

NUTRITION

# Victory Meals

**Protein foods enable the housewife to provide her family with nutritious substitute main dishes for the meatless days that are ahead.**

By JANE STAFFORD

► WHAT ARE we going to eat for meat today? Cheese fondue or peanut butter soup? Baked beans or pecan and rice loaf?

Meatless days or meat rationing has put the question on the tongues of hundreds of thousands of American civilians. The answer depends on the ingenuity of housewives and cooks and on their knowledge of foods and their nourishing properties.

First thing to consider in the search for meat substitutes is the place meat fills in our daily diet. During the past decade, U. S. Bureau of Home Economics experts report, our per capita consumption of meat has ranged from 125 to 160 pounds per year. That is between two and three pounds per week per capita. The proposed two and one-half pounds per week per person ration therefore seems, offhand, to be just about the amount we have always been eating.

Actually, however, the amount of meat each of us eats depends considerably on the size of our food budget. Many have not been able to afford two and one-half pounds per week per person, while others have customarily eaten much more. If you have a record of how many pounds of meat you bought in an average week and divide it by the number of persons in your household, you will know whether the proposed meat ration is more or less, and just how much less, than you ordinarily eat.

## One Serving Enough

Regardless of how much meat you like and are accustomed to eating, you rightly want to know how much meat you need to keep well and strong. One serving of lean meat, fish or poultry daily is called for by the national nutrition yardstick drawn up by leading scientists just before the war, when we were trying to build America strong for defense. The size of the serving is not specified, but the yardstick does give the exact amounts of the chief nourishment items in meat, protein, iron, thiamin, and niacin, which everyone should get.

You ordinarily get some of each of these four from other foods. Your problem on meatless days is, therefore, to make sure your meat substitute supplies each of the four nourishment items in which meat makes an outstanding contribution.

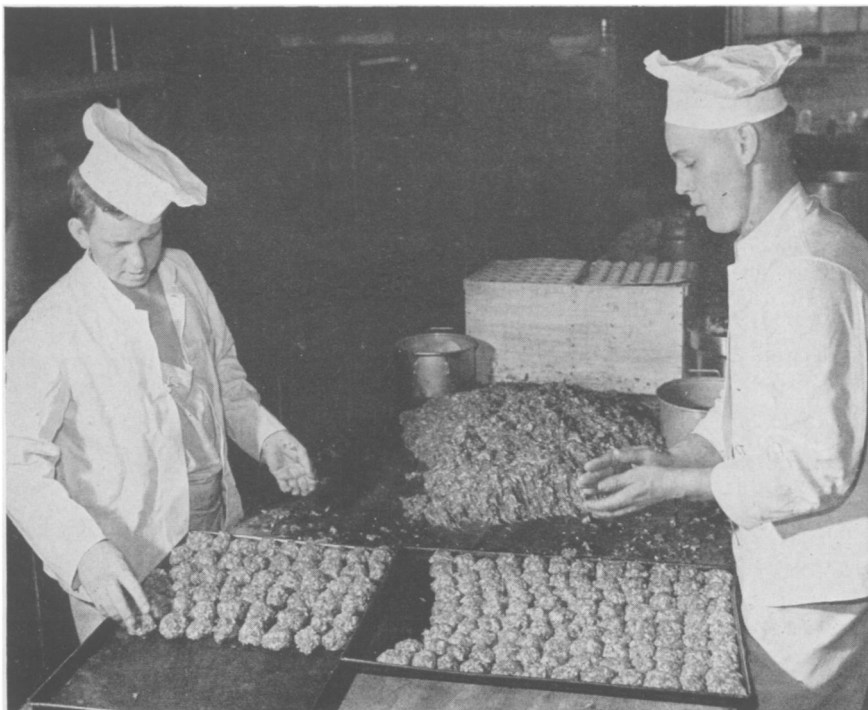
Those who can afford it or who can raise their own, can eat chicken or other poultry on meatless days and thus solve the problem quite simply because poultry is in the same nutritional class as meat. Fish is also, but the fish supply is likely to be limited as long as submarines threaten the fishing fleets.

Eggs, cheese and milk, cereals, peas and beans and nuts are other food sources of protein. The first three furnish what scientists term "high class" or "complete" protein.

Protein is the essential stuff of which all living tissue is made, from brain,

heart and other internal organs to muscles, blood, skin, hair and nails. There are many kinds of protein, each made of simpler materials called amino acids, or protein building blocks. These amino acids are formed when the proteins of food are digested and it is the amino acids from our food that are actually used to build body tissues. The body can build some amino acids from simpler chemicals but some it must get ready-made from foods. These particular ones have been labeled "essential" amino acids. Foods that furnish all the amino acids, including the 10 essential ones, are called complete protein food sources. These are the foods of animal origin, meat, fish, poultry, milk, cheese and eggs.

