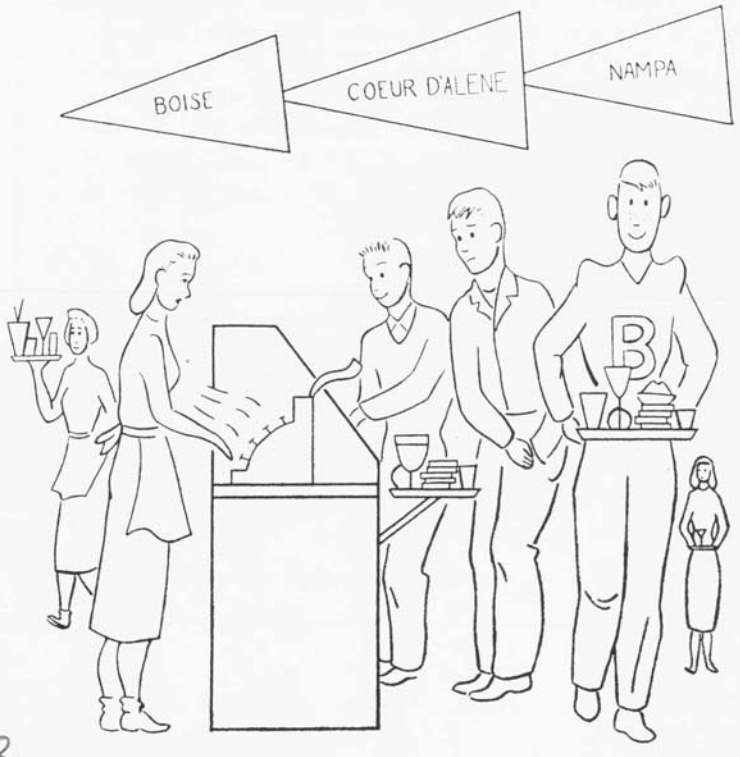
UNIVERSITY OF IDAHO
College of Agriculture

What Do Idaho Teen-agers Eat?



IDAHO Agricultural Extension Service

Bulletin 272
March 1957

THIS BULLETIN is a brief summary of a nutritional status study conducted in 1951 by the Home Economics Research Department of the University of Idaho Agricultural Experiment Station, as the Idaho phase of the Western Regional Nutritional Status study. The 274 subjects were boys and girls 15 and 16 years of age.

A comprehensive report of this study is given in Idaho Agricultural Experiment Station Research Bulletin No. 33 "Nutritional Status of School Children 15 and 16 Years of Age in Three Idaho Communities."

Published and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914, by the University of Idaho Agricultural Extension Service, James E. Kraus, Director; and the United States Department of Agriculture, cooperating.

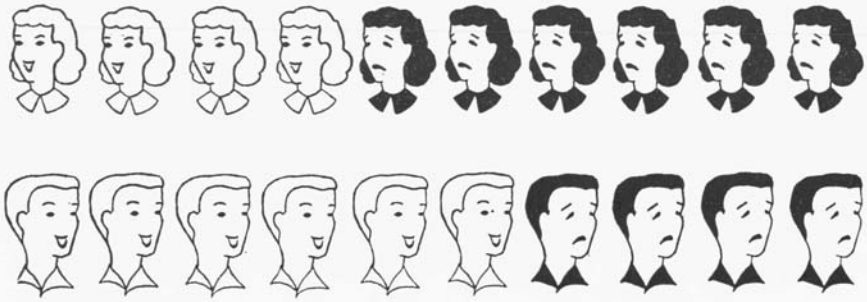
What Do Idaho Teen-agers Eat?

KATHLEEN P. WARNICK, SHIRLEY V. BRING AND ELLA WOODS*

WHAT DO Idaho teen-agers eat? Boys and girls in Boise, Nampa and Coeur d'Alene helped answer this question by keeping records of the foods they ate for 1 week. The Home Economics Research Department of the University of Idaho studied these food records. Here are some of the things they found about these teen-agers' food habits.

