

physiology, has been slow and difficult. We shall enumerate only a few of the leading facts so far recognized.

An average man of 150 pounds weight will be made up chemically as follows:—

Water	93.0 lbs.
Protein	22.5 "
Fats	23.5 "
Carbo-hydrates	0.2 "
Mineral matters	10.8 "
	150.0 lbs.

Animal and vegetable compounds are first divided into two classes, *nitrogenous* (those containing nitrogen, as well as carbon, oxygen, hydrogen, sulphur, and sometimes phosphorus) and *non-nitrogenous* (containing carbon, oxygen and hydrogen). The nitrogenous compounds, of which cheese (casein), white of eggs (albumen) and lean meat (fibrin) are familiar examples, are also known under the names of *albuminoids* and *protein*. In the animal frame the protein constitutes the flesh, muscle, tendons, etc.—the machinery of the body. The composition of protein is, nitrogen, 16 per cent.; carbon, 53.5 per cent.; oxygen, 22.5 per cent.; hydrogen, 7 per cent.; sulphur, 1 per cent.

The non-nitrogenous compounds are divided into two classes, the fats and the carbo-hydrates. The latter are compounds of carbon and water, and are found in the sugars, starch and cellulose. But little is found in the body (in the glycogen of the liver), sugar especially being readily soluble, and therefore not of a permanent or stable character.

In the fats the carbon, hydrogen and oxygen are united in proportions different from those of the carbohydrates.

The mineral matters are found mainly in the bones, and consist principally of calcium, phosphorus, chlorine, fluorine, potassium, sodium and magnesium compounds. Salts are necessary for the building up of the bony structure or framework, and are therefore most requisite in the case of the growth of children. But there are other uses of the mineral matters which have not yet been determined. Animals fed on pure nutrients entirely free from mineral matters become languid, droop, and finally