



TUBERCULOSIS INFORMATION

- BCG Vaccine

BCG, or bacille Calmette-Guérin, is a vaccine for tuberculosis (TB) disease. BCG is used in many countries, but it is not generally recommended in the United States because of the low risk of infection with *M. tuberculosis*, the variable effectiveness of the BCG vaccine against pulmonary TB, and the vaccine's interference with tuberculin reactivity.

BCG vaccination does appear to lower the risk of serious complications of primary TB in children. But in the United States, the consideration of BCG vaccination is recommended only for children who have negative tuberculin skin test results, and who cannot be given treatment for latent TB infection but are at high risk for continuous exposure to infectious TB or to TB that is resistant to isoniazid and rifampin. BCG is no longer recommended for health care workers or other adults who are likely to be exposed to TB. However, vaccination of health care workers should be considered on an individual basis in settings in which (1) a high percentage of TB patients are infected with *M. tuberculosis* strains resistant to both isoniazid and rifampin, (2) transmission of such drug-resistant *M. tuberculosis* strains to health care workers and subsequent infection are likely, and (3) comprehensive TB infection-control precautions have been implemented and have not been successful. Furthermore, BCG should not be given to persons who are immunosuppressed, such as persons who are infected with HIV. It should not be given to pregnant women, even though no harmful effects of BCG vaccination on the fetus have been observed.

Interpreting Tuberculin Skin Test Results in BCG-Vaccinated Persons

In persons vaccinated with BCG, sensitivity to tuberculin is highly variable, depending upon the strain of BCG used and the group vaccinated. The presence or size of a postvaccination tuberculin skin-test reaction does not predict whether BCG will provide any protection against TB disease. Furthermore, the size of a tuberculin skin-test reaction in a BCG-vaccinated person is not a factor in determining whether the reaction is caused by *M. tuberculosis* infection or the prior BCG vaccination.

Tuberculin skin testing is not contraindicated for persons who have been vaccinated with BCG, and the skin-test results of such persons are used to support or exclude the diagnosis of *M. tuberculosis* infection. A diagnosis of *M. tuberculosis* infection and the use of treatment of latent TB infection should be considered for any BCG-vaccinated person who has a tuberculin skin-test reaction of ≥ 10 mm of induration, especially if any of the following circumstances are present:

- ! The vaccinated person is a contact of another person who has infectious TB, particularly if the infectious person has transmitted *M. tuberculosis* to others;
- ! The vaccinated person was born or has resided in a country in which the prevalence of TB is high; or
- ! The vaccinated person (e.g., some health care workers, employees and volunteers at homeless shelters, and workers at drug-treatment centers) is exposed continually to populations in which the prevalence of TB is high.

Treatment of latent TB infection should be considered for BCG-vaccinated persons who are infected with HIV and who are at risk for *M. tuberculosis* infection if they have a tuberculin skin-test reaction of ≥ 5 mm induration.

BCG-vaccinated persons who have a positive reaction to the tuberculin skin test, but who do not have TB disease, should be evaluated for treatment of latent TB infection. The possibility of TB disease should be considered for BCG-vaccinated persons who have symptoms suggestive of TB.

For More Information

For more information about implementing CDC guidelines, call your state health department.

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