MANY OF THE TEEN-AGERS DID NOT GET ALL THE NUTRIENTS THEY NEEDED

Only 4 out of every 10 girls and 6 out of every 10 boys had diets which were good or excellent in all the nutrients studied. The other girls and boys had less than two-thirds of the National Research Council's recommended dietary allowance of one or more of the essential nutrients.



Let's take a look at the nutrients which were most often low in these food records. Then we'll see which food groups are the best sources of these nutrients.

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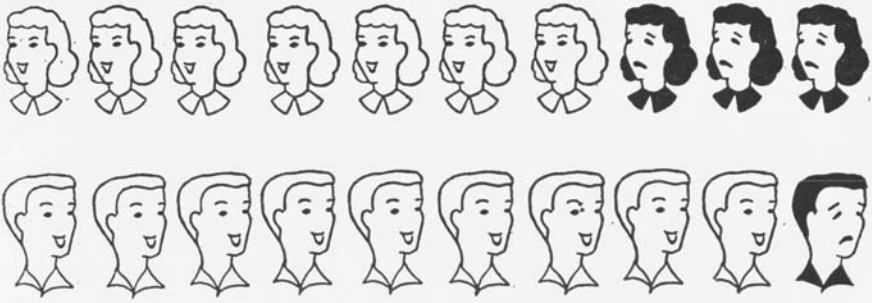
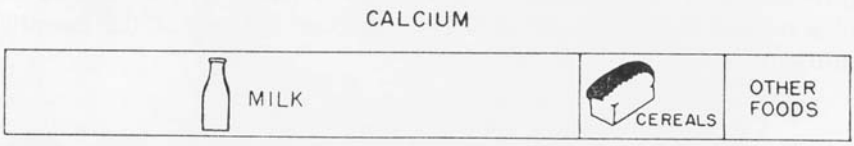
Calcium

Calcium is needed for the bones and teeth and also for normal blood clotting and for normal muscle activity.

Three girls out of 10 but only 1 boy out of 10 did not get enough calcium from the foods they ate.





Two-thirds of the calcium in the diets of these teen-agers came from milk and its products, such as cheese and ice cream. Most of the boys drank at least 3 glasses of milk every day, but many of the girls had only 2 glasses or less. Three glasses of milk along with moderate amounts of whole grain or enriched cereals and fruits and vegetables furnish the amount of calcium teen-agers need.

Iron

Iron is needed for hemoglobin, the red coloring matter of the blood. When iron is low, hemoglobin may be low; when hemoglobin is low, anemia results.

Five girls out of 10 but only 1 boy in over 100 did not get enough iron.

IRON

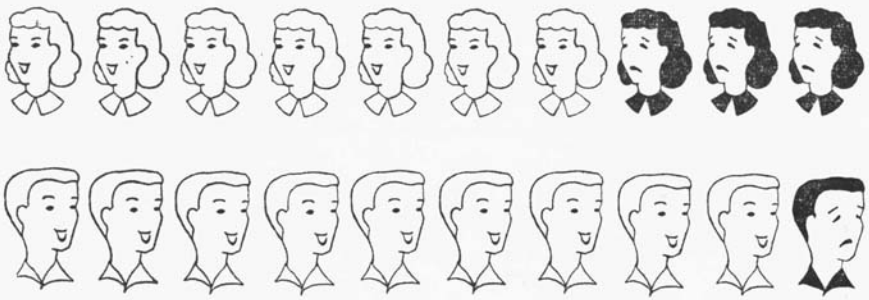
One-third of the iron in these diets came from protein foods (meat, eggs, legumes and nuts) and one-third came from cereals. Boys ate these foods in larger quantities than did the girls. Fruits and vegetables furnished nearly one-fourth of the iron.

Of all the kinds of meat, liver and kidney have the most iron. Eggs, potatoes, green leafy vegetables and dried fruits are also good sources.

