WHAT TO EAT AND WHY
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This booklet is an informal man-to-man talk upon a subject that comes close home for each of us ordinarily healthy people. Please note that it is not addressed to those who have something wrong with their digestion. They need a doctor's advice about special diets, which they won't find here. So let us begin with a pertinent question.

"Does it really matter very much what I eat?"

The answer is "yes, decidedly." We know this is true—most grown-ups admit it—but how many of us can give a definite answer to the question that logically follows: "Then just what must I eat?" Most of us assume that we know, but when we try to be exact about the foods that are essential to good health, we find ourselves none too sure.

It is not strange that this uncertainty about what to eat still exists, for it is only in comparatively recent years that the experts have made rapid progress with the scientific study of human food requirements. But what the experts have found out can now be translated quite readily into simple, practical everyday meals. You will find the newer knowledge of nutrition neither difficult to understand nor hard to put into practice. It all simmers down to just this: there are specific things you must get from your food if you wish to be well-nourished. This is most easily accomplished by eating certain foods every day. When you have eaten these, then you can make up the day's quota of food with whatever other foods happen to please your palate.

A lot of what the experts know about our nutritional re-
requirements and how they are met by our food comes from studies on the feeding of farm and laboratory animals. Much too, has been learned about the needs of well people by studying the needs of sick people, especially those who are the victims of food deficiency diseases. But much more has been learned by studying well people to see how much of certain foods they must have to enable them to keep their customary health.

Believe it or not, these experts have found that there are forty odd different food substances that must be supplied to the human body to keep it in health. In scientific libraries you will find whole volumes written about each of these essentials. But fortunately for us unscientific folk, it isn’t necessary to know even the names of most of them in order to eat properly. There are, however, eight that you really should know about. In the back of this book on page 16 you will find a table which shows the amounts of these eight substances to be found in the more important foods included in a day’s meals.

What is the practical point of all these scientific findings?
Here it is (as applied to the ordinarily healthy adult): each and every day there should be included somewhere in the three meals these few simple, common foods.

Two glasses of milk; an egg, one serving of meat or meat substitute; one potato and two servings of other vegetables; two servings of fruit, one of them fresh; some dark bread or cereal; butter.

This is the easy way to obtain all the essentials. These foods, among them, cover the forty odd indispensable substances. A little meditation upon the table will show to what extent eating more of the other foods will compensate for an omission. It is plain, for example, that eating more meat and green vegetables, will make up for omitting an egg, but eating all the foods in this list is by far the easiest way to make the totals come right. Without further apology we shall refer to these as the *must* foods.

The starchy and sweet foods and the fats, though important, are chiefly of value as sources of fuel for the body. As no single one of these foods is essential to health, they might be termed the “yes, you may” foods to distinguish them from the indispensables. In practice, then, after the essential foods are taken care of, you may eat anything that you like (within reason, of course) to make up the total amount of food your body requires to keep up the energy you use in work and play.

“But isn’t the *must* list already too much food?” Later in our story you’ll find that it meets less than half the total food requirements of the ordinary man, or the large active woman. Even the small woman who doesn’t work very hard will find that the essential foods have taken only about two-thirds of the day’s quota, so she, too, may cater to her “sweet tooth”—in moderation: be it noted!

One more point: one must not assume that the “yes, you may” foods are the only ones that taste good, whereas others are to be regarded ruefully as just “good for you.” The *must*
SCIENTISTS ARE INTERESTED IN WHAT IS IN EACH FOOD AND HOW TO MEET THE BODY NEEDS.

foods can be every bit as appetizing as those we use to round out the meal. Indeed it is important that they tempt the appetite. Many of the dislikes of members of the family may be overcome by attention to details of preparation.

MILK IN MANY FORMS

Any grown-up who insists that milk is needed only by youngsters can convince himself of his error by looking at the table on page 16 where he will find all the virtues of milk counted out for him. Yes, children need it badly, expectant mothers need it, but so does everyone who has bones and teeth. Many people like milk in or on things rather than as a beverage. It really makes no difference how it is used; on cereal at breakfast, in cream soup for luncheon, or at dinner in creamed vegetables, or custard, Indian or rice pudding for dessert. As long as it adds up to the equivalent of about two cups, all is well.
WHAT TO EAT AND WHY

If a glass of milk makes you feel as if you have a lump of lead in the stomach, try warming the milk. This advice is especially good for the bedtime snack.

When economy is the watchword, evaporated milk diluted with water may be used for cooking. Milk loses little, if any, of its nutritional qualities in canning.

