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DIETARY STUDIES
OF
THREE COLLEGE GIRLS
by
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DIETARY STUDIES OF THREE COLLEGE GIRLS.

During the last ten or fifteen years great progress has been made in all lines of scientific investigation. Especially has this been true regarding the science of the nutrition of the body, both animal and human. Great strides have been made in this, but even now very little can be said to be positively known regarding the requirements of that body. It is known that the tissues of the body consist of carbohydrates, proteids, fats and minerals, and that certain amounts of these materials must be taken into the body at intervals to replace what is lost in the activities of life. From this food, is evolved by means of complicated processes called metabolism, the energy necessary to life. This energy is shown not only in work, but also in body heat and nervous force. This energy is measured in heat units, which are calories, because heat may be transformed into other kinds of energy. The heat or energy which each food is capable of yielding to the body and the approximate amount that will be needed for a day have been calculated. Further, the relative amounts of the energy to be provided by the different food principles has been determined. The heat of the various foods is, of course, found by chemical means.

One method used in determining these requirements, is to make what are called dietary studies of individuals or groups of individuals for stated lengths of time. Notes are kept as to the actual amounts of the different foods eaten (sometimes also its cost). Then, either by means of direct analysis of the specimens of the foods or by means of tables of averages of analyses, the amounts of the various nutrients - fats, proteids, carbohydrates - taken into the body, can be determined

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together with the energy which they are capable of yielding. From this also can be calculated the ratio of the energy yielded by proteids to that yielded by the other nutrients. This is done by multiplying the amount of fat by two and a quarter ($2\frac{1}{4}$), (because one pound of fat yields approximately two and a quarter times as much energy as equal amounts of either of the others) adding to this the amount of carbohydrates and dividing by the amount of proteids. This is called the nutritive ratio, giving, not the real amounts of nutrients, but the relative amounts in prime numbers.

In the more scientific and exact dietary studies, notes are also made on the relative digestibility of the foods, and the amounts actually used in the energies of the body, as indicated by the amounts of urea in the urine, for the nitrogenous materials and the carbon dioxide excreted by the lungs and skin, which shows the metabolism of the carbohydrates and fats.

One result of all this work is the setting of what are called "dietary standards" both for the nutritive ratio and calorie values, the unit taken being "a man at moderately active work".

	Calories	Nutritive ratio
Man at hard work	3270	4.9
Man with hard muscular work	4150	6.2
Man with moderate muscular work	3400	6.2
Man at sedentary or woman with moderately active work	2700	6.1

This table shows some of the dietary standards given by W.O. Atwater in his bulletin, "Principles of Nutrition and Nutritive Value of Food".

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Though these are the standards agreed on by most authorities, all are not agreed, and hence we are at liberty to doubt and to make experiments to prove or disprove the correctness of these standards. It was partly this and partly to find how near student dietaries came to the accepted standard, that led to the making of some dietary studies during the winter term of 1905.

The group of three, of whom the studies were made, was as follows:-

1. A Domestic Science Short Course student, age 28, height five feet, six inches, weight 140 pounds.
2. A teacher of Domestic Art, age 28, height five feet five inches, weight 110.
3. A Senior Domestic Science student, age 21, height five feet six inches, weight 120.

The fact that all were doing their own cooking made a choice possible as to kinds and amounts of foods and manner of preparation, which would not otherwise have been possible. The individual tastes of each were allowed full play and did not influence the others to any great extent. All three ate a great deal of bread and vegetables, not caring much for meat. None drank tea or coffee, water and Postum-cereal being the preferred drinks. Abundance of all things, rather than a great variety at one meal, was sought. As much as possible the manner of cooking was varied from day to day. On all school days, that is, every day except Sunday and Monday, a cold lunch was taken to school and hence the evening meal was taken early and made the heavy meal of the day. Breakfast was served at 6:30, lunch at 12:00 and supper at 5:30.

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During the first series, including the four weeks from February 8 to March 7, no effort was made to introduce any special classes of food into the diet, but it was taken much as it had been for the past months. The following table summarizes the cost, the amounts of food eaten and the nutrients in that food.

