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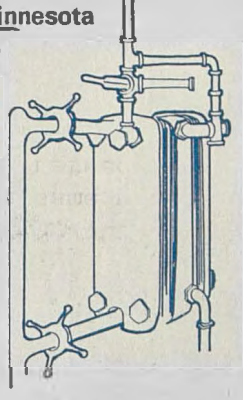
3 MINNESOTA DAIRY PRODUCTS PROCESSOR



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DAIRY PRODUCTS AND NUTRITION

You hear a lot about nutrition these days. For a change of pace some statistics in a recent USDA report might interest you. What the numbers tell, and there were a lot of them, is the relative contribution of food products to various nutrients in the American diet. The figures run back to 1909.

ENERGY FROM FOOD

About fifty years ago, in the 1925-29 era, dairy products supplied nearly 15 percent of the energy Americans derived from all food. For 1974, the latest date in the USDA report, that percentage had declined to 12.3. The big difference was a drop in the use of butter: it provided 1.3 percent of the energy in 1974 compared with 4.6 percent in 1925-29. Americans derived about 17 percent of their food energy from meat in 1974, and just about the same percentage from sugars and other sweeteners. Both sweets and meats showed marked increases as energy suppliers over the last 50 years.

PROTEIN

If it's high quality protein, like milk protein, you can get by on about 45 grams per day. Most of us take in a good deal more than that, however. For this nutrient, dairy products now provide nearly 22 percent of our total intake. Meat adds a whopping 30 percent. And taken together, meat, poultry, and fish provide 42 percent of our protein intake. The only other significant food groups currently meeting protein needs are flour and cereal products, which provide about 17.6 percent of our daily intake. Dairy products as a protein supplier, are relatively unchanged in 50 years.

FAT

Americans in 1974 consumed 15.5 percent of total fat intake from dairy products. Butter accounts for one-fifth of that. But 50 years ago dairy products were adding fat to the diet at the rate of 29 percent and nearly half of that was butter. What sources provide the rest of America's fat intake? More that one-third is consumed in meat, poultry, and fish. Almost 40 percent comes from other fats and oils: the corn oils, margarines, and shortenings.

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CARBOHYDRATE

Carbohydrate is generally thought of as the source of body energy. Actually energy is derived from protein to the same extent, and fat yields a little over two times as much energy per gram. The main carbohydrate in milk is milk sugar--lactose. And some lactose is present in most dairy products except cheese and butter, which have very small amounts. Americans, in 1974, consumed 6.5 percent of their total carbohydrates from dairy products. That figure is one percentage point above the 1925-29 mark. Meats do not contain carbohydrate, so most of what we consume comes from flour and cereal products (35%) and sugars and other sweeteners (38%).

CALCIUM AND PHOSPHORUS

Phosphorus plays a direct role in the amount of calcium our bodies absorb from various food sources. Nutritionists generally agree that for best calcium absorption, phosphorus should be present in food to an equal amount--a 1:1 ratio. Present food formulations and dietary trends tend to provide more phosphorus than calcium, so it is an excess of the latter that can be worrisome--although of little consequence to most Americans. Dairy products supply a staggering three-fourths of our calcium needs, about one-third of our phosphorus needs--and at just about the right calcium-phosphorus ratio.

IRON

Dairy foods are not good sources of iron; only 2 percent of our needs stem from this source. Meat, of course, is a rich storehouse, meeting a fourth of our iron needs. Eggs give us about 5 percent; we get a little over 10 percent from vegetable products, and a rather sizable 27.6 percent from flour and cereal. As nutritionists have often emphasized, milk and cereal make good nutrient mates.

MAGNESIUM

Little discussed, but essential, magnesium is possibly the most widespread nutrient in nature, existing since pre-Cambrian days. Slightly over 20 percent of our daily magnesium requirements come from dairy products. Flour and cereal products, at 17.9 percent, are the next largest supplier.

VITAMIN A

This vitamin of night-vision fame is soluble in fats and oils. Therefore you find it associated chiefly with the fat portion of food products. If you separate milk into cream and skim milk, practically all the vitamin A is lost. The same is true for vitamins D, E, and K. This is why low-fat and skim milk products are often fortified with vitamins A and D. From dairy products, either fortified or naturally present, come nearly 15 percent of our vitamin A intake. Meat, poultry, and fish provide 22 percent, vegetable products 36.5 percent.

THIAMINE

Now consider the first of the B vitamins, thiamine (or vitamin B_1). Dairy products provide about 8.8 percent of our daily needs at the present rate of consumption. More than 25 percent of our needs come from meat, and the richest source, flour and cereal grains, add 36 percent. If you compare these figures with 50 years ago, dairy products have declined by about two percent as a supplier of this nutrient, meat has dropped nearly six percentage points, but flour and cereal have rocketed up 15 percent.

RIBOFLAVIN

Dairy products supply another B vitamin (B_2) riboflavin, to our diets to nearly 40 percent of the total. Meat, poultry, and fish lend some 25 percent, flour and cereal products 17.5 percent.

NIACIN

You will find this vitamin in meat, poultry, and fish, and in flour and cereal products. Most of our needs come from these two food groups: 47.2 percent from the former, 23.5 percent from the latter. The rest of our needs for 1974 came from a scattering of foods such as dairy products (1.5%), fruits (2.6%), all vegetables except potatoes (6.7%), potatoes (6.9%), and dry beans (7.2%).

VITAMIN B_6

In 50 years meat, poultry, and fish products have jumped from 29 to 45.5 percent as suppliers of this vitamin. Dairy products rose from 9.2 to 10.1 percent, vegetable products except potatoes have remained 11 percent, potatoes have dropped from 17.5 to 10.6 percent, beans stable at 4.5 percent, and flour and cereal products down from 17 to 8.8 percent. Our diets continue slowly but steadily to change.

VITAMIN B_{12}

This vitamin is nearly the exclusive domain of animal products. In 1974 slightly over 70 percent of our needs were supplied through meat, poultry, and fish foods, 19.5 percent from dairy foods, 8.4 percent from eggs. Flour and cereal products accounted for only 1.5 percent.

VITAMIN C

We have not been saying much about fruits, but this is where they shine. Nearly 38 percent of our vitamin C needs presently stem from this source. Vegetables supply 36.2 percent and potatoes, a rich source of vitamin C, add another 16.8 percent.

SUMMARY

These aren't all the nutrients we need, but some of the major ones. If you run down the list and look over the foods from which Americans derive these nutrients, you soon recognize what nutritionists have been saying all along: For good health and nutrition look to the four basic food groups--meat, fruits and vegetables, cereal products, and dairy products. In that respect nothing has changed for over half a century.