1941

Campus Women Aid In Hospital Research

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Recommended Citation
Koebel, Ann (1941) "Campus Women Aid In Hospital Research," The Iowa Homemaker: Vol. 21 : No. 3 , Article 2.
Available at: http://lib.dr.iastate.edu/homemaker/vol21/iss3/2

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Campus Women Aid In

Hospital Research

Research in the nutritional requirements of the college woman is reviewed by Ann Koebel

"IT CAN'T be done. That many women will never be able to cooperate and work together." This was the general consensus of male opinion when a group of nutritionists met at Ames five years ago to plan one of the most extensive nutritional research studies ever undertaken.

Detailed observations from studies conducted here in dietetics classes had indicated for some time that the food habits of college women didn't even remotely approach the generally accepted standard. This could mean either that the standards were wrong or that college women weren't in the optimum state of well-being.

Since there had been limited experimental data in the literature regarding the period between puberty and adulthood, approximately 14 to 25, Iowa State proposed a regional cooperative project to study the nutrition of college women.

Representatives from five colleges, Iowa, Kansas, Minnesota, Ohio and Wisconsin, signed the master project drawn up at that first meeting in 1936. Later Nebraska and Oklahoma joined the group. This project included an outline of all of the specific problems to be studied and a statement of the methods to be used.

The research is done by the foods and nutrition sub-stations of the agricultural experiment stations with the cooperation of the medical staffs. At each school there is a leader in charge who conducts the experimental work. Dr. Margaret A. Ohlson, associate professor of foods and nutrition, is the leader in charge at Iowa State.

For the past five years the various schools have been taking literally thousands of tests and measurements in order to determine standards for the average girl. Here alone 1,265 women between the ages of 17 and 25 are represented. Pertinent data is obtained from the physical examinations given to all entering freshmen. Measurements have also been obtained on a smaller number of women throughout their four years in college.

One of the tests given to the girls studied throughout their four years of college is a basal metabolism rating. The first year there was a wide variability in the results, as would be expected due to the fact that the students weren't accustomed to the test. Normally the variability would decrease with each successive year as the students became more familiar with the procedure. This decrease occurred in the second year but in the third and fourth years the variability increased.

Since these results were contrary to all normal expectations, a case history was made of each student contributing to the variability. In every instance the student was found to be one getting a limited amount (Continued on page 21)
an apprentice in the Extension Service at Iowa State College. Wanda Cooper has similar work in Poweshiek County.

Among the textile and clothing majors, Elsie Louise Clarke is with Marshall Field's, Chicago. Ida Halpin is employed in the advertising department at Sears Roebuck, Chicago. Sylvia Hardy and Kay Monson are doing merchandise examining for Montgomery Ward and Co., Chicago. Eleanor Powell is supervisor of the sewing project in the Negro Girls' Work Experience Center at the N.Y.A. Training School, Kansas City, Mo.

Recent graduates in the field of journalism are Lois Madsen, assistant foods editor of the Chicago Daily News and Dorothy Ann Roost, advertising manager of Tilden's Department Store, Ames.

Jessann Hannan is a clerical worker at Well's Historical Museum, Southbridge, Mass. Ora Cramer is supervisor of the Boys and Girls' Home in Sioux City.

-Mary Elizabeth Sather

Hospital Research

(Continued from page 3)

of sleep, having no organized leisure and undertaking heavy responsibilities. The basal was repeated in the spring of the senior year when the student was living a more passive life and, in most instances, the rating had returned to the sophomore level.

One of the most interesting experiments has been in connection with calcium and phosphorus requirements. This study was approached in two ways. The first test involved 109 women from Iowa, Kansas, Nebraska and Ohio. They were permitted to choose their own diet, but everything they ate was accurately weighed. Balance studies of calcium and phosphorus were conducted for five days when portions of food equivalent to what they actually consumed were analyzed and when the calcium and phosphorus output was determined.

For the past two years the problem has been approached through varying a basic diet which meets all requirements except calcium, vitamin D and energy. This diet, supplemented by increasing amounts of milk, was given to a selected group of students for three consecutive months. It was then repeated for three more intervals with the same amounts of milk and 350 units of vitamin D. Pure carbohydrates and fats were also added to increase the caloric content.

For each interval the student was given two weeks to adjust to the study and then a balance study was conducted for the last two weeks.

Approximately three cups of milk a day seemed to give optimum calcium and phosphorus retention. This is slightly in excess of the generally accepted standard of two cups for post-adolescence.

It is rather difficult to explain the exact importance of this increased standard as the women receiving a lower allowance of milk showed no external evidence of trouble. However, the body might be considered as having empty bins which can be filled with an adequate nutritional allowance. During normal periods the body apparently can function perfectly well if the bins are empty. Filling them, though, may be one of the best physical protections for periods of strain such as child-bearing.

Since the entire study is conducted exclusively with college women it has been impossible to definitely determine the effect of this extra calcium and nitrogen on pregnancy. However, the various schools are attempting to maintain contact with as many of the women as possible in order to determine whether this theory of potential storage capacity has any validity.

The work mentioned in regard to basal metabolism and calcium and phosphorus requirements represents only a very small part of the research that has been done. It is interesting to note that there have been only slight variations in the results obtained from the different schools.

The past five years have served only as a beginning for this extensive study. Probably the most important things that have been accomplished are the establishment of a standardized technique and the determination of the direction for future study. The persons conducting the experiment are hesitant to draw definite conclusions from the research so far completed. They prefer, rather, to point out trends and tendencies which they plan to investigate more fully.

In addition to constituting an important contribution to scientific research, this nutritional status study serves as an outstanding example of what can be accomplished by cooperative projects.

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October, 1941