

AN ABSTRACT OF THE THESIS OF

~~Jessie Audrey Harper~~-----for the ~~M. S.~~-----in ~~Economics~~-----  
(Name) (Degree) (Major)

Date Thesis presented ~~May 11, 1939~~----

Title ~~A Comparative Study of Quantities of Food Consumed by~~  
~~Men and Women Students at Oregon State College~~-----

Abstract Approved: [REDACTED]  
(Major Professor)

A comparative study of the quantities of food consumed by men and women students at Oregon State College was carried on over two seven-day periods. The two living groups selected for study were Waldo Hall, with 241 women registered and the men's dormitory, with 341 men students registered. Data on quantities of food consumed by the men students were collected in the kitchen and dining room for the men's dormitory group during the first seven-day period. The data on the quantities of food consumed by the women were collected during the second seven-day period.

The same set of menus was used for the two seven-day periods with those few exceptions which allowed for customary practices of the two groups. No attempt was made to change the quantity, quality, or method of preparing and serving the food in the two respective living groups. Variables were limited by the fact that all of the dormitories at Oregon State College are under the direction of the Director of Dormitories.

Results of the study show that the men students consumed more food than the women students. The men consumed 32.71% more meat at dinner, 74.85% more of the main dish at luncheon, 80.39% more hot cooked vegetables served as part of the main course at luncheon and dinner, 71.89% more potatoes at dinner, 4.16% less desserts at luncheon, 0.42% more desserts at dinner, and 4.41% more of the fruit served at breakfast. The men consumed 301.44% more prepared dry cereal at breakfast, 249.84% more hot cereal, 62.94% more bread, 4194% more butter, 370.79% more cream at breakfast and dinner, 51.68% more milk, 16.20% more hot chocolate, 30.69% less coffee at breakfast, and 124.31% more coffee at dinner. Data show that the men consumed 193.65% more sugar (based on consumption on Sunday), 13.92% more salad (body of salad only), and 118.77% more lettuce.

A COMPARATIVE STUDY OF QUANTITIES OF FOOD  
CONSUMED BY MEN AND WOMEN STUDENTS  
AT OREGON STATE COLLEGE

by

JESSIE AUDREY HARPER

A THESIS

submitted to the  
OREGON STATE COLLEGE

in partial fulfillment of  
the requirements for the  
degree of


MASTER OF SCIENCE

May 1939





OLD BADGER BOND

APPROVED:

  
Head of Department of Institution Economics

In Charge of Major

  
Chairman of School Graduate Committee

  
Chairman of State College Graduate Council

### ACKNOWLEDGMENTS

The writer wishes to extend her gratitude to Miss Melissa Hunter, head of the Department of Institution Economics and Director of Dormitories at Oregon State College, for her constructive criticism, inspiration, and valuable advice during the planning of the study, as well as the writing of the thesis.

To Miss Georgia C. Bibee, the writer expresses appreciation for her advice and assistance in helping to make the study possible.

The writer is indebted to the members of the kitchen staff of Waldo Hall and of the Memorial Union Dining Service for their willing cooperation and assistance in collecting data for the study.

## TABLE OF CONTENTS

Chapter	Page
I Introduction	1
A. Purpose of Study.....	1
B. Scope of Study.....	2
C. Duration of Study.....	3
D. Quality and Quantity of Food.....	3
E. Adequacy of Diet.....	4
F. Definition of "Food Consumed"....	5
II Review of Literature	8
III Plan of Study	19
A. Preliminary Plans.....	19
B. Equipment for the Study.....	20
C. Laboratory Set-Up.....	20
D. Typical Menus.....	24
E. Method of Collecting Data.....	25
IV Results	32
V Summary, Conclusions and Recommendation	62
Appendix	
Menus.....	69
Food Consumption Charts.....	72
Bibliography.....	93



## LIST OF TABLES

Table	Page
1 Comparison of Quantities of Dinner Meats Consumed by Men and Women Students.....	33
2 Comparison of Quantities of Main Dish at Luncheons Consumed by Men and Women Students.....	34
3 Comparison of Quantities of Potatoes Consumed by Men and Women Students.....	35
4 Comparison of Quantities of Luncheon Vegetables Consumed by Men and Women Students	36
5 Comparison of Quantities of Vegetables Consumed by Men and Women Students at Dinner.....	37
6 Comparison of the Total Quantity of Vegetables Consumed by Men and Women Students During the Two Seven-Day Periods, Respectively.....	37
7 Comparison of Quantities of Breakfast Fruits Consumed by Men and Women Students	38
8 Comparison of Quantities of Luncheon Desserts Consumed by Men and Women Students.	39
9 Comparison of Quantities of Dinner Desserts Consumed by Men and Women Students.	40
10 Comparison of Quantities of Prepared Breakfast Cereals Consumed by Men and Women Students.....	41
11 Comparison of Quantities of Hot (Cooked) Cereal Consumed at Breakfast by Men and Women Students.....	42
12 Comparison of Quantities of Breakfast Breads Consumed by Men and Women Students	44

### List of Tables

Table		Page
13	Comparison of Quantities of Luncheon Breads Consumed by Men and Women Students	44
14	Comparison of Quantities of Dinner Bread Consumed by Men and Women Students.....	45
15	Comparison of Average Quantities of Bread Consumed by Men and Women Students Over the Two Respective Seven-Day Periods (Daily Consumption).....	45
16	Comparison of Quantities of Butter Consumed at Breakfast by Men and Women Students.....	46
17	Comparison of Quantities of Butter Consumed at Luncheon by Men and Women Students.....	47
18	Comparison of Quantities of Butter Consumed at Dinner by Men and Women Students	47
19	Comparison of Quantities of Butter Consumed by Men and Women Students Over the Two Respective Seven-Day Periods (Daily Consumption).....	47
20	Comparison of Quantities of Cream Consumed at Breakfast by Men and Women Students.....	48
21	Comparison of Quantities of Cream Consumed at Dinner by Men and Women Students	49
22	Comparison of Average Quantities of Cream Consumed by Men and Women Students at Breakfast and Dinner.....	50
23	Comparison of Quantities of Milk Consumed at Breakfast by Men and Women Students...	50
24	Comparison of Quantities of Milk Consumed at Luncheon by Men and Women Students....	51

### List of Tables

Table		Page
25	Comparison of Average Quantities of Milk Consumed by Men and Women Students at Breakfast and Luncheon.....	52
26	Consumption of Hot Chocolate by the Men and Women Students.....	53
27	Comparison of Quantities of Breakfast Coffee Consumed by Men and Women Students	54
28	Comparison of Quantities of Coffee Consumed by Men and Women Students for Dinner.....	54
29	Comparison of Quantities of Breakfast Sugar Consumed by Men and Women Students	55
30	Comparison of Quantities of Dinner Sugar Consumed by Men and Women Students.....	56
31a	Comparison of Average Quantities of Sugar Consumed by Men and Women Students at Breakfast and Dinner.....	56
31b	Comparison of Average Quantities of Sugar Consumed by Men and Women Students at Breakfasts, Luncheons, and Dinners.....	56
32	Comparison of Quantities of Salad Consumed by Men and Women Students.....	57
33	Comparison of Quantities of Lettuce Consumed in Salads by Men and Women Students	59
34	Miscellaneous Foods.....	60



## LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Comparison of Quantities of Meat Consumed at Dinner by Men and Women Students .....	33a
2	Comparison of Quantities of Vegetables (Including Potatoes) Consumed by Men and Women Students	37a
3	Comparison of Quantities of Breads, Cereals, and Sugar Consumed by Men and Women College Students .....	45a
4	Comparison of Quantities of Dairy Products Consumed by Men and Women College Students .....	53a



# OFF BUREAU BONE

## INTRODUCTION

A COMPARATIVE STUDY OF QUANTITIES OF FOOD  
CONSUMED BY MEN AND WOMEN STUDENTS  
AT OREGON STATE COLLEGE

Chapter I

INTRODUCTION

A. Purpose of Study

The responsibility for the provision of housing and board for at least a portion of the students who attend most colleges and universities falls upon the administrative officers of the respective institutions.

At Oregon State College three dormitories are maintained. Waldo and Margaret Snell, with optimum capacities of 252 and 141, respectively, are the two halls for women students. The men's dormitory, comprising Cauthorn, Buxton, Poling, Weatherford, and Hawley Halls, accommodates 340 men students.

A dining room is maintained for each of these three dormitory groups. Thus, the men and women students take their meals in their own respective dining rooms and do not eat together.

The writer, a graduate assistant in the Department of Institution Economics, School of Home Economics,



became interested in the comparison of the quantities of food consumed by the men and women students in colleges and universities. Since no comparison could be found that had been done by previous workers, this study was planned and carried to completion.

It is hoped that the study herein reported may not only make clear the comparisons of the amounts of food consumed by the men and women students at Oregon State College, but that it may serve as a guide to institutional managers as they plan, purchase, and supervise the preparation of food for similar student groups.

#### B. Scope of Study

The study herein reported aims to compare the amounts of food consumed by selected groups of men and women students at Oregon State College. Waldo Hall, for women, and the men's dormitory were the two living groups selected to study. These were the two largest living groups on the campus, and it was felt that they represented a good cross section of the four thousand students who attend the college. At the time of this study there were 241 college women living in Waldo Hall and 341 college men living in the men's dormitory. All of the college classes and nearly every school on the campus were represented in

these two groups. Therefore, it was believed that a comparable percentage of the amount of food consumed by the men and women students could be reached.

#### C. Duration of Study

Data for the study herein reported were collected over two seven-day periods. The first period, January 31 to February 6, 1938, was spent collecting data on the food consumed by the men students living in the men's dormitory. The second period, February 28 to March 6, 1938, was spent collecting the same type of data for the women students living in Waldo Hall. This study had to be carried on over the two seven-day periods because it was physically impossible for the writer to collect data from both groups at the same time. The weeks of January 31 to February 6, for the men, and February 28 to March 6, for the women, were selected because they seemed to represent typical periods and were convenient times for the investigator. Data collected for each of the seven-day periods begin with breakfast on Monday and end with supper on Sunday night.

#### D. Quality and Quantity of Food

The writer in no way attempted to change the quality

or the quantity of food prepared for the respective living groups during the study. The quality seemed excellent and was representative of that served from year to year in the dormitories as shown by examination of the menu file. The quantities of food prepared for the respective groups of students were those amounts issued from the store room for the cooks to prepare.

The menus used were as nearly alike in the two dining rooms as possible, and yet have the meals served as was customary in the respective dining halls.

#### E. Adequacy of Diet

In the study herein reported the writer has in no way attempted to determine the nutritional adequacy of the meals served. It is true, however, that the nutritional adequacy should be of primary importance to the institutional manager. Studies previously done in the School of Home Economics at Oregon State College indicate that an adequate diet is provided in the dormitories.

Grace (8) found that the diet in one of the women's dormitories (Margaret Snell Hall) at Oregon State College was adequate in calories, protein, calcium, phosphorus, and iron. She states that an adequate amount of vitamins was supplied by the large quantities of fruits and vegetables consumed.



Hansen (9) in her graphical study of the food cost of the department of dormitories over a two-year period states, "Comparison of the percentage of expenditure of the food dollar for the five groups with Gillett's recommendation shows either close agreement or variation in the direction of this flexible standard. A pre-dominance of protective foods is apparent from this nutritional economic analysis." Hansen also found that when the expenditures for the various food groups were measured by the standard given by Sherman (14) they were "desirable".

The findings by Grace (8) and Hansen (9) are of particular significance because of the fact that the dormitories, at the time of this study herein reported, were under the same efficient managers as they were at the time the two above mentioned studies were made. The records show a continuation of the same type of menu and the same quality of food purchased and served.

#### F. Definition of "Food Consumed"

This study aims not to determine the number of calories consumed by the respective student groups, but is a comparative study of the amounts of food served to the men and women students in their respective dining rooms.

All calculations of amounts of food consumed by the students are made on the basis of those amounts of food sent to the dining room minus the amounts of food returned to the kitchen in the serving bowls or serving dishes. If desserts, salads, or milk at vacant places were not used they were returned to the kitchen. These amounts returned were subtracted from the total quantities served to calculate the amounts consumed by the respective groups.

Since this study is a comparison of the amounts of food served to the respective student groups and not a study of caloric intake, edible plate wastes are not considered as "waste" in this study but are calculated as "food consumed". The food which made up this edible plate waste must have been necessary for the satisfaction of the students, otherwise it would not have been served to them.

Although the institutional manager might be interested in knowing how the food she serves is being supplemented between meals, and how it affects the amounts consumed at regular meals, the writer of the study herein reported has made no attempt to determine the character or quantity of food thus consumed. As already stated, only that food served at the three regular meals in the dining rooms of

the above mentioned dormitories is considered in the calculations.



REVIEW OF LITERATURE

AMERICAN

OF THE BIOGRAPHICAL BOARD



## Chapter II

### REVIEW OF LITERATURE

The writer, in order to ascertain if any studies similar to the one herein reported had been made by other investigators, sent inquiries to the major colleges and universities throughout the country that maintained institutional management departments. The institutions were selected after examination of courses offered in institution management as shown in their catalogues. They reported that no work of such nature had been done.

In all literature reviewed, no study was found to have as its aim the comparison of the quantities of food consumed by groups of college men and women. The literature herein cited was selected because, in the opinion of the writer, it was most related to the subject of this thesis. Schools of various types, clubs, and every type of philanthropic institution lend themselves to dietary studies, cost studies and various other forms of investigations.

Atwater (1), a pioneer in the field of dietary studies in America, gives much credit for the early dietary investigations to Voit and his associates at the

Munich School of Physiologists, and also to Liebig, all of Germany; as well as to Playfair in England, Payen in France, and to Mollescott in Italy. Atwater's early writings include reviews of work done in many parts of the world. After intensive work on dietary studies in this country, he published a bulletin in 1895, entitled, "The Chemistry and Economy of Food". He made the following statements regarding "calories of energy".

"It has been assumed that a woman required, on the average, eight-tenths as much as a man for corresponding muscular activity. I have assigned the dietary of a man with light exercise to a woman at moderate work, and that of a man with light physical exercise to a woman with light work, thus providing for a woman rather more than eight-tenths as much as man. Very likely, eight-tenths would accord more nearly with the actual needs."

Atwater (2) studied the dietaries in the institutions for the insane in New York at the request of the Commission of Lunacy of that state. In the account of his study in 1901 he also summarized the work of Dunlap of 1898-99, in the Scotch prisons, and that of Richards and Wentworth in 1896, in the city institutions of Boston. As early as 1901, Atwater states in this report the lack of dietary investigations in such institutions and their importance for the future. Atwater found that an average

of 3,420 calories and 114 grams of protein per capita was consumed daily. He concluded that dietaries are valuable because they have to do with the physiological, pecuniary, and humanitarian aspects of living.

Bevier (3), a pioneer in home economics work, reports dietary studies which involved three hundred people who lived in sorority, church, and cooperative houses. Twelve studies were carried out according to approved methods.

She summarizes nine of these twelve studies and reports a minimum per capita cost of 37.1 cents daily and a maximum per capita cost of 40.3 cents daily. The average daily protein intake was 69.5 grams. Waste was found to be a variable factor. Bevier felt that much candy and between meal eating tended to influence the results of the study.