Materials	amt. in lbs.	cost	Percentage 1 pound		Amounts used			
			prot.	fat	carb.	cal.	prot.	fat carb. cal.
Beefsteak	$\frac{1}{2}$ 13	.07	20.8	10.6	834	.104	.053	417
Dried beef	--	.09	30.0	6.5	840	.012	.024	338
Rabbit	$\frac{32}{32}$ 32	.08	21.5	2.5	505	.189	.021	431
Soupbone	$1\frac{7}{16}$	.05	22.2	6.1	662	.32	.089	952
Sausage	$2\frac{7}{16}$	.15	27.9	40.4	22255	.706	1.02	5628
Salt Pork	$\frac{1}{2}$	.06	8.4	67.0	2984	.042	.335	1492
Salt Cod	$\frac{3}{32}$	.01	25.4	.3	410	.025		45
Canned Salmon	1	.15	21.8	12.1	915	.218	.121	915
Trout	$\frac{3}{4}$	.10	19.2	2.1	445	.144	.015	333
Eggs	$4\frac{1}{2}$	.88	13.4	10.5	720	.603	.472	3240
Milk	$32\frac{1}{2}$	.75	3.3	4.0	5.0 325	1.062	1.3	1.6210562
Cream	$2\frac{7}{16}$	.10	2.5	18.5	4.5 910	.061	.46	.1112220
Butter	$7\frac{11}{16}$	1.80	1.0	85.0	3650	.076	6.5	27710
Cheese	1	.18	28.8	35.9	.32055	.288	.359	.0032055
Jell-o	$\frac{1}{4}$	.10	91.4	.1	1705	.228	.228	426
Cocaa	$\frac{1}{8}$	.08	21.6	28.9	37.72320	.027	.036	.047 290
Cottolene	$2\frac{1}{2}$	.30		100	4220		2.5	10550
Canned corn	$1\frac{5}{16}$	.10	1.6	.4	9.6 225	.021	.005	.126295
Canned peas	$1\frac{9}{16}$.08	3.6	.2	9.8 255	.056	.003	.152 399
Canned tomatoes	2	.15	1.2	.2	4.0105	.032	.008	.192 450

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Materials	amt. lbs.	cost	prot.	fat	carb.	cal.	prot.	fat	carb.	cal.
Navy beans	$2\frac{5}{16}$.10	22.5	1.8	59.6	1605	.520	.042	1.377	3710
Carrots	$1\frac{9}{16}$	.04	1.1	.4	9.3	210	.017	.006	.145	117
Cabbage	$4\frac{17}{32}$	.11	1.6	.3	5.6	145	.072	.013	.252	652
Onions	$\frac{13}{32}$	.01	1.6	.3	9.9	225	.006		.04	91
Potatoes	43	.60	2.2	.1	18.4	385	.946	.043	7.912	16555
Sweet potatoes	$2\frac{13}{16}$	.09	1.8	.7	27.4	570	.049	.02	.769	1608
Squash	$8\frac{7}{8}$	.12	1.4	.5	9.0	215	.124	.044	.79	1909
Bread	$39\frac{1}{2}$	2.08	9.3	1.2	52.7	1205	3.673	.474	20.816	47597
Crackers	$4\frac{1}{4}$	.40	9.8	9.1	73.1	1425	.416	.386	3.106	8181
Cream of wheat	2	.15	13.1	2.1	74.6	1710	.262	.042	1.482	3420
Cornstarch	$\frac{3}{8}$	.03			90.0	1675			.337	627
Cornmeal	$2\frac{5}{16}$	.03	9.2	1.9	75.4	1655	.194	.043	1.743	3825
Flour	$4\frac{1}{4}$	.13	10.6	1.1	76.3	1665	.45	.046	3.243	7076
Hominy	1	.05	2.2	.2	17.8	380	.022	.002	.178	380
Oatmeal	3	.22	16.1	7.2	67.5	1860	.501	.219	1.986	5550
Tapioca	$\frac{5}{16}$	.05	.4	.1	88.0	1650	.001		.275	515
Rice	$\frac{1}{2}$	.05	8.0	.3	79.0	1630	.04	.002	.4	815
Raisins	$\frac{3}{8}$	.03	2.6	3.3	76.1	1605	.009	.012	.285	608
Prunes	$\frac{11}{16}$	.08	2.1		73.3	1400	.014		.506	962
Lemons	$\frac{1}{8}$	.01	1.0	.7	8.5	205	.001	.001	.01	25
Apples	7	.15	.4	.5	14.2	290	.028	.035	.994	2030
Cranberries	2	.20	.4	.6	9.9	215	.008	.012	.198	430
Bananas	$1\frac{3}{4}$	.13	1.3	.6	22.0	460	.022	.01	.37	805
Oranges	$3\frac{5}{16}$	.25	.8	.2	11.6	240	.026	.007	.383	795
Canned raspberries	$1\frac{1}{8}$	.05	.8	2.1	56.4	1150	.009	.003	.634	1293
" peaches	$1\frac{1}{4}$.08	.7	.1	10.8	220	.009	.001	.135	275
Grape jelly	$1\frac{1}{2}$.15	1.1		77.2	1455	.016		1.158	2182

