycin, and grapefruit juice, as they can increase nimodipine levels and toxicity.

### Possible Side Effects

Common side effects include:

- Hypotension (low blood pressure)
- Dizziness or lightheadedness
- Nausea
- Flushing
- Headache
- Bradycardia (slow heart rate)

Serious but rare side effects:

- Severe hypotension leading to shock
- Liver enzyme abnormalities
- Arrhythmias (irregular heartbeats)
- Allergic reactions (rash, difficulty breathing, swelling)

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### *Drug Interactions*

- **Antihypertensive Drugs:** Increased risk of hypotension when combined with beta-blockers or ACE inhibitors.
- **CYP3A4 Inhibitors and Inducers:**
  - **Inhibitors (e.g., azole antifungals, macrolides, grapefruit juice):** Can increase nimodipine levels, leading to toxicity.
  - **Inducers (e.g., rifampicin, carbamazepine):** May reduce nimodipine effectiveness.
- **Warfarin and Anticoagulants:** Caution is required due to a potential increased risk of bleeding.

### *Storage Instructions*

- Store at a **temperature below 25°C**, away from direct sunlight.
- Protect from light and freezing.
- Use diluted solutions immediately after preparation.

### *Conclusion*

Nimodipine (10 mg) injection is a crucial medication for preventing and treating cerebral vasospasm and ischemic complications following subarachnoid hemorrhage. Its ability to improve cerebral blood flow makes it a valuable treatment option, but it must be administered carefully under medical supervision to avoid significant hypotension and drug interactions.

Manufactured in India for:



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