Hawley (10) reports the results of two investigations initiated by the Bureau of Home Economics, United States Department of Agriculture. One of these consisted of the study of the records of 35 colleges and universities to determine the food consumption in students' residence halls. Seventeen sororities and fraternities, as well as eighteen dormitories and practice houses, were selected for the study. The other investigation initiated by the Bureau of Home Economics included 192 records of food consumed from

colleges and universities all over the United States, in an attempt to determine the nutritional needs of college students. Hawley summarizes the results of 12 similar published studies, and brings them together in tabular form for comparison with the two above mentioned studies, and records from 23 residence halls at Washington State College by Hunt. In this comparison the twelve published studies showed somewhat less energy, protein, calcium, and iron with about the same per cent of phosphorus as do those reports of Hunt and Hawley. Examination of the energy distribution among the various food groups indicated that on the whole, meat, fish, eggs, fatty foods, and sweets are used in ample quantities for a well balanced meal; while milk, cream, cheese, fruits, and vegetables play too small a part in the diet. It was found that the use of cereals was variable. The writer concludes that college students, as a general rule, receive diets that meet their needs. Iron is the factor that is in greatest danger of being secured in insufficient quantities. Hawley also concludes that a comparison of the nutritive value of diets planned by dietitians with diets planned by those who were untrained in food values shows that those planned by the former group are more satisfactory in every respect.



Kramer and Grundmeier (11) reported on a survey of 20 living organizations for college students at Kansas State Agricultural College. Ten sororities, seven fraternities, and three boarding houses for men made up this group of living organizations which supplied food for 465 students. After studying each organization for a month, it was concluded that the protein supply was sufficient and the energy was probably adequate. Calcium, phosphorus, and iron were sufficient for only about half of the groups. There was doubt as to the adequacy of the vitamins and cellulose. It was the conviction of the investigators that a diet adequate in food value might well have been provided in each of the organizations studied, if care had been used in selecting the food. All of these living organizations had untrained managers.

Grace (8) studied the amounts of food consumed by women in nine sorority houses, two home management houses and one women's dormitory (Margaret Snell Hall) at Oregon State College. Each group was studied over a period of seven days. The inventory method was used and calculations were expressed in shares as given by Rose (12). Grace found the calories, protein, and phosphorus sufficient in all groups. Calcium was sufficient in all but one group, a home management house. Iron was found to be low in two sorority houses and in one home management house.

Grace stated that an adequate supply of vitamins was indicated by the large amounts of fruits and vegetables used by the two groups. She found that the food served to the dormitory group was adequate in calories, protein, phosphorus, calcium, and iron, when compared to the standards as given by Rose (13), and concluded that the vitamins must be adequate considering the quantities of fruits and vegetables consumed.

Grace found the cost of the food ranged from \$.34 to \$0.49 per capita per day. She concluded that an adequate diet can be furnished and satisfactory standards can be maintained, by any organized group of college girls in this particular locality, at a cost not exceeding \$.49 per capita per day for food materials, if a knowledge of nutrition is used along with expedient purchasing.

Rose (13), writes in the discussion of the nutrition of high school boys and girls, "It will cost just as much to feed a girl as a boy although she eats a third less calories, because the calories she does eat must carry nearly as much building and regulating material as his, and her normal food intake is less sustained by the demand of hunger and more through the appeal which the food makes to the eye."

- Dickins (6) studied the food consumption of boys and

girls in six typical agricultural high school dormitories of Mississippi. The actual food eaten by eighteen 15-16-17-year old boys, twenty-four 15-16-17-year old girls, seventeen 18-19-year old boys, and sixteen 18-19 year old girls was calculated for thirteen consecutive meals

"Girls ate about 40 per cent less than boys. This was true of building and regulatory material. as well as energy material. The calories the girls ate did not carry any more building and regulatory material than that of boys, in fact, less calcium in both age groups and less phosphorus in the 15-16-17 year age group than that of the boys."

Dickins writes the comparison of this study with the statement of Rose (13):

"On this basis it is readily seen that girls' dietaries were more often inadequate than boys'. This may be, at least, in part, explained by the fact that the diets in these schools are too largely composed of starches, fats, and sweets. Large quantities of a diet of this type must be eaten in order to get sufficient quantities of nutrients. Girls normally do not consume as much as boys for they are smaller in size and are less active. A starch, fat, sweet type of diet often causes girls to cut down on their food consumption for fear of getting 'too fat'. Girls need foods that are relatively richer in building and regulatory material than boys for they eat less."

The average daily cost of food actually consumed for the 15-16-17 year old group of boys was 31 cents; for girls of the same age, 20 cents. For the 18-19 year old group of boys, the cost was 30 cents; while for the girls the cost was 22 cents.

O'Leary (12) collected data concerning the cost per capita per day for food materials, overhead, labor and management from some of the dining halls in colleges and universities throughout the Middle West and Pacific coast. She recognized that the data is not complete but assembled it because of the dearth of literature on the subject. She found wide variation of percentages and amounts of money expended for various purposes. In one instance the costs of raw food for both men and women were given, respectively, for one school. The daily per capita cost for food materials was \$0.72 for the college men and \$0.50 for the college women. Thus, 44% more is spent for the food materials for the men than for the women. The amounts spent for food at this particular school were the highest reported in the study. These figures are for a privately endowed school on the Pacific Coast.

Hansen (9) carried out a graphical study of the board income dollar and of the division of the food dollar for the department of dormitories at the Oregon State College. This study covered the expenditures for two consecutive years, namely, 1931-2 and 1932-3, and includes both the men's and women's dormitories. From the study of the students' board dollar she found that for the two respective years 42.93¢ and 42.31¢ were spent for raw food.



Hansen, in her graphic analysis of the food dollar, checked her results with the standards set by Gillett and Sherman. She writes:

"Comparison of the percentages of expenditures of the food dollar for the five food groups with Gillett's recommendation shows either close agreement or variations in the direction indicated by this flexible standard. A predominance of 'protective foods' is apparent from this nutritional-economic analysis.

"According to the limits defined by Sherman as 'low, medium, and high', the Department of Dormitories rates 'low' (analytically, not nutritionally) in percentage spent for meats, poultry and fish; 'medium' in percentage spent for fats, sugars, etc.; and 'high' in percentage spent for fruits and vegetables, milk, cream and cheese. According to Sherman's comments on these conventional limits set for the grouping of American dietaries, such rating of expenditures for the various food groups as was given the Department of Dormitories is desirable.

"In applying the test of Sherman's two 'rules' it was found the amounts spent for the two groups--milk, cream and cheese, and fruits and vegetables--were compared with that spent for meats (taken as 100% base) 108% and 124% were spent for milk, cream, and cheese; and 149% and 156% were spent for fruits and vegetables in the two years studied. This comparison is also a favorable indication of carefully planned meals.

"The application of these three tests to the distribution of the expenditures for food over the two-year period showed favorable comparisons with the suggested recommendations."

Bogert (4) states that it is doubtful if sex has any direct effect on energy requirements. She explains that women usually require less energy, not only because of

their smaller total size, but also because of the larger proportion of inactive tissue in their bodies.

Chaney and Ahlborn (5) in their book written in 1934 have accepted the conventional average weights of 70 kilograms for the average man and 56 kilograms for the average woman. They also accept and print the following table taken from a bulletin written in 1895 by Atwater (1).

	Total Calories	Calories per Kilogram of Body Weight
Woman with light muscular exercise	2400	43
Woman with moderate muscular work	2700	48
Man without muscular work	2700	38
Man with light muscular work	3000	43
Man with moderate muscular work	3500	50
Man with severe muscular work	4500	64

It is interesting to note that in 1934 as in 1895 the same number of total calories is assigned to these different activities, and that the totals are calculated on the basis of total body weight.

DuBois (7), in a discussion of normal basal

metabolism, states:

"There has been no satisfactory explanation for the difference in metabolism of the sexes. Many investigators have assumed that women have a lower basal than men because they have a thicker layer of subcutaneous fat and better protection against heat loss. Perhaps the musculature plays some role but in the male sex there is a marked difference in the musculature of athletes and non-athletes without the corresponding variation in the level of the metabolism. It is particularly interesting that the sex deviation appears in early childhood when the build, bodily activity, and muscular efficiency are practically the same. It seems necessary to ascribe the lowered metabolism to a sex difference in the endocrine system."

PLAN OF STUDY



### Chapter III

#### PLAN OF STUDY

##### A. Preliminary Plans

This study on the comparison of the quantities of food consumed by men and women students at Oregon State College was planned with the assistance of the head of the Department of Institution Economics, School of Home Economics, who is also director of dormitories at Oregon State College. Only through the close cooperation of these two departments is it possible to carry to completion a study of the type herein reported.

The typewritten menus for the weeks of this study, namely January 31 through February 6 and February 28 through March 6, were sent to the respective dormitory kitchens from the office of the director of dormitories in the usual manner. The cooperation of the kitchen employees in each group was solicited. The aim of the study as well as the methods to be used were explained.

All questions that the employees raised were answered and the entire plan made clear to them before the investigation was begun. They seemed interested in the study and were eager to assist in collecting the data.

Preliminary studies were carried out in the men's

dining room on several foods such as potatoes, milk, and bread, to test the practicability of such an investigation. It was found that some foods, especially beverages, could be checked more satisfactorily by measure than by weight.

#### B. Equipment for the Study

Fairbanks platform scales and small portable kitchen scales were used throughout the study. All weights were taken in pounds and ounces. The large quantities of foods weighed made the use of platform scales necessary. The rapidity of work and constant moving from one work center to another made the small scales indispensable. To insure accuracy, the scales were checked at intervals throughout the study by an object of known weight.

All measuring was done in the one cup and one, two, and four quart measures which were used in the respective kitchens by the cooks for measuring ingredients for their formulas.

The data for each day at the respective institutions were recorded on separate forms. This made for speed and accuracy in collecting the data as well as in classifying and evaluating them.

#### C. Laboratory Set-Up

The kitchen and dining room at the Memorial Union

Dining Service was the laboratory during the first week of the study, when data were being collected regarding the amounts consumed by the men students. The second week was spent in the kitchen and dining room at Waldo Hall collecting data on the amounts of food consumed by the women students.

During these two seven-day periods the writer arrived at the kitchen at five-thirty each morning, soon after the employees reported for work. Careful weighing and measuring of food was carried on throughout the day until seven-thirty each evening.

Students, who live in the dormitories and need work, are employed to do the table setting and act as waiters and waitresses in their respective halls. They are paid a definite wage per hour and do not work a certain amount of time for their meals. Thus, in all calculations, student employees are considered as students and not as kitchen employees. Food consumed by all other employees is not included in the calculations of the amounts of food consumed by men and women students.

Variables are somewhat limited in the study herein reported by the fact that the entire dormitory system at Oregon State College is under the supervision of the Director of Dormitories. This makes for uniformity and

coordination on every hand. The director purchases all food stuffs, transacts all major business for the system, and personally supervises the food preparation in the women's dormitories. She is assisted by the supervisor of the Memorial Union Dining Service, of which the men's dining hall is a unit. The same formulas are used in each dormitory kitchen throughout the system.

Mention might be made of the fact that both dining rooms are pleasant, well lighted, and have ample space for the respective groups served. The dining room at Waldo Hall is located on the ground floor of the building. Dining facilities are not provided in the men's dormitory. Students living in each of its five units have their meals in a common dining room in the Memorial Union Building, located diagonally across the street from the men's dormitory.

The time and manner in which the meals are served are standardized throughout the dormitory system. On week days, breakfast is served from 7:00-7:30, lunch at 12:15, and dinner at 6:15. On Sundays, breakfast is served from 8:00-8:30, dinner at 1:00 and supper from 5:45 until 6:15.

All meals at Waldo Hall are served at tables by waitresses with the exceptions of breakfast each morning and supper on Sunday night which are served cafeteria



style. In the men's dining hall all meals are served at the tables by waiters.

Before each meal the tables are set with the necessary silver, dishes, and cold food. When the students are seated the hot food is brought directly from the kitchen by student employees. Each employee serves two tables of ten each. The host style of food service is used throughout the dormitory system. The main dish is placed in front of the host. The accompanying foods, such as vegetables are served by the person on the left of the host. The first plate served is passed around the table to the person at the right of the host.

When the food at a table has been served the student employees return to the kitchen for any additional food that is available for refills. Refills are available in the men's dining room and the Waldo Hall dining room under ordinary circumstances on the following: the main dish at luncheon, gravy, vegetables served at dinner (including potatoes), breads at breakfast, luncheon, and dinner; cream and milk at breakfast, cream at dinner, cereals at breakfast, and beverages served at Sunday night supper. Refills are available on vegetables which are often served as part of the main course at luncheon to the men students. Refills on tea are allowed at luncheon in the Waldo Hall dining room. Relishes as

well as jams and preserves are supplied in quantities large enough for refills. Salad dressings, too, are usually available for sufficient refills in both dining halls, but seldom used.

One pat of butter is served to the men students at breakfast with refills allowed. Two pats per capita are allowed for luncheon and dinner in the men's dining hall. At breakfast in Waldo Hall the women serve themselves the amount of butter they desire as they pass along the cafeteria counter. At luncheon and dinner one pat is served to each woman student and waitresses supply refills as desired.

Certain foods are not prepared in quantities large enough for refills. This is true of such foods as salads, desserts, cocktails, fruits at breakfast, milk served at lunch and some meat and fish sauces.

#### D. Typical Menus

It has been explained that the central organization of the dormitories makes for standardization throughout the dormitory system. This seems apparent, not only through the high quality of food served, but also in the type of menus planned. In order to limit as many variables as possible in this study, a set of typical menus

was planned for one week. Although this set of menus was planned for both the men and women students, customary practices of the two groups have been observed. For instance, when certain main dishes are served at lunch a hot vegetable is served as a supplement in the men's dining room but not in the women's. This custom has been observed throughout this study. The absence of this vegetable will be noticed on the week's menu for the women students.

Tea is always included in a choice of luncheon beverages in the women's dormitories, but not in the men's dining room. It has been found from experience in the past that so few men drink tea at luncheon that it was impractical to offer it.

At breakfast, any left over bakery products are often served in addition to the particular type of baked product on the menu. This is another customary practice that will be noted on the food consumption charts.

#### E. Method of Collecting Data

Plans for the collection of data for this study were made so that the quality of the food served was not lowered and that no institutional practices were violated.

The general method of collecting data was to record

the weight or measure of the entire quantity of food prepared for each of the two student groups. Where possible this check was made before food was served in the serving bowls or individual dishes. The foods returned to the kitchen or pantry in the serving bowls after the meal was put in one container, to be weighed or measured. These amounts of returned food plus those consumed by the employees were subtracted from the total amounts prepared. Exceptions to this general method will be explained.

At the Memorial Union Dining Service, fresh vegetables were weighed, as purchased, and after preparation but not when cooked and ready for service. To take time to weigh all this food was impractical. It would have disrupted the plan of work among the employees and would have caused an inferior product to be served. For example, when mashed potatoes were prepared for the men's dormitory group, 175 pounds of peeled potatoes were cooked. The capacity of the mixing machine bowl made it necessary to mash these potatoes in three separate portions. Since mashed potatoes deteriorate on standing, they are mashed just before time for serving them. In cases of this kind the investigator recorded all data possible, such as the raw weight of the peeled potatoes, the amount of seasoning and milk added, as well as that amount of potatoes



eaten by the employees and returned to the kitchen. Thus, for the men's dormitory group all necessary data were recorded excepting the total weight of the mashed potatoes. At Waldo Hall, smaller quantities were prepared and it was practical to get all data, including the total cooked weight.

To cope with the above mentioned situation in the kitchen for the men's dormitory group, a plan was worked out whereby all data on a smaller amount of known weight, about 25#, of food was collected. With complete data on the smaller amount and data on the large quantity excepting the total cooked weight, a simple proportion was worked out between the raw peeled weight and the mashed weight of the two quantities. In the case of mashed potatoes, the same proportion of milk and seasonings was added. For all amounts of vegetables calculated by this method, the same amounts of seasonings were added to the small quantities as to the large quantities. For other vegetables as well as potatoes, these amounts were calculated by simple proportion. The investigator believes that under existing circumstances this was the best method to employ when such large quantities of foods were studied.

