

[Bordetella Pertussis]

How to confirm Pertussis?

Three diagnostic tests for Pertussis: **Nasopharyngeal Culture** (Available at Massachusetts State Laboratory Institute (SLI) and other diagnostic laboratories), **Serology** (only assays performed at Massachusetts SLI are acceptable for the diagnosis of Pertussis. *Both the Mass. DPH and the CDC do NOT accept results from commercial labs*), **PCR** (performed at several laboratories). Pertussis culture and serology test kits can be obtained from the Massachusetts SLI. For information regarding diagnostic testing refer to the Massachusetts SLI website: <http://www.mass.gov/dph/bls/labsite.htm> or call 617-983-6640. Any laboratory confirmed case of Pertussis should be reported to the Mass. DPH. The interpretability of each test depends on the age of the patient and the stage of the disease during which the specimen is collected (see table).

Duration of Cough	Children (≤ 11 yrs old)	Adults (>11 yrs old)
≤ 14 days	Nasopharyngeal (culture or PCR)	Nasopharyngeal (culture or PCR)
> 14 days	Nasopharyngeal (culture or PCR)	PCR or Serology

Whether or not to test a patient suspected of Pertussis

YES, if high suspicion of Pertussis:	NO
· Paroxysmal cough, whoop and/or apnea	· Cold-like symptoms but no cough
· Acute cough of any duration & exposure of Pertussis	· No symptoms despite contact with Pertussis

Who to treat?

- 1) symptoms compatible w/ Pertussis
- 2) Acute cough & exposure to Pertussis
- 3) Acute cough with positive Pertussis culture or PCR

Who to treat prophylactically (no symptoms)?

- 1) All close contacts (sharing indoor airspace for at least 10 hrs/wk, direct face-face contact & direct contact w/ nasal/oral/respiratory secretions) w/ infected persons

(In patients <1 year, be cautious about treating due to association of erythromycin & infantile hypertrophic pyloric stenosis)

Options for Treatment

Children

Erythromycin: 40-50mg/kg/day divided QID for 14 days (max 2g/day)

Azithromycin: 10mg/kg/day on day 1 (max 500mg/day), then 5mg/kg/day once daily for days 2-5 (max 250mg/day)

Bactrim: 8mg/kg/day (Trimethoprim) & 40mg/kg/day (Sulfamethoxazole) divided BID for 14 days (max 320mg/day, max 1600mg/day respectively)

Adults

Erythromycin: 250-500mg QID for 14 days

Azithromycin: 500mg on day 1, 250 mg once daily for days 2-5

Bactrim: 320mg/day (Trimethoprim) & 1600mg/day (Sulfamethoxazole) divided BID, or 1-double strength tab BID

Ciprofloxacin: 500mg BID for 7 days

Levofloxacin: 500mg once daily for 7 days

When is a patient most contagious?

A patient is most contagious during the catarrhal stage and during the first two weeks after onset of coughing. Treatment of the case in this timeframe limits the spread of infection to household contacts in both children and adults. Isolating patient from school or work may also limit the spread of infection.

Pertussis Immunization

The Mass. DPH recommends that the DTaP vaccine should be given at 2 mo., 4 mo., 6 mo., 15-18 mo., and at 4-6 years of age.

New recommendations from Mass. DPH will likely replace Td with DTaP at 11-12 years of age. After exposure, the DTaP vaccine should be administered ASAP for children less than 7 y.o. who are unimmunized, or with incomplete Pertussis vaccine series, or for those who have had less than 4 doses and more than 3 years have elapsed since the last Pertussis vaccine.

If you have any questions regarding Pertussis, Please call MDPH @ (617) 983-6800.