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Recommended Citation

Wilder, Susan Z., "Adequate Diet for the School Child" (1923). *Extension Circulars*. Paper 119.
http://openprairie.sdstate.edu/extension_circ/119

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Extension Circular No. 119

February 1923

ADEQUATE DIET FOR THE SCHOOL CHILD

by

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Cooperative Extension work in Agriculture and Home Economics. South Dakota State College and United States Department of Agriculture Cooperating.

Distributed in furtherance of Acts of Congress of May 8 and June 30, 1914.

ADEQUATE DIET FOR THE SCHOOL CHILD

Ease of digestion and adequacy in protien, minerals and vitamins are absolutely essential for the school child. The results of mistakes in the feeding of school children are not seen as quickly as in the case of younger children. Mistakes in feeding at this age may result in serious diseases conditions later on. The adolescent child probably requires as much or more food than the adult because he is growing rapidly. The three food needs for both children and adults are those to supply building materials for repair and growth, fuel foods for heat and energy, and to take care of the regulatory needs.

I. Essential characteristics of the child's diet.

A. Ease of digestion is first

1. Plan to have the children's food simply prepared.
 - a. Give children fat in the form of butter and whole milk.
 - b. Children will not have indigestion so quickly after showing emotion, grief, fear, excessive fatigue, if given simply prepared food.
 - c. Children will go about their work or play more contentedly if they are not troubled with foods that are hard to digest.
2. Fried foods are hard for children to digest. Unemulsified fat is not digested in the stomach. Therefore, if protien and carbohydrates foods are covered with fat, the child may have indigestion.
3. Care should be used in feeding children nuts. Thorough mastication is necessary to prevent indigestion. Nut paste is best for young children.

B. Adequate protien is most important for the child.

1. Children need the right protiens to repair the body tissues, maintain body processes and growth. (Milk, eggs)
2. Certain proteins, legumes, dried beans need to be well cooked and fed carefully, because they are liable to bacterial decomposition in the intestines.

C. Children must have an adequate supply of mineral.

1. Calcium and phosphorus, required by adults for maintenance of the tissues, are especially needed by children for growth of tissue particularly bones and teeth and also soft tissue.
2. Iron is needed for the blood.

- D. Children must have an adequate supply of vitamins for health and growth. Vitamin supply for adults is more likely to be fairly well taken care of thru the eating of coarse food. Milk is one of the best sources of vitamins.
- E. Children need a greater quantity of food per unit of weight or surface than the amount needed by adults. Children must have enough food to maintain the body needs and to provide for growth.

II. Essential Foods

- A. In planning the diet of the school child, certain foods are considered as absolutely essential if the child is to be kept in health and maintain the right rate of growth. The foods that make up the rest of the diet will not make so much difference if the essentials are eaten by the child first.

B. Milk

1. Milk is absolutely necessary in every child's diet because milk is a "regulatory food." "Regulatory foods" are those foods that will insure health, normal growth, and proper body regulation.
 - a. Its proteins are excellent for growth. These supplement well the inadequate proteins of cereals and legumes. Ninety-eight per cent of milk protein is digested and absorbed.
 - b. Minerals are excellent. They are sufficiently basic to offset the acidity of the ask of cereals. Calcium is present in abundance. Calcium is needed for building bones and teeth. Diets that lack milk are nearly always deficient in calcium.
 - c. All known vitamins are present in whole milk.
2. There is no substitute for milk in the child's diet because it is --
 - a. A complete food for growing children.
 - b. Makes up the deficiencies of the grains, which makes up the bulk of man's diet throughout the world.
3. Amount needed by child per day.
 - a. At least a pint of whole milk every day for safety.
 - b. A quart is better.
 - c. Children fed that do not have whole milk every day are likely to suffer from dietary deficiencies. By the introduction of a quart of milk a day many an orphanage has brought about in children:

1. Improvement in energy.
 2. Rate of growth.
 3. Resistance to disease.
 4. General health.
 5. Appearance.
4. Children can be encouraged to take milk. The nutrient value of milk that is served to children in cooked foods is the same as when served as a drink.
- a. In cream soups.
 - b. Puddings.
 - c. Scalloped dishes.
 - d. Milk drinks.
5. Milk is not an expensive food, when its food value is considered. Milk at 18¢ a quart will give more protein and energy than can be purchased in eggs at 35¢ a dozen and more energy and almost as much protein as in beef at 35¢ a pound.
6. Forms of milk.