Most canned vegetables were heated in their own liquid, drained, and seasoned when they were served as a

part of the main course. It was impractical to weigh the total amounts of these canned vegetables as they were ready for service. They were transferred directly from the steam jacketed kettles or large steamer insets into the serving bowls and then taken immediately into the dining room by the waitresses and waiters. Weighing the entire amount before transferring to the serving bowls would have caused unnecessary breaking or mashing of the vegetables and made for a delay in service, causing the vegetables to cool. To determine the total amounts of canned cooked vegetables served, the number of cans used was multiplied by the average net weight or the average net drained weight of one can. When tomatoes were used as the vegetable, the former weight was used; but when vegetables were served, such as buttered peas, beans, or beets, the latter weight was taken as the basis. Any seasonings added to the vegetables were checked for weight, and this amount was added to the total weight of the vegetable to give the total amount of the cooked vegetable. The amount returned to the kitchen in serving bowls and the amounts eaten by the employees were subtracted from the amount prepared to get the total amount consumed by the students in the two respective groups.

All canned vegetables and fruits used in the

dormitories are packed either in #10 or #2 cans, depending on the kind of vegetable or fruit. The average net contents or the average net drained contents were calculated from the study of either five #10 cans or ten #2 cans. This number of cans selected to study was arbitrarily decided. Those foods of which the entire content of the cans were used, such as tomatoes, the net content of each can and the average for the number studied were calculated. Where only the drained weight of the food was used, the cans were weighed before and after being drained of excess liquid. The liquid, as well as the solid portion of the contents of each can, was weighed and checked with the respective total net content of each can. An average net weight or the average drained net weight was calculated for each canned vegetable and fruit used during this study.

Amounts of canned vegetables or canned fruits used for salads were calculated by multiplying the average net drained weight by the number of cans used. In the case of gelatine salads, calculations were made on the basis of the weight of the finished product when ready to serve in the lettuce cups.

Weights of canned fruits served as desserts or as the fruit at breakfast were calculated from the average



net weight of the can. The weight of the fruit pits has not been subtracted from any of the fruits served during the two seven-day periods which this study covers, excepting when used in salads and cocktails.

All beverages were checked by measure to find the amounts consumed. At Waldo Hall and in the men's dining hall, the coffee consumption for this study was calculated on the basis of the difference between the amount in the urn at the beginning and the end of the meals. At Waldo Hall coffee at breakfast and dinner is poured directly from the urn into the cups and served directly to the students who have ordered it. The same method is used in the men's dining hall at breakfast. At dinner the coffee is poured from the urns into pitchers and served in cups from the service stands in the dining room. The pitchers are not returned to the pantry with left over coffee at the end of the meal since the coffee could not be utilized. No check was made on the amount left in the pitchers, and not served.

This fact must be considered when the comparison of the coffee consumed for dinner at the men's dining hall is compared with that consumed at Waldo Hall.

The sugar consumption tables indicate the amounts of sugar consumed by the students during the meals from the



sugar bowls only and do not include that sugar used in cooking. Sugar was emptied from the sugar bowls and weighed after each meal, and a known amount replaced.

The amount of butter used was calculated by subtracting the number of pats returned to the pantry unserved from the number sent to the dining room. Standard butter cutters were used in both kitchens. The number of pats per pound was used in calculating the amounts consumed.

Although not included in tabular form in this thesis, the total plate waste of each meal was examined, weighed, and recorded. This was done in order to check on any foods that were wasted in excess. References to these foods have been made in the results.

Students living in the dormitories are required to take their meals in their respective dining rooms, and no refund on board is made for absences of less than one week. Regular attendance at meals is voluntary, however. The numbers of students served at each meal were recorded. Per capita averages are calculated from the actual number present at the respective meals and not from the number registered in the dormitories.



OF THE BIOLOGICAL BOARD

# RESULTS

## Chapter IV

RESULTS

In order that the data herein reported might be summarized and clear-cut relationships shown between the quantities of food consumed by men and women students, the following tables and figures have been prepared. For convenience, foods of a like or similar nature served at either breakfast, luncheon, or dinner have been grouped together for the seven-day period.

The tables that follow give the average per capita consumption by the men and women students with the calculation of the per cent more or less consumed by the men students.

Data not included on the figures and tables are given on the food consumption charts in the appendix.

Meats Consumed at Dinner

The amounts of meat issued to the dormitory kitchens from the central storeroom of the dormitory system are limited. More is allowed for the men students than for the women students.

Data of this study show that the average per capita consumption of the meats at dinner for the seven-day period was 32.17% more for the men than it was for



the women. Table 1 shows that the men consumed 25.50% to 49.41% more meat than the women. Figure 1 also shows the comparative consumption of meats for the respective seven-day periods.

Table 1

Comparison of Quantities of Dinner Meats  
Consumed by Men and Women Students

Day of Week	Kind of Meat	Oz. per capita Women	Men	% More or Less Consumed by Men
Monday	Roast Lamb	1.9608	2.7976	42.68 more
Tuesday	Swiss Steak (Gravy)	4.9577	6.3515	28.11 more
Wednesday	Roast Beef	2.2681	3.2780	44.53 more
Thursday	Ham	2.0260	3.0270	49.41 more
Friday	Fillet of Cod	3.9898	5.0550	26.70 more
Saturday	Veal Steak	2.8654	3.5961	25.50 more
Sunday	Creamed Chicken	4.7577	6.1879	30.06 more
Total		22.8255	30.2931	
Average		3.2608	4.3276	32.71 more

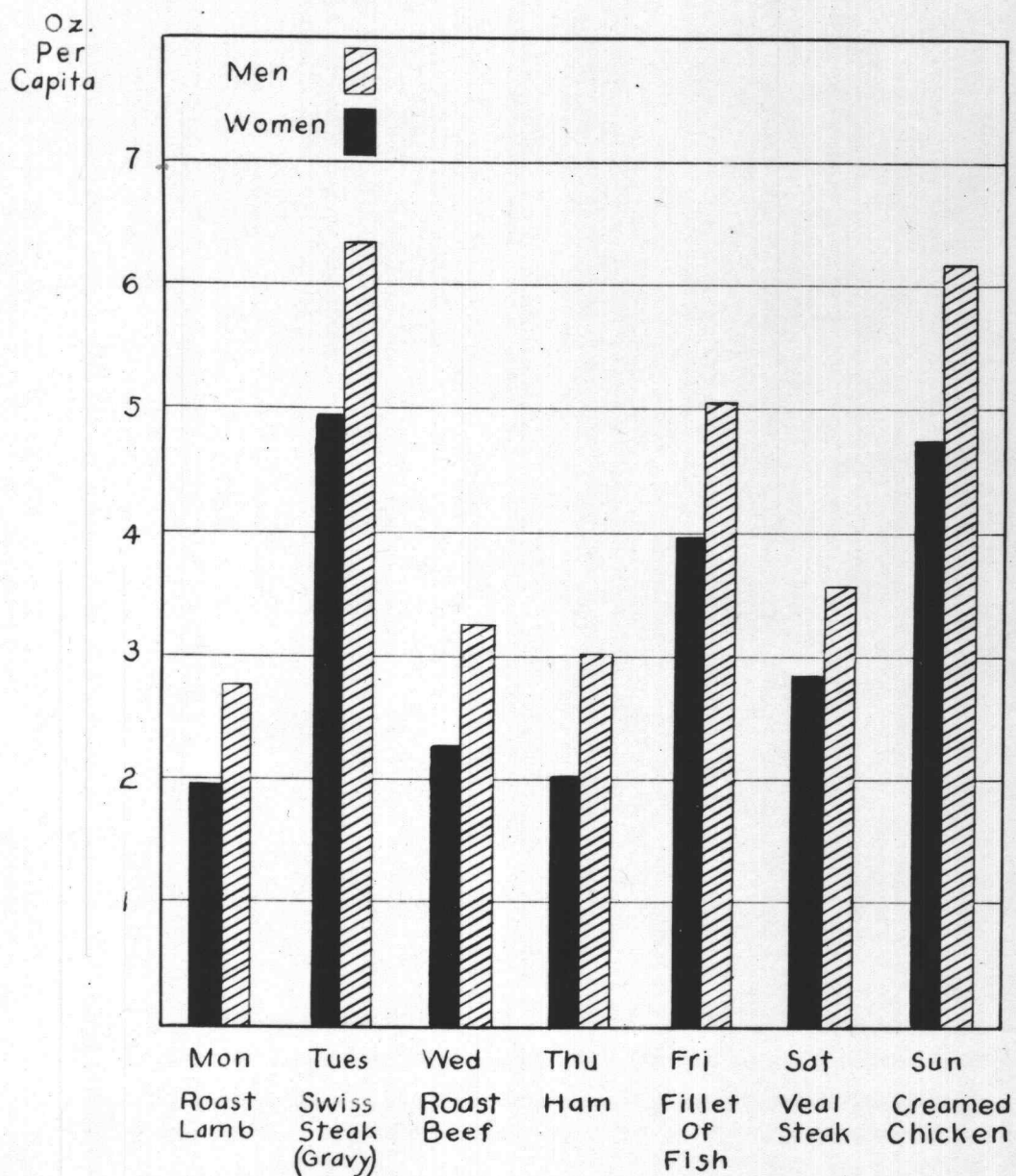
Consumption of Main Dish at Luncheon

The men consumed 74.85% more of the main dish at luncheon, as shown on Table 2. Data show that 163.64% more Italian spaghetti was consumed by the men students on Thursday while .34% less sandwiches was consumed by the men at Sunday night supper. This appears to be true for two reasons. First, the women seem to like sandwiches better than do the men students. Second, observations during the study showed that the women students



FIG. 1

COMPARISON OF QUANTITIES OF MEAT  
CONSUMED AT DINNER BY MEN AND  
WOMEN COLLEGE STUDENTS



wasted more sandwiches. Perhaps this was due to the fact that the women students took the number they thought they wanted as they served themselves cafeteria style. The men took them from plates at the table only as they were ready for more.

The only limitation for the main dish at luncheon was on wieners, Monday. Mention might be made that the data on wieners is given on the weight as purchased.

Table 2

Comparison of Quantities of the Main Dish at Luncheons Consumed by Men and Women Students

Day of Week	Name of Food	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Wieners	2.6540	3.2641	22.99 more
Tuesday	Vegetable-Meat Stew	7.3665	13.0954	77.77 more
Wednesday	Tuna Souffle	5.6783	13.0478	129.78 more
Thursday	Italian Spaghetti	4.1364	10.9053	163.64 more
Friday	Vegetable Soup	5.7417	12.4865	117.47 more
Saturday	Creamed Dried Beef	7.1436	8.5000	18.99 more
Sunday	Sandwiches	5.4355	5.4172	.34 less
Total		38.1560	66.7163	
Average		5.4509	9.5309	74.85 more

Potatoes Consumed at Dinner

The dinner menus, of the dormitory system, usually include potatoes. They are prepared in quantities large enough to allow refills. This study shows that the men consume 71.89% more potatoes than do the women students.

Table 3 shows that the men consumed 112.62% more creamed potatoes than did the women, while they consumed only 24.57% more baked potatoes. The size of the baked potatoes was not uniform and this may account for the fact that the consumption was more nearly alike.

Table 3

Comparison of Quantities of Potatoes  
Consumed at Dinner by Men and Women Students

Day of Week	Method of Preparation	Oz. per capita Women	Oz. per capita Men	% More or Less Consumed by Men
Monday	Mashed	4.9386	8.2574	67.20 more
Tuesday	Browned	4.5446	7.4121	63.10 more
Wednesday	Parsley	3.7532	6.6103	76.13 more
Thursday	Candied Sweet Potatoes	4.5368	8.2643	82.16 more
Friday	Creamed	3.6042	7.6634	112.62 more
Saturday	Baked	4.8821	6.0814	24.57 more
Sunday	Mashed	3.9531	7.6433	93.35 more
Total		30.2126	51.9322	
Average		4.3161	7.4189	71.89 more

Vegetables Consumed at Luncheon

As has been explained, the policy of the Department of Dormitories is to include a vegetable on the menu for the men when certain luncheon dishes are served in the men's dining hall. The luncheon menus during this study have included this extra vegetable on the men's menu for Monday, Wednesday, Thursday, and Saturday. Sauer kraut for luncheon on Monday was the only vegetable served, as such, to the women at noons during the week. Therefore,

it is not surprising to note from Table 3 and Figure 2 that the men consumed 438.32% more vegetables at luncheon for the week than the women students.

Table 4

Comparison of Quantities of Luncheon Vegetables  
Consumed by Men and Women Students

Day of Week	Food	Oz. per capita Women	Men	% More or Less Consumed by Men
Monday	Sauer Kraut	3.6777	4.8929	30.26 more
Wednesday	Buttered Peas		5.0024	
Thursday	Buttered Cabbage		4.5207	
Saturday	Buttered Turnips		5.3819	
Total		3.6777	19.7979	
Average (7 days)		.5254	2.8283	438.31 more

Vegetables Consumed at Dinner

Data on this study show that the men consume 22.92% more dinner vegetable than the women. These data as shown on Table 5 and Figure 2 compare the amounts of the cooked vegetable served as part of the main course.

The men consumed from 10.23% less to 69.48% more hot cooked vegetable at dinner than did the women students. Since cauliflower was the only vegetable that was not provided in quantities large enough for refills it seems that likes and dislikes for the various vegetables must have figured in the amounts consumed by the two respective groups.



Table 5

Comparison of Quantities of Vegetables  
Consumed by Men and Women Students

Day of Week	Kind of Vegetable	Oz. per capita Women	Oz. per capita Men	% More or Less Consumed by Men
Monday	Buttered Beets	3.8659	3.4702	10.23 less
Tuesday	Stewed Tomatoes	4.2958	4.3879	2.14 more
Wednesday	Carrots (buttered)	2.6383	4.4713	69.48 more
Thursday	Cauliflower (Buttered)	2.7532	3.3183	20.51 more
Friday	Squash	4.1071	4.8382	17.80 more
Saturday	Spinach	2.6038	3.8827	49.11 more
Sunday	String Beans	2.6432	3.7898	43.38 more
Total		22.9073	28.1584	
Average		3.2725	4.0226	22.92 more

Hot Cooked Vegetables Consumed at Luncheon and Dinner

Data of this study show that the men consumed 80.39% more than did the women. Table 6 shows a comparison of the total weekly per capita consumption consumed by the men and women students.

