**POLYMIXIN B FOR INJECTION USP**

**500,000 Units**

*Rx ONLY*

To reduce the development of drug-resistant bacteria and maintain the effectiveness of polymyxin B and other antibacterial drugs, polymyxin B should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria.

**WARNING (continued)**

**CAUTION:** WHEN THIS DRUG IS GIVEN INTRA-MUSCULARLY OR INTRAVENOUSLY INTRAVENOUSLY, IT SHOULD BE GIVEN ONLY TO HOSPITALIZED PATIENTS, SO AS TO PROVIDE CONSTANT SUPERVISION BY A PHYSICIAN.

RENA FUNCTION SHOULD BE CAREFULLY DETERMINED AND PATIENTS WITH RENAL DAMAGE AND NITROGEN RETENTION SHOULD HAVE REDUCED DOSAGE. PATIENTS WITH NEPHROTOXICITY DUE TO POLYMIXIN B SULFATE USUALLY SHOW ALBUMINURIA, CELULAR CASTS, AND AZOTEMIA. DIMINISHING URINE OUTPUT AND A RISING BUN ARE INDICATIONS FOR DISCONTINUING THERAPY WITH THIS DRUG.

NEUROTOXIC REACTIONS MAY BE MANIFESTED BY IRRITABILITY, WEAKNESS, DROWSINESS, ATAIXIA, PERIODAL PARESTHESIA, NUMBNESS OF THE EXTREMITIES, AND BLURING OF VISION. THESE ARE USUALLY ASSOCIATED WITH HIGH SERUM LEVELS FOUND IN PATIENTS WITH IMPAIRED RENAL FUNCTION AND/OR NEPHROTOXICITY.

THE CONCURREN OR SEQUENTIAL USE OF OTHER NEUROTOXIC AND/OR NEPHROTOXIC DRUGS WITH POLYMIXIN B SULFATE, PARTICULARLY BACTERIAIN, STREPTOMYCN, NEOMYCIN, KANAMYCIN, GENTAMICIN, TOBRAMYCIN, AMIKACIN, CEPHALORIDINE, PAROMOMYCIN, VIOMYCIN, AND COLISTIN SHOULD BE AVOIDED.

**DESCRIPTION**

Polymyxin B for Injection USP is one of a group of basic polypeptide antibiotics derived from *B* polymyxin (*B* aerogenes). Polymyxin B sulfate is the sulfate salt of Polymyxin B, and B1, which are produced by the growth of Bacillus polymyxa (Prazmowski) Migula (Fam. Bacillaciae). It has a potency of not less than 6000 polymyxin B units per mg, calculated on the anhydrous basis. The structural formulae are:

Each vial contains 500,000 polymyxin B units for parenteral or ophthalmic administration.

Polymyxin B for Injection USP is in powder form suitable for preparation of sterile solutions for intramuscular, intravenous drip, intrathecal, or ophthalmic use.

In the medical literature, dosages have frequently been given in terms of equivalent weights of pure polymyxin B base. Each milligram of pure polymyxin B base is equivalent to 10,000 units of polymyxin B and each microgram of polymyxin B base is equivalent to 10 units of polymyxin B.

Aqueous solutions of polymyxin B sulfate may be stored up to 12 months without significant loss of potency if kept under refrigeration. In the interest of safety, solutions for parenteral use should be stored under refrigeration and any unused portion should be discarded after 72 hours. Polymyxin B sulfate should not be stored in alkaline solutions since they are less stable.

**CLINICAL PHARMACOLOGY**

Polymyxin B sulfate has a bactericidal action against almost all gram-negative bacteria except the Proteus group. Polymyxins increase the permeability of the bacterial cell membrane leading to death of the cell. All gram-positive bacteria, fungi, and the gram-negative cocci are resistant to polymyxin B. Appropriate mechanisms are used when performing in vitro susceptibility testing of polymyxin B. The following in vitro susceptibility test criteria should only be used for interpreting the results of polymyxin B susceptibility testing against *P. aeruginosa* when the indicated quality control parameters are met during testing.

**In Vitro Susceptibility Test Interpretive Criteria for Polymyxin B Sulfate Against Pseudomonas aeruginosa**

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Minimal Inhibitory Concentration (MIC) (mcg/mL)</th>
<th>Disk Diffusion Interpretive Criteria (300 unit disk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>≤2</td>
<td>Susceptible</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>≥8</td>
<td>Resistant</td>
</tr>
</tbody>
</table>

**INFORMATION**

NOTE: IN MENINGEAL INFECTIONS, POLYMIXIN B SULFATE SHOULD BE ADMINISTERED ONLY BY THE INTRATHecal ROUTE.

To reduce the development of drug-resistant bacteria and maintain the effectiveness of polymyxin B and other antibacterial drugs, polymyxin B should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

**CONTRAINDICATIONS**

This drug is contraindicated in persons with a prior history of hypersensitivity reactions to polymyxins.

**WARNINGS**

**CLOSTRIDIUM DIFFICILE ASSOCIATED DIARRHEA (CDAD)**

This product contains Polymyxin B. CDAD has been reported with use of nearly all antibacterial agents, including Polymyxin B for Injection, and may range in severity from mild diarrhea to fatal colitis. Treatment with antibacterial agents alters the normal flora of the colon leading to overgrowth of *C. difficile*.
References:
Manufactured by: Ben Venue Laboratories, Inc., Bedford, OH 44146
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