OF COURSE, VEGETABLES ARE GOOD

An American ambassador to Great Britain once said jokingly that the English have only two vegetables and both of them are cabbage. How far that is from the situation here! Every man (and woman, too) should be dragged to the market just to see the profusion of appetizing vegetables spread out in the attractive displays. There are often twenty or more different vegetables offered in a single market stall.

Each year we discover new ways of serving vegetables. Wonders never cease; even in some of the finest hotels, the homely carrot, cut into thin, delicate strips vies with celery and radish roses as an appetizer. In railroad diners the most popular dish is said to be salad in which the half dozen "greens" available at the moment are served with a simple dressing.

In the picture on page 11 are twenty-odd vegetables found for the most part the year around. Perhaps your market will have even more.

With such a wealth of vegetables to choose from, it should be possible to have a daily variety, achieved by combining one root and one leafy vegetable. Such raw vegetables as cole slaw, raw tomatoes, carrot strips and green salads are growing in popularity; and it should be a point of pride with the home-maker to study the problem of increasing the consumption of greens by making salads easy to eat and using dressings that the family really like.

Just a few hints about cooking vegetables. They simply
THE "MUST" FOODS. MILK; EGGS; MEAT OR MEAT SUBSTITUTES; POTATO;
TWO OTHER VEGETABLES; TWO FRUITS; SOME DARK BREAD OR CEREAL;
AND BUTTER.

must not be boiled to death. A good general rule is to steam
them or cook them in a small amount of water—only enough
to prevent them from scorching. Some of the modern heavy
cooking utensils help in succeeding with this method of
cooking.

Vegetables should be cooked only long enough to make
them tender. Salt added to the cooking water helps the
taste: many cooks forget this. If the water they are cooked
in has a good flavor, as it does with celery or onions, for
example, and soup is on the menu for the near future, the
water may well be added to the soup.

During the season of the year when some fresh vegetables
become scarce, canned vegetables may be substituted. Modern
canning processes are successful in keeping most of the food
values of the fresh vegetable.

Finally, a word in praise of the lowly potato. It has nutri-
tional virtues which are likely to be forgotten, and it is nearly
always less expensive than other vegetables. It can be cooked
in so many attractive ways that it helps to give variety to meals. Creamed or scalloped potatoes may help to make the milk come out right for the day.

Now a special word to the homemaker. Please keep in mind the virtues of variety. Don't serve the same old vegetables every day. Take pride in surprising your family with all the different ones your market provides. Learn new ways of preparing and serving the old ones. Season them with care, and remember cream sauce and cheese can be added to almost any vegetable with good effect.

FRUIT FOR HEALTH AS WELL AS PLEASURE

Fruit is so well liked by most people that it seems scarcely necessary to praise it or to point out how much it contributes to making menus varied and interesting—from breakfast orange juice to the dinner dessert of fruit cup or fruit ice.

Fresh fruit, however, makes a very special contribution to our collection of essentials. This is why babies have orange
juice or tomato juice daily. The citrus fruits and tomato are especially valuable, but most fresh fruits have value if eaten in sufficient quantity, as they can be by adults. Unfortunately some of the value is lost in cooking. Canned fruits, delicious as they are, should not be thought of as equal to fresh fruits in this respect.

AND MEAT'S IMPORTANT TOO

Every ordinarily active and healthy person should have meat or a meat substitute once each day. Husky youngsters and hard-working adults may like to have meat in a second meal. By meat substitutes we mean fish, fowl, beans, egg and cheese dishes.

There is this much to be said about meat: there is no more food value in the most expensive porterhouse steak than in a pot roast. The inexpensive cuts call for better cooking, for it takes a careful cook to make a pot roast tender and tasty—anyone can put a porterhouse steak under the broiler, though it may require judgment to take it out at the perfect moment. What is true of beef is true of lamb and pork and poultry.
With the meats we include, of course, liver, kidneys, and sweetbreads. Most people are far from neutral about these particular foods: they have a strong liking or an active dislike. It should be said that these dishes have the same virtues as muscle meats, but to a greater degree, and that they merit intelligent care in cooking.

THAT EGG A DAY!

One sure way to get an egg a day is to eat it for breakfast, but several eggs a week per person can easily be used in cooking if the homemaker has it on her mind. Anyone whose egg cooking does not go beyond poaching and scrambling should spend some time with a good cookbook. It is a temptation to devote the rest of this pamphlet to omelettes and baked eggs (and their sauces), egg salads, soufflés (main course and dessert), custards, and all the countless other desserts which include eggs.