Whole milk is best for a child. Skim milk is better than no milk. Skim milk lacks the fat and fat soluble vitamin needed for growth.

C. Vegetables and fruits.

1. Supply minerals, calcium, in which cereals are deficient and iron in which milk is somewhat deficient, are found in most fruits and vegetables.
2. Green leaf vegetables are "regulatory" foods in the same sense as milk.
 - a. Vegetables are rich in iron which is lacking in milk and in most cereal foods. The greens are the best source of iron.
 - b. Vitamins, A, B, and C are present in abundance in vegetables.
3. Their ash is alkaline, neutralizing the acid ash of cereals, legumes, meats and eggs. Exceptions are prunes, plums, and cranberries which contain benzoic acid.
4. Prevent constipation because of cellulose which gives bulk to food and substances that in themselves are laxative in nature.
5. Potatoes, grapes, bananas are about one fifth carbohydrates; dried fruits are rich in sugar.

D. Cereals

1. Cereals alone are not a complete food.

- a. Cereal protein is inadequate.
- b. Minerals are present in inadequate amounts especially in the refined cereals.
- c. Vitamin content is inadequate. A, B, and C. practically absent. Water soluble B found only in germ and outer covering of the grain. Both of these are necessary for health and growth but largely removed in milling.
- d. Cereals are fuel foods.

2. The great bulk of the diet of all peoples consists of cereals. This is because of --

- a. Cheapness.
- b. Ease of growth and storage.
- c. Flavor.
- d. Ease of digestion.

3. Cereals furnish about 43 per cent of protein in diet.
4. Cereals supply minerals, phosphorus, calcium and iron.
5. Coarse cereals give bulk.

E. Eggs, meat, fish (head)

1. Eggs.

- a. Eggs are desirable sources of complete proteins, of vitamins and of minerals, especially calcium phosphorus and iron in the yolk.
- b. Except in iron content they are not superior to milk. More than 50¢ a dozen they are a more expensive source of complete protein than milk at 18¢ a quart.
- c. If they are omitted from the diet, care must be taken to supply iron in spinach and other green vegetables in legumes, in fruit, especially oranges and prunes and in whole cereals.

2. Meat and fish.

Meat is of value because it is a protein food.

a. Lean meat.

1. Lean meat is decidedly inferior to milk and eggs in character of its proteins, its minerals and its vitamins.

2. Lean meat is nearly as deficient as seeds in minerals.
3. Lean meat proteins are superior to grains.
- b. Liver and vital organs are far superior to lean meat in character of proteins, minerals and vitamins.
- c. Fish appears to be superior to our ordinary meat in the same respect as are the vital organs of animals.

The amount of food given children must be ample.

- a. No more should be spent for meat than for milk.
- b. As much should be spent for vegetables and fruits as for meat.
- c. One-fourth of the food money should be spent for cereals.

Food Habits

Essential food requirements -- summary.

1. Children should have
 - a. A quart of milk a day.
 - b. Fruits twice a day, once fresh.
2. Children need three warm meals at regular hours every day.
3. Lunches between meals should be discouraged. If necessary, plain bread and butter, milk or fruits is best for lunches.
4. Sweets. Candy should be eaten after a meal. Otherwise it's use will take away the desire for the essential foods.
5. Sufficient time needs to be taken for meals.
6. Children should be taught to like all wholesome foods.
 - c. Vegetables other than potatoes twice a day, preferably one of these uncooked.
 - d. Greens at least twice a week (included in c)
 - e. Butter fat every day.
 - f. Cereals as breakfast food and bread.
 - g. Meat or egg or fish once a day.

Health Habits

1. For the best of health and growth, children must form good food habits.
2. Every child needs at least nine hours of sleep a day.
3. Regular hours of work, play and sleep.
4. A full bath at least once a week, better every day.
5. At least one bowel movement every day.
6. Four to six glasses of water every day.

An Index to Health

Your weight for height and age and the rate of gain is the best index to your general health. From the following table find out what you should weigh and the rate of gain for the next six months. Mark this on chart provided for this purpose. Then weigh and mark on chart. Weigh regularly every month and mark according to directions on back of chart. Are you gaining at the rate you should? If you are not you can do so by playing the Health game right.

