

BCG vaccine: long-term protection against TB

A BCG vaccine has been shown to have good long-term protective efficacy against tuberculosis (TB), according to recently published data from a 60-year follow-up study.¹

During 1935 and 1938, a placebo-controlled trial of BCG vaccination was conducted among 3025 American Indians and Alaska Natives aged 1 month to 20 years. Prospective case finding continued until 31 December 1947. This retrospective record review provides an analysis of follow-up data for the period 1948–1998 from 1483 participants in the BCG vaccine group and 1309 in the control group.

Throughout the follow-up period, covering more than 100 000 person-years of observation, the total number of pulmonary and extrapulmonary TB cases was 102: 36 in the BCG vaccine group and 66 in the control group, yielding respective incidence rates of 66 and 138 per 100 000 per year and a crude (unadjusted) vaccine efficacy of 52% (95% CI 27, 69). The vaccine effect was not substantially changed after adjusting for age at vaccination, sex, subsequent BCG vaccination, long-term medical illness, isoniazid use, tribe, strain of BCG vaccine and BCG dose (adjusted vaccine efficacy of 55%; 95% CI 31, 77).

These are "remarkable" results, despite the fact that they leave many questions about vaccination unanswered, comments Dr Christopher Dye from the World Health Organization, Geneva, Switzerland.² Nevertheless, he adds that "*these findings are relevant to the well-being of millions who are still threatened by or who have TB and provide important lessons for future TB vaccine development*".

1. Aronson NE, et al. Long-term efficacy of BCG vaccine in American Indians and Alaska Natives: a 60-year follow-up study. JAMA: the Journal of the American Medical Association 291: 2086-2091, No. 17, 5 May 2004.

2. Dye C. A booster for tuberculosis vaccines. JAMA: the Journal of the American Medical Association 291: 2127-2128, No. 17, 5 May 2004.