



VOLUME 5: NURSING SERVICES	Effective Date: 8/1/10
CHAPTER 16A	Revision Date(s):
ADMINISTRATION OF AMPHOTERICIN B	Attachments: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

I. POLICY

1. Amphotericin B shall be administered only upon the order of the provider.
2. Amphotericin B may only be administered by a registered nurse (RN).
3. Amphotericin B shall be administered via an infusion pump.
4. The patient-inmate shall be monitored every 15-30 minutes during initial administration and no less than every two (2) hours during subsequent Amphotericin B administration.
5. Pharmacy should be consulted for any questions regarding appropriate monitoring parameters, possible adverse events, as well as any other problems regarding administration of Amphotericin B.

II. PURPOSE

To provide a procedure for the safe administration of Amphotericin B to patient-inmates.

III. RESPONSIBILITIES

The Chief Executive Officer/Health Care Manager (CEO/HCM) at each institution is responsible for implementation of this policy in collaboration with the Chief Nurse Executive/Director of Nursing (CNE/DON).

IV. PROCEDURE DETAILS

A. Equipment

- Volumetric IV Pump
- Primary IV pump set macrodrip nonfiltered
- Prescribed dose of IV Amphotericin B as mixed or provided by Pharmacy

B. Knowledge Base

1. Amphotericin B is an antifungal agent that is a derivative of a strain of *Streptomyces nodosus*. It is indicated in the use of severe, potentially fatal fungal infections (e.g., cryptococcosis, aspergillosis, disseminated moniliasis).
2. Administration of Amphotericin B requires close nursing attention as severe side effects may occur. Side effects include: headache, seizures, chills, fever, nausea and vomiting, anorexia, diarrhea, epigastric pain, renal toxicity, including hypocalcemia, azotemia, hypomagnesemia, anemia, phlebitis, flushing, rash, hypotension. (Other side effects, considered rare, are listed in drug literature.)
3. Adverse effects:
 - a. Central Nervous System: Fever (often with shaking chills), headache, malaise, generalized pain
 - b. Gastrointestinal: Nausea, vomiting, dyspepsia, diarrhea, cramping, epigastric pain, anorexia
 - c. Hematologic: Normochromic, normocytic anemia

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- d. Genitourinary: Hypokalemia, azotemia, hyposthenuria, renal tubular acidosis, nephrocalcinosis
- e. Local: *Pain at the injection site* with phlebitis and thrombophlebitis
- f. Other: Weight loss

C. Drug Interactions

- 1. Do not administer with corticosteroids unless these are needed to control symptoms
- 2. Increased risk of nephrotoxicity with other nephrotoxic antibiotics, antineoplastics
- 3. Increased effects and risk of toxicity of digitalis, skeletal muscle relaxants, flucytosine
- 4. Increased nephrotoxic effects with cyclosporine

D. Special Notes

- 1. Avoid administering Amphotericin B concurrently with white blood cell (granulocyte) transfusions. Severe reactions have been reported.
- 2. Amphotericin B should not be given through a filter smaller than 1.0 millimicron. Also, minibid tubing may become clogged due to the thick consistency of Amphotericin B.
- 3. Do not administer any other medications via the tubing used for Amphotericin B.
- 4. Do not use saline to flush intravenous (IV) line. Saline is not compatible with Amphotericin B. **Use 5% dextrose in water (D₅W).**

E. Procedure

- 1. Check lab values as ordered by the provider and notify the provider of any abnormal values prior to the administration of Amphotericin B.
- 2. Explain the procedure to the patient-inmate. and the potential side effects. Teach the patient-inmate to report side effects immediately.
- 3. Pre-medicate the patient-inmate as ordered by the provider to decrease the risk of side effects.
- 4. Obtain baseline vital signs.
- 5. Prime IV tubing with Amphotericin B and place on the volumetric pump. Set volumetric pump to correct rate as ordered by the provider.
- 6. Test Dose:
 - a. The provider may order a test dose of Amphotericin B.
 - b. Typically the test dose is 1 – 5 mg diluted with 10 ml D5W and infused over 15 – 30 minutes.
- 7. During Initial Dose:
 - a. Monitor the patient-inmate's blood pressure every 15 minutes x 4, then every 30 minutes (if stable) until two (2) hours after the infusion is complete.
 - b. Monitor the patient-inmate's temperature every hour during the infusion.
- 8. Subsequent Doses:
 - a. Monitor the patient-inmate's blood pressure every two (2) hours and as needed (PRN).
 - b. Monitor the patient-inmate's temperature every four (4) hours.

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9. Report side effects to the provider if ordered pre-medications do not control side effects. (Refer to *Knowledge Base* section for list of side effects.)
10. Throughout therapy, monitor the following when ordered and notify the provider of abnormal values.
 - a. Serum potassium levels
 - b. Urine output
 - c. CBC/Hgb & Hct
 - d. Magnesium levels
 - e. Liver function tests

F. Documentation

1. Document the following on the Medication Administration Record (MAR):
 - a. Name of medication
 - b. Dosage
 - c. Date/time
 - d. Method of administration
 - e. Name and quantity of solution
2. Record the quantity of solution given via IV piggyback on the intake and output (I&O) record.
3. Document the patient-inmate's tolerance of treatment, complaints of side effects, and any other pertinent data on the Nursing Care Record.
4. Document the patient-inmate education provided on the Nursing Care Record.

G. References

Weinstein, S. (2001). *Plumer's principles and practice of intravenous therapy* (7th ed.). Philadelphia, PA: Lippincott, Williams & Wilkins, Retrieved from CD-ROM @ E:\mg\amphotericin_B.htm