NUTRITION

Vitamins for Doughnuts?

Vitamin loss in deep fat frying studied. Doughnut consumption on increase but number eaten is a factor in considering enrichment.

➤ DOUGHNUTS, with triple the popular appeal they had in 1929, seem now to be making a bid for favor on the nutritional score. That appears to be the story back of a scientific study of vitamin losses during deep fat frying reported by Dr. Gladys J. Everson and Dr. Arthur H. Smith, of Wayne University, Detroit. (*Science,* March 30)

When the Red Cross and other organizations hand out doughnuts and coffee to men in the armed forces, nutritionists wish they could give something as tasty and easy to serve that contained more vitamins and minerals. And nutritionists generally advise all of us to eat a better breakfast than one consisting solely of doughnuts and coffee. The doughnuts contribute calories for energy, but the doughnut and coffee breakfast is short of vitamins and minerals.

White bread for breakfast toast used to have the same nutritional fault of lacking vitamins and minerals. Now it is enriched by addition of three B vitamins, thiamin, niacin and riboflavin, and the mineral, iron.

Why not enrich doughnuts, too, is the question naturally asked by those who make them and those who like to eat them. One answer was that the deep fat frying by which doughnuts are made would cause a loss of thiamin, which does not survive heat well.

In a study supported by a grant from the Doughnut Corporation of America, Drs. Everson and Smith found that when doughnuts are made by the usual commercial process from enriched flour, which is one way of making enriched bread, there was lost 22.9% of the thiamin and 20% of the niacin but no appreciable amount of riboflavin or of iron.

Some thiamin is lost from bread in the baking. The average loss is about 15%, but the 22.9% loss reported for the doughnuts is within the range reported for thiamin loss in bread. Niacin, the pellagra-preventing vitamin, however, is not lost in the baking of bread as this vitamin stands up well under heat.

Waste of vitamins, because of the loss in processing, has been one argument against enriching doughnuts, crackers, cake, spaghetti and macaroni.

The number of doughnuts eaten by the average person also comes into the picture. Drs. Everson and Smith state that in 1929, according to sales records, 201 millions of dozens of doughnuts were sold. In 1943 the figure was 665 millions of dozens. In 1944 the Red Cross distributed 84,130,960 doughnuts, approximately, to members of the armed forces in all theaters. That is a lot of doughnuts, but if divided equally it would come to less than a dozen doughnuts a year for each GI. Similarly, the 1943 total gives one doughnut a week for each of the 130,000,000 or 140,000,000 persons in our population.

Even leaving out infants and non-doughnut eaters, some nutritionists think doughnuts do not constitute a large enough part of the daily diet to make enrichment advisable. The average person consumes much more bread than doughnuts daily, it is argued, so bread is considered the product to be enriched from the standpoint of improving national nutrition.

GI's and others in the services who may consume a large proportion of the 665 million dozen or more annual doughnut fry probably will continue to get their doughnuts, enriched or non-enriched, there being no satisfactory substitute. Maybe someone can work out a substitute full of vitamins in time for the next war.

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AGRICULTURE

New Weed Killer Is More Effective Than Oil

➤ A NEW chemical weed-killer has been developed at the University of California's College of Agriculture, Prof. A. S. Crafts announces in *Science* (April 20). It carries the rather long descriptive title of 2,4 dinitro 6 secondary butyl phenol. Emulsified with a little oil and a lot of water, it has been found very effective against weeds that resist the all-oil sprays now in general use. It is less inflammable and less expensive to transport than oil, and safer to use than arsenical weed-killers, in areas where livestock are pastured.

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