

Ployflip B Injection

Polymyxin B (500,000 IU) Injection – Comprehensive Information

Composition and Ingredients

Each vial contains:

- **Polymyxin B (500,000 IU):** A cyclic polypeptide antibiotic derived from *Bacillus polymyxa*, effective against multidrug-resistant Gram-negative bacterial infections.

Indications and Uses

Polymyxin B is used for the treatment of severe infections caused by multidrug-resistant Gram-negative bacteria, including:

- **Septicemia (Bloodstream Infections):** Particularly effective against *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, and *Klebsiella pneumoniae*.
- **Meningitis:** Used in bacterial meningitis caused by drug-resistant pathogens.
- **Urinary Tract Infections (UTIs):** Used in complicated UTIs caused by resistant Gram-negative bacteria.
- **Respiratory Tract Infections:** Treats hospital-acquired pneumonia (HAP) and ventilator-associated pneumonia (VAP).
- **Skin and Soft Tissue Infections:** Treats infections caused by resistant bacteria in wounds, burns, or surgical sites.
- **Intra-abdominal Infections:** Used in peritonitis and intra-abdominal abscesses.
- **Ophthalmic Infections:** Sometimes used in severe eye infections.

Mechanism of Action

- Polymyxin B disrupts the bacterial **outer membrane**, increasing permeability and leading to cell lysis.
- It binds to **lipopolysaccharides (LPS)** on Gram-negative bacteria, neutralizing their toxic effects.

- Effective against **drug-resistant bacteria**, including **carbapenem-resistant Enterobacterales (CRE)** and **extensively drug-resistant (XDR) bacteria**.

Dosage and Administration

- **Route of Administration:** Administered as an **intravenous (IV) infusion**, intramuscular (IM) injection, or **intrathecal (for meningitis)** injection under strict medical supervision.
- **Dosage:**
 - **IV or IM:** Loading dose of **2.5 mg/kg**, followed by maintenance doses of **1.5–2.5 mg/kg/day** in divided doses.
 - **Intrathecal (Meningitis):** **50,000 IU per day** in cerebrospinal fluid (CSF) under hospital settings.
 - **Topical Use:** Used in irrigation solutions for localized infections.
- **Duration:** Treatment duration depends on infection severity and response, typically **7–14 days**.

Precautions and Warnings

- **Nephrotoxicity (Kidney Damage):** Requires kidney function monitoring (serum creatinine, urine output).
- **Neurotoxicity:** Can cause muscle weakness, paresthesia, confusion, dizziness, or respiratory depression.
- **Hypersensitivity Reactions:** Caution in patients with a history of allergies to polymyxins.
- **Drug-Drug Interactions:**
 - **Aminoglycosides & Vancomycin:** Increased risk of kidney damage.
 - **Neuromuscular Blockers:** Can enhance neuromuscular blockade, leading to paralysis.
 - **Diuretics (e.g., Furosemide):** Can worsen kidney toxicity.
- **Pregnancy and Lactation:** Used with caution; safety in pregnancy is not well established.
- **Pediatric Use:** Carefully administered in neonates and children due to renal immaturity.

Possible Side Effects

- **Common:** Nephrotoxicity, dizziness, headache, nausea, vomiting, skin rash.
- **Serious:** Respiratory depression, acute kidney injury, neuromuscular paralysis, severe allergic reactions (anaphylaxis).

Storage Instructions

- Store below **25°C** in a dry place, protected from light.
- Reconstituted solution should be used immediately or stored in the refrigerator for **24 hours**.

Conclusion

Polymyxin B (500,000 IU) injection is a **last-resort antibiotic** for life-threatening infections caused by multidrug-resistant Gram-negative bacteria. Due to its potential toxicity, it should only be used under **strict medical supervision** with **regular monitoring of kidney and neurological functions**.

Manufactured in India for:



Cafoli Lifecare Pvt. Ltd.

(An ISO 9001: 2015 Certified Co.)

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