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Materials	amt. in lbs.	cost	prot.	fat	carb	cal.	prot.	fat	carb.	cal.
Plum butter	2 $\frac{3}{4}$.20	1.2	.1	58.3	1115	.026	.002	1.278	2440
Molasses	4 $\frac{1}{2}$	.20	2.4		67.3	1290	.108		3.118	5805
Sugar	11 $\frac{6}{16}$	.72			100.0	1860			11.375	21156
Honey	1	.13	.4		81.2	1520	.004		.812	1520
Vinegar	2	.06								
Postum	$\frac{1}{2}$	.09								
Soda	$\frac{1}{4}$	.01								
Salt	1 $\frac{13}{16}$	.02								
Totals		\$12.00					11.93	14.854	68.725	212654

Nutritive ratio, 1:9.1

The following menus show the manner of serving:

Wednesday, February 8.

Breakfast.

Oatmeal

Cream and sugar.

Crackers

Creamed beef

Sauted potatoes

Bread

Butter

Lunch

Bread and butter

Cold squash

Cranberry sauce

Gingerbread

Supper

Sausage

Boiled sweet potatoes

Boiled potatoes

Fried hominy

Bread and butter

Plum butter

Postum

Cake

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Thursday, February 9.

Breakfast.

Oatmeal
Creamed potatoes

Cream and sugar
Bread and butter

Lunch.

Bread and butter
Hard cooked eggs

Cold hominy
Plum butter

Cake.

Supper

Codfish gravy
Mashed squash

Boiled potatoes
Bread and butter

Raisin Tapioca.

Friday, February 10.

Breakfast.

Oatmeal
Fried potatoes

Cream and sugar
Milk gravy.

Bread and butter

Lunch

Bread and butter
Plum butter

Cold squash
Cake

Oranges

Supper

Boiled potatoes
Dried beef gravy

Creamed peas
Bread and butter

Molasses.

Saturday, February 11.

Breakfast

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Oatmeal	Cream and sugar
Sausage	Creamed potatoes
Bread and butter	
Lunch	
Bread and butter	Dried beef
Plum butter	Cake
Oranges	
Supper	
Boiled potatoes	Sweet potatoes
Pan broiled beef-steak	Brown sauce
Canned tomatoes	Bread and butter
Postum	Whipped cream

Sunday, February 12.

Breakfast	
Oatmeal	Cream and sugar
Sausage	Soft-cooked eggs
Fried potatoes	Bread and butter
Dinner	
Thick soup	Crackers
Beef	Boiled potatoes
Bread	Butter

Banana and orange Bavarian.

Lunch
Fudge.

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Monday, February 13.

Breakfast

Cornmeal mush	Cream and sugar
Warmed-up potatoes	Meat gravy
Bread	Butter

Dinner

Thick soup	Crackers
Baked beans	Pork
Boiled potatoes	Muffins and butter

Bavarian cream

Supper

Fried fish	Fried potatoes
Bread	Butter
Stewed prunes	Postum

Tuesday, February 14

Breakfast

Oatmeal	Cream and sugar
Sauted potatoes	Bread and butter

Lunch

Bread and butter	Cold baked beans
Prunes	Loaf cake

Supper

Cream of tomato soup	Crackers
Fried fish	Mashed potatoes
Bread and butter	Molasses

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Wednesday, February 15.