Table 6

Comparison of the Total Quantity of Vegetables  
Consumed by Men and Women Students  
During the Two Seven-Day Periods Respectively

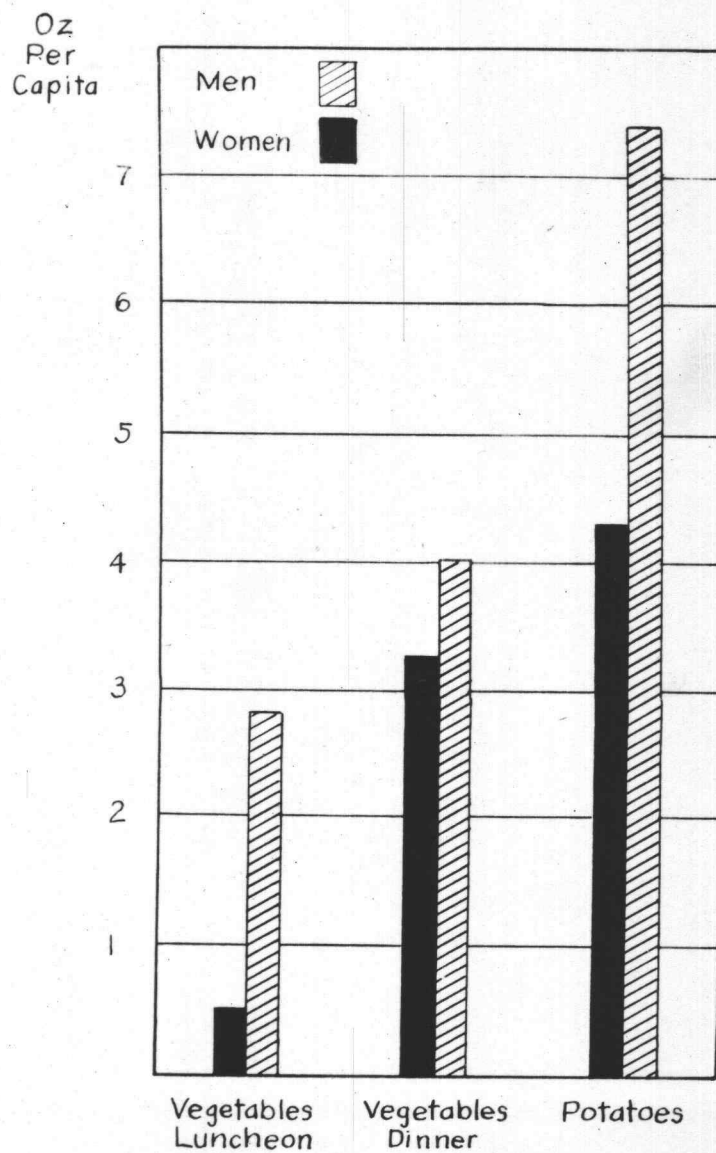
Meal	Oz. per capita per week Women	Oz. per capita per week Men	% More or Less Consumed by Men
Luncheon	3.6777	19.7979	438.32 more
Dinner	22.9073	28.1584	22.92 more
Total	26.5850	47.9563	80.39 more

FIG. 2

37a

COMPARISON OF QUANTITIES OF VEGETABLES  
(INCLUDING POTATOES) CONSUMED BY MEN  
AND WOMEN COLLEGE STUDENTS

Daily Average For 7 Day Period



### Fruits Consumed at Breakfast

Fruits served at breakfast are limited to one serving. Therefore, the size of the serving determines the percent more or less consumed by the men students. The men students consume 4.41% more breakfast fruit than do the women. Table 7 shows that in four instances the men consumed less breakfast fruit than the women.

Table 7

Comparison of Quantities of Breakfast Fruits  
Consumed by Men and Women Students

Day of Week	Kind of Fruit	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Oranges, A.P.	5.3920	5.9000	9.42 more
Tuesday	Dried Prunes (Stewed)	3.2875	4.2691	33.43 more
Wednesday	Bananas, A.P.	4.9891	4.6901	5.99 less
Thursday	Sliced Peaches	3.6200	3.5779	1.16 less
Friday	Apricots	4.1544	3.7491	9.76 less
Saturday	Oranges, A.P.	6.3448	6.0829	4.13 less
Sunday	Grapefruit, A. P.	5.5425	6.5315	17.84 more
Total		33.3303	34.8006	
Average		4.7615	4.9715	4.41 more

### Desserts Consumed at Luncheon

The amount of luncheon dessert consumed by the students is largely dependent upon the size of the serving. Table 8 shows that the men students consumed 4.16% less



luncheon dessert than the women students. It will be noticed that on Friday when a cottage cheese-pineapple salad and butterscotch rolls were on the menu, no special dessert was included. On Sunday, too, a large fruit salad made the serving of a special dessert unnecessary. Therefore, in the calculation of the average daily per capita of luncheon desserts, five instead of seven has been used as the divisor.

On Tuesday the men consumed 51.73% less brownies than did the women. This can be explained by the fact that the brownies made for the women students were not only larger but contained dates which added much to their weight. On Saturday the men consumed 50.79% more prunes than the women because larger servings were dished for them.

Table 8

Comparison of Quantities of Luncheon Desserts  
Consumed by Men and Women Students

Day of Week	Dessert	Oz. per capita Women	Men	% More or Less Consumed by Men
Monday	Fruit Cup	4.6446	4.2136	9.28 less
Tuesday	Brownies	1.7511	.8452	51.73 less
Wednesday	Peanut Cookies	1.7270	1.6209	6.14 less
Thursday	FFloating Island	4.6636	3.9911	14.42 less
Friday	(Butterscotch rolls - no dessert served) (Heavy salad			
Saturday	Canned Italian Prunes	2.8830	4.3472	50.79 more



Table 8 (continued)

Comparison of Quantities of Luncheon Desserts  
Consumed by Men and Women Students

Day of Week	Dessert	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Sunday	(Fruit Salad served instead of dessert)			
Total		15.6693	15.0180	
Average (5 meals)		3.1339	3.0036	4.16 less

Desserts Consumed at Dinner

A comparison of the amounts of dinner desserts shows that the men consume 0.42% more than the women. The daily consumption is shown on Table 9. It is true that the size of the servings limits the amounts of desserts consumed. No refills are provided.

Table 9

Comparison of Quantities of Dinner Desserts  
Consumed by Men and Women Students

Day of Week	Dessert	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Maple Nut Mold)	4.1676	2.9702	28.73 less
	Whipped Cream )	.3631	.4970	36.88 more
Tuesday	Cake with Chocolate Icing	2.9484	2.9696	.72 more
Wednesday	Cocoanut Cream Pie	4.4098	5.1356	16.46 more
Thursday	Ice Cream	2.9797	3.1892	7.03 more
Friday	Chocolate Pudding	3.8520	4.3495	12.92 more
	Whipped Cream	.5612	.4790	14.65 less
Saturday	Apple Betty	5.4292	5.2150	3.24 less
Sunday	Ice Cream	2.8732	2.8949	.76 more
Total		27.5842	27.7000	
Average		3.9406	3.9571	.42 more

### Prepared Cereal Consumption

Data of this study show that men students consume 301.44% more prepared breakfast cereal than do the women. This figure seems significant because of the fact that cereal is one of the foods that is not limited. Table 10 and Figure 3 show the comparative consumption of prepared cereal for the two groups. It is interesting to note that on Friday the men students consumed over 1000% more corn-flakes than the women students.

Table 10

Comparison of Quantities of Prepared Breakfast Cereals  
Consumed by Men and Women Students

Day of Week	Kind of Cereal	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Corn Flakes	.0738	.3566	383.20 more
	Puffed Wheat	.0398	.3088	675.88 more
	Shredded Wheat	.0284	.0652	129.58 more
		.1420	.7306	414.51 more
Tuesday	Shredded Wheat	.0695	.4136	495.11 more
	Corn Flakes	.0642	.4317	572.43 more
		.1337	.8453	532.23 more
Wednesday	Puffed Rice	.0601	.1127	87.52 more
	Corn Flakes	.0819	.2509	206.35 more
	Bran Flakes	.1257	.4261	239.06 more
		.2677	.7897	194.99 more
Thursday	Puffed Wheat	.0550	.1255	128.00 more
	Bran Flakes	.0750	.3460	361.33 more
	Corn Flakes	.0300	.2738	812.66 more
		.1600	.7453	361.81 more
Friday	Grapenuts	.3626	.5161	42.33 more
	Bran Flakes	.0549	.3226	487.61 more
	Corn Flakes	.0275	.3047	1008.00 more
		.4450	1.1434	156.94 more

Table 10 (continued)

Comparison of Quantities of Prepared Breakfast Cereals  
Consumed by Men and Women Students

Day of Week	Kind of Cereal	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Saturday	Shredded Wheat	.0828	.3057	269.20 more
	Bran Flakes	.0621	.3731	500.81 more
	Corn Flakes	.0414	.2642	538.16 more
		.1863	.9430	406.17 more
Sunday	Grapenuts	.1429	.4972	247.94 more
	Bran Flakes	.0588	.4199	614.12 more
	Puffed Rice	.0167	.1215	627.54 more
		.2184	1.0386	375.55 more
Total		1.5531	6.2359	
Average (7 days)		.2219	.8908	301.44 more

Cooked Cereal Consumption

The men students consumed 249.84% more cooked cereal than did the women students as shown on Table 11 and Figure 3. Data show that the men students consumed from 171.66% to 495.21% more.

Table 11

Comparison of Quantities of Hot (Cooked) Cereal  
Consumed at Breakfast by Men and Women Students

Day of Week	Kind of Cereal	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Wheat Flakes	.5177	1.8089	249.41 more
Tuesday	Wheat Hearts	.6417	1.9071	197.19 more
Wednesday	Rolled Oats	.4098	1.3732	235.09 more
Thursday	Wheat Hearts	.5500	1.8657	205.76 more
Friday	Wheat Flakes	.4725	1.9032	302.79 more
Saturday	Rolled Oats	.6828	1.8549	171.66 more
Sunday	Wheat Hearts	.3026	1.8011	495.21 more
Totals		3.5771	12.5141	
Average		.5110	1.7877	249.84 more



### Bread Consumption

Thursday morning was the only breakfast when the men consumed less bread than the women. They consumed 15.53% less.

The men consumed 14.92% less bread for Friday luncheon than did the women. It is true that the butterscotch rolls which were prepared for the women were larger and more were available for them than for the men. The women had all they could consume and some were returned to the kitchen. The men consumed all rolls prepared for them as well as 6# 6 ounces of additional sliced bread.

The men students consumed more bread each day at dinner than the women, with the exception of baking powder biscuits on Sunday. Since more were available for the women Table 14 shows that the men consumed 20.35% less than did the women.

Tables 12, 13, 14, and 15, and Figure 3 show the comparative consumption of breads by the men and women students.

The weight of bread before toasting has been given in instances where toast was served. Weights of all breads served hot were taken before they were heated.



Table 12

Comparison of Quantities of Breakfast Breads  
Consumed by Men and Women Students

Day of Week	Kind of Bread	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Sweet Rolls	1.7727	2.2132	24.85 more
Tuesday	Butterhorns	3.4224	5.0648	47.99 more
Wednesday	Toast and rolls	1.3169	1.6761	27.28 more
Thursday	Doughnuts and Butterhorns	3.7900	3.2015	15.53 less
Friday	Toast	1.0989	1.7670	60.80 more
Saturday	Cinnamon rolls (and toast)	3.2552	4.9223	51.21 more
Sunday	Hot Cakes	2.0000	3.4309	71.55 more
	Toast	.2186	(none)	
Totals		16.8747	22.2758	
Average (7 days)		2.4107	3.1823	32.01 more

Table 13

Comparison of Quantities of Luncheon Breads  
Consumed by Men and Women Students

Day of Week	Kind of Bread	Oz. per capita		% More or Less Consumed by Men
		Women	Men	
Monday	Finger Rolls	2.1232	2.2760	7.19 more
Tuesday	Bread	1.1267	2.9048	157.81 more
Wednesday	Bread	1.2174	2.6328	116.26 more
Thursday	Bread	1.3818	2.7929	102.12 more
Friday	Butterscotch rolls (Includes 6# 6 oz. bread by men)	4.7085	4.0060	14.92 less
Saturday	Bread	.3564	1.7917	402.72 more
Sunda	Bread as toast	1.0745	1.6667	55.11 more
Sunday	(Bread reported in total sandwich weight)			
Totals		11.9885	18.0709	
Average (7 days)		1.7126	2.5816	50.74 more

Table 14

Comparison of Quantities of Dinner Bread  
Consumed by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.2458	2.7202	1006.67 more
Tuesday	.4742	1.7424	267.44 more
Wednesday	.2895	1.7402	501.11 more
Thursday	.1948	1.3183	576.74 more
Friday	.3265	1.3592	316.29 more
Saturday	.0991	1.2182	1129.26 more
Sunday	.0892	.7771	771.19 more
Sunday (Baking powder biscuits)	1.6714	1.3312	20.35 less
Total	3.3905	12.2068	
Average (7 days)	.4844	1.7438	259.99 more

Table 15

Comparison of Average Quantities of Bread  
Consumed by Men and Women Students  
Over the Two Respective 7-Day Periods  
(daily consumption)

	Ounces per capita		% More or Less Consumed by Men
	Women	Men	
Breakfast	2.4107	3.1823	32.01 more
Luncheon	1.7126	2.5816	50.74 more
Dinner	.4844	1.7438	259.99 more
Average	4.6077	7.5077	62.94 more

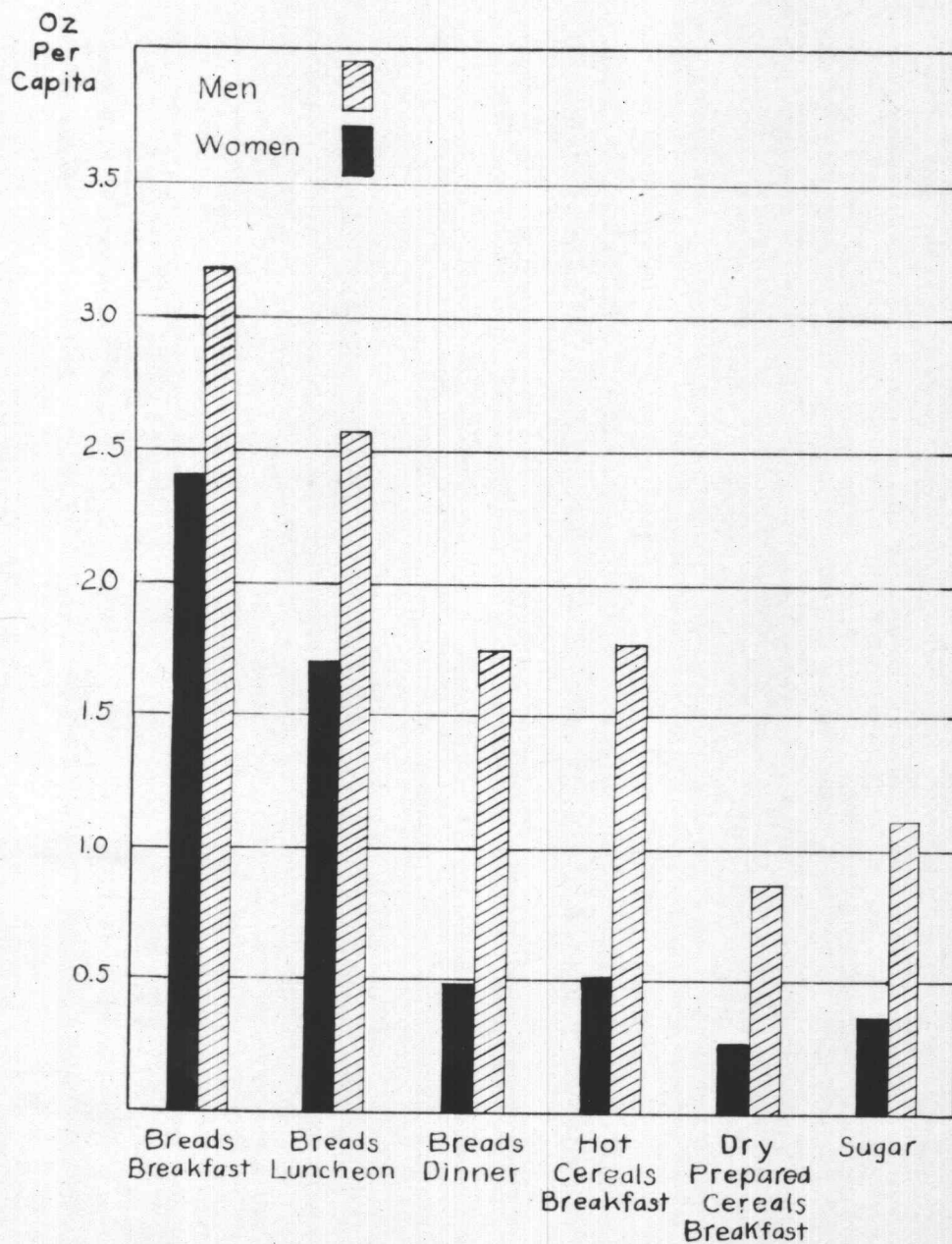
### Butter Consumption

The average daily butter consumption as shown by this study is 1.0612 ounces for the women students and 1.5063 ounces for the men students. Table 19 and Figure 4 show that 41.94% more butter is consumed by the men than by the women.