Because eggs are often used one at a time, as in muffins, which are eaten by several people, the best way to count egg consumption is from the total weekly use of the whole family.
FINALLY, WHOLE GRAIN CEREALS

In all agricultural countries, cereals of various kinds (and the breads made from them) are the great economical source of human fuel. At our family tables, even though there may not be second helpings of all the more expensive items, we count on having plenty of bread for the people with big appetites. For this reason, bread has often been called the staff of life. As the milling process used in making white flour removes some of the nutrients, about all that need be said here is that some part of the day’s supply should be whole grain cereal or dark bread.

Note: Those of us who live in northern cities, where winter sunshine is scarce, and smoke is often thick, may get too little life-giving sunshine. Then it is that something else is needed. Especially during times of rapid growth, in infancy and early childhood, another must food is called for: it is codliver oil, or a substitute for it. During pregnancy, and while the mother nurses her baby, the doctor may prescribe it also.

"PROOF OF THE PUDDING IS THE EATING THEREOF"

Now that we have finished with what you must eat, perhaps a word should be said about when, and how much, to eat.

Experts tell us that it is best for most people to divide the day’s intake of food into three parts. There is a whole bookshelf of scientific studies upon the physiology of digestion and assimilation to support their advice, which simply cannot be reviewed here. So let’s take their word for it, abide by their suggestion, and put it to practical use.

The word breakfast was well chosen. After twelve or more hours without food, it is wise to break the fast with a good, nutritious meal. Don’t begin here, please, to make excuses about not having time: there is always time for important things and breakfast is important. Breakfast is important, for the body really needs plenty of fuel for the morning’s work or play. Breakfast is important, for if it is a good one, the next meal (if it is eaten away from home) need not be so
heavy—or expensive. So a good breakfast may be an economy measure. Finally it is important because it is the logical time to get in several of the *must* foods.

Breakfast is a good time to eat one of the two servings of fruit: be it orange or tomato juice, banana on cereal, or berries in season. Breakfast is a good time to get in your whole grain cereal, with milk. It’s just the time to eat your daily (or almost daily) egg. So you see, a good breakfast uses up several of the *musts*.

Next, a word about lunch! Either you eat it at home, you take it with you, or you buy it. Wherever you eat it, take your time. Luncheon gobbled on the run begets indigestion. The adult at home usually eats just a snack at noon: * but the snack may be either nourishing and satisfying or almost a total loss insofar as the body is concerned. If it is made of left-overs, then the home luncheon is a good time to make over the vegetables into a cream soup (cream of lettuce, spinach, celery, pea, asparagus—almost any vegetable makes a delicious soup); or the cooked left-overs can be combined quickly with raw vegetables to make an appetizing salad.

Luncheons taken to work deserve thought to achieve variety and nourishing quality. Do yours get the care they deserve? Milk is a working man’s luncheon drink. If you doubt it, look about any construction job where hard-working men eat at noon: some flavor milk with coffee, but most take it straight. Milk is equally appropriate for the luncheon of any person, hard-working or not. Combined with a salad or cheese sandwich or two and fruit, what better luncheon would anyone want?

At even the “quickest” lunch counter, a satisfactory luncheon can be bought if one knows how to pick and choose. Al-

* Where youngsters are concerned, the noon meal is usually the fullest of the day. Foods for children are discussed in “BETWEEN TWO YEARS AND SIX” which will be sent upon request to interested readers.
BADLY NEEDED TO BREAK THE NIGHT’S FAST, A GOOD BREAKFAST MAY REDUCE THE COST OF THE LUNCHEON EATEN AWAY FROM HOME.

though many others seem to be lunching upon a soda and an eclair, or upon coffee and doughnuts, you may find to your surprise that cream soup, and salad sandwiches also are being served.

So you see that if breakfast and lunch are chosen wisely, only a few of the *must* foods remain for the evening meal. It should never have to carry all the “duty” dishes of the day. If you are still short on your fruit quota for the day, the evening meal may begin with a fruit cocktail or end with a fruit dessert. If low on milk, then a custard or other milk dessert will fill the bill. Custom decrees that at this meal you will have the meat (or substitute dish), your potato, and one or more other vegetables. One cooked vegetable and a salad are the first choice. Perhaps it will simplify matters to look at the three meals of the day in an outline, in which different plans for meals are combined to make satisfactory totals.
Let’s see how these general plans can be worked out. In plan two, if egg is omitted from breakfast, poached egg on spinach or Spanish omelette would be an excellent luncheon choice. If the cereal is omitted, whole wheat muffins or graham toast for breakfast or brown bread sandwiches with a cream soup or fish chowder for lunch would cross off one of the portions of whole grain cereal. The latter plan would
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<th>Ascorbic Acid (C)/Vitamin C (milligrams)</th>
<th>Calcium (IV)</th>
<th>Phosphorus (III)</th>
<th>Protein (I)</th>
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<td>60-70</td>
<td>Amounts recommended by Experts</td>
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*Additional food to meet the energy requirement according to taste from the following: Second helpings of the protective foods

