

NUTRITION

Diet Standards For Americans Of All Ages Announced

What Old, Young and Middle-Aged Need to Eat for Building Health for Defense Now Worked Out

AMERICA is about to learn exactly which foods and how much of each should be eaten each day for the health and vitality needed to make us strong individually and for defense as a nation.

Standards for planning an adequate diet for Americans of all ages, Mother and Dad, the children, the old folks, the young matron who is expecting or nursing a baby, have been worked out and finally approved by the nation's authorities on nutrition.

The new diet standards are contained in a report by Dr. Russell M. Wilder, of the Mayo Clinic, chairman of the Food and Nutrition Committee of the National Research Council, to Surgeon General Thomas Parran, U. S. Public Health Service.

Diet and food standards have been announced before, but these new ones are planned according to the latest scientific knowledge about foods and their contribution to health, strength and morale. The food standards worked out only a few years ago by a committee of the League of Nations, Dr. Wilder explained, would not serve for our nationwide program of defense on the nutrition front because they are out of date.

When those standards were compiled, the discovery of nicotinic acid as a cure and preventive of pellagra had not been made. Riboflavin, another important member of the vitamin B group, was unknown. The standard set for thiamin, which is morale vitamin B₁, was based on animal diet studies. Studies on humans have recently shown that we need more of this morale vitamin than the animal studies showed.

Actually we need more of the B vitamins than can be readily obtained from modern diets, Dr. Wilder said, because modern refined foods contain relatively little of these vitamins. The use of enriched bread will help in planning diets that will meet the higher requirements now known about, and there are plans for enriching other staple foods to make sure that an adequate diet can be made from foods that are available to everyone.

The new defense diet standards, which are suitable for any time but especially important to follow right now, took a long time to develop. Over a month ago a committee of nutrition authorities were ready to announce them. At that time the standards were stated in terms nutritionists use in their laboratories: grams of protein, fat, carbohydrate, milligrams of vitamins, and the like.

Then, when someone started translating them into bread (*Turn to page 347*)

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Without Thiamin in Diet Pigs Cease to Be Hoggish

See Front Cover

LACK of thiamin (vitamin B₁) changes personality of pigs. Without thiamin they are no longer piggish. The United States Department of Agriculture says more and better pigs, capable of producing good meat, are needed to fill vacancies soon to exist in the defense market.

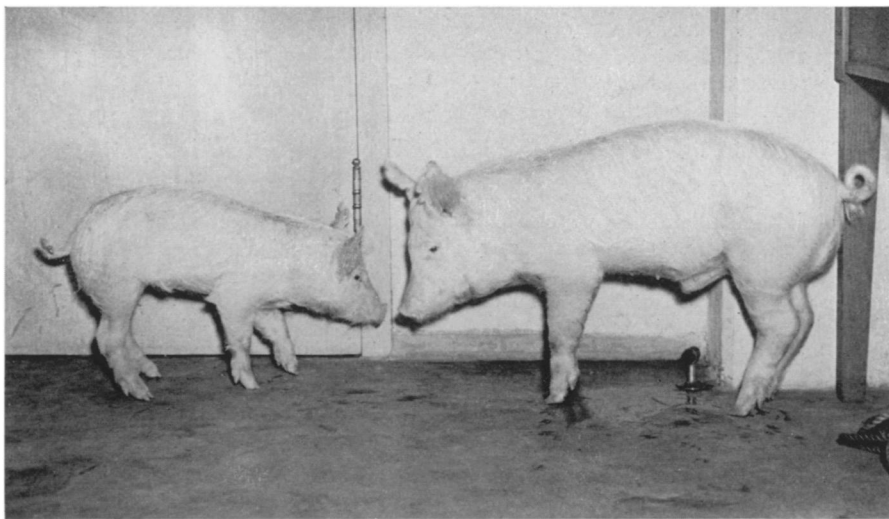
With this in mind, the Beltsville Experimental Farm, near Washington, D. C., is working to reduce the infant mortality rate of pigs. One reason for this large mortality rate may be that little pigs do not get enough thiamin in their diet. N. R. Ellis, Nutrition expert of the U. S. Department of Agriculture, fed part of a litter of pigs a synthetic diet without thiamin, and the rest a diet with thiamin. It was found that pigs lacking thiamin gained weight for a time but then began to lose weight. They developed bad hearts, ran subnormal body temperatures, got weak and died. One suffered from convulsions. There was a noticeable lack of appetite as these pigs became sick.

The other little pigs born at the same time of the same mother, but fed thiamin in their diet, grew well and are healthy.

The pig shown on the cover of this week's SCIENCE NEWS LETTER had a medium thiamin and medium fat diet.

What these pigs demonstrate may possibly have human implications. It has been found, Mr. Ellis said, that contrary to what some biologists believe, thiamin is involved in the use of fat by the body. It is possible to get along with smaller amounts of fat if the amount of thiamin eaten is high. A high fat diet (28%) with 25 mcg. thiamin per kilogram of body weight, seems to be equal to a medium fat diet (12%) with 35 mcg. of thiamin, or a diet containing a minimum of fat (2%) if 40 mcg. of thiamin is taken.

Science News Letter, May 31, 1941



CONTRAST

The big pig had thiamin, the other pig had none. But both were born of the same mother at the same time. The small pig is fed a high fat diet, but deprived of thiamin. The other, three times as heavy, has a low-fat diet but with a high thiamin content in its ration.