Vitamin A

Vitamin A is needed for growth. At all ages it is important for normal vision, especially in dim light. Vitamin A aids in protecting the body against infection.

Three girls out of 10 and 1 boy out of 10 did not get enough vitamin A.



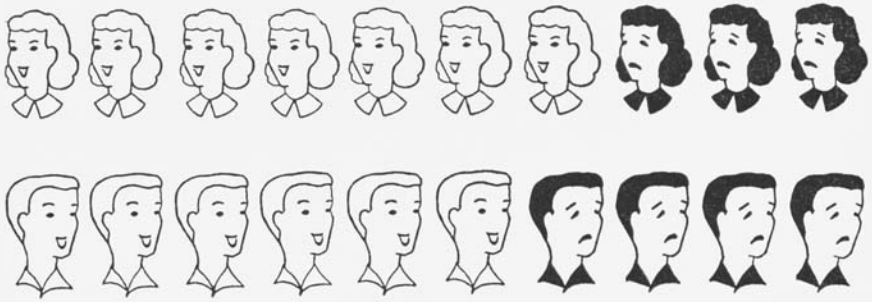
VITAMIN A

Green and yellow vegetables were the best sources of vitamin A in these diets. These vegetables contain carotene which the body converts to vitamin A. Vitamin A is also present in some foods from animal sources. Good sources are liver, egg yolks, butter and whole milk. Milk products and protein foods each supplied about one-fifth of the vitamin A in these teen-age diets.

Vitamin C

Vitamin C, or ascorbic acid, is needed for healthy gums, teeth and other body tissues.

Three girls out of 10 and 4 boys out of 10 did not get enough vitamin C. This was the only nutrient which was low in more of the boys' diets than in that of the girls'.



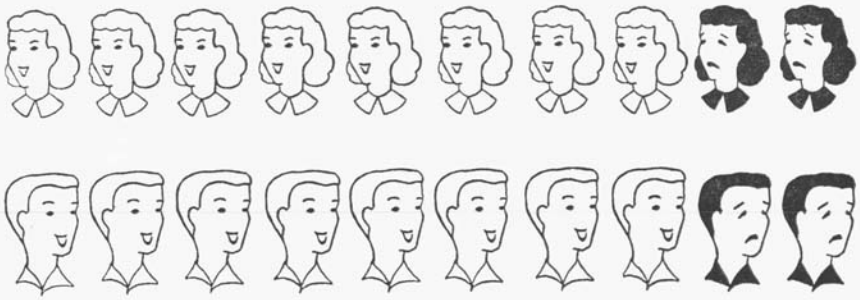
VITAMIN C

Nearly half of the vitamin C in these teen-agers' diets came from tomatoes and citrus fruits—oranges and grapefruit. Potatoes furnished nearly one-fifth of the vitamin C. Cabbage, broccoli, cauliflower, strawberries and melons are other good sources.

Thiamine

Thiamine, or vitamin B_1 as it is sometimes called, is necessary for normal growth, appetite, digestion and proper functioning of the nerves.

Two girls out of 10 and 2 boys out of 10 were not receiving enough thiamine.



