to know that a pound is 7000 grains; or that it is the force of gravity at a certain latitude, acting upon a mass of platinum carefully preserved in the archives at Westminster. But such exact knowledge is quite unnecessary for our purposes. If I am travelling in Russia, where they measure distance in versts, and I am told that my rate of travelling is, 30 versts per hour and my destination is 300 versts distant, I can just as well calculate the time at which I shall reach home, as I would do if I knew what a verst actually was in yards or miles. Fix in your mind the term *calorie* as a measure of energy; and don't bother about its complete significance.

But remember that a man of 156 lbs. weight, lying quietly in bed all day, requires to be supplied with 1848 calories of energy if at the end of the day he is to be as well and strong as he was in the morning. If he sits up in a chair, all day, he will require 1996 calories of energy, because the sitting posture demands more muscular effort ; and if he moves about the house, or is at all fidgety, he must have 2160 calories. A hospital patient of 156 lbs. weight, must have more than this if he is to grow stronger, for the numbers given do not allow of added vitality, but merely the maintenance of initial vitality. If our man is to do any kind of work, he must of course, be supplied with additional calories of energy; and Rubner, the great German authority on this subject finds an average of 2445 calories requisite for such men as writers, draughtsmen, tailors, physicians, etc.

Actual computations of the diet of Farmers, maintained in good health show the following :—

Farmers in Connecticut	3410	calories
" Vermont	3635	"
" New-York	3785	"
" Mexico	3435	"
" Italy	3565	"
" Finland	3474	"
Average	3551	"

(*Lusk.* Fundamental Basis of Nutrition.)

Lusk says : From the present available data one may estimate the daily energy requirement of a well-nourished adult (156 lbs) as follows :

Occupation

In bed 24 hours	1680	calories
In bed 8 hours, work involving sitting in a chair 16 hours	2170	"
Bed 8 hours, in a chair 14 hours, moderate exercise 2 hours	2500	"
Farmers	3500	"
Rider in a 6 day bicycle race	10000	"

I want to impress upon you the importance of thinking in terms of *calories* when you are dealing with what we call vital energy. When you ask your friend "How do you do, to-day?" you are really asking him whether the energy that he expends in his daily life work is satisfactorily replaced by the energy that he derives from his food. If this is not the case, then he is starving.

Starvation. Every human body, in a good state of health, represents a certain fixed income and outgo of energy, which we call the normal. If excess of food, more than requisite to maintain this *normal* is supplied, one or more of several things must happen. (1) The excess food may pass through the body