

HAEMOPHILUS INFLUENZAE TYPE b (Hib) POST-EXPOSURE PROPHYLAXIS

I. DEFINITION:

Haemophilus influenzae are gram-negative coccobacilli that may be either encapsulated (types a–f) or unencapsulated (nontypeable). Virulence appears to be associated with capsulation. On the basis of specific capsular polysaccharides, six different types have been distinguished (designated types “a” through “f”). *Haemophilus influenzae* type b (Hib) is the only type for which there is a vaccine and for which public health control measures are necessary.

II. ETIOLOGY AND EPIDEMIOLOGY:

See Epi Manual

III. MANAGEMENT PLAN:

- A. An Acute Disease Service (ADS) epidemiologist consults with the Communicable Disease Nurse (CDN) to discuss identification of contacts and recommendations for post-exposure prophylaxis (PEP).
- B. Clients who are identified as contacts and recommended to receive PEP should be directed to an appropriate resource to receive their PEP prescription.
 1. The object of chemoprophylaxis is to prevent Hib disease in children under 4 years of age by eradicating nasopharyngeal carriage in all primary contacts.
 2. Chemoprophylaxis is only recommended for persons that had direct exposure to the case patient.
 3. The majority of secondary cases in households occur within the first seven days after hospitalization of the index case. Thus, antibiotic prophylaxis of contacts should be instituted as rapidly as possible.
 4. The following two options describe where contacts should be referred for their PEP prescription.
 - a. Post-exposure prophylaxis option #1 (use of external resources):
 - 1) Refer client to his/her private physician, or
 - 2) Urgent care center or other “a.m./p.m.” clinic, or
 - 3) The hospital physician treating the source case.
 - b. Post-exposure prophylaxis option #2:
 - 1) Personnel at the local county health department (CHD) who are legally authorized to prescribe (i.e., medical director, contract physician, physician assistant, family nurse practitioner, pediatric nurse practitioner) may provide prescriptions within the scope of their licensed specialty area if none of the listed resources in option #1 are available.
 - 2) The CDN can coordinate providing a prescription to a Hib contact with the Regional Director or District Nurse Manager (DNM) and the person with prescriptive authority using the following steps:

- 3) Contact the CHD Regional Director and/or DNM to discuss circumstances involving unavailability of external resources as defined above in option #1.
- 4) If decision is made to provide a prescription for PEP via the CHD, request client(s) to come to the CHD.
- 5) Open a limited service record on each person, unless current record is open.
- 6) Perform an assessment of each individual's allergies, age, and body weight and refer to the dosage for PEP. Obtain name of pharmacy where client will fill prescription.
- 7) The person with prescriptive authority will complete an order that includes the contact's name, date of birth, weight, and calculated PEP information (antibiotic name and dose) (ODH 303M).
- 8) The person with prescriptive authority will then contact the pharmacy designated by the client to inform the pharmacist of the circumstances.
- 9) For clients who are unable to afford costs for antibiotic prophylaxis, the CDN will discuss with the CHD Regional Director or DNM to determine if the course of antibiotics recommended for PEP is available through the CHD.

- C. Rifampin is the drug of choice in prevention of the development of secondary disease among close contacts exposed to a case of Hib.

Dosage for Rifampin^{1,2} Prophylaxis of Contacts to a Case of *H. influenzae* type b

<u>Contacts</u>	<u>Dosage</u>
Children 1 month or older and adults	20 mg/kg (maximum dose 600 mg) once daily for 4 days
Infants less than 1 month of age	10 mg/kg once daily for 4 days

¹ Not to be taken during pregnancy.

² Side effects of Rifampin include orange discoloration of urine, discoloration of soft contact lenses (removal recommended for duration of chemotherapy), discoloration of teeth, nausea, vomiting, and diarrhea. May interfere with efficacy of oral contraceptives and some seizure prevention and anticoagulant medications.

IV. CLIENT EDUCATION/COUNSELING:

- A. Report potential side effects to medication. Side effects to Rifampin include orange discoloration of urine, discoloration of soft contact lenses (removal recommended for duration of chemotherapy), discoloration of teeth, nausea, vomiting, and diarrhea.
- B. May interfere with efficacy of oral contraceptives and some seizure prevention and anticoagulant medications.
- C. Rifampin should not to be taken during pregnancy.

REFERENCES:

Heymann, D.L. (Ed.), *Control of Communicable Diseases Manual*. 19th Edition. Washington, DC, American Public Health Association, 2008.

American Academy of Pediatrics. *Haemophilus influenzae* Infections. In: Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2012 Report of the Committee on Infectious Diseases*. Elk Grove Village, IL: American Academy of Pediatrics; 2012: 345-352.