Height and Weight Table for Girls

Height Inches	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
47	53								
48	55	56							
49	57	58							
50	59	60	61						
51	62	63	64						
52	65	66	67						
53	68	68	69	70					
54	70	71	72	73					
55	73	74	75	76	77				
56	77	78	79	80	81				
57	81	82	83	84	85	86			
58	85	86	87	88	89	90	91		
59	89	90	91	93	94	95	96	98	
60		94	95	97	99	100	102	104	106
61		99	101	102	104	106	108	109	111
62		104	106	107	109	111	113	114	115
63		109	111	112	113	115	117	118	119
64			115	117	118	119	120	121	122
65			117	119	120	122	123	124	125
66			119	121	122	124	126	127	128
67				124	126	127	128	129	130
68				126	128	130	132	133	134
69				129	131	133	135	136	137
70					134	136	138	139	140
71					138	140	142	143	144
72						145	147	148	149

(By Dr. Thomas D. Wood)

About What a Girl Should Gain Each Month.

Age
 5 to 8 6 oz.
 8 to 11 8 oz.
 11 to 14 12 oz.

Age
 14 to 16 8 oz.
 16 to 18 4 oz.

Height and Weight Table for Boys

Height Inches	10 Yrs	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
47	54								
48	56	57							
49	58	59							
50	60	61	62						
51	63	64	65						
52	65	67	68						
53	68	69	70	71					
54	71	72	73	74					
55	74	75	76	77	78				
56	78	79	80	81	82				
57	81	82	83	84	85	86			
58	84	85	86	87	88	90	91		
59	87	88	89	90	92	94	96	97	
60	91	92	93	94	97	99	101	102	
61		95	97	99	103	104	106	108	110
62		100	102	104	106	109	111	113	116
63		105	107	109	111	114	115	117	119
64			113	115	117	118	119	120	122
65				120	122	123	124	125	126
66				125	126	127	128	129	130
67				130	131	132	133	134	135
68				134	135	136	137	138	139
69				138	139	140	141	142	143
70					142	144	145	146	147
71					147	149	150	151	152
72					152	154	155	156	157
73					157	159	160	161	162
74					162	164	165	166	167
75						169	170	171	172
76						174	175	176	177

(By Dr. Thomas D. Wood)

About What a Boy Should Gain Each Month

Age		Age
5 to 8	6 oz.	12 to 16
8 to 12	8 oz.	16 to 18
		16 oz.
		8 oz.

To Illustrate How Weight Record is Kept

Francis Jones is 13 years old, upon measuring she finds that her height is 56 inches and that she weighs 73 pounds on March 15. She finds upon looking at the table that for a girl thirteen years old and 56 inches tall the average weight is 80 pounds.

She also finds that the average gain for her age is about 12 ounces or $\frac{3}{4}$ pound a month. Marking in this gain on the chart and connecting them gives the average weight line or gain to be expected for the next six months. (See weight chart below)