Breakfast

Cream of wheat

Sausage

Bread

Cream and sugar

Potato cakes

Butter

Lunch

Bread and butter

Prunes

Cheese

Loaf cake

Supper

Boiled potatoes

Cabbage with white sauce

Bread and butter

Dried beef gravy

Grape jelly

Thursday, February 16.

Breakfast

Oatmeal

Crackers

Sausage

Cream and sugar

Fried potatoes

Lunch

Bread and butter

Grape jelly

Hard-cooked eggs

Cake

Supper

Salmon croquettes

Stewed corn

Rice with grape jelly

Boiled potatoes

Bread and butter

~~SR Feb 1904~~

Friday, February 17.

Breakfast

Cream of wheat

Cream and sugar

Crackers

Creamed potatoes

Bread and butter

Lunch

Salmon sandwiches

Grape jelly

Cake

Supper

Fried rabbit

Boiled potatoes

Corn fritters

Bread and butter

Grape jelly

Saturday, February 18

Breakfast

Oatmeal

Cream and sugar

Crackers

Creamed potatoes

Bread and butter

Molasses

Lunch

Fried rabbit

Bread and butter

Grape jelly

Apples

Supper

Boiled potatoes

Creamed Salmon

Mashed squash

Griddle cakes

Postum

Whipped cream

~~SR Feb 1904~~

Sunday, February 19.

Breakfast

Cream of wheat

Milk gravy

Bread

Cream and sugar

Warmed potatoes

Butter

Dinner

Mashed potatoes

Boiled cabbage

Cocaa tapioca

Salmon croquettes

Bread and butter

Whipped cream

Lunch

Bread and butter

Postum

Whipped cream

Monday, February 20.

Breakfast

Cornmeal mush

Cheese

Cream and sugar

Sauted potatoes

Dinner

Baked beans

Boiled potatoes

Pork

Bread and butter

Lemon pie
Supper

Cold beans

Bread and butter

Potato cakes

Grape jelly

Lemon pie

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Tuesday, February 21.

Breakfast

Cream of wheat

Cream and sugar

Crackers

Fried potatoes

Sausage

Lunch

Cold beans

Bread and butter

Cookies

Oranges

Supper

Scalloped potatoes

Mashed squash

Bread and butter

Postum

Cookies

Wednesday, February 22.

Breakfast

Cornmeal mush

Cream and sugar

Sausage

Fried potatoes

Molasses

Dinner

Ice cream

Chocolate sauce

Chocolate cake

Supper

Corn fritters

Mashed squash

Bread and butter

Grape jelly

Squash pie.

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Thursday, February 23.

Breakfast

Cornmeal mush

Poached eggs

Bread and butter

Cream and sugar

Sauted potatoes

Lunch

Bread and butter

Cranberry sauce

Cheese

Squash pie

Supper

Sausage

Sweet potatoes

Bread and butter

Boiled potatoes

Creamed cabbage

Cranberry sauce

Ginger cookies

Friday, February 24.

Breakfast

Cream of wheat

Creamed potatoes

Cream and sugar

Bread and butter

Lunch

Bread and butter

Oranges

Cranberry sauce

Ginger cookies

Supper

Mashed potatoes

Dry toast

Postum

Creamed peas

Butter

Grape jelly

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Saturday, February 25.

Breakfast

Cream of wheat

Cream and sugar

Potato cakes

Fried eggs

Bread and butter

Lunch

Bread and butter

Cheese

Grape jelly

Cookies

Oranges

Supper

Boiled potatoes

Pan broiled steak

Peanut and cabbage salad

Brown sauce

Bread and butter

Canned peaches

Sunday, February 26

Breakfast

Cream of wheat

Sugar and cream

Creamed potatoes

Bread and butter

Molasses

Dinner

Cream of pea soup

Crackers

Mashed potatoes

Beefsteak

Brown sauce

Bread and butter

Fig cookies

Peach jell-o

Lunch

Pea salad

Bread and butter

Fig cookies

Peach jell-o

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Monday, February 27.

Breakfast

Cream of wheat

Fried potatoes

Cream and sugar

Bread and butter

Dinner

Baked beans

Sauted potatoes

Bread and butter

Pork

Boiled cabbage

Apple tapioca

Supper

Cold beans

Bread and butter

Boiled rice

Cranberry sauce

Chocolate cake.