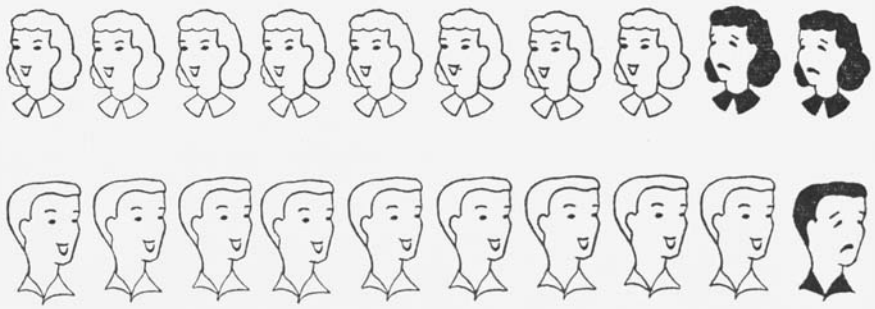
THIAMINE

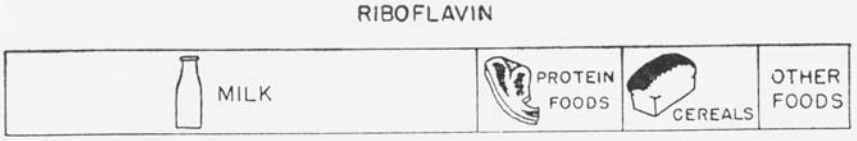
Cereals furnished over one-third of the thiamine. Milk products and protein foods are also good sources. Pork is especially rich. Liver, potatoes, peanuts and peanut butter are other good sources.

Riboflavin

Riboflavin, another of the B vitamins, is needed for normal growth, healthy skin and normal vision.

Two girls out of 10 and 1 boy out of 10 did not get as much riboflavin as they needed.





Milk products furnished more than half of the riboflavin in these diets. Three glasses of milk a day, along with moderate amounts of whole grain or enriched cereals and protein foods, furnish the amount of riboflavin teen-agers need.

WHY DID MORE GIRLS THAN BOYS HAVE POOR DIETS?

The girls ate about two-thirds as much of most foods as the boys. They had fewer calories, but they also cut down on the important nutrients they needed. Because girls eat less than boys, it is especially important that they make wise choices, so that the food eaten will supply all the nutrients needed and not just calories.

WHY WERE SOME OF THE BOYS AND GIRLS EATING POOR DIETS?

Some homemakers did not plan good diets for the school children

One problem is the custom of serving the main meal at noon and only a light meal, frequently of left-overs, in the evening. For children who cannot eat the noon meal at home or who do not have a good meal at school, this practice frequently results in poor diets. For example, a supper of boiled navy beans, white bread and coffee, or one of potatoes, white bread and milk, following a lunch of a candy bar and soft drink, or french fried potatoes and catsup, or even the more nutritious hamburger and milkshake, would not furnish the nutrients essential for growth, health and vitality during adolescence and the years ahead.

Many homemakers have a regrettable tendency to cook primarily for their husbands and only incidentally for the children and themselves. When their husbands are home, they will prepare a complete meal, but anything handy will do for just themselves and the children.

Lunches carried from home or bought at a restaurant were rarely as good as the school lunch

The school lunch made important contributions to the diets of many teen-agers, especially those whose evening meals tended to follow the beans, bread and coffee pattern. The school cafeteria furnished a number of the boys and girls with their only servings of vitamin-rich fruits and vegetables. Some boys and girls had more than half of their week's intake of milk and protein foods at the school cafeteria.

Weekend meals were often skimpy

Far more noon and evening meals were missed on weekends than on school days. The meals which were eaten on weekends tended to be less complete than those eaten on school days. The lower food intake at weekend meals was not made up by an increase in the amount eaten as snacks.

Most snacks were high in calories but low in nutrients

Nearly all the boys and girls ate snacks, but most of the snacks were just some form of sweets. These are high in calories, but usually furnish few of the essential vitamins and minerals.

Athletic training rules were sometimes misunderstood

The nutritionists were concerned by the interpretation which some of the student athletes put on the coach's training rules regarding eating before games. In emphasizing that the players should not eat a heavy meal before a game, the coach evidently did not stress the importance of having adequate lunches to make up for the reduced food intake. For example, one basketball player had three suppers in a week consisting principally of canned peaches. On two days his lunch had been a piece of pie, and on the other three school days his lunch was a hamburger, soft drink and pie or candy bar. Such meals could not furnish the energy and nutrients needed to supply the demands of growth and strenuous activity for student athletes over a period of several months.