Tables 16, 17, and 18 show that the men consumed

FIG. 3

COMPARISON OF QUANTITIES OF BREADS,  
CEREALS AND SUGAR CONSUMED BY MEN  
AND WOMEN COLLEGE STUDENTS  
DAILY AVERAGE



4.22% more at breakfast, 48.27% more at lunch, and 73.99% more at dinner than the women. It has been explained that the amount of butter served to the men is limited; this limits the amount consumed by them.

Fluctuation in the amounts consumed from day to day at the same meal will be noted. Butter consumption seems to depend upon other foods served at the various meals. For example, for luncheon Tuesday the butter consumption for the girls is high because they eat much butter with brownies, which were served at that meal. The men students seem to show no particular liking for this combination. Of course, amounts of butter consumed by the men students is quite constant since it is true that they consume nearly the limit at each meal.

Table 16

Comparison of Quantities of Butter  
Consumed at Breakfast by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.4205	.4375	4.04 more
Tuesday	.2888	.4424	53.19 more
Wednesday	.3497	.4049	15.89 more
Thursday	.3450	.3118	19.62 less
Friday	.3626	.3835	5.76 more
Saturday	.3862	.4145	7.33 more
Sunday	.3529	.6022	70.64 more
Total	2.5057	2.9968	
Average	.3435	.3580	4.22 more



Table 17

Comparison of Quantities of Butter  
Consumed at Luncheon by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.3981	.5846	46.75 more
Tuesday	.4525	.5595	23.65 more
Wednesday	.3696	.5904	59.74 more
Thursday	.3091	.5799	87.61 more
Friday	.3722	.6006	61.36 more
Saturday	.4415	.5590	26.61 more
Sunday	(calculated in total sandwich weight)		
Total	2.3430	3.4740	
Average (of 6 days)	.3905	.5790	48.27 more

Table 18

Comparison of Quantities of Butter  
Consumed at Dinner by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.4469	.5863	31.19 more
Tuesday	.2488	.5697	128.98 more
Wednesday	.3106	.5770	85.77 more
Thursday	.3593	.5676	58.22 more
Friday	.2551	.6343	148.65 more
Saturday	.3505	.5244	49.61 more
Sunday	.3192	.5255	64.63 more
Total	2.2904	3.9848	
Average	.3272	.5693	73.99 more

Table 19

Comparison of Average Quantities of Butter  
Consumed by Men and Women Students  
Over the Two Respective 7-Day Periods  
(Daily Consumption)

Meal	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Breakfast	.3435	.3580	4.22 more
Luncheon (6 day average)	.3905	.5790	48.27 more
Dinner	.3272	.5693	73.99 more
Total daily average	1.0612	1.5063	41.94 more

### Cream Consumed at Breakfast

A comparison of the amounts of cream consumed at breakfast shows that 445.45% more cream was consumed by the men than by the women.

It is difficult to account for the large quantity of cream consumed by the men Saturday morning. Since the data on Table 20 show a small milk consumption for Saturday morning, one of the employees must have poured cream in some milk pitchers as waiters returned for refills.

Table 20

Comparison of Quantities of Cream  
Consumed at Breakfast by Men and Women Students

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.1250	.5588	347.04 more
Tuesday	.1230	.6798	452.68 more
Wednesday	.0929	.6690	620.13 more
Thursday	.1300	.7169	451.46 more
Friday	.1429	.6237	336.46 more
Saturday	.1625	1.0570	550.46 more
Sunday	.1092	.5249	380.68 more
Totals	.8855	4.8301	
Average	.1265	.6900	445.45 more

### Cream Consumed at Dinner

Men consumed 215.46% more cream at dinner than did the women during this study. Data does not include the cream used in cooking or cream served as whipped cream. Observations in the men's dining room show that the men students use cream on almost every dessert served to them,

even on ice cream. Cream used on the desserts as well as that used in coffee seems to account for the greater consumption by the men.

Cream served with apple betty on Saturday showed a definite increase in cream consumption in both groups as shown on Table 21.

Table 21

Comparison of Quantities of Cream  
Consumed at Dinner by Men and Women Students

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.0446	.1696	280.27 more
Tuesday	.0495	.2212	346.87 more
Wednesday	.0575	.1813	215.31 more
Thursday	.0519	.1520	192.87 more
Friday	.0663	.2071	212.37 more
Saturday	.1274	.3095	142.94 more
Sunday	.0282	.1019	261.35 more
Total	.4254	1.3426	
Average	.0608	.1918	215.46 more

Consumption of Cream at Breakfast and Dinner

Data show that the men students consumed 370.79% more cream than the women students did at these two meals. Figure 4 and Table 22 give further information as to the amounts consumed.

Table 22

Comparison of Average Quantities of Cream  
Consumed by Men and Women Students  
At Breakfast and Dinner

Meal	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Breakfast	.1265	.6900	445.45 more
Dinner	.0608	.1918	215.46 more
	.1873	.8818	370.79 more

Milk Consumed at Breakfast

Men students consumed 171.11% more milk at breakfast than the women students as shown on Table 23.

At Waldo Hall milk is offered in the choice of beverages. These women serve themselves as they pass along the cafeteria counter. At the men's dining hall milk is placed on each table in a large pitcher, with refills available.

Table 23

Comparison of Quantities of Milk  
Consumed at Breakfast by Men and Women Students

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.3920	1.2941	230.13 more
Tuesday	.4652	1.2876	176.78 more
Wednesday	.4153	1.2606	203.54 more
Thursday	.5100	1.3384	162.43 more
Friday	.3956	1.0108	155.51 more
Saturday	.5379	.8705	61.83 more
Sunday	.3781	1.3260	250.60 more
Total	3.0941	8.3880	
Average	.4420	1.1983	171.11 more



### Milk Consumed at Luncheon

Data of this study show that the men consume .62% more luncheon milk than do the women students. Chart No. 24 shows little variation from day to day. One glass of milk is served to each of the men in the men's dining hall. The women are given a choice of tea or milk at luncheon. The food consumption sheets in the appendix show that milk was preferred by most all of the women students and only a very small amount of tea was consumed.

Table 24

Comparison of Quantities of Milk  
Consumed at Luncheon by Men and Women Students

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	1.0427	1.0208	2.10 less
Tuesday	1.0679	1.0476	1.90 less
Wednesday	.9913	1.0657	7.50 more
Thursday	1.0545	1.0414	1.24 less
Friday	1.0045	.9967	.78 less
Saturday	1.0426	1.0694	2.51 less
Sunday	----	----	
Total	6.2035	6.2416	
Average (6 lunches)	1.0339	1.0403	.62 more

### Milk Consumption

The men students consumed 51.68% more milk than the women students as shown on Table 25. The daily average

per capita consumption was 1.4759 cups for the women and 2.2386 cups for the men. These data do not include milk used in cooking or that used in the preparation of hot chocolate. Figure 4 shows the comparison of the amounts of the dairy products consumed by the men and women students, including milk.

Table 25

Comparison of Average Quantities of Milk  
Consumed by Men and Women Students  
At Breakfast and Luncheon

Meal	Cups per Capita Women	Men	% More or Less Consumed by Men
Breakfast (average of 7 days)	.4420	1.1983	171.11 more
Luncheon (average of 6 days)	1.0339	1.0403	.62 more
Total daily average	1.4759	2.2386	51.68 more

Consumption of Hot Chocolate

On the menus for both the men's and women's dormitories hot chocolate is always included in the choice of beverages for breakfast and Sunday night suppers. The comparative consumption of hot chocolate by the men and women students is shown on Table 26 and Figure 4. This item of food has been included with the dairy products on the latter since it is essentially hot milk which has been flavored with a thick chocolate paste. Data of this study show that 16.20% more hot chocolate is consumed by the men than by

the women students.

Table 26

Consumption of Hot Chocolate  
By the Men and Women Students

Day and Meal	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday Breakfast	.1079	.2059	90.83 more
Tuesday Breakfast	.1573	.2014	28.04 more
Wednesday Breakfast	.1421	.1972	38.77 more
Thursday Breakfast	.1600	.1825	14.06 more
Friday Breakfast	.1758	.2007	14.16 more
Saturday Breakfast	.2069	.2176	5.17 more
Sunday Breakfast	.2017	.2105	4.36 more
Sunday Supper	.9032	.9655	6.90 more
Total	2.0549	2.3813	
Average (per capita per meal)	.2562	.2977	16.20 more

Consumption of Coffee

A comparison of the quantities of coffee consumed at breakfast by the men and women students shows that the men consumed 30.69% less coffee than the women, as shown on Table 27. In both cases the coffee was poured directly from the urn into the coffee cups and the data shown represents the exact quantities served to the respective groups.

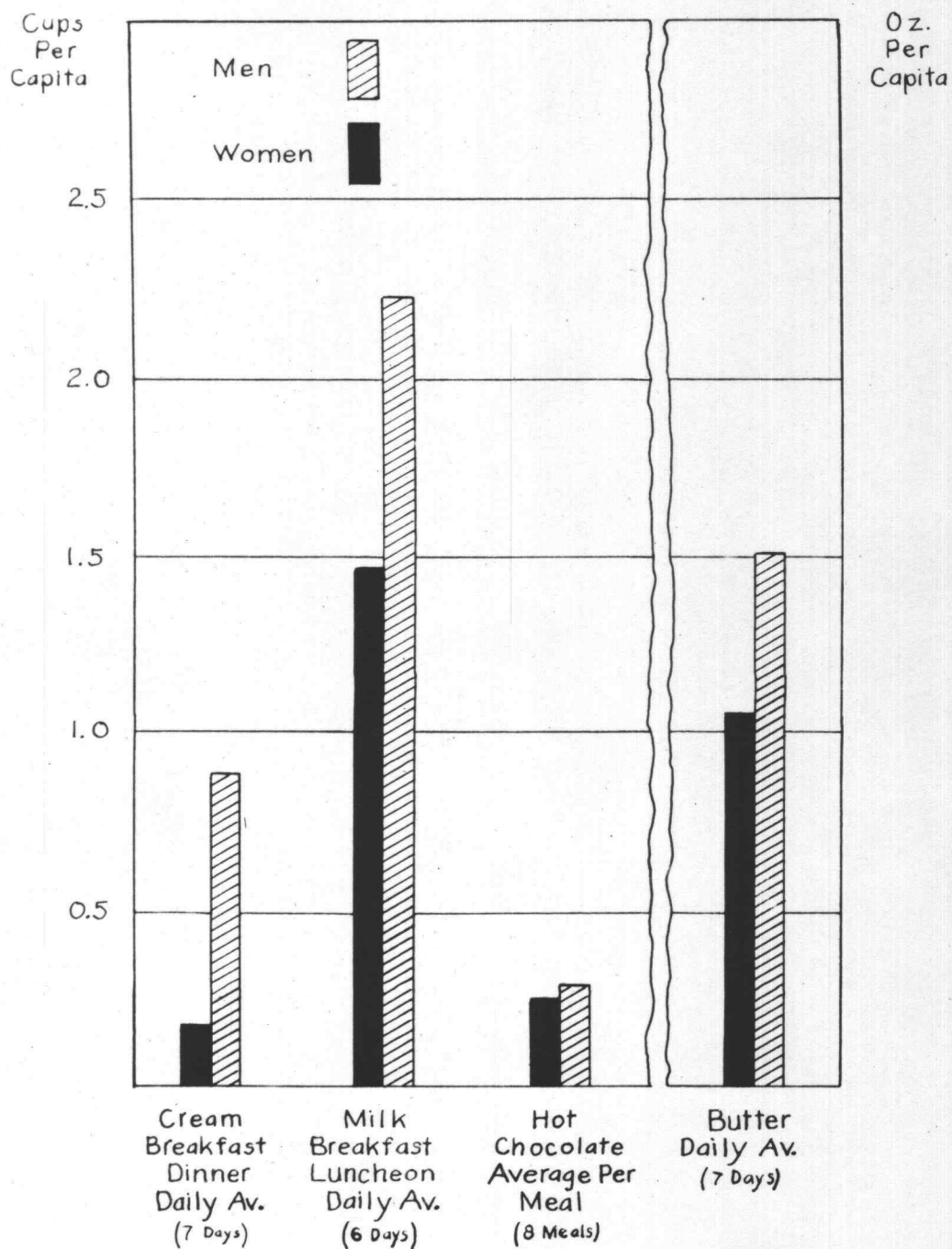
As has already been explained, the data on the quantities of coffee consumed by the men students at dinner represent the quantities taken to the dining room in pitchers. The data for the quantity consumed by the



FIG. 4

53a

COMPARISON OF QUANTITIES OF DAIRY  
PRODUCTS CONSUMED BY  
MEN AND WOMEN COLLEGE STUDENTS





women students is for the coffee served to the women upon their requests. This may in part account for the fact that the data shows that the men students consumed 124.31% more coffee at dinner.

Table 27

Comparison of Quantities of Breakfast Coffee  
Consumed by Men and Women Students

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.4091	.2382	41.77 less
Tuesday	.3102	.2302	25.79 less
Wednesday	.3716	.2254	39.34 less
Thursday	.4200	.2586	38.43 less
Friday	.3740	.2941	21.36 less
Saturday	.4689	.3101	33.87 less
Sunday	.3697	.3315	10.33 less
Totals	2.7235	1.8881	
Average	.3891	.2697	30.69 less

Table 28

Comparison of Quantities of Coffee  
Consumed by Men and Women Students for Dinner

Day of Week	Cups per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.3575	.8095	126.43 more
Tuesday	.3756	.7758	106.55 more
Wednesday	.3481	.7976	129.13 more
Thursday	.3636	.7904	117.38 more
Friday	.3929	.8285	110.87 more
Saturday	.3019	.7818	158.96 more
Sunday	.3568	.8154	128.53 more
Total	2.4964	5.5990	
Average	.3566	.7999	124.31 more

Sugar Consumption

The average daily per capita consumption of granulated sugar from the sugar bowls shows that the men stu-

dents consumed 193.65% more when calculations are based on the average for three meals as shown on Table 31-b and Figure 3. The men consumed 167.56% more when averages for breakfast and dinner are used in the calculations on Table 31-a.

Table 29 and Table 30 show that the men consumed 193.76% more sugar at breakfast and 125.21% more sugar at dinner than the women students. During the study herein reported so little sugar was consumed at luncheon that it did not show in the weights taken, excepting at Sunday night supper (luncheon).