1. White rolls and crackers
2. Sugar jam, and sweet desserts
3. White rolls and crackers
4. White rolls and crackers
5. White rolls and crackers

(1) 1 gram = 1/30 ounce
(2) 1 Milligram = 1/1000 of a gram (less than the weight of the proverbial "mustard" seed)
(3) 1 International Unit Vitamin A = 6/10,000 milligram of carotene.
provide some milk, and the potatoes at dinner might well be
creamed or scalloped to help the milk account; or the dessert
can be one made from milk, such as custard or Indian pud-
ding. We leave the people who won't eat any breakfast to
work out their own plan. It's harder!

FOR INQUIRING MINDS ONLY
Having surveyed the "what" and the "when" to eat, we come
at last to the all-important "why." Unless we can persuade
you that you really should have the must foods, all this good
advice will have been in vain. Let us see how the protective
foods "add up" for the eight food constituents we know
enough about to measure exactly and how the sum compares
with the amount experts believe we need daily.

The table on the opposite page is an analysis of the foods
a person would have eaten had he followed plan No. 1 (see
page 15). In that scheme he would have had, let us assume,
orange juice (½ cup), and whole wheat cereal among the
breakfast dishes. His luncheon sandwich might have been
Swiss cheese on rye bread. The dinner meat was hamburg
or tenderloin steak (4 oz.), the vegetables, other than potato,
were creamed carrots, and a mixed green salad. The dinner
dessert was a prune soufflé. The other foods need no further
description here. Now, you will find in the table how much
this person got from his conscientious following of plan
No. 1.

THOSE EIGHT COLUMNS OF FIGURES
Why is each of these food constituents important to us and
what do the columns of figures mean?
Protein. Almost everyone associates this word, and rightly,
with muscle. We need protein daily to provide new material
for muscle and other tissues which, as long as they are
alive, undergo constant chemical changes which need to be
balanced. Not the least important is a normal protein content of the blood because this, odd as it may seem, is what keeps us from storing too much water in the body. A chemist knows that the proteins we eat are all broken down into twenty relatively simple substances (amino acids) in the process of digestion, but fortunately we do not need to think about all twenty separately if the protein comes from a variety of sources.

Column (I) is figured for a meat meal, but a cheese soufflé “substituted” would leave the protein count in a perfectly satisfactory state.

*Calcium and Phosphorus.* These “minerals” are often thought of together because they are two of the principal constituents of bone and teeth. Anyone who thinks that “adults do not need milk” should look at Column (II) with a con-
WHAT TO EAT AND WHY

A scientist's eye. Milk is the outstanding source, with vegetables (as they add up for the day) a poor second best. It is an odd fact that four great groups of human food are very poor in calcium—meat, cereal (even dark ones), sugar and fat. In the parts of the world where milk is scarce, customs which seem strange to us have grown up. The Eskimo gnaws away on the ends of bones, the Japanese eats the softened bones of fish as a matter of course.

The calcium of milk is carried over to cheese. For those readers who eat cheese regularly, and in sufficient quantity for it to be of some importance, and who like to scale down their milk, the following fact may be of interest. Two ounces of cheese (a piece one inch by one inch by three inches) are about the equivalent of the daily pint of milk, for this amount of cheese furnishes 16 grams of protein, .52 grams of calcium, and .40 grams of phosphorus.

A PORTABLE LUNCHEON MAY BE APPETIZING AND NUTRITIOUS:
THIS ONE CONTAINS MILK, AN EGG, SANDWICHES AND FRUIT.
Iron. Yes, iron is needed every day because it is a part of the red blood corpuscles which do not stay made, but are constantly being renewed by the bone marrow. When the reader hears that 15 milligrams a day are needed (20 are better for a woman) he may be inclined to relax and think “there is nothing here to worry about.” Actually we pick up our iron in tiny amounts here and there (see Column IV) and a small eater or a heedless one can easily run short.

If you add up the iron from all the fruits and vegetables, you will find that it about equals that from the meat. Dried fruits such as prunes and apricots are better than average. It is well to remember that potato has five times as much iron as an amount of white bread which provides the same number of calories. This is one of the reasons for listing potato as desirable. Rice and macaroni are not substitutes for potato in this respect. Whole grain cereals have three to four times as much iron as the corresponding white cereal. The egg a day makes a contribution which cannot well be spared.

