

Testing for Pertussis

- Healthcare providers most commonly use PCR (polymerase chain reaction) to test for pertussis.
 - PCR tests for the presence of *B. pertussis* genetic material.
 - Results are available quickly.
 - All local and regional laboratories offer the test.
 - Washington State Public Health Laboratory may perform the test for uninsured patients like healthcare workers, childcare workers, infants and pregnant women.
- Culture remains the gold standard pertussis test—but *B. pertussis* is difficult to culture.
- Serology is not recommended for diagnosing acute pertussis because it is unreliable and difficult to interpret.



Collecting Nasopharyngeal Specimens

- For the most reliable test results, collect specimens as soon as possible after symptoms start—but you can collect specimens up to 4 weeks after coughing starts.
- Wear a mask and eye protection to avoid exposure.
- Ask the patient to blow his or her nose to clear excess mucus. For infants and young children, clean the anterior nares with moist swabs. Excess mucus on the diagnostic swab can result in equivocal or indeterminate results.
- When collecting specimens from children, ask another person to help. You must keep the patient still to prevent injury and specimen contamination.
- Tilt the patient's head slightly backward (see picture above).
- Use a Dacron® or rayon swab on a flexible wire shaft. Do not use wooden shafted swabs or calcium alginate swabs. They are contraindicated for PCR testing.
- While the swab is still in its paper package, slightly bend the wire shaft about 1 centimeter above the tip to help get the tip into the nasopharynx.
- If you need both culture and PCR, place 2 swabs together, one on top of the other. This saves the patient the discomfort of being swabbed twice. To avoid contamination, slip a second swab inside the other's paper package to manipulate the swabs together.
- Gently pass the swab(s) through the nostril to the posterior nasopharynx. **Do not force.** When you reach the posterior nasopharynx, you will feel resistance.
- Rotate the swab(s). Ideally, leave in place for 10 seconds.
- For PCR, put the swab in a dry, sterile screw top transport tube. Ship the specimen at ambient temperature.
- For culture, streak 1 swab onto Reagan-Lowe or charcoal transport media. Leave the swab on top of the media. Do not stab the swab into the charcoal slant. Cut the top of the wire with scissors so you can screw on the media tube cap.

To avoid spreading pertussis, patients with moderate to high clinical suspicion should stay at home and treat with an approved antibiotic, pending test results.