WHICH FOODS WERE MOST LIKED OR DISLIKED?

The boys and girls were asked "What are your favorite foods?" and "What foods do you dislike?" The food named most often as a favorite was potatoes. Asparagus and liver were mentioned most often as being disliked. Vegetables other than potatoes were named oftener as being disliked than liked. Fruits were usually liked. Meats, except liver, were usually liked. All forms of sweets were mentioned only 44 times as favorite foods, but fruits and vegetables were mentioned as favorite foods 161 times and meats 101 times.

WERE THE IDAHO TEEN-AGERS IN GOOD PHYSICAL CONDITION?

In general, the health of the Idaho boys and girls was good. The boys averaged 67½ inches in height and 138 pounds in weight, the girls 64 inches and 123 pounds. These averages for height correspond with those generally reported for boys and girls of these ages, but the weights tend to be somewhat above those expected for their heights.

None of these teen-agers had hemoglobin values low enough to indicate anemia.

Tooth condition varied greatly by area

The boys and girls who had lived in Nampa all their lives had an average of 6 teeth decayed, missing or filled. Those from Boise averaged 7. The teen-agers in Coeur d'Alene had an average of 14 decayed, missing or filled teeth.

NAMPA

BOISE

COEUR D'ALENE

The number of decayed, missing or filled teeth ranged from 0 to 17 for the Nampa boys and girls, 0 to 20 for the Boise boys and girls and 10 to 28 for those from Coeur d'Alene. Two of the Coeur d'Alene teen-agers had complete upper dentures.

The Nampa water supply contained 1.5 parts per million fluorides and the Boise water contained 0.5 parts per million. The Coeur d'Alene water, however, contained no fluorides, so these children had not received the benefits of fluorides in making their teeth more resistant to decay. Other factors, such as climate, minerals, (calcium in the drinking water and soil conditions) may have also affected the amount of tooth decay in these areas.

HOW CAN IDAHO TEEN-AGERS IMPROVE THEIR DIETS?

1. **Eat more vitamin C**—The low vitamin C content of the diets can easily be increased to the recommended level by including citrus fruit or tomato juice at breakfast, packing an orange in the lunch or having one as a snack, or by using tomatoes, cabbage, broccoli or cauliflower in the noon or evening meals.
2. **Eat more vitamin A**—Approximately one-third of the boys and girls ate green and yellow vegetables at the evening meals but only one-fourth ate any at the noon meal. Few snacks included this food group, although a raw carrot would be a good low-calorie, high-vitamin A addition to many diets.
3. **Eat more calcium**—These teen-agers drank milk less often for the noon meal than for breakfast or the evening meal. A serving of milk for lunch, either as a beverage or in soup, cheese or dessert, would increase the calcium intake.
4. **Girls, eat more iron**—Far fewer girls than boys ate protein foods for breakfast. An egg at breakfast would make a much needed addition to the girls' iron intake. Other foods which would increase the iron in the diets are lean meats (especially liver, even in small quantities), legumes, whole grain or enriched cereals, greens and dried fruits.
5. **Eat more nutritious snacks**—The types of snacks eaten by the boys and girls in this study showed that most of them had liberal amounts of spending money. Emphasis should be placed on teaching school children to get their money's worth nutritionally in the foods they choose. This problem is complicated by the fact that nutritious snacks such as milk or fruit are usually more expensive, less readily available and less glamorized by advertising than are other snacks which nutritionally furnish little besides calories and which tend to promote tooth decay.
6. **Eat more complete meals on weekends**—Weekend meals were frequently skipped or were only sketchy. More complete meals on Saturdays and Sundays would improve the over-all nutrient intake of these teen-agers.
7. **Families, preserve more fruits and vegetables**—Many of the families in this study used their freezers or lockers only for meat. Freezing and/or canning the surplus fruits or vegetables produced at home or readily available on the market would provide fruits and vegetables needed in the diet during other seasons.