

"Coffee is the seed of the coffee plant (*Coffea Arabica*), a good-sized shrub or small tree, and is contained in the fruit of the plant, which is an oblong, rounded, scarlet or purple, slightly juicy berry, with a thin, fleshy mesocarp and a papery endocarp inclosing the two seeds. The seeds are the coffee of commerce. This shrub is a native of tropical Africa, where it grows very extensively on both coasts and far into the interior. It is also cultivated in most warm parts of the earth, especially in Java and Brazil.

"The earliest knowledge of coffee came from Arabia, where it was introduced from Abyssinia at least four hundred years ago. The employment of coffee as a beverage was introduced from Arabia in the sixteenth century into Egypt and Constantinople. Leonhard Ranwolf, a German physician, was probably the first to make coffee known in Europe by the account of travels printed in 1573. The first coffee-house was established in London in 1652, and in Paris in 1672. When we consider that 643,234,766 pounds of coffee, valued at \$94,599,880, were imported into this country in 1895, and a consumption per capita of 9.22 pounds, we realize the universality of its use and the importance of a clear understanding of the article and its physiological action.

"The average composition of unroasted coffee is:

Caffeine	0.8
Legumin.....	13.1
Gum and sugar	15.5
Caffeotannic and caffeic acids	5.0
Fat and volatile oil...	13.0
Woody fibre.....	34.0
Ash	6.7
Water	22.0

"The chemical composition varies somewhat after roasting; unroasted coffee contains caffeine and a kind of tannin, called caffeotannic acid. Dur-

ing roasting a part of the caffeine is volatilized and an empyreumatic substance called *caffeon* is developed.

"According to the article in the 'International Cyclopædia,' vol. iv., coffee owes its exhilarating and refreshing properties to the presence of three substances in the roasted bean:

"1. Caffeine, which occurs in the roasted bean to the extent of from three quarters to one per cent.

"2. A volatile oil, which is not present in the raw bean, but which is developed during the process of roasting to the extent of only one part to fifty thousand of the roasted coffee.

"3. Astringent acids resembling tannic acid, called caffeotannic and caffeic acids.

"According to T. Lauder Brunton, the action of coffee is something like that of caffeine, but differs from it in some respects inasmuch as the *caffeon* increases the peristaltic movements of the intestine and causes, indeed, tetanic contraction of it. While caffeine does not alter peristaltic movements, *caffeon* quickens the pulse, dilates the vessels and lowers the blood-pressure, and produces a sensation of warmth on the surface. In some persons coffee produces a feeling of weight in the abdomen and a tendency to hemorrhoids. As tea has not this action, or has it only to a comparatively slight extent, it is probably due to the combined action of the caffeine and *caffeon*.

"As to the physiological effects of caffeine, Dr. G. E. de Schweinitz classifies theine and caffeine as drugs which are nervous stimulants in physiological and nervous depressants in toxic dose. Dr. T. Lauder Brunton gives the following as the physiological effects of caffeine:

"1. Its effects on oxidation are to hasten it.

"Action on the muscles: In small doses it increases muscular work, and causes the muscle to recover rapidly after exhaustion.