

— that all should be subjected to a mild illness that a large number may escape a severe and fatal illness. Another argument against vaccination is that there is no scientific warrant that one disease can protect against another. To this it may be answered that the ablest authorities on the question of vaccination, including the immortal Edward Jenner, agree that variola and vaccinia are one and the same disease, and therefore it is a sound position to take that vaccination can protect against variola.

In pre-vaccination days, smallpox was a disease of childhood. Every few years it would spread in epidemic form, attacking all who had not been protected by a previous attack. The mortality was very high, and many who escaped with their lives did so only to be blind, deaf or maimed.

In Prussia, prior to compulsory vaccination in infancy, and re-vaccination at twelve years of age, the death rate was 90 per 100,000 of the population, to which must be added all the disfigurement. Now the death rate is 2 in the same number. In Belgium the death rate was formerly 95 in every 100,000; but since all the school children have to be vaccinated, the death rate has fallen to 3. The records of the Italian army for 30 years show that of those troops who had not been vaccinated, 300 in every 10,000 took smallpox with 50 deaths, whereas among those who were well vaccinated only 5 in 10,000 took the disease, with practically no deaths. At the time of the Franco-Prussian war the Prussian army lost some 400 or 500 soldiers by smallpox, while the French army lost 23,000. In the former the vaccination regulations were very strict, in the latter very lax. The experience taught France a stern lesson, and all her troops are carefully vaccinated, or re-vaccinated on entering the army.

Turn to the experience of Great Britain. On a basis of 1,000,000 of the population the following are the average annual death rates in the respective periods: 1660-79, 4,170; 1728-57, 4,260; 1771-80, 5,020; 1801-10, 2,040; 1831-35, 830; 1838-53, 513; 1854-71, 388; 1872-82, 262; 1885-92, 73. Taking vaccinated and unvaccinated as a means of comparison, we find that in one thousand vaccinated children the attack rate was 5 per cent., and the death rate 0.09. In the unvaccinated the attack rate was 101 and the death rate 44. And