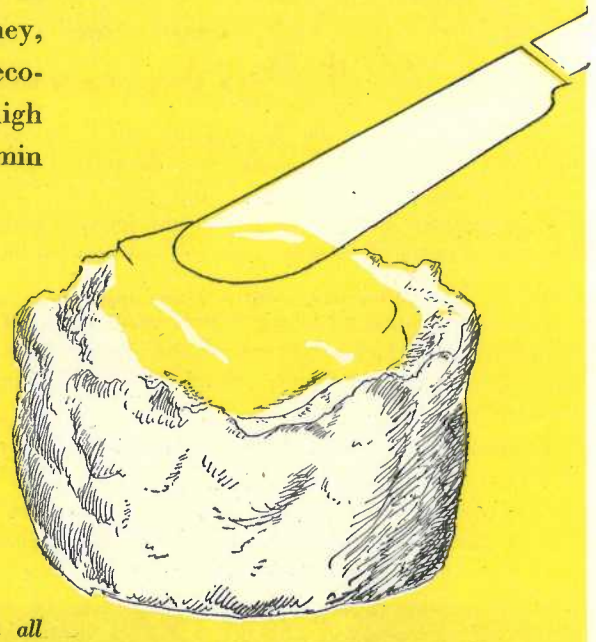
Margarine's Cost and America's Nutrition

These days the thoughtful professional man considers *two* cost factors when recommending nutritional foods for either normal or special diets. These two costs are—money, and *ration points*. Modern Margarine is economical of both. It is a fine-flavored, high quality table fat. It is fortified with Vitamin A the year around. It is a wholesome, highly digestible source of energy.

That is why so many professional men recommend the use of Modern Margarine.



Why Margarine is Sold White: *Laws bar the sale of colored margarine at any price in 24 of our states. In many other states there are heavy state taxes and license fees affecting manufacturers, wholesalers, retailers and users. In all states, to sell margarine already colored, the manufacturer would have to pay a Federal tax of 10c per pound. Margarine is the only food so taxed and restricted.*

Removal of these restrictions will permit the sale of Margarine in the golden yellow wanted in a table spread.

FOR AMERICA'S
DAILY BREAD...
Modern Margarine

NATIONAL ASSOCIATION OF MARGARINE MANUFACTURERS
Munsey Bldg., Washington 4, D. C.

may be ended but there still remain the problems associated with the armies of occupation, the intensified war with Japan in the Pacific, the requirement that the sick and disabled be kept in the Army until they have reached maximum recovery, and medical routines associated with the discharge of men from the armed forces.

In a consideration of the questions associated with the discharge of British medical officers, the London *Lancet* points out that it was possible to invade France with a cover of less than 5 hospital beds for each hundred men but that it is necessary in the Far East, with "its long lines of communication, its abominable climates and its special risks from endemic and epidemic disease" to furnish 10 beds for every hundred troops and physicians and medical personnel to staff them.

The suggestion that young men who have recently completed internships and residencies be taken into the military service to replace older physicians now in the service is not wholly sound. This would not provide the Army with the highly specialized services that can be provided only by older men. The necessary peripheral nerve surgery, vascular surgery, plastic surgery and highly specialized diagnostic and therapeutic skills of internal medicine, psychiatry, dermatology and ophthalmology, for example, will not be made available by taking new young men into the service.

The physicians of the armed forces may be assured that every agency of the American Medical Association that can possibly be helpful is seriously engaged in this problem. The Committee on Postwar Medical Service, the Board of Trustees and all of the facilities of the headquarters office are doing their utmost to aid officers in the Office of the Surgeons General in solving problems related to the discharge of medical officers. Years were required for mobilizing the armies and medical services of our nation; release cannot be accomplished overnight.

OLEOMARGARINE

With the advent of war there has been a considerable decrease in edible fats available for civilian consumption. As a means for increasing the supply of solid edible fat to replace the decreasing amount of butter available for nonmilitary populations, margarine has been increasingly emphasized. Aside from the fact that this food has been fortified to the extent of 9,000 international units of vitamin A per pound to compensate for its lack of this vitamin, much discussion has concerned the nutritional value of fortified margarine as compared with butter fat. Various economic interests have been injected into this discussion, but only recently has objective evidence on the nutritional value of this fat been available.

Deuel and his associates [1] found that growing rats could use either butter fat, various vegetable fats or margarine with equal ease. The animals grew equally well, as shown by increase in weight and increase in bone length, whether their dietary fat consisted of butter fat or of margarine. In addition, Deuel [2] made careful analyses of the rats maintained on diets containing the various fats and found that there was no difference in the protein, lipid, ash or water content of the tissues of the animals. Then Elvehjem and his associates [3] showed that margarines permitted satisfactory growth in rats when the carbohydrate of the diet was glucose, sucrose, starch, dextrin or a mixture of them, whereas, when lactose was the sole carbohydrate of the diet, the rats grew better when butter or lard rather than oleomargarine was the fat used.

Deuel and his associates [4] studied the effect of different fats on fertility and lactation, since under these circumstances the dietary requirements constitute a more stringent test of nutritional adequacy than does growth. Difference was not found in the fertility of male or female rats on diets which contained various fats, irrespective of whether the fat was butter, margarine, corn, olive, peanut or soybean oils, provided the diets were supplemented with the proper fat soluble vitamins. All the diets produced young of equal weight at weaning, showing that they were equally efficacious in promoting lactation. These results would indicate that butter per se is not required for the growth or lactation of the rat. Perhaps then nutritional deficiency might occur in subsequent generations of animals whose diet was deficient in butter fat; a study [5] was carried out in which ten generations of rats were maintained on a diet containing margarine fortified with vitamin A in place of butter fat. Vegetable fats such as those used in margarine, the evidence proved, can serve adequately in place of butter fat in regard to growth, reproduction and lactation on a diet which would be otherwise nutritionally satisfactory.

The experimentalists in nutrition have shown that margarine may be substituted for butter fat with impunity in regard to growth, reproduction and lactation, provided the diet is nutritionally adequate. Of all the fat soluble vitamins, margarine is deficient in vitamin A, but this deficiency is made up by the fortification of the product with added vitamin A. This is a common procedure and most products on the market today are fortified in this way. The possibility of using margarine as a low cost fat may be of considerable importance in the feeding of the war seared population of Europe; it may also be used with safety in this country when a less costly edible fat is needed.

1. Deuel, Harry J., Jr.; Movitt, Eli; Hallman, Lois F., and Mattson, Fred: J. Nutrition **27**: 107 (Jan.) 1944.

2. Deuel, H. J.; Movitt, Eli; Hallman, Lois F., and Wu, E.: J. Nutrition **27**: 335 (April) 1944.

3. Boutwell, R. K.; Geyer, R. P.; Elvehjem, C. A., and Hart, E. B.: J. Nutrition **26**: 601 (Dec.) 1943.

4. Deuel, H. J.; Movitt, Eli, and Hallman, Lois F.: J. Nutrition **27**: 509 (June) 1944.

5. Deuel, H. J.; Hallman, Lois F., and Movitt, Eli: J. Nutrition **29**: 309 (May) 1945.