

which are to be seen in some of the railway stations, in favour of the purity of some particular mineral water, in which the microbes somewhat resemble a collection of curiously-shaped fish swimming about in an aquarium. As a matter of fact, they are not animals at all, but minute forms of vegetable life, varieties of the lowest fungi; analogous to the yeasts and moulds. Each of them is composed of one tiny cell, and like the other lowly forms of vegetable life, is quite destitute of green colouring matter. They multiply by simply dividing into two, each daughter cell rapidly reaches the parent's dimensions, and again divides, and so on. The rapidity with which they multiply under favourable conditions of food, temperature, and moisture, is something enormous. In the case of one species of bacterium concerned in simple putrefaction, it has been estimated that if the conditions of life remained continuously favourable, a single bacterium would in three days multiply to such an extent that the resulting mass would about fill the Atlantic Ocean. Lucky it is for us, however, that the conditions of their life do not remain sufficiently favourable for such a consummation.

Now, when any of these specific microbes becomes implanted on a favourable soil, such, for instance, in the case of diphtheria, as the mucous membrane of the throat of a susceptible person, a rapid multiplication of the microbes takes place, and infection is accomplished.

The process of multiplication results also in the formation of certain poisonous chemical products, which become absorbed by the adjacent blood vessels and lymphatics, and thus, entering the circulation, give rise to the poisonous effects characteristic of the particular disease, by exerting their deleterious influence on those organs or tissues which are susceptible to their action. The toxicity of some microbial products is very great. It has been shown that a dose of $\frac{1}{150}$ grain of diphthero-toxine, the poison generated in diphtheria will kill a medium-sized dog when injected under the skin. In other words, one ounce of this substance is sufficient to exterminate 70,000 dogs. It is on the nervous system that their malign influence is chiefly impressed, and precisely in the same way as an individual is struck down with signs of profound and fatal nervous prostration, when he becomes a victim to the sting of the hooded cobra, so does a person succumb to the malignancy of the poison generated in the course of a severe attack of diphtheria. In some diseases, at any rate in diphtheria and cholera, the microbes remain localised in the mucous membranes of the throat and bowel respectively, which

then represent a kind of local manufactory concerned in the production of the chemical poison or toxine which alone enters the blood and lymph streams; whereas, in certain other diseases, amongst which I may quote influenza and relapsing fever, and probably small-pox, typhus and others, the microbes themselves actually enter the circulation, undergo enormous multiplication there, and become distributed in the various organs, so that the unfortunate patient is not only subject to the action of their poisonous products, but is also literally infested with the micro-organisms themselves. In the case of influenza, relapsing fever, anthrax, and malarial fevers, their presence has been actually demonstrated in the blood.

(To be continued.)

Tasty Tit-Bits and Dishes Dainty,

FOR INVALIDS AND CONVALESCENTS.

Compiled especially for "The Nursing Record "

BY

LADY CONSTANCE HOWARD.

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Omelette with Nutmeg or other Spice.



Two yolks of eggs and one white, a tablespoonful of cream, a little minced parsley and shallot, and a *very* little of *Keen and Robinson's* ground nutmeg. Whisk all well together and fry in as little butter as possible. Any other spice may be substituted if preferred to the nutmeg.

Potato Omelette.

Take a large freshly-baked potato, break it open and scoop out the inside with a spoon. Beat this until quite smooth, add ground white pepper and salt to taste, one dessertspoonful of lemon juice and the yolks of four eggs. A minute or two before the omelette is to be fried add the whites of the eggs beaten to a firm froth. Fry in the usual way, and serve on a hot dish. Garnish with crisply fried parsley. It takes about five or six minutes to fry. Enough for two persons.

Fish Omelette.

Make the omelette in the omelette pan; cook whatever fish is to be used either stewed in very fresh butter, or boiled and mixed with butter. When the omelette is fried enough, put the fish on the side *nearest* the handle, and turn the other half over it. Turn out into an *entrée* dish, and serve with some good half-glaze. Prawns, shrimps, lobster, all may be served this way.

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