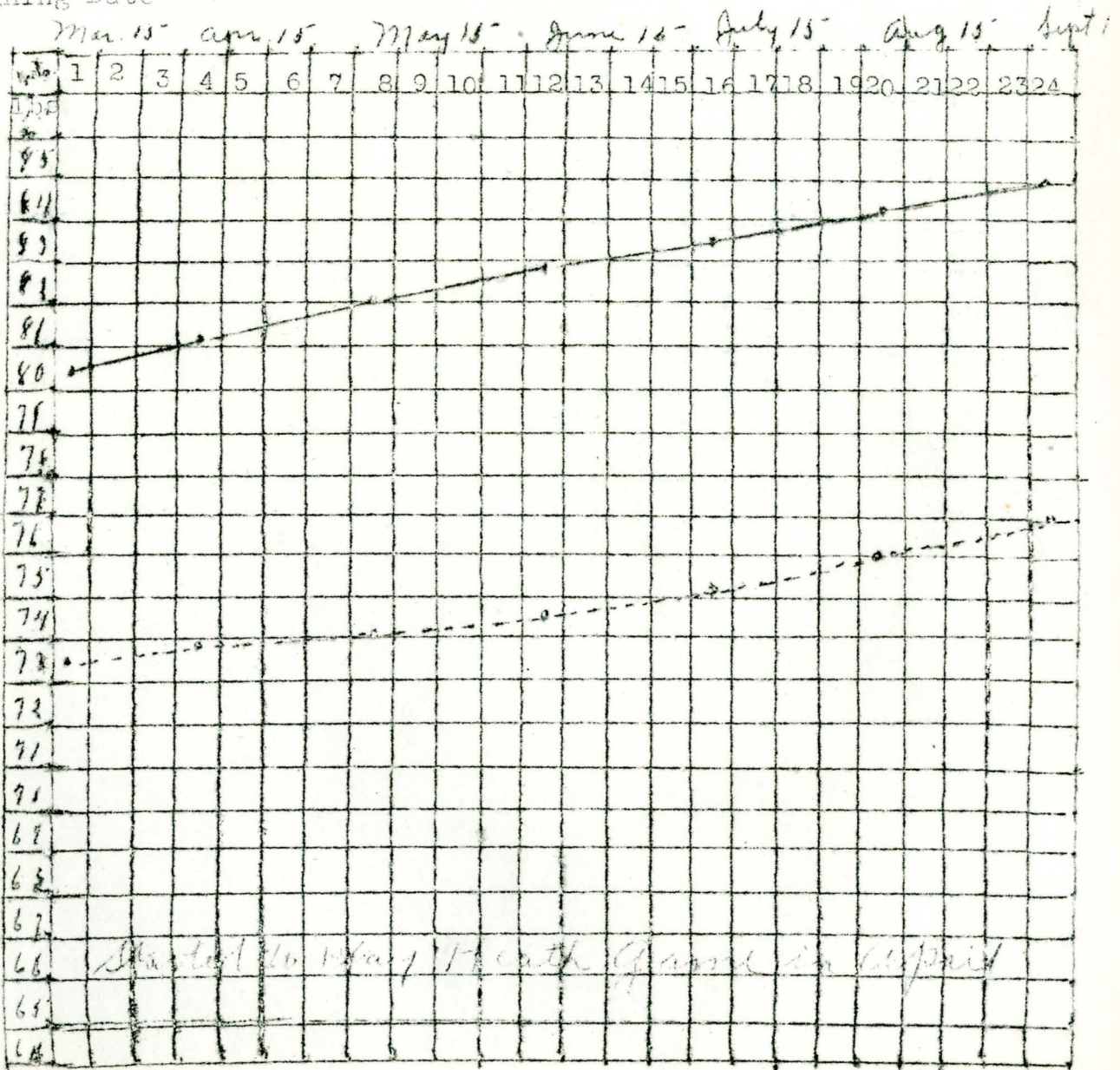
At the second weighing, Francis weighed $73\frac{1}{4}$ pounds, at the third weighing $73\frac{1}{2}$, at the fourth weighing 74, at the fifth $74\frac{1}{4}$, at the

sixth weighing 75½, at seventh weighing 76½. This dotted line shows Francis' weight line or her growth line for the six months. The first part of the growth line shows that she is not growing as well as she should, but when she began to play the Health Game and living up to the rules every day, her gain increased steadily.

Weight Record Card

NAME Francis Jones ADDRESS Brookings COUNTY Brookings
 Age: Years 13 Months _____ Average weight for height 80
 Height Inches 56
 Weight Pounds 72 Club Project Food

Weighing Date



South Dakota State College
and U. S. Department of
Agriculture Cooperating.

FOOD HABIT SCORE CARD

Mary A. Dolve
Foods and Nutrition Specialist

DAILY CREDITS	Date:						Date:							
	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
MILK 1 cup 5 3 cups 15														
2 cups 10 4 cups 20														
VEGETABLES other than potatoes														
Once a day 10 Twice a day 20														
FRUITS														
Once a day 10 Twice a day 20														
GREENS OR LEAFY VEGETABLES (Included in vegetable allowance) 5														
FRESH FRUITS OR CANNED TOMATOES (Included in fruit allowance) Mark days used with F, F, or T. 5														
CEREALS Whole grain, bread or breakfast cereals 15														
WATER Per day - 4 glasses 10 6 g. 15														
TOTAL CREDITS														
DEDUCT FOR: Drinking tea or coffee														
Children 10														
Adults - more than two cups 10														
Going without breakfast 10														
Sweets between meals 10														
No bowel movement 15														
TOTAL DEDUCTION														
TOTAL SCORE														
AVERAGE SCORE (Add daily scores and divide by number of days score is kept)	NUTRITION SIGN POST (Answer Yes or No)													
	10% underweight? ----			Headaches? ----			Constipation? ----			Colds? ----				
	15% Overweight? ----						Indigestion? ----							

This score card does not cover a complete diet, but seeks to show the user where he stands in relation to important food habits.

If scoring is done for both adults and growing children highest possible score 120

If scoring is done for either adults or growing children highest possible score 100

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W. F. Kumlien, Director