

Pomerania, 5.25 ; in Lower Austria, 6 ; in Westphalia, 6 ; in Saxony, 8.33 ; in Bohemia, 2 ; in Venice, 2.2 ; in Lombardy, 2 ; in Sweden, 2.0 ; and in Bavaria, 4. These figures exhibit an astonishing diminution in the mortality from small-pox when compared with the results in the British Isles where vaccination had, up to that time, been only voluntary. We have, in addition, further corroborative evidence of a most instructive character from the returns of Dr. Balfour for the British Army and Navy Medical Department, where every soldier and sailor is protected by vaccination. These returns show : 1. That from 1817 to 1836, inclusive a period of 20 years, with an aggregate strength of 44,611 men, and a total mortality of 627, there were only *three* deaths from small-pox. 2. They show that with an aggregate number of troops in Gibraltar of 44,611 men, during the same period, and with a total mortality of 1,291, only one death was caused by small-pox. 3. In the West Indies, where there were several epidemics during the period, not a solitary death occurred from small-pox among the British or white troops, although the aggregate strength was 86,661, and the total mortality 6,803. Among the black troops at the same station, the aggregate of which was 40,934, and the total mortality 1,645, not one case of small-pox occurred. 4. At Bermuda, Nova Scotia, New Brunswick, Cape of Good Hope, and the Mauritius, no deaths occurred during the same time, and the white troops of Western Africa escaped entirely, while the unprotected black population were dying by hundreds. 5. In Malta, during the twenty years from 1818 to 1838 inclusive, while the aggregate strength of the British troops was 40,826, and the total mortality 665, only two deaths from small-pox occurred. This circumstance is the more remarkable from the fact that the disease raged all over the Islands during 1830 and 1838, and that it destroyed 1,169 persons. In 1830 there died of small-pox, 1,048 out of a total mortality of 3,407. In 1838 there were 121 deaths from the disease, out of a mortality of 2,583. The mortality among those *not vaccinated* was 1 in 4.7. Among those *vaccinated*, 1 in 23.4.

Dr. Aitken sums up the results of vaccination as follows. "1. During ninety-one years pre-

vious to *inoculation* there are on record sixty-five distinct epidemics of small-pox ; which is equal to a ratio of 77.4 epidemics in 100 years. 2. During sixty-three years in which *inoculation* was practised, and that to a very great extent, there were fifty-three distinct and well marked epidemics ; which is equal to a ratio of eighty-four epidemics in 100 years. 3. During the fifty-five years, since *vaccination* has been practised, there have been twelve distinct and well-marked epidemics ; which is equal to a ratio of twenty-four epidemics in 100 years."

In this country, although we are not in possession of statistics so definite as those we have just given, the general results of the adoption of vaccination as a protective against small-pox have been such as to satisfy the great majority of the profession and the general public of its unquestionable value. We have recently passed through a pretty severe epidemic, in which a large number have been attacked ; and we think that two things have been amply demonstrated. First, the great majority of those who have passed through critical attacks have been unvaccinated, indifferently vaccinated, or not successfully vaccinated, for many years previously. Secondly, it has been clearly shown that where persons recently vaccinated successfully *have* been attacked, they have passed through a modified form of the disease. It has been further shown pretty conclusively that most persons exposed, but recently protected, have escaped altogether.

Now, if the statistical and other information in our possession upon this subject is of any value at all, it is difficult to understand how the ground taken by the anti-vaccination advocates is substantial in any direction. There can be no doubt that small-pox has been less frequent and less disastrous than before the discovery and introduction of vaccination. To say that it would not have been any more frequent in the absence of the expedient is a mere begging of the question, without any foundation in fact, and not susceptible of proof.

Dr. W. B. Carpenter has been made a C.B.