Table 29

Comparison of Quantities of Breakfast Sugar  
Consumed by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.1136	.5651	397.45 more
Tuesday	.1765	.4784	171.05 more
Wednesday	.2732	.5493	101.06 more
Thursday	.2200	.5437	147.41 more
Friday	.2033	.5771	183.87 more
Saturday	.1724	.5850	239.33 more
Sunday	.2101	.7238	244.50 more
Total	1.3691	4.0224	
Average	.1956	.5746	193.76 more

Table 30

Comparison of Quantities of Dinner Sugar  
Consumed by Men and Women Students

Day of Week	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday	.0503	.2798	456.26 more
Tuesday	.1502	.3030	101.73 more
Wednesday	.0811	.3202	294.82 more
Thursday	.0823	.2703	228.43 more
Friday	.2143	.2401	120.39 more
Saturday	.1840	.2395	30.16 more
Sunday	.0845	.2548	201.54 more
Total	.8467	1.9077	
Average	.1210	.2725	125.21 more

Table 31-a

Comparison of Average Quantities of Sugar  
Consumed by Men and Women Students  
At Breakfast and Dinner

Meal	Average Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Breakfast	.1956	.5746	193.76 more
Dinner	.1210	.2725	125.21 more
Total	.3166	.8471	167.56 more

Table 31-b

Comparison of Average Quantities of Sugar  
Consumed by Men and Women Students  
At Breakfasts, Luncheon\*, and  
Dinners

Meal	Average Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Breakfast	.1956	.5746	193.76 more
Luncheon* (Sunday night supper)	.0645	.2720	321.71 more
Dinner	.1210	.2725	125.56 more
Total	.3811	1.1191	193.65 more

\*Since no appreciable amounts of sugar were used at luncheon on week days, by either men or women, this calculation is made on the basis of Sunday night supper.



Salad Consumption

The men students consumed 13.92% more salad than the women students (when the body of the salad is compared). The data on Table 32 does not include the weight of the salad dressing unless it was mixed in by the cooks as in the case of apple-celery, potato, and Waldorf salad. The weight of the lettuce leaf or lettuce bed is not figured in these calculations, except in the instances of head lettuce salad, which was served at dinner on Tuesday and Sunday. The size of the salads served largely controlled the amounts of salad consumed.

Table 32

Comparison of Quantities of Salad  
Consumed by Men and Women Students

Day and Meal	Kind of Salad	Ounces per Capita Women	Ounces per Capita Men	% More or Less Con- sumed by Men
Monday				
Luncheon	Potato	5.7630	8.0267	39.28 more
Dinner	(Celery and Olives served)			
Tuesday				
Luncheon	Apple-celery	3.5480	4.4286	24.82 more
Dinner	Head Lettuce	2.1174	3.4424	62.58 more
Wednesday				
Luncheon	Sliced Orange	2.0870	1.2570	39.77 less
Dinner	Waldorf	3.9404	4.0242	2.13 more
Thursday				
Luncheon	Pear )	2.7273	2.0888	23.41 less
	Cheese)	.2455	.3905	59.06 more
Dinner	Molded Grape- fruit	3.0216	2.9329	2.94 less
Friday				
Luncheon	Pineapple	2.4036	2.2913	4.67 less
	Cottage Cheese	2.9014	2.6757	7.78 less



Table 32 (continued)

Comparison of Quantities of Salad  
Consumed by Men and Women Students

Day and Meal	Kind of Salad	Ounces per Capita Women	Men	% More or Less Con- sumed by Men
Friday Dinner	Tomato (with lettuce)	1.4337	1.2557	12.41 less
Saturday Luncheon	Asparagus (with lettuce)	1.5372	1.6736	8.87 more
Dinner	Fruit and Nut	1.5189 .1509	2.8046 .2085	84.65 more 38.17 more
Sunday Dinner	Lettuce (Russian dressing)	1.3052	2.3824	82.53 more
Supper	Peach Pineapple	1.1694 2.2500	1.2069 2.3372	3.21 more 3.88 more
Total		38.1205	43.4270	13.92 more

Lettuce Consumption

The men consumed 118.77% more lettuce than did the women. Table 33 shows that when lettuce was used as a garnish or salad bed for salads, as much as 823% more was used for the women students than for the women. Judging from past observations, the women seem to eat more lettuce if smaller portions are served to them. The men living in the men's dormitory do not seem to be satisfied with a small salad or one that appears to be small. Therefore, more lettuce is used for their salads. Data show that the men students consumed 118.77% more lettuce than the women students. All data on lettuce is in terms of edible

portions as served.

Table 33

Comparison of the Quantities of Lettuce  
Consumed in Salads by Men and Women Students

Day and Meal	Ounces per Capita		% More or Less Consumed by Men
	Women	Men	
Monday			
Luncheon	.3934	(None used)	
Dinner		(Olives and celery instead of salad)	
Tuesday			
Luncheon	.3167	.7500	136.82 more
Dinner	2.1174	3.4424	62.58 more
Wednesday			
Luncheon	.3130	1.6866	227.87 more
Dinner	.2255	.9668	329.62 more
Thursday			
Luncheon	.2136	1.1953	459.60 more
Dinner	.4286	.9850	129.82 more
Friday			
Luncheon	.1525	1.4084	823.54 more
Dinner	1.6888	2.0615	22.07 more
Saturday			
Luncheon	.2660	1.4447	443.12 more
Dinner	.3113	.8306	166.81 more
Sunday			
Dinner	1.3052	2.3824	82.53 more
Supper	.4032	.6437	59.65 more
Total	8.1352	17.7974	118.77 more

Miscellaneous Foods

The percentage differences show a wide range for the miscellaneous foods shown on Table 34. Data for scrambled eggs, which were served for breakfast Friday morning, show that the men consumed 10.69% more. The amount of this food served was limited.

The men consumed 309.88% more crackers than the women did. The amount of crackers served was not limited.

The men consumed .37% less cherry sauce on their ice cream. The sauce served on the ice cream by the cooks determined the amount consumed.

Data on gravy show that the men consumed 150.20% more on Monday and 196.79% more on Wednesday than did the women students. The amount of gravy served was not limited.

The men consumed 14.53% less tartar sauce than the women. The consumption of the men students was limited by the amounts served.

Further data as to the consumption of miscellaneous foods will be found on Table 34 and on the food consumption sheets in the appendix.

Table 34

Miscellaneous Foods

Day and Meal	Food	Ounces per Women	Capita Men	% More or Less Con- sumed by Men
Monday				
Breakfast	Bacon	.8637	1.0000	15.79 more
Dinner	Gravy	.2046	.5119	150.20 more
	cups		cups	
Dinner	Celery	.9050	.6846	24.35 less
Dinner	Olives	.6089	.4613	24.24 less
Wednesday				
Breakfast	Raspberry jam	.7650	1.5820	106.79 more
Dinner	Gravy	.1873	.5559	196.79 more
	cups		cups	

Table 34 (continued)

Miscellaneous Foods

Day and Meal	Food	Ounces Women	per Capita Men	% More or Less Con- sumed by Men
Friday				
Breakfast	Scrambled Eggs	2.1758	2.4086	10.69 more
Breakfast	Jam	.6209	1.0179	63.94 more
Luncheon	Crackers	.1883	.7718	309.88 more
Dinner	Tartar sauce	.9693	.8285	14.53 less
Sunday				
Breakfast	Syrup	1.6050	2.2044	37.35 more
Dinner	Cherry sauce	1.2019	1.1975	.37 less



SUMMARY, CONCLUSIONS, AND RECOMMENDATION

## Chapter V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATION

Summary

This comparative study of the quantities of food consumed by men and women students at Oregon State College is based on data of the quantities of food consumed over two seven-day periods. During the first seven-day period the amounts of food consumed by the men living in the men's dormitory was recorded. The amounts of food consumed by the women students living in Waldo Hall were recorded during the second seven-day period. These two groups were selected for this comparative study because they were the two largest living groups on the campus and seemed to represent a cross section of the four thousand students who attend Oregon State College. At the time of this study there were 241 women living in Waldo Hall and 341 men living in the men's dormitory.

The same set of menus was used during the two seven-day periods with those few exceptions which allowed for all customary practices of the two groups.

No attempt was made to change the quantity, quality, or the method of serving the food to the respective groups. Variables were limited by the fact that all of

the dormitories at Oregon State College are under the supervision of the Director of Dormitories. Uniformity was apparent in the two institutions, not only in the quality of food used, but also in the methods of preparing, cooking, and serving the food.

Results of this study show that the men consumed:

1. 32.71% more meat at dinner
2. 74.85% more main dish at luncheon
3. 80.39% more of the hot cooked vegetables
  - (a) 438.31% more at luncheon
  - (b) 22.92% more at dinner
4. 71.89% more potatoes at dinner
5. 4.16% less desserts served at luncheon
6. 0.42% more desserts served at dinner
7. 4.41% more fruit served at breakfast
8. 301.44% more prepared (dry) cereal at breakfast
9. 249.84 more hot cooked cereal at breakfast
10. 62.94% more bread
  - (a) 32.01% more at breakfast
  - (b) 50.74% more at luncheon
  - (c) 259.99% more at dinner
11. 41.94% more butter
  - (a) 4.22% more at breakfast
  - (b) 48.27% more at luncheon
  - (c) 73.99% more at dinner

12. 370.79% more cream
  - (a) 445.45% more at breakfast
  - (b) 215.46% more at dinner
13. 51.68% more milk
  - (a) 171.11% more at breakfast
  - (b) 0.62% more at luncheon
14. 16.20% more hot chocolate
15. 30.69% less coffee at breakfast  
124.31% more coffee at dinner
16. 193.65% more sugar (based on consumption Sunday)
  - (a) 193.76% more at breakfast
  - (b) 321.71% more at luncheon (Sunday night supper)
  - (c) 125.21% more at dinner
17. 13.92% more salad (body of salad only)
18. 118.77% more lettuce



## Conclusions

Data of this study show that the men students consumed more food than did the women students. This might be expected since men have a greater total body weight, a larger proportion of active tissues, and a slightly higher basal metabolism than women. From observations it seems that the men students at Oregon State College are apt to have more strenuous muscular activities included in their daily routine than the women students. Also, some difference in the amounts of food consumed by the two groups may be attributed to the fact that women students are more likely to watch their food consumption to keep from gaining weight than are the men students.

The comparison of the quantities of food consumed by the two groups in this study does not agree with the statement of Rose (13) concerning the feeding of high school boys and girls. She states: "It will cost just as much to feed a girl as a boy although she eats a third less calories, because the calories she does eat must carry as much building and regulating material as his.." Data of the study herein reported show that the men students consumed larger quantities of nearly all building and regulating foods as well as more of nearly all fuel foods than did the women students.

The findings of Dickins ( 6 ) from the study of the food consumption of high school boys and girls in agricultural high schools in Mississippi agree more closely with the data of this study although an exact comparison can not be made because of a different way of reporting findings is used for this study. While she questioned the adequacy of the diet, especially for the girls, she found that they consumed 40% less of both building and regulating foods than the boys.

The results of this study show conclusively that under similar circumstances it will cost more to feed men students than women students. The following calculations are based on the weekly per capita averages and are used to show the total quantities of foods that would be consumed by 100 students, over a seven-day period, under similar circumstances. The foods listed are those that would likely be served to any group of students and are those foods that were available for refills, excepting meat for the men students. These calculations are in terms of 100 students, since this number is commonly used as a unit by institutional managers.

	<u>100 Women Consumed</u>	<u>100 Men Consumed</u>
Meats (dinner)	142.66#	189.33#
Main Dish at Luncheon	238.48#	416.98#
Potatoes (dinner)	188.83#	324.58#

	<u>100 Women Consumed</u>	<u>100 Men Consumed</u>
Cooked Vegetables (Served hot at luncheon and dinner)	166.16#	299.73#
Breads and rolls	201.59#	328.46#
Sugar (from bowls during 7 days)	14.25#	38.76#
Hot Cereal (Breakfast)	22.36#	78.21#
Prepared or dry cereal (Breakfast)	9.71# or nearly 20 8-oz. pkg.	38.97# or nearly 78 8 oz. pkg.
Butter (3 meals daily)	44.62#	65.35#
Milk	58.11 gal.	91.25 gal.
Cream	8.19 gal.	39.25 gal.

Institutional managers or anyone concerned with feeding men and women college students must allow for these differences in quantities of food consumed as they plan for, purchase, and supervise the preparation of food for similar student groups. These differences in food consumption by men and women students should especially be considered when determining rates of board.



### Recommendations

A study of the comparative cost of food for men and women college students might well follow this study of the comparison of quantities of food consumed by the two groups.

Dietary studies for men and women students living in the respective dormitories at Oregon State College would be of interest and value.



APPENDIX

OREGON STATE COLLEGE

Department of Dormitories

Women - Menus

February 28-March 6, 1938

	<u>Breakfast</u>	<u>Luncheon</u>	<u>Dinner</u>
<u>Monday</u>	Oranges Cereals Bacon Rolls Jam Coffee-Choc-Milk	Wieners and Sauerkraut Potato Salad Finger Rolls Fruit Cup Milk-Tea	Roast Lamb - Gravy Mashed Potatoes Buttered Beets Celery and Olives (Ripe) Maple Nut Mold--Wh. Cr. Coffee
<u>Tuesday</u>	Dried Prunes Cereals Butterhorns Coffee-Choc-Milk	Meat & Vegetable Stew Apple Celery Salad Brownies Tea-Milk	Swiss Steak Browned Potatoes Stewed Tomatoes Head Lettuce Salad 1000 Is. Dressing Plain Cake-Chocolate Frosting Coffee
<u>Wednesday</u>	Bananas Cereals Toast Jam Coffee-Choc-Milk	Tuna Fish Souffle Sliced Orange Salad Peanut Butter Cookies Milk-Tea	Roast Beef - Brown Gravy Parsley Potatoes Buttered Carrots Jellied Grapefruit Salad Cocoanut Cream Pie Coffee
<u>Thursday</u>	Sliced Peaches Cereals Raised Doughnuts Coffee-Choc-Milk	Italian Spaghetti Stuffed Pear Salad Floating Island Tea-Milk	Fruit Cocktail Baked Ham-Mustard Sauce Candied Sweet Potatoes Buttered Cauliflower Fruit Salad Ice Cream Coffee

OREGON STATE COLLEGE		
Department of Dormitories	Women - Menus	February 28-March 6, 1938
<u>Breakfast</u>	<u>Luncheon</u>	<u>Dinner</u>
<u>Friday</u>		
Canned Apricots	Vegetable Soup	Filet of Cod
Cereals	Cottage Cheese-Pineapple	Tartar Sauce
Toast	Salad	Creamed Potatoes
Scrambled Eggs	Butterscotch Rolls	Whipped Squash
Jam	Tea-Milk	Lettuce Tomato Salad
Coffee-Choc-Milk		Chocolate Cream Pudding
		- Whipped Cream
		Coffee
<u>Saturday</u>		
Oranges	Creamed Dried Beef	Veal Steak - Gravy
Cereals	Don Toast	Baked Potato with Butter
Cinnamon Rolls	Lettuce Asparagus Salad	Spinach
Coffee-Choc-Milk	Italian Prunes	Banana Nut Salad
	Tea-Milk	Apple Betty-Thin Cream
		Coffee
<u>Sunday</u>		
Fresh Grapefruit	Tomato Juice	Toasted Tuna Sandwiches
Cereals	Creamed Chicken with Biscuits	
Hot Cakes	Mashed Potatoes	Toasted Cheese Sandwiches
Syrup	Buttered String Beans	Assorted Fruit Salad
Coffee-Choc-Milk	Lettuce Salad-Russian	Potato Chips
	Dressing	Tea-Cocoa
	Cherry Sundae	
	Coffee	

OREGON STATE COLLEGE  
Department of Dormitories  
Memorial Union Dining Service  
Menus

---

January 31-February 6, 1938

The menus for the men, January 31 to February 6, 1938, were the same as those served to the women students, February 28 to March 6, except for the following exceptions. Milk was not included in the choice of beverages at breakfast for the men students. Luncheons were supplemented on Wednesday with buttered peas, Thursday with buttered cabbage, and Saturday with buttered turnips. Tea was not included on the luncheon menu for the men students.



