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### Efficacy of BCG

Tuberculosis in the United States began to increase in 1986. Racial and ethnic minorities have been particularly affected and New York City has been a major focus. Disease due to multiple drug resistant organisms has become more common and there has been an association with AIDS. Against this background it became important to reassess the value of BCG vaccination. A meta-analysis of published studies of the efficacy of BCG has been undertaken by Graham A Colditz and colleagues (*Journal of the American Medical Association* 1994; 271: 698-702). A total of 1264 publications was reviewed and the analysis was based on 14 prospective trials and 12 case-control studies.

Overall BCG immunisation was found to give 50% protection against tuberculosis, mainly pulmonary disease. The degree of protection did not vary with age at immunisation. Protection appeared to be greater against more severe forms of disease such as meningitis (64% protection) or disseminated tuberculosis (71% protection) but this could be a wrong impression due to more accurate and complete diagnosis in more severe cases. It could be that the overall protective efficacy of 50% is falsely low. The results did not vary significantly according to the strain of BCG used. Two factors were found to explain 66% of the variability in trial findings. These were the quality of the data and geographical location, the efficacy of BCG vaccination varying directly with distance from the equator. The latter, of course, could be a surrogate measure for a variety of different factors. The authors believe that their meta-analysis supports the continued use of BCG.

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