## FOODS CONTAINING VITAMIN C

(Written for "The Listener" by DR. MURIEL BELL, Nutritionist to the Department of Health)

## [1.] INTRODUCTORY

T does not need me to remind you of what is now common knowledge -that sailors who are away at sea on long voyages develop scurvy, a disease characterised by a tendency to hæmorrhages, for example, gums that readily bleed; and it is also well known that it may be prevented or cured by fresh green vegetable, or by a ration of the juice of certain fruits. We New Zealanders have a particular interest in the part played by Captain Cook in buildto the measures and precautions needed in preventing an outbreak of the disease; for he actually read a paper to the Royal Society on his experiences of the relative merits of foods that prevent it, and indeed it is no doubt due to his observa-

tions and knowledge of how to keep his men fit that he was enabled to raise Britain's flag in this country.

But there were other points of medical interest recorded by captains at sea, in connection with this particular disease, points which are now being explained by scientific findings of recent date. For instance, it was frequently noted that an outbreak of scurvy followed the occurrence of an epidemic or infection; or again it was observed that one history of its prevention because of the of the first tendencies among the men was a subtle mental change — they became ing up the scientific knowledge relating argumentative and quarrelsome. The latter symptom might now be included as evidence of what is termed "sub-clinical" scurvy; the former is of interest in the light of the part played by vitamin C in respect of fighting in-

The idea is now gaining ground that be accumulating that this particular vitamin deficiencies do not necessarily vitamin has a right to be classified as show up in their frank forms (exemplified here by scurvy) but may yet result part it plays in the production of in the sup-optimal states of health which invite infections or diminish the power of the body to resist disease. Of interest in this connection is the influence of these deficiencies on the mind - the querulousness in scurvy; the mental confusion, or the more definite lunacy, in pellagra. This idea has led to the distinction being made between "optimal" and "marginal" requirements of vitamins; the latter in the case of vitamin C will prevent scurvy, the former will keep the body fitter to resist disease.

Note that there were outbreaks of scurvy following an acute infection among the crew. We now believe that the explanation is to be found in the way in which the vitamin C is used up in removing the harmful effects of bacterial toxins-hence an acute shortage of the vitamin in the body was induced, and frank scurvy precipitated. It is of interest to know that a diminished quantity of this vitamin is found in the blood of those who are suffering from acute infections such as tuberculosis and pneumonia; and scientific evidence seems to

anti-infective because of the specific "immune bodies"—substances required for conferring immunity to bacteria.

## Shortage of Oranges

During war there is special need to keep up to the level of optimum nutrition, and yet circumstances of blockade and restricted trade communications act in the contrary direction, leading to the well-known association of war, pestilence, and famine. The special need is probably accounted for by the fact that with concentrations of men in camp there is a greater liability for the spread of infections and for an increase in their virulence. That the circumstances of blockade are getting nearer to our own shores prompts this article on vitamin C-for we must be ready if need be to face a shortage of oranges. Foods which are able to compensate for this shortage are vegetables and fruits. We all know of the recent lack of vegetables, a lack which is liable to be accentuated when men are taken from their gardens to act as watchmen on the shore.

In the next article the relative merits of foods as substitutes for oranges will be considered.



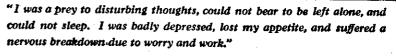
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