

leafy vegetables. Recent research points to the fact that this vitamin is complex and consists of several factors.

Vitamin D has been in the limelight perhaps more than any of the other vitamins because of its connection with sunlight. A lack of vitamin D prevents the calcium and phosphorus supplied in the food from doing a good job of building strong and properly shaped bones and teeth and produces in children a condition known as rickets. Cod liver oil is perhaps the most reliable source of this vitamin, especially when summer sunshine is not available. It is now taken for granted that it should be added to every child's diet, especially in the winter time. As investigation continues, however, it is being found that some foods as egg yolk and milk contain vitamin D, though in varying amounts.

Vitamin E is another vitamin known to be present in foods but it is so widely distributed that it is not thought necessary to consider it especially. The presence of other vitamins in foods is probable, but of this we can be assured that, if we are careful to provide a good supply of milk, whole cereals, raw and cooked fruits and vegetables including tomatoes, with eggs fairly frequently and cod liver oil for children, there is not much danger that our health will suffer from an inadequate vitamin supply.

#### PROVIDE PROTEIN FOR GROWTH

While we do not think of protein as a protective food, there should be an adequate amount of it to supply the growth and wear-and-tear needs of the body. Opinions differ somewhat as to the amount that the body needs, but there is not much danger that there will be an insufficient amount of it in the average diet. All proteins are not of equal value, however. Those found in milk, cheese, eggs and meat are known as Grade A or perfect proteins, while those in dried beans and peas and in cereals are called imperfect because they do not meet the needs for growth as well as do the Grade A proteins. It is important, then, that we take care that some, at least, of the protein in our meals is of the perfect protein type. The addition of milk to cereal is a good example of an imperfect protein supplemented by the perfect protein found in milk. This makes a cheap source of protein of considerable value, especially in planning meals on a very limited income.

If we take more protein than our body needs for building and repair, it will be used for energy as are carbohydrates and fats, since the body cannot store protein. But it is an expensive form of energy food both as to the money it costs and its effect on the body machinery. It is well, then, to depend rather on the carbohydrates and fats for our energy supply.

#### COUNT YOUR CALORIES

We have already stated that the body requires foods to supply energy and to keep it warm. These foods are known as fuel foods and the term is applied mainly to breadstuffs, breakfast cereals, starchy vegetables, sugars and fats. The ability of these foods to provide the body with muscular energy and heat is described in terms of Calories. A Calorie is the unit of measurement of the fuel value of food. Fat provides more than twice as many Calories as the same weight of carbohydrates or proteins. Since most foods consist of a mixture of proteins, fats and carbohydrates some will provide more energy than do others. Those containing a high percentage of fat will

be high in Calories, while those containing a small percentage of any of the fuel foods, but with considerable framework and water as fruits and leafy vegetables, will have a low Calorie value.

We must be careful not to confuse the term energy, as we use it in terms of muscular energy and heat which we obtain from fuel foods, with its wider meaning of vitality or buoyant good health which we achieve by a wide use of protective foods. Ordinary sugar is almost pure carbohydrate and, while we use it to give flavour to our meals and as a supplementary source of energy, we must not let it crowd out the ever necessary fruits and vegetables. Sugars in the form of honey, corn syrup and dried fruits are known as simple sugars and are among those most easily taken care of by the body. The most easily digested animal fats are butter and cream and these are good forms in which to supply fat to a child. Highly-heated fat is more difficult to digest; hence the undesirability of a great many fried foods in our meals.

The amount of fuel needed by the body, and thus the number of Calories, varies with the age of the individual, his weight and the degree of his activity. Naturally a person lying in bed or sitting quietly all day requires much less than one who is engaged in heavy muscular work. Women usually require less than men and the requirement of boys and girls in their teens is as great, if not greater, than that of adults. If we take more food Calories than our body needs the excess is stored as fat and we put on weight. If we do not take enough Calories the body calls on its reserve store and we lose weight. (See table on page 8.)

For convenience the caloric value of food is stated in terms of 100-Calorie portions. Average servings of many foods make up the 100-Calorie portion which makes it possible to calculate the number of Calories in a meal without undue effort. A large apple supplies 100 Calories of energy, as does a large orange or a medium-sized banana or potato. Two medium slices of bread, two tablespoons of sugar and one of butter give 100 Calories each. A glass of whole milk gives 165 Calories, while an average serving of leafy vegetables would provide not more than 35 Calories unless salad dressing or butter were added which would increase the Calorie value somewhat. There is not much need for the housewife to worry about counting the Calories for the normally healthy family. Her great concern is to see that they receive a good share of protective foods. Then, if the adults are keeping to a steady weight with little loss or gain and the children are growing steadily, she may be assured she is supplying them with the proper amount of fuel food.

#### USE FOOD ACCESSORIES WITH DISCRETION

Water, while not a food in itself, is necessary for the proper functioning of the body processes. Watery fruits and vegetables contain it in considerable amounts and we get it, too, in the beverages used with meals. In addition, it is well to drink it freely.

Tea and coffee have no food value, except for the small amount of cream and sugar used with them. Some authorities even consider them harmful, but the general opinion is that they can be used safely in moderation in the diet of a normally healthy adult. However, because they are stimulating, because they have no food value in themselves, and because, if used, they will crowd out the all-important milk, they have no place in the well-planned