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Monday

Food	Women (176)	Men (272)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Oranges, A. P.	59# 5 oz.	100# 5 oz.	5.3920 oz.	5.9000 oz.	9.42 more
Cereals					
Cooked	5# 12 oz.	30# 12 oz.	.5177 oz.	1.8089 oz.	249.41 more
Cornflakes	13 oz.	97 oz.	.0738 oz.	.3566 oz.	383.20 more
Shredded Wheat	5 oz.	18 oz.	.0284 oz.	.0652 oz.	129.58 more
Puffed Wheat	7 oz.	5# 4 oz.	.0398 oz.	.3088 oz.	675.88 more
Bacon, uncooked	9# 8 oz.	17#	.8637 oz.	1.0000 oz.	15.79 more
Sweet Rolls	19# 8 oz. (24½ doz.)	37# 10 oz. (47 doz.)	1.7727 oz.	2.2132 oz.	24.85 more
Butter	4# 10 oz.	7# 7 oz.	.4205 oz.	.4375 oz.	4.04 more
Coffee	4½ gal.	4.0 gal.	.4091 cups	.2382 cups	41.73 less
Milk	4½ gal.	22. gal.	.3920 cups	1.2941 cups	230.13 more
Chocolate	1 3/16 gal.	3½ gal.	.1079 cups	.2059 cups	90.83 more
Cream	1 3/8 gal.	9½ gal.	.1250 cups	.5588 cups	347.04 more
Sugar	1# 4 oz.	9# 7 oz.	.1136 oz.	.5651 oz.	397.45 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon - Monday

Food	Women (211)	Men (337)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Wieners	35#	68# 12 oz.	2.6540 oz.	3.2641 oz.	22.99 more
Sauer Kraut	48# 8 oz.	103#	3.6777 oz.	4.8929 oz.	30.26 more
Rolls	28# (28 doz.)	48# (48 doz.)	2.1232 oz.	2.2760 oz.	7.19 more
Butter	5# 4 oz.	12# 5 oz.	.3981 oz.	.5846 oz.	46.75 more
Salad, Potato	76# (includes 5# 3 oz. lettuce)	169# 1 oz. (no lettuce used)	5.7630 oz.	8.0267 oz.	39.28 more
Fruit Cup	61# 4 oz.	88# 12 oz.	4.6446 oz.	4.2136 oz.	9.28 less
Milk	13 $\frac{3}{4}$ gal.	21 $\frac{1}{2}$ gal.	1.0427 cups	1.0208 cups	2.10 less
Tea	3 cups		.0143 cups		
Sugar	----	----			

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Monday

Food	Women (179)	Men (336)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Roast Lamb	21# 15 oz.	58# 12 oz.	1.9608 oz.	2.7976 oz.	42.68 more
Gravy	2½ gal.	10 3/4 gal.	.2046 cups	.5119 cups	150.20 more
Mashed Potatoes	55# 4 oz.	173# 6 oz.	4.9386 oz.	8.2574 oz.	67.20 more
Buttered Beets	43# 4 oz.	72# 14 oz.	3.8659 oz.	3.4702 oz.	10.23 less
Celery	10# 2 oz.	14# 6 oz.	.9050 oz.	.6846 oz.	24.35 less
Olives	6# 13 oz.	9# 11 oz.	.6089 oz.	.4613 oz.	24.24 less
Bread	2# 12 oz.	57# 2 oz.	.2458 oz.	2.7202 oz.	1006.67 more
Butter	5#	12# 5 oz.	.4469 oz.	.5863 oz.	31.19 more
Maple Nut Mold	47# 5 oz.	62# 6 oz.	4.1676 oz.	2.9702 oz.	28.73 less
Whipped Cream	4# 1 oz.	10# 7 oz.	.3631 oz.	.4970 oz.	36.88 more
Coffee	4 gal.	17 gal.	.3575 cups	.8095 cups	126.43 more
Cream	2 qts.	3 9/16 gal.	.0446 cups	.1696 cups	280.27 more
Sugar	9 oz.	5# 14 oz.	.0503 oz.	.2798 oz.	456.26 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Tuesday

Food	Women (187)	Men (278)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Dried Prunes	38# 7 oz.	74# 3 oz.	3.2875 oz.	4.2691 oz.	33.43 more
Butterhorns	40# (22½ doz.)	88# (49½ doz.)	3.4224 oz.	5.0648 oz.	47.99 more
Cereals					
Rolled Oats	7# 7 oz.	34# 4 oz.	.6417 oz.	1.9071 oz.	197.19 more
Shredded Wheat	13 oz.	7# 3 oz.	.0695 oz.	.4136 oz.	495.11 more
Cornflakes	12 oz.	7# 5 oz.	.0642 oz.	.4317 oz.	572.43 more
Butter	3# 6 oz.	7# 11 oz.	.2888 oz.	.4424 oz.	53.19 more
Milk	5 7/16 gal.	22 3/8 gal.	.4652 cups	1.2876 cups	176.78 more
Coffee	3 5/8 gal.	4 gal.	.3102 cups	.2302 cups	25.70 less
Chocolate	1 3/4 gal.	3½ gal.	.1573 cups	.2014 cups	28.04 more
Cream	1 7/16 gal.	11 13/16 gal.	.1230 cups	.6798 cups	452.68 more
Sugar	2# 1 oz.	8# 5 oz.	.1765 oz.	.4784 oz.	171.05 more



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon - Tuesday

Food	Women (221)	Men (336)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Vegetable-Meat Stew	101# 12 oz.	275#	7.3665 oz.	13.0954 oz.	77.77 more
Apple Celery Salad	49#	93#	3.5480 oz.	4.4286 oz.	24.82 more
Lettuce	4# 6 oz.	15# 12 oz.	.3167 oz.	.7500 oz.	136.82 more
Bread	15# 9 oz.	61#	1.1267 oz.	2.9048 oz.	157.81 more
Butter	6# 4 oz.	11# 12 oz.	.4525 oz.	.5595	23.65 more
Brownies	24# 3 oz.	17# 12 oz.	1.7511 oz.	.8452	151.73 less
Milk	14 3/4 gal.	22 gal.	1.0679 cups	1.0476 cups	1.90 less
Tea	1 1/2 qt.		.0271 cups		
Sugar	----	----			

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Tuesday

Food	Women (213)	Men (330)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Swiss Steak and Gravy	66#	131#	4.9577 oz.	6.3515 oz.	28.11 more
Browned Potatoes	60# 8 oz.	153#	4.5446 oz.	7.4121 oz.	63.10 more
Stewed Tomatoes	57# 3 oz.	90# 8 oz.	4.2958 oz.	4.3879 oz.	2.14 more
Head Lettuce					
Salad					
Lettuce	28# 3 oz.	71#	2.1174 oz.	3.4424 oz.	62.58 more
Mayonnaise	4#	7# 8 oz.	.3046 oz.	.3636 oz.	19.37 more
Bread	6# 5 oz.	35# 15 oz.	.4742 oz.	1.7424 oz.	267.44 more
Butter	3# 5 oz.	11# 12 oz.	.2488 oz.	.5697 oz.	128.98 more
Cake, Chocolate					
Icing	39# 7 oz.	61# 4 oz.	2.9484 oz.	2.9696 oz.	.72 more
Coffee	5 gal.	16 gal.	.3756 cups	.7758 cups	106.55 more
Cream	2 gal. 1 1/4 qt.	4 gal. 2 1/4 qt.	.0495 cups	.2212 cups	346.87 more
Sugar	2#	6# 4 oz.	.1502 oz.	.3030 oz.	101.73 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Wednesday

Food	Women (183)		Men (284)		Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Bananas	57#	2 oz.	83#	4 oz.	4.9891 oz.	4.6901 oz.	5.99 less
Cereals							
Cooked	4#	11 oz.	24#	4 oz.	.4098 oz.	1.3732 oz.	235.09 more
Bran Flakes	1#	7 oz.	7#	9 oz.	.1257 oz.	.4261 oz.	239.06 more
Puffed Rice		11 oz.	2#		.0601 oz.	.1127 oz.	87.52 more
Corn Flakes		15 oz.	4#	7 oz.	.0819 oz.	.2509 oz.	206.35 more
Toast (and rolls)	15#	1 oz.	29#	12 oz.	1.3169 oz.	1.6760 oz.	27.28 more
Raspberry Jam	8#	12 oz.	28#	11 oz.	.7650 oz.	1.5820 oz.	106.79 more
Butter	4#		7#	3 oz.	.3497 oz.	.4049 oz.	15.89 more
Coffee	4 gal.	1 qt.	4 gal.		.3716 cups	.2253 cups	39.34 less
Chocolate	1 gal.	2½ qt.	3.5 gal.		.1421 cups	.1972 cups	38.77 more
Cream	1 gal.	1 cup	11 gal. 3.5 qt.		.0929 cups	.6690 cups	620.13 more
Milk	4 gal.	3 qt.	22 gal.	1½ qt.	.4153 cups	1.2606 cups	203.54 more
Sugar	3#	2 oz.	9#	12 oz.	.2732 oz.	.5493 oz.	101.06 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon -- Wednesday

Food	Women (230)	Men (335)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Tuna Fish Souffle	81# 10 oz.	273# 3 oz.	5.6783 oz.	13.0478 oz.	129.78 more
Buttered Peas	None	104# 11.8 oz.	None	5.0024 oz.	
Sliced Orange Salad					
Orange Slices	30#	26# 4 oz.	2.0869 oz.	1.2570 oz.	39.77 less
Lettuce	4# 8 oz.	37# 13 oz.	.3130 oz.	1.6866 oz.	227.87 more
Mayonnaise	12 oz.	1# 1 oz.	.0522 oz.	.0511 oz.	2.11 less
Bread	17# 8 oz.	55# 2 oz.	1.2174 oz.	2.6328 oz.	116.26 more
Butter	5# 5 oz.	12# 6 oz.	.3696 oz.	.5904 oz.	59.74 more
Peanut Butter Cookies	24# 13 oz.	33# 15 oz.	1.7270 oz.	1.6209 oz.	6.14 less
Milk	14.5 gal.	22 gal. 1 1/4 qt.	.9913 cups	1.0657 cups	7.50 more
Tea	1 qt. 1 cup	None	.0217	None	



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Wednesday

Food	Women (235)		Men (331)		Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Roast Beef	33#	5 oz.	67#	15 oz.	2.2681 oz.	3.2780 oz.	44.53 more
Brown Gravy	2 gal.	3 qts.	11.5 gal.		.1873 cups	.5559 cups	196.79 more
Parsley Potatoes	55#	2 oz.	143#		3.7532 oz.	6.6103 oz.	76.13 more
Buttered Carrots	38#	8 oz.	92#	8 oz.	2.6383 oz.	4.4713 oz.	69.48 more
Waldorf Salad	57#	14 oz.	83#	4 oz.	3.9404 oz.	4.0242 oz.	2.13 more
Lettuce		53 oz.	20#		.2255 oz.	.9668 oz.	329.62 more
Bread	4#	4 oz.	36#		.2895 oz.	1.7402 oz.	501.11 more
Butter	4#	9 oz.	11#	15 oz.	.3106 oz.	.5770 oz.	85.77 more
Cocoanut Cream Pie	65#	1 oz.	106#	4 oz.	4.4098 oz.	5.1356 oz.	16.46 more
Coffee	5 gal.	1 pt.	16.5 gal.		.3481 cups	.7976 cups	129.13 more
Sugar	1#	4 oz.	6#	10 oz.	.0811 oz.	.3202 oz.	294.82 more
Cream	3 qts.	1.5 cups	3 gal. 3 qts.		.0575 cups	.1813 cups	215.31 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Thursday

Food	Women (200)		Men (263)		Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Sliced Peaches	45#	5 oz.	58#	13 oz.	3.6200 oz.	3.5779 oz.	1.16 less
Cereals							
Cooked	6#	14 oz.	30#	12 oz.	.5500 oz.	1.8657 oz.	205.76 more
Bran Flakes		15 oz.	5#	11 oz.	.0750 oz.	.3460 oz.	361.33 more
Corn Flakes		6 oz.	4#	8 oz.	.0300 oz.	.2738 oz.	812.66 more
Puffed Wheat		11 oz.	1#	15 oz.	.0550 oz.	.1255 oz.	128.00 more
Doughnuts	40#	9 oz.	52#	10 oz.	3.2450 oz.)	3.2015 oz.	15.33 less
	(37 doz. 2)				)		
Butterhorns	6#	13 oz.			.5450 oz.)		
	(3 doz. 10)				)		
Butter	4#	5 oz.	5#	2 oz.	.3450 oz.	.3118 oz.	19.62 less
Coffee	5 gal.	1 qt.	4 gal.	1 qt.	.4200 cups	.2586 cups	38.43 less
Chocolate	2 gal.		3 gal.		.1600 cups	.1825 cups	14.06 more
Milk	6 gal.	1½ qt.	22 gal.		.5100 cups	1.3384 cups	162.43 more
Cream	1 gal.	2½ qt.	11 7/8 gal.		.1300 cups	.7169 cups	451.46 more
Sugar	2#	12 oz.	8#	15 oz.	.2200 oz.	.5437 oz.	147.14 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon - Thursday

Food	Women (220)	Men (338)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Italian Spaghetti	56# 14 oz.	230#	4.1364 oz.	10.9053	163.64 more
Buttered Cabbage	None served	95# 7 oz.	None	4.5207	
Pear Salad					
Pear	37# 8 oz.	44# 2 oz.	2.7273 oz.	2.0888 oz.	23.41 less
Lettuce	2# 15 oz.	25# 4 oz.	.2136 oz.	1.1953 oz.	459.60 more
Mayonnaise	3# 6 oz.	8# 5 oz.	.2727 oz.	.3935 oz.	44.29 more
Cheese	3# 12 oz.	8# 4 oz.	.2455 oz.	.3905 oz.	59.06 more
Milk	14.5 gal.	22 gal.	1.0500 cups	1.0414 cups	1.24 less
Bread	19#	59#	1.3818 oz.	2.7929 oz.	102.12 more
Butter	4# 4 oz.	12# 4 oz.	.3091 oz.	.5799 oz.	87.61 more
Floating Island	64# 2 oz.	84# 5 oz.	4.6636 oz.	3.9911 oz.	14.42 less
Tea	1.5 qt.	None served	.0273 cups		
Sugar	----	----			

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Thursday

Food	Women (231)	Men (333)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Fruit Cocktail	31#	59#	2.1472 oz.	2.8348 oz.	32.02 more
Cooked Ham	29# 4 oz.	63#	2.0260 oz.	3.0270 oz.	49.41 more
Mustard Sauce	3# 6 oz.	5# 6 oz.	.2338 oz.	.2583 oz.	10.52 more
Candied Sweet Potatoes	65# 8 oz.	172#	4.5368 oz.	8.2643 oz.	82.16 more
Buttered Cauliflower	39# 12 oz.	69# 1 oz.	2.7532 oz.	3.3183 oz.	20.51 more
Grapefruit Salad	43# 10 oz.	61# 1 oz.	3.0216 oz.	2.9329 oz.	2.94 less
Lettuce	6# 3 oz.	20# 8 oz.	.4286 oz.	.9850 oz.	129.82 more
Salad Dressing	3# 4 oz.	7# 4 oz.	.2251 oz.	.3483 oz.	54.73 more
Bread	2# 13 oz.	27# 6 oz.	.1948 oz.	1.3183 oz.	576.74 more
Butter	5# 3 oz.	11# 13 oz.	.3593 oz.	.5676 oz.	58.22 more
Ice Cream	9.56 gal.	14.75 gal.	2.9797 oz.	3.1892 oz.	7.03 more
Coffee	5 gal. 1 qt.	16.5 gal.	.3636 cups	.7904 cups	117.38 more
Cream	3 qts.	3.1625 gal.	.0519 cups	.1520 cups	192.87 more
Sugar	1# 3 oz.	5# 10 oz.	.0823 oz.	.2703 oz.	228.43 more



