



Space view of ash plume from the Iceland volcano

## PIC QUESTION OF THE WEEK: 4/26/10

Q: Can a PPD test be safely administered to a pregnant woman or one who is breastfeeding?

A: Tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis* and is usually contracted by inhalation of the organism. Common symptoms include cough (with or without blood), chest pain, fatigue, chills, night sweats, and anorexia. In many cases, patients exposed to the organism may be asymptomatic. Specific populations must be tested for tuberculosis because they are considered at high risk for developing and transmitting the infection. These include patients who are HIV positive or possess weakened immune systems; close contacts of patients with a positive skin test to or having active TB; healthcare workers, and those who inject illegal drugs. The diagnostic test routinely used for detection of *M. tuberculosis* is known as the Mantoux tuberculin skin test (TST). It is performed by injecting a volume of 0.1 ml of tuberculin purified protein derivative (PPD) into the inner (also known as the volar surface) forearm. The test is typically interpreted within 48-72 hours after application. This is accomplished by measuring the size of *induration* (raised or palpable area) at the injection site. An area  $\geq 15$  mm is considered a positive test in most healthy individuals while a result of  $\geq 10$  mm is positive for healthcare workers, intravenous drug users, and additional patient groups. An area  $\geq 5$  mm is felt to be positive in those who are immunosuppressed (e.g. HIV patients), close contacts of those with TB, and others. Recipients of the PPD test frequently question its safety if they are pregnant or breastfeeding. Unlike vaccines, there is no viral or microbial component (live or inactivated) in PPD, thus, it is not infectious. There are no issues of safety in performing a Mantoux test in breastfeeding woman because the protein is sterile, non-virulent, and unlikely to transfer into human milk. The World Health Organization (WHO) states that PPD testing is compatible with breastfeeding. The Centers for Disease Control and Prevention (CDC) also states that PPD testing during pregnancy is safe and has not been associated with any congenital anomalies in the newborn. Since untreated tuberculosis can be catastrophic for a pregnant woman and her fetus, it is important to note that she can be tested. Clearly, the risk of unknown tuberculosis infection outweighs the minimal (if any) risk of harm from PPD testing during pregnancy. In summary, it is safe to administer a PPD test to both pregnant and breastfeeding women.

### References

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Megan K. Geier and Zachary J. Elerick, Pharm.D. Candidates

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