Those Elusive Vitamins. One of the great medical advances of the last quarter century came from recognizing that several of the diseases that plague mankind have their origin, not in bacterial infection, but because of the absence from food of substances which the body needs in minute amounts. Several of these substances are now to be seen on the chemist’s shelf, but the magic still remains that minute amounts of them in our daily food stand between us and dire calamities.

Vitamin A. This substance is a necessary part of all the delicate membranes which line the body and also of the mechanism by which we see in dim light. Anyone who eats “according to the pattern” is sure to get enough vitamin A, since it is found in valuable amounts in milk, butter, eggs, and green and yellow vegetables. Some of the greens such as spinach, watercress, and broccoli, contain much more than the vegetables figured in the table. White potato, good as it is in other
respects, does not help us here. (Vitamin A occurs in animal products ready formed and in vegetables as a bright yellow pigment, carotene, which the body converts into true vitamin A, so we need not be greatly concerned about it.)

**Vitamin B (Thiamin).** We have thought of vitamin B deficiency (beriberi) as occurring in countries where polished rice is the principal food or arising as a nutritional accident of war in prison camps, but it seems increasingly probable that some of the poor appetites and some of the more serious symptoms of our hospital patients are of this origin. Column (VI) shows that it takes all the contributions from the **must** foods to make the total come right. It is noticeable that the whole grain cereals and milk are important in their thiamin content.

**Vitamin C (Ascorbic Acid).** Mothers have learned very rapidly that babies need orange juice or tomato juice and
infantile scurvy is seen much less often in the hospitals than it used to be. As a matter of fact, everyone needs one very good source of vitamin C a day (because it is an essential part of the connective tissue of the body). There are a few vegetables (especially cabbage) which are an excellent source of ascorbic acid if eaten raw, but most people, much as they may like cole slaw, would find it much less appealing to eat it every day than to drink orange juice. Oranges, grapefruit, and tomatoes deserve honorable mention, but many other fresh fruits are a good second best and eating larger amounts of the fruit can compensate for the smaller quantity of ascorbic acid in each serving. Southerners do not need to buy oranges in watermelon time, except for the baby. The ascorbic acid in grapefruit juice and tomato juice survives canning very well, but cooked fruit such as apple sauce, prunes, and canned fruit which were only fair sources of ascorbic acid to begin with should not be counted on as...
settling this score. Jams and marmalade do not help us in this regard.

Potatoes deserve a word all to themselves. It is difficult to assign a figure to them because old ones have less ascorbic acid than new ones and the loss in cooking varies with the method, but the common sense experience of a couple of hundred years and the newest findings in the laboratory agree that they make an important contribution when eaten daily.

*Calories.* Everyone knows that “counting the calories” means adding up the energy return from our foods. If you are of a good weight and mean to stay so, the caloric intake must just balance your need, day in and day out. Many people are blessed with an appetite which serves as an exact regulator. Others need scales to step on once a week to tell them whether they are eating too much or too little.*

The two principal causes of difference in the calories needed

*WAISTLINES is a useful booklet on the subject of overweight. A copy will be sent free.*
by adults are size and activity. In general these are about the amounts required:

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<th>Work Type</th>
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<tr>
<td>Moderate muscular</td>
<td>2700-3000</td>
<td>2200-2500</td>
</tr>
<tr>
<td>Hard muscular</td>
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Column (VIII) shows clearly that the *must* foods do not give enough calories for even a small eater. The calories will be made up from a variety of foods—second helpings of everything for the big eaters, and for nearly everybody, additional foods which are good sources of energy—rolls and crackers, sugar, candy, and jam, salad oils and other fats. When the scales say less should be eaten every day, these are the foods which should be reduced.

“Haven’t these foods any of the merits of the protective foods?” Yes—some of them to a minor degree. White rolls and white bread contain protein. Some jams contain a small amount of iron. Any little amounts we pick up are just so much more in a good cause.

While we are recording the virtues of the *must* foods, it should be added that a diet including the suggested fruit, vegetables, and dark cereals should go a long way toward preventing constipation. With plenty of water to drink and regular toilet habits, ordinarily healthy people should have no need for laxatives.

**AS WE PART**

Eating is pretty much a matter of habit. You can get yourself into the *custom* of eating the right amounts of the essential foods with surprisingly little difficulty. Once you get into the *habit* of taking about two glasses of milk, an egg, a serving of meat (or substitute), two vegetables, in addition to potato, two servings of fruit, and some whole grain cereal, making the right selection becomes almost automatic.

So, we say, custom that is a *good* custom is a great friend to well-being. Be sure your custom is good. It’s the easiest way to have your food “add up right.”