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Friday

Food	Women (182)	Men (279)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Apricots	47# 4 oz.	65# 6 oz.	4.1544 oz.	3.7491 oz.	19.76 less
Cereal					
Cooked	5# 6 oz.	33# 3 oz.	.4725 oz.	1.9032 oz.	302.79 more
Grapenuts	4# 2 oz.	9#	.3626 oz.	.5161 oz.	42.33 more
Corn Flakes	5 oz.	5# 5 oz.	.0275 oz.	.3047 oz.	1008.00 more
Bran Flakes	10 oz.	5# 10 oz.	.0549 oz.	.3226 oz.	487.61 more
Scrambled Eggs	24# 12 oz.	42#	2.1758 oz.	2.4086 oz.	10.69 more
Toast	12# 8 oz.	30# 13 oz.	1.0989 oz.	1.7670 oz.	60.80 more
Jam	7# 3 oz.	17# 12 oz.	.6209 oz.	1.0179 oz.	63.94 more
Butter	4# 2 oz.	6# 11 oz.	.3626 oz.	.3835 oz.	5.76 more
Coffee	4 1/4 gal.	5 gal.	.3740 cups	.2941 cups	21.36 less
Chocolate	2 gal.	3.5 gal.	.1758 cups	.2007 cups	14.16 more
Milk	4.5 gal.	17 gal. 2 1/2 qts.	.3956 cups	1.0108 cups	155.51 more
Cream	1 gal. 2.5 qts.	10 gal. 3 1/2 qts.	.1429 cups	.6237 cups	336.46 more
Sugar	2# 5 oz.	10# 1 oz.	.2033 oz.	.5771 oz.	183.87 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon - Friday

Food	Women (223)	Men (333)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Vegetable Soup	80#	259# 14 oz.	5.7417 oz.	12.4865 oz.	117.47 more
Crackers	2# 10 oz.	16# 1 oz.	.1883 oz.	.7718 oz.	309.88 more
Cottage Cheese					
Salad					
Cheese	40# 7 oz.	55# 11 oz.	2.9014 oz.	2.6757 oz.	7.78 less
Pineapple	33# 8 oz.	47# 11 oz.	2.4036 oz.	2.2913 oz.	4.67 less
Mayonnaise	2# 5 oz.	5# 9 oz.	.1659 oz.	.2673 oz.	61.12 more
Lettuce	2# 2 oz.	29# 5 oz.	.1525 oz.	1.4084 oz.	823.54 more
Butterscotch Rolls					
	65# 10 oz.	77#	4.7085 oz.	3.6997 oz.)	14.92 less
Bread	----	6# 6 oz.		.3063 oz.)	
Butter	5# 3 oz.	12# 8 oz.	.3722 oz.	.6006 oz.	61.36 more
Milk	14 gal.	20 gal. 3 qts.	1.0045 cups	.9967 cups	.78 less
Tea	1 qt. 1 cup	----	.0224 cups		
Sugar	----	----			

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Friday

Food	Women (196)	Men (309)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Filet of Cod	48# 14 oz.	97# 12 oz.	3.9898 oz.	5.0550 oz.	26.70 more
Tartar Sauce	11# 14 oz.	16#	.9693 oz.	.8285 oz.	14.53 less
Creamed Potatoes	43# 4 oz.	148#	3.6042 oz.	7.6634 oz.	112.62 more
Whipped Squash	50# 5 oz.	93# 7 oz.	4.1071 oz.	4.8382 oz.	17.80 more
Lettuce Tomato Salad					
Lettuce	20# 11 oz.	39# 13 oz.	1.6888 oz.	2.0615 oz.	22.07 more
Tomato	17# 9 oz.	24# 5 oz.	1.4337 oz.	1.2557 oz.	12.41 less
Mayonnaise	3# 13 oz.	4# 1 oz.	.3122 oz.	.2104 oz.	48.38 more
Bread	4#	26# 4 oz.	.3265 oz.	1.3592 oz.	316.29 more
Butter	3# 2 oz.	12# 4 oz.	.2551 oz.	.6343 oz.	148.65 more
Chocolate Pudding	47# 3 oz.	84#	3.8520	4.3495 oz.	12.92 more
Whipped Cream	6# 14 oz.	9# 4 oz.	.5612 oz.	.4790 oz.	14.65 less
Coffee	4 gal 3 1/4 gal.	16 gal.	.3929 cups	.8285 cups	110.87 more
Cream	3 qts. 1 cup	4 gal.	.0663 cups	.2071 cups	212.37 more
Sugar	2# 10 oz.	4# 10 oz.	.2143 oz.	.2401 oz.	120.39 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Saturday

Food	Women (145)	Men (193)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Oranges	57# 8 oz.	73# 6 oz.	6.3448 oz.	6.0829 oz.	4.13 less
Cereals					
Cooked	6# 3 oz.	23#	.6828 oz.	1.8549 oz.	71.66 more
Bran Flakes	9 oz.	4# 8 oz.	.0621 oz.	.3731 oz.	500.81 more
Shredded Wheat	12 oz.	3# 11 oz.	.0828 oz.	.3057 oz.	269.20 more
Corn Flakes	6 oz.	3# 3 oz.	.0414 oz.	.2642 oz.	538.16 more
Cinnamon Rolls	28# 13 oz. (20 doz.)	59# 6 oz. (41.5 doz.)	3.1793 oz.	4.9223 oz.)	51.21 more
Bread	11 oz.		3.2552 oz.	)	
Butter	3# 8 oz.	5#	.3862 oz.	.4145 oz.	7.33 more
Chocolate	1 7/8 gal.	2 5/8 gal.	.2069 cups	.2176 cups	5.17 more
Coffee	4 1/4 gal.	3 3/4 gal.	.4689 cups	.3101 cups	33.87 less
Milk	4 7/8 gal.	10 1/2 gal.	.5379 cups	.8705 cups	61.83 more
Cream	1 1/2 gal.	12 3/4 gal.	.1625 cups	1.0567 cups	550.46 more
Sugar	1# 9 oz.	7# 1 oz.	.1724 oz.	.5850 oz.	239.33 more



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Luncheon - Saturday

Food	Women (188)	Men (288)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Creamed Dried Beef	83# 15 oz.	153#	7.1436 oz.	8.5000 oz.	18.99 more
Bread (toast)	12# 10 oz.	30#	1.0745 oz.	1.6667 oz.	55.11 more
Buttered Turnips	None served	96# 14 oz.	----	5.3819 oz.	
Salad					
Asparagus	18# 1 oz.	30# 2 oz.	1.5372 oz.	1.6736 oz.	8.87 more
Lettuce	3# 2 oz.	26# 1 oz.	.2660 oz.	1.4447 oz.	443.12 more
Mayonnaise	4# 6 oz.	12# 15 oz.	.3723 oz.	.7188 oz.	93.07 more
Bread	4# 3 oz.	32# 4 oz.	.3564 oz.	1.7917 oz.	402.72 more
Butter	5# 3 oz.	10# 1 oz.	.4415 oz.	.5590 oz.	9.48 more
Prunes	33# 14 oz.	78# 4 oz.	2.8830 oz.	4.3472 oz.	50.79 more
Milk	12 1/4 gal.	19 1/4 gal.	1.0426 cups	1.0694 cups.	2.51 less
Tea	1 1/2 qt.	None used	.0319 cups		
Sugar	----	----			

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Saturday

Food	Women (212)	Men (307)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Veal Steak	38#	69#	2.8654 oz.	3.5961 oz.	25.50 more
Gravy	2 1/4 gal.	11 gal.	.1698 cups	.5733 cups	237.63 more
Baked Potatoes	64# 11 oz.	116# 11 oz.	4.8821 oz.	6.0814 oz.	24.57 more
Spinach	34# 8 oz.	74# 8 oz.	2.6038 oz.	3.8827 oz.	49.11 more
Salad					
Fruit	20# 2 oz.	65# 5 oz.	1.5189 oz.	2.8046 oz.	84.65 more
Nuts	2#	4#	.1509 oz.	.2085 oz.	38.17 more
Mayonnaise	2# 8 oz.	8# 11 oz.	.1887 oz.	.4528 oz.	139.96 more
Lettuce	4# 2 oz.	15# 15 oz.	.3113 oz.	.8306 oz.	166.81 more
Bread	1# 5 oz.	23# 6 oz.	.0991 oz.	1.2182 oz.	1129.26 more
Butter	4# 11 oz.	10# 1 oz.	.3505 oz.	.5244 oz.	49.61 more
Apple Betty	71# 15 oz.	100# 1 oz.	5.4292 oz.	5.2150 oz.	3.94 less
Cream	6 3/4 qts.	5.94 gal.	.1274 cups	.3095 cups	142.94 more
Coffee	4 gal.	15 gal.	.3019 cups	.7818 cups	158.96 more
Sugar	2# 7 oz.	4# 10 oz.	.1834 oz.	.2395 oz.	30.16 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Breakfast - Sunday

Food	Women (119)	Men (181)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Grapefruit, A.P.	41# 3.5 oz.	73# 14 oz.	5.5425 oz.	6.5315 oz.	17.84 more
Cereal					
Cooked	2# 4 oz.	20# 6 oz.	.3026 oz.	1.8011 oz.	495.21 more
Bran Flakes	7 oz.	4# 3 oz.	.0588 oz.	.4199 oz.	614.12 more
Grapenuts	1# 1 oz.	5# 10 oz.	.1429 oz.	.4972 oz.	247.94 more
Puffed Rice	2 oz.	1# 6 oz.	.0167 oz.	.1215 oz.	627.54 more
Hot Cakes	14# 14 oz.	38# 13 oz.	2.0000 oz.	3.4309 oz.	71.55 more
Syrup	11# 15 oz.	24# 13 oz.	1.6054 oz.	2.2044 oz.	37.55 more
Toast	1# 10 oz.	None	.2186 oz.		
Butter	2# 10 oz.	6# 13 oz.	.3529 oz.	.6022 oz.	70.64 more
Chocolate	1.5 gal.	2 3/8 gal.	.2017 cups	.2105 cups	4.36 more
Coffee	2 3/4 gal.	3 3/4 gal.	.3697 cups	.3315 cups	10.33 less
Milk	11 1/4 qt.	15 gal.	.37815 cups	1.3260 cups	250.70 more
Cream	3 qts. 1 cup	5 15/16 gal.	.1092 cups	.5249 cups	380.68 more
Sugar	1# 9 oz.	8# 3 oz.	.2101 oz.	.7238 oz.	244.50 more

FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Dinner - Sunday (noon)

Food	Women (213)	Men (314)	Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Tomato Juice	(573 oz.)	(1002 oz.)	2.1268 oz.	2.2994 oz.	8.11 more
Cocktail	35# 13 oz.	62# 10 oz.			
Creamed Chicken	63# 5 oz. (7 9/16 gal.)	121# 7 oz. (14.5 gal.)	4.7577 oz.	6.1879 oz.	30.06 more
Biscuits	22# 4 oz.	26# 2 oz.	1.6714 oz.	1.3312 oz.	20.35 less
Mashed Potatoes	52# 10 oz.	150#	3.9531 oz.	7.6433 oz.	93.35 more
String Beans	35# 3 oz.	74# 5 oz.	2.6432 oz.	3.7898 oz.	43.38 more
Lettuce	17# 6 oz.	46# 12 oz.	1.3052 oz.	2.3824 oz.	82.53 more
Russian Dress- ing	7# 6 oz.	20# 13 oz.	.5540 oz.	1.0608 oz.	91.48 more
Bread	1# 3 oz.	15# 4 oz.	.0892 oz.	.7771 oz.	771.19 more
Butter	4# 4 oz.	10# 5 oz.	.3192 oz.	.5255 oz.	64.63 more
Ice Cream	8 1/2 gal.	12 5/8 gal.	2.8732 oz.	2.8949 oz.	.76 more
Cherry Sauce	16#	23# 8 oz.	1.2019 oz.	1.1975 oz.	.37 less
Sugar	1# 2 oz.	5#	.0845 oz.	.2548 oz.	201.54 more
Cream	1 1/2 qts.	2 gal.	.0282 cups	.1019 cups	261.35 more
Coffee	4 3/4 gal.	16 gal.	.3568 cups	.8154 cups	128.53 more



FOOD CONSUMPTION CHARTS FOR MEN AND WOMEN STUDENTS  
Supper (Tea) - Sunday

Food	Women (124)		Men (261)		Women per Capita	Men per Capita	% More or Less Con- sumed by Men
Sandwiches	42#	1 oz.	88#	6 oz.	5.4355 oz.	5.4172 oz.	.34 less
Potato Chips	3#		11#	12 oz.	.3871 oz.	.7203 oz.	86.08 more
Salad							
Peach	9#	1 oz.	19#	11 oz.	1.1694 oz.	1.2069 oz.	3.21 more
Pineapple	17#	7 oz.	38#	2 oz.	2.2500 oz.	2.3372 oz.	3.88 more
Lettuce	3#	2 oz.	10#	8 oz.	.4032 oz.	.6437 oz.	59.65 more
Mayonnaise	2#	1 oz.	6#	3 oz.	.2661 oz.	.3793 oz.	42.54 more
Tea	3	qts.	3	5/8 gal.	.0968 cups	.2222 cups	129.55 more
Cream	----		1	3/4 gal.	----	.1073 cups	
Sugar		8 oz.	4#	7 oz.	.0645 oz.	.2720 oz.	321.71 more
Chocolate	7	gal.	15	3/4 gal.	.9032 cups	.9655 cups	6.90 more

## BIBLIOGRAPHY

BIBLIOGRAPHY

1. Atwater, W. O. Methods and Results of Investigations on the Chemistry and Economy of Food. U. S. Department of Agriculture Office of the Experiment Station Bulletin 21. Government Printing Office. 1895
2. Atwater, W. O. Dietaries in Public Institutions U. S. Department of Agriculture Year Book, 1901. Washington Government printing office. 1902
3. Bevier, Isabel Dietary Studies. Journal of Home Economics 12:63-67. 1920
4. Bogart, Jean L. Nutrition and Physical Fitness. Philadelphia. W. B. Saunders Co. 1931
5. Chaney, Margaret S. and Ahlborn, Margaret. Nutrition. The Riverside Press New York. 1934
6. Dickins, Dorothy. Food Consumption of Boys and Girls in Six Typical Agricultural High Schools of Mississippi. A. and M. College, Mississippi. 1931 (Mississippi Agricultural Experiment Station Bulletin No. 292)
7. DuBois, Eugene F. Basal Metabolism in Health and Disease. Third edition, revised. Philadelphia. Lea & Febiger. 1936
8. Grace, Minerva Vermilyea. Consumption and Cost of Food for College Women at Oregon State College. Masters Thesis, Oregon State College, 1929

9. Hansen, Ruth Wescott. A Graphical Study of Food Costs of the Department of Dormitories at Oregon State Agricultural College. Masters Thesis. Oregon State College. 1935
10. Hawley, Edith. Nutritive Value and Cost of Food Served to College Students, 1929 (U. S. Department of Agriculture Circular No. 89)
11. Kramer, Martha M. and Grundmeier, Edith. Food Selection and Expenditure in a College Community. Journal of Home Economics, 18:18-23, 1926
12. O'Leary, Mary. A Comparison of Total Food Costs in College Dining Halls. Journal of Home Economics, 23:757-9, 1931
13. Rose, Mary Swartz. The Foundations of Nutrition. Third Edition. New York. Macmillan Company. 1938
14. Sherman, Henry C. Chemistry of Food and Nutrition. The Macmillan Company. 1937