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Vitamins and Minerals Make Their Debut in Enriched Flour

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Vitamins and Minerals Make Their Debut in

**Enriched Flour**

Clara Gebhard Snyder, M. S. ’30, home economics director of Wheat Flour Institute, explains the new product.

**Enriched Flour** is wheat flour which contains added vitamins and minerals. Now, in addition to being the most versatile and economical energy-yielding food, flour also provides, in economical form, needed vitamins and the essential mineral iron.

Although everyone knows that vitamins and minerals are essential to health, surveys have shown that about 40 percent of all Americans eat a diet which fails to provide all of these nutrients they need. American diets lack chiefly some of the B-vitamins and iron.

Other minerals and vitamins are important, too, but getting them into the diet seems not to be quite so much a problem as getting enough iron and the B-vitamins known as thiamin (B1) and nicotinic acid (the pellagra-preventing vitamin).

The little brown wheat berry naturally contains iron as well as some of the B-vitamins. But in order to be eaten, most wheat must be made into flour, which in turn is made into delectable breads, biscuits and other delightful baked goods. It so happens that white flour, which contains only a part of the B-vitamins and iron of the wheat berry, makes the kind of baked products the great majority of people prefer.

If a way could be found to add needed iron and B-vitamins to white flour, it would still have excellent baking qualities. At the same time it would make a great contribution to the health of the nation.

Such a way has been found. Scientists working for years in their laboratories have learned how to make pure vitamins that can be added to flour as it is milled. The flour to which definite amounts of some of these vitamins and minerals are added is called Enriched Flour.

In order to bear on its label the distinguished name Enriched Flour, flour must meet carefully worked out specifications. Each pound of Enriched Flour must contain at least 1.66 milligrams of thiamin (B1); 6.15 milligrams of nicotinic acid (pellagra-preventing vitamin); and 6.15 milligrams of iron.

Those are the nutritive ingredients Enriched Flour must contain. It may also contain any one or all of the following: 1.22 milligrams of riboflavin (formerly called vitamin B2); 492 milligrams of calcium; and 492 milligrams of phosphorus. Because of the widespread interest in Enriched Flour, many questions are being asked about it. This article attempts to answer some of those asked most frequently.

How is Enriched Flour made? There are three practical ways of adding vitamins and minerals to flour: (a) The simplest and in many respects the most desirable way is to add the required amounts of the vitamins and minerals to white flour.

Because milligrams are very small amounts in proportion to barrels of flour, methods have been worked out by which the vitamins and minerals are fed into the flour in such a way that each pound gets its proper share.

As in all other milling procedures, the control laboratory checks the flour periodically to make sure that the specified amounts of vitamins and minerals are present. Enriched Flour made by this process is white flour. It looks, tastes, and bakes like the excellent white flour homemakers have known and used for years.

(b) Another way is to use more of the wheat to make flour. This is called making a long extraction, since some of the flour streams which contain bran and germ particles are milled into the flour.

Enriched Flour made by this method is not white. It may vary from a grayish or light cream color to deep tan or light brown. Although Enriched Flour of this type will probably be available, it is expected that by far the greater volume of Enriched Flour will be white flour. (c) A third way consists of using a combination of the two preceding methods.

Will flour containing these amounts of vitamins and minerals supply the full amount of these nutritive substances the body needs? The amount of vitamins and minerals supplied by flour depends on the quantity of wheat flour products eaten. If two or three slices of bread or two or three biscuits made from Enriched Flour are eaten at each meal, they will go far toward supplying a good portion of the day's requirement. Milk, eggs, meat, cheese, fruits, vegetables and all the other good foods that make up a satisfying and well-balanced diet will contribute the rest.

Does baking affect the vitamins and minerals in Enriched Flour? Nicotinic acid and iron are so far as is now known, not affected by baking. Thiamin (B1) is quite stable when the batter or dough containing it is slightly acid. For this reason, thiamin is not much affected by baking unless an excess of soda is used.

**How can Enriched Flour be identified?** In addition to its brand name, it bears the words Enriched Flour on its label.

**What is the cost of Enriched Flour?** Enriched Flour costs about 50 cents a barrel more than flour to which no vitamins and minerals have been added. That means that for about 1/4 cent per pound of flour, families can be provided with important amounts of needed vitamins and minerals.

Will all Enriched Flour contain the same amounts of thiamin, nicotinic acid and iron? In order to be sold as Enriched Flour, it must meet certain definite specifications. Both minimum and maximum amounts of the added nutritive elements have been set.

All Enriched Flour must contain thiamin, nicotinic acid and iron. These are called required enriching ingredients. Enriched Flour may contain in addition to the required ingredients, riboflavin, calcium and phosphorus. These are called optional enriching ingredients.