Tuesday, February 28.

Breakfast

Cornmeal mush

Rice croquettes

Cream and sugar

Bread and butter

Lunch

Cold beans

Cake

Bread and butter

Apples

Supper

Cream of potato soup.

Boiled potatoes

Creamed onions

Mashed squash

Bread and butter

Cranberry sauce.

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Wednesday, March 1.

Breakfast

Cornmeal mush

Cream and sugar

Creamed potatoes

Bread and butter

Lunch

Bread and butter

Cheese

Cranberry sauce

Cake

Apples

Supper

Boiled potatoes

Creamed carrots

German taost

Honey

Thursday, March 2.

Breakfast

Oatmeal

Cream and sugar

Sauted potatoes

Bread and butter

Lunch

Bread and butter

Hard-cooked eggs

Cranberry sauce

Chocolate cake

Supper

Boiled potatoes

Squash

Muffins and butter

Honey

Apple snow.

Friday, March 3.

Breakfast

Oatmeal

Cream and sugar

Crackers

Warmed-up potatoes

Milk gravy

Lunch

Bread and butter
Apple sauce

Cold squash
Fig cookies

Supper

Boiled potatoes
Cold slaw

Codfish gravy
Bread and butter

Postum.

Saturday, March 4.

Breakfast

Oatmeal
Crackers
Sausage

Cream and sugar
Bread and butter
Fried potatoes

Lunch

Bread and butter
Crackers

Dried beef
Raspberry sauce

Apples

Supper

Boiled potatoes
Bread and butter

Bean soup
Honey

Sunday, March 5.

Breakfast

Cornmeal mush
Sausage

Cream and sugar
Fried potatoes

Bread and butter

Dinner

Boiled potatoes

Dried beef gravy

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Creamed carrots	Bread and butter
Heston Pudding	
Lunch	
Bread and butter	Apples

Monday, March 6

Breakfast

Cornmeal mush	Cream and sugar
Sausage	Fried potatoes
Bread and butter	

Dinner

Baked beans	Pork
Potatoes	Muffins and butter

Molasses

Supper

Bread and butter	Boiled rice
Raspberry sauce	Cake with raisin filling

Tuesday, March 7.

Breakfast

Cornmeal mush	Cream and sugar
Rice croquettes	Bread and butter

Lunch

Cold beans	Bread and butter
Apple butter	Cake

Supper

Boiled potatoes	Squash
Eggs in nests	Bread and butter

Postum.

The second series was for two weeks from March 8 to March 21 and here the effort was made to introduce proteids more largely into the diet. The table summarizing this series follows.

Materials	amt. in lbs.	cost	Percentage in 1 pound			cal.	Amounts used.		
			prot.	fat	carb.		prot.	fat	carb.
Beefsteak	1	.13	21.3	7.9		730	.213	.079	
Dried beef	$\frac{3}{32}$	.01	30.0	6.5		840	.03	.006	
Sausage	$\frac{1}{2}$	.05	27.9	40.4		2225	.139	.202	
Salt pork	$\frac{5}{32}$	.02	8.4	67.0		2984	.002	.135	
Salt Cod	$\frac{1}{4}$	.03	25.4	.3		410	.063		
Canned salmon	1	.15	21.8	12.1		915	.218	.121	
Fresh fish	$\frac{1}{2}$	.08	19.2	2.1		445	.096	.01	
Eggs	$3\frac{15}{16}$	.45	13.4	10.5		720	.528	.414	
Milk	$15\frac{1}{4}$	.30	3.3	4.0	5.0	325	.519	.63	.78
Cream	$1\frac{7}{32}$	.05	2.5	18.5	4.5	910	.031	.231	.056
Butter	$3\frac{1}{4}$	.82	1.0	85.0		3605	.032	2.76	
Cheese	1	.18	28.8	35.9		2055	.288	.359	
Buttermilk	4	.05	3.0	.5	4.8	165	.12	.02	.192
Jell-o	$\frac{1}{8}$	.05	91.4	.1		1705	.114		
Cottolene	1	.12		100		4220		1.	
Canned tomatoes	2	.12	1.2	.2	4.0	105	.032	.008	.192
Canned peas	$1\frac{9}{16}$	.10	3.6	.2	9.8	255	.056	.003	.152
Navy beans	$1\frac{3}{8}$	.04	22.5	1.8	59.6	1605	.31	.024	.818
Carrots	$\frac{7}{16}$	.01	1.1	.4	9.3	210	.005	.002	.042
Cabbage	$2\frac{1}{8}$	.06	1.6	.3	5.6	145	.034	.006	.119
Potatoes	19	.28	2.2	.1	18.4	385	.418	.019	3.496
Parsnips	$\frac{7}{32}$.01	1.6	.5	13.5	300	.04	.001	.036
Bread	19	1.15	9.3	1.2	52.7	1205	1.767	.228	10.013

