

## MILK and TUBERCULOSIS

(Written for "The Listener" by DR. H. B. TURBOTT, Director of the Division of School Hygiene, Health Dept.)

AS a combination of valuable nutritive elements in their most perfectly balanced form, milk undoubtedly heads the list. The elements are all there in proper proportion and attractive guise—the vitamins, fats, proteins, minerals; all those little items that build up the human machine and keep it fit.

But there is just one weakness about milk that prevents it from being labelled the absolutely perfect food. That weakness lies in its attraction for germs of all kinds, by very reason of its food qualities. Raw milk literally teems with them. Fortunately, the bulk of them are harmless, but there are some not so harmless—some that cause mankind much suffering and medical science much bother.

Included in them is the tubercle bacillus, the little germ that starts tuberculosis in human beings. Cattle, like human beings, are liable to catch tuberculosis, and this minute bacillus is occasionally present in the milk of cows suffering from the disease. Such contaminated milk is recognised as a source of tuberculosis infection, especially in children.

For that reason, parents and others should insist that the milk given to children is free from this infection. Milk from tuberculin tested cows and pasteurised milk are both free from tuberculous infection.

### A Continuous Battle

The battle to keep dairy herds free from tuberculosis is going on all the time. It has been for many years, and the Department of Agriculture, in its endeavours to clean up this disease in dairy cattle, makes no bones about it. Every infected cow is killed as soon as it is proved to be such. As a result of its intensive campaign, the incidence of tuberculosis in dairy stock is dropping. The year before last, for example, only five per cent. of the dairy cattle tested on the farm showed infection, and of more than half a million head sent to the slaughterhouse, only 7.7 per cent. were condemned because of tuberculosis. For the year just ended these percentages have shown a further decline, and the evidence indicates that as a result of the Department's fine work the tuberculosis in our dairy herds is gradually and systematically being cleaned out. Therefore, if your milk comes from clean herds, herds certified free from the tuberculosis taint there is nothing to worry about as regards tuberculosis.

Pasteurisation of milk is simply the scientific way of killing the germs. In

other words, while the taste and food value of milk have been unchanged, the harmful organisms in it have been destroyed. It is done by heating the milk, and several interesting things happen when milk is heated. At a temperature of 130 degrees Fahrenheit the germ which causes diphtheria is destroyed; a little more heat, at 137 degrees, the typhoid and dysentery germs are no more; the tuberculosis germ is killed at 140 degrees, and at 145 degrees (held for 30 minutes) pasteurisation takes place.

### Pasteurisation at Home

In some places milk cannot be obtained from guaranteed tuberculin-tested

cows, and in the normal way it is not pasteurised. In that event a little home pasteurisation is called for. Heat the milk to the point where the living germs are destroyed and before the milk starts to cook. That is about 145 degrees. Keep it there for 30 minutes for pasteurisation. Cooking commences at 160 degrees, and at boiling point some of the food value of milk entirely disappears.

The important thing to remember is that milk can be a source of tuberculosis infection. Anybody in the habit of consuming raw milk from cows that have not undergone the tuberculin test, or milk that is not pasteurised, is running considerably more than a slight risk of getting tuberculosis.

In this connection I would like to add that the milk supplied daily to school-children throughout the Dominion is pasteurised. They get it fresh and germ free.


(Next week: "Foods containing Vitamin C," by Dr. Muriel Bell.)

## DIABETES

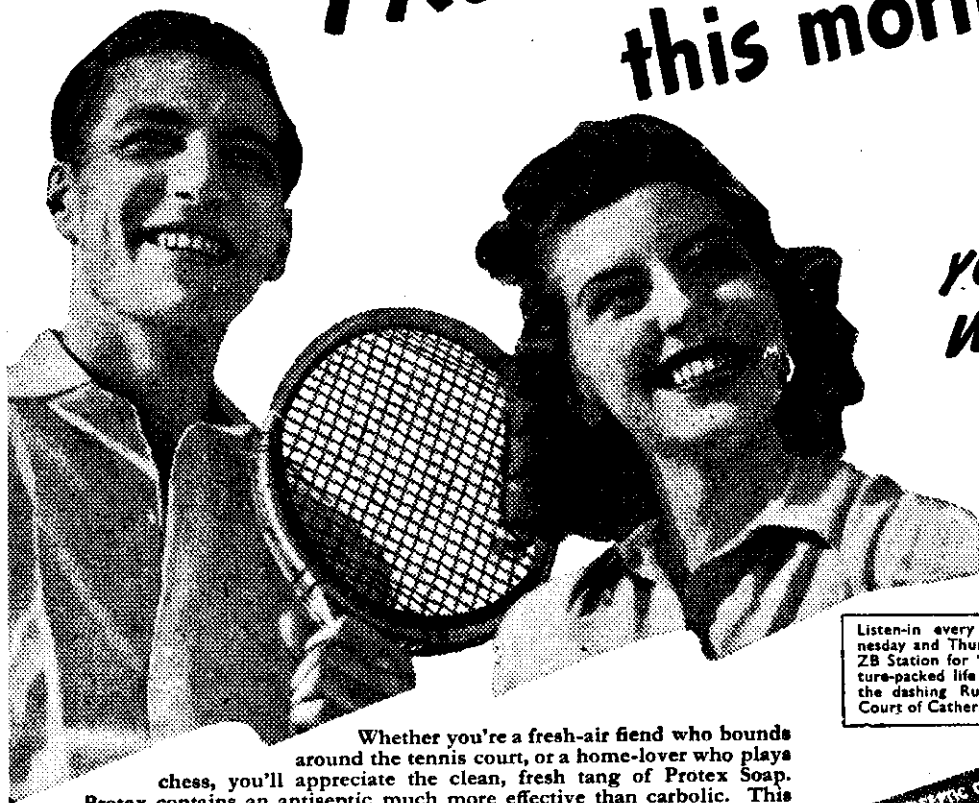
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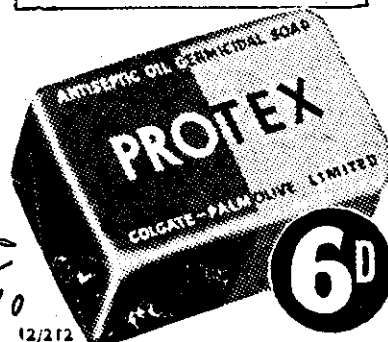
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