Cereals, nuts and vegetables of the legume family such as peas and beans furnish proteins, but their proteins are incomplete in that they do not furnish all 10 of the essential amino acids. Exceptions to this are soybeans and peanuts. Peanuts and heated soybeans con-



**IN THE ARMY NOW**—Army cooks shown in this official photograph from the U. S. Department of Agriculture, have priorities on huge quantities of meat to keep the men in top fighting trim.



**NO MEAT occasionally need not prove a hardship. Eating the right substitutes will keep youngsters healthy and strong.**

tain protein much superior to the ordinary vegetable or plant protein, nearly matching the efficient proteins in meat, milk, eggs and cheese.

Soybeans are known to Americans chiefly as soybean sauce for chop suey, though our Chinese allies for centuries have used them for food as well as condiment. In recent years, soybean cultivation in America has increased greatly and in some communities canned soybeans and soybean flour are now available. Unfortunately, however, this food, which would go a long way to solve the problem of a nourishing meat substitute, is not yet generally available.

So, to get first-class protein in a meat substitute, we must depend chiefly on eggs, cheese and milk. Those who do not like to drink milk can take it in many other forms. Breakfast cereal, for example, can be cooked in milk instead of water. Milk can also be disguised in custards, puddings, soups and chowders.

#### **Milk Furnishes Half**

A pint of milk furnishes about half the day's protein needed by anyone except nursing mothers. Grown-ups should take one pint of milk daily according to the nutrition yardstick, so if they can double their milk intake on meatless days they need not worry about losing out on protein. Don't let the cost worry

you, either. Few foods supply efficient proteins at so low a cost as milk, and as far as protein is concerned, skim milk is as valuable as whole milk.

Protein, however, is not the only nourishing item to search for in meat substitutes. Most people know that meat supplies iron, needed for building hemoglobin, the chemical that gives the red color to our blood. More important than its color is the transport job hemoglobin does in carrying vitally needed oxygen to every cell in the body.

#### **Need More Iron**

So we must have iron to build plenty of hemoglobin. In 1940, Bureau of Home Economics figures show, nearly a fourth of the total iron in American family diets came from lean meat, fish and poultry. But cereals in the past few years have contributed about as much iron to American diets as have meats. One of the easiest ways to add iron to the diet is to eat more whole grain cereals and breads. Enriched flour, it should be remembered, has more iron than fine patent flour but not as much as whole-wheat flour.

Vegetables, particularly potatoes and the dark green leafy ones, also are good sources of iron. So are mature peas and beans, eggs, dried fruit and molasses.

When it comes to finding meat substitutes that supply the vitamins of meat,

we must turn again to the whole grain cereals, dry beans, peas, peanuts and soybeans, if you can get them.

The meat vitamins are thiamin, popularly known as the morale vitamin or B<sub>1</sub> and niacin, the pellagra-preventing and curing vitamin formerly called nicotinic acid. The thiamin and niacin present in wheat is largely lost in the milling process. If we ate half our cereals and flours as whole wheat, we would get four times as much niacin and two or three times as much thiamin. Eating enriched flours and cereals increases the thiamin and niacin content of diets, but not to the same extent as whole grain products.

*If you want recipes for meat substitutes, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., for bulletin on meat substitutes.*

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#### **INVENTION**

### **Government Tells What You Should Not Invent**

➤ UNCLE SAM can tell you one invention that you don't need to try to invent. It is the idea of how to help win the war most often suggested to the National Inventors Council.

This popular device is a net or screen to protect ships against torpedoes.

The National Inventors Council, in announcing that 100,000 ideas have been submitted to it by our nation of inventors, explained that several thousand of these were devices for protecting ships against torpedoes.

Because this field of invention has had such intensive consideration, it is suggested that inventors would be wise to direct their efforts to a less developed category of inventions.

During the last World War, the Naval Consulting Board received 6,740 similar suggestions. Of their defensive value, this Board said:

"Up to the present time not one of these proposals involving screens of any kind has received the approval of the Navy Department or of the merchant marine. The principal objections offered to these devices are that they are heavy, difficult to hold in position, unmanageable in a heavy sea, and that they interfere with the speed and with the ability of the vessel to maneuver—the immunity of a vessel to submarine attack is dependent very largely on its speed and also its maneuvering ability."

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