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Materials	amt. in lbs.	cost	prot.	fat	carb.	cal.	prot	fat.	carb.	cal
Crackers	2	.20	9.8	9.1	73.1	1925	.196	.192	1.462	3850
Cornstarch	$\frac{1}{2}$	.02			90.0	1675			.125	209
Cornmeal	$1\frac{1}{4}$	.02	9.2	1.9	75.4	1655	.094	.052	.824	1931
Flour	3	.06	10.6	1.1	76.3	1655	.318	.033	2.289	4995
Oatmeal	1	.06	16.1	7.2	67.5	1860	.167	.073	.662	1860
Raisins	$\frac{1}{2}$	.01	2.6	3.3	76.1	1605	.003	.004	.095	200
Apples	$7\frac{11}{16}$	.17	.4	.5	14.2	290	.031	.038	1.093	2228
Oranges	3	.33	.8	.2	11.6	240	.024	.006	.348	720
Rhubarb	$\frac{1}{2}$	.03	.6	.7	3.6	105	.003	.004	.018	52
Canned peaches	2	.15	.7	.1	10.8	220	.014	.002	.216	440
Apple butter	$1\frac{3}{4}$	.10	.2	.8	37.2	730	.004	.014	.651	1276
Molasses	$1\frac{1}{2}$	.18	2.4		69.3	1290	.036		1.039	1935
Sugar	4	.28			100.	1860			4.0	7440
Vinegar	1	.02			Accessory					
Salt	$\frac{1}{2}$	.01			"					
Totals		\$5.90					5.945	6.676	28.718	93452

Nutritive ratio, 1:7.3

Menus.

Wednesday, March 8.

Breakfast

Oatmeal

Cream and sugar

Creamed potatoes

Bread and butter

Lunch

Bread and butter
 Cake

Apple butter
 Apples

Fudge

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Supper

Cream of tomato soup

Boiled potatoes

Molasses

Dry toast

Codfish gravy

Thursday, March 9.

Breakfast

Oatmeal

Creamed potatoes

Bread

Cream and sugar

Soft-cooked eggs

Butter

Lunch

Bread and butter

Apple butter

Cake.

Supper

Creamed potatoes

Bread and butter

Creamed cabbage

Stewed raisins

Friday, March 10

Breakfast

Oatmeal

Fried potatoes

Bread

Cream and sugar

Creamed dried beef

Butter

Lunch

Bread and butter

Stewed raisins

Soft-cooked eggs

Cake

Supper

Mashed potatoes

Macaroni

Bread

Fried fish

Tomato Sauce

Butter

Jell-o with custard.

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Saturday, March 11.

Breakfast

Oatmeal

Cream and sugar

Crackers

Potato cakes

Steak-brown sauce

Bread and butter

Lunch

Bread and butter

Cheese

Apple butter

Cake

Supper

Bread and butter

Creamed potatoes

Postum

Whipped cream

Crackers

Sunday, March 12

Breakfast

Oatmeal

Cream and sugar

Bread and butter

Dried beef gravy

Molasses

Dinner

Boiled potatoes

Beef stew

Tomatoes

Bread and butter

Corn starch

Chocolate sauce

Lunch

Canned peaches

Whipped cream

Bread and butter.

V-5-1-4
~~SR 7-15-1904~~

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Monday, March 13.

