

follows :—"During late years much has been done in Gibraltar to give the men more breathing space and ventilation, hence the decline in consumption, which was so fatal formerly when the men were crowded in casemates. When their barracks are still further improved, we shall see a still further lessening of consumption."

Writing of another factor in the production of consumption, the same author says : "In some way, which is not clear, a moist soil produces an unfavorable effect on the lungs ; at least in a number of English towns, which have been sewered, and in which the ground has been rendered much drier, Buchanan has shown that there has been a diminution in the number of deaths from phthisis. Dr. Bowditch, of Boston, U.S., and Dr. Middleton, of Salisbury, noticed the same fact some years ago. Buchanan's evidence is very strong as to the fact of the connection, but the nature of the link between the two conditions of drying of soil and lessening of certain pulmonary diseases is unknown. It is curious how counter the observation runs to the old and erroneous view, that in malarious, and therefore wet places, there is less phthisis."

As an evidence of how several causes may predispose to consumption, even in favored localities, the following extract from Parkes is suggestive :—"Although in the Alps, phthisis is arrested in strangers in many places, the Swiss women, on the lower heights, suffer greatly from it. The cause is a social one. The women employed in making embroidery congregate all day in small, ill-ventilated, low rooms, where they are often obliged to be in a constrained position. Their food is poor in quality. Scrofula is very common. The men, who live an open air life, are exempt ; therefore, in the very place where strangers are getting well of phthisis, the natives die from it. Another instance, that we must look to local conditions and social habits for the great cause of phthisis. It would even seem possible that, after all, it is not indeed elevation and rarefaction of air, but simply plenty of fresh air and exercise, which are the great agents in the cure of phthisis."

Another extract from the same author is also instructive. He says : "A few years ago much influence was ascribed to food as a cause of phthisis. The occurrence of a sort of dyspepsia, as a forerunner, though this does not seem very common, and the great effect of the treatment by cod liver oil,

seemed to show that the fault lay in some peculiar malnutrition which affected the blood and through this the lungs. Probably there is truth in this, but of late years the effects of conditions, which influence immediately the pulmonary circulation and the lungs themselves, have attracted much attention. The effect of want of exercise, no doubt a highly complex cause, acting both on digestion and circulation, and of impure air have been found to be very potent agencies in causing phthisis, and conversely the conditions of prevention and treatment which have seemed most useful, are nutritious food and proportionate great exercise in the free and open air. So important has the last condition proved to be, that it would appear that even considerable exposure to weather is better than keeping phthisical patients in close rooms, provided there be no bronchitis or tendency to pneumonia or pleurisy."

We see, therefore, that up to the time when those words were written, *i.e.*, in 1884, the prevention and treatment of consumption consisted in recommending a nutritious diet into which milk and the albuminous and fatty elements of food entered largely, the use of well ventilated rooms, the avoidance of damp houses and localities, and a large amount of exercise in the open air. Prevention, in the true sense of the term, was not advised because the germs which produce the disease had been discovered only a short time previous, and the most effective plan for destroying these germs was not yet known.

One of the most considerable advances made in the science of Medicine in our day, was the publication by Koch, in 1882, of certain conclusions relating to the origin of pulmonary consumption. These conclusions embraced (1), the demonstration of the presence invariably in tuberculous products of a micro-organism, described as rod-shaped, motionless, of a length double that of its width and not exceeding the diameter of the blood corpuscles ; and (2), the fact that this organism is not found in other than tuberculous morbid products. A third constituent of the discovery was the complete isolation of the organism from all tuberculous matter by a series of cultivations, and the production of the disease in certain animals by inoculation with the organism after the cultivation had been carried through several generations, a large number of inoculations having been with few exceptions suc-