Breakfast

Cornmeal mush
Sauted potatoes
Butter

Cream and sugar
Griddle cakes
Molasses

Dinner

Baked beans
Boiled potatoes
Gingerbread

Pork
Johnny cake and butter
Foamy sauce

Supper

Cold beans

Bread and butter

Welsh rarebit

Tuesday, March 14

Breakfast

Bread and milk
Sauted potatoes

Butter
Poached eggs

Lunch

Bread and butter
Cheese

Cold beans
Gingerbread

Supper

Cream of potato soup
Creamed carrots

Crackers
Bread and butter

Postum

Wednesday, March 15

Breakfast

Oatmeal	Cream and sugar
Fried potatoes	Bread and butter
Soft-cooked eggs	

Lunch

Bread and butter	Cheese
Canned peaches	Gingerbread

Supper

Boiled potatoes	Sausage
Bread and butter	Fried parsnips

Orange

Thursday, March 16

Breakfast

Oatmeal	Cream and sugar
Sauted potatoes	Creamed codfish.
Bread	Butter

Lunch

Bread and butter	Hard-cooked eggs
Gingerbread	Oranges

Supper

Boiled potatoes	Sausage
Creamed cabbage	Bread and butter

Canned peaches.

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Friday, March 17.

Breakfast

Oatmeal
Creamed potatoes

Cream and sugar
Bread and butter

Lunch

Bread and butter
Gingerbread

Cheese
Oranges

Supper

Boiled potatoes
Creamed peas

Salmon croquettes
Bread and butter

Heston Pudding

Saturday, March 18.

Breakfast

Oatmeal
Soft-cooked eggs
Bread

Cream and sugar
Creamed potatoes
Butter

Lunch

Bread and butter
Fancy cookies

Salmon
Oranges

Sunday, March 19.

Breakfast

Cornmeal mush
Crackers

Cream and sugar
Creamed salmon

Bread and butter

Dinner

Cream of pea soup

Crackers

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Mashed potatoes

Bread

Oranges

Soft-cooked eggs

Butter

Cookies

Lunch

Bread and butter

Oranges

Molasses

Cookies

Monday, March 20

Breakfast

Cornmeal mush

Potato cakes

Bread

Cream and sugar

Poached eggs

Butter

Dinner

Baked beans

Boiled potatoes

Pork

Bread and butter

Molasses

Supper

Cold beans

Creamed salmon

Bread and butter

Apple sauce

Cookies

Tuesday, March 21.

Breakfast

Oatmeal

Potatoes

Cream and sugar

Steak and eggs

Bread and butter

Lunch

Bread and butter

Cookies

Cold beans

Oranges

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Supper

Boiled potatoes

Steak

Creamed peas

Bread and butter

Postum

Cookies

A comparison of the two series follows.

	Cost per person		Nutritive Ratio	Calories per day per person
	Per week	Per day		
I	\$1.00	\$.14 $\frac{2}{7}$	1:9.1	2531.5
II	.98 $\frac{1}{8}$	.14 $\frac{1}{2}$	1:7.3	2225.0

The cost of the materials was always approximately, sometimes exactly, \$1.00 per week per person, this being the entire cost of board, exclusive of the fuel and the work necessary, which was probably two and a half hours a day for the three.

As to the energy values, although one dietary study is not conclusive, this seems to indicate that Atwater's calculation, given above, is too high as regards calorie value and too low as to nutritive ratio. This is on the assumption of the values for "a woman at moderately active work" for the cases here described. That there was no deficiency felt in the diet is shown by the fact that if there had been such a need felt, it would have been made known and so supplied. All the subjects were in good health during the entire time of the experiments, notwithstanding the fact that the weather was severe and they were obliged to be out in it every day. At the close of the experiments the subjects were in practically the same condition of body and health as at the beginning and the weights about the same,

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showing that this ration was sufficient to maintain the body weight and the condition of the system. A large amount of study was being done by the two students during the whole of this time, involving somewhat late hours, which would call for nervous force. The work done by the students was up to the average of both.

While not attempting to disprove Professor Atwater, the following conclusions may be drawn,- that the student bachelor dietary especially if largely vegetarian, does not conform to the accepted dietary standards; that the lighter dietary satisfies the desires of the body; that the less amount of proteids does not interfere with the ability to maintain good health and mental working ability and also gives power to maintain the body temperature, even when much exposed to cold.