

INTRODUCTION

- A. The diet of Eskimos has always been of interest because these people have managed to survive under adverse circumstances by utilization of unusual natural resources. Previous studies of Alaskan diets were limited to a series of weighed studies at Gambell and Anaktuvuk Pass by Rodahl⁽¹⁾; to a limited diet record study at Nikolski by Moorrees⁽²⁾ and a study based on one-day diet records from four Eskimo villages by Heller⁽³⁾.
- B. The present study was begun in 1956 with the following objectives:
- (1) To determine the present food habits of Alaskan Eskimos and Indians;
 - (2) To estimate the degree of their dependence on local food;
 - (3) To estimate the adequacy of the diet;
 - (4) To predict medical or public health problems which might arise from inadequate diet.

METHODS

Eleven villages—nine Eskimo and two Athapascan Indian—representing several geographic and ecologic areas of Alaska were included in this study (see map facing page 4). The combined total population of these villages was 2252.

A total of 4840 diet records, most of them of 7 days duration were collected on a seasonal basis for both sexes and for all age levels. From these records the data of 4567 were converted by machine calculation into mean daily intakes of the eleven major nutrients,* and the mean intakes were then compared to the National Research Council (NRC) recommendations⁽⁴⁾ in order to assess the adequacy of the diet. The source of nutrients and seasonal fluctuations in these sources were determined as well. The remaining 273 diet records were of infants who obtained either part or all of their milk from the breast.

* Calories, protein, fat, carbohydrate, calcium, iron, vitamin A, thiamin, riboflavin, niacin and ascorbic acid.



Eskimo woman acting as interpreter-helper recording food intakes, Shungnak.

During the initial visit to each of the selected villages, the nutritionist met first with the local village council to acquaint them with the purpose of the study, to explain the procedure to be used in obtaining diet records, and to secure their recommendations for the services of an interpreter-helper. During this, as well as subsequent visits, every occupied home in the village was visited and diet records obtained from all who would cooperate.

The majority of families were cooperative and much of the credit for the success of the project belongs to the participants.

In each family, one member, who could speak, read and write English, was given instructions on how to observe, measure (using typical household measures) and record the size of servings for each family member. The nutritionist with the interpreter's assistance checked daily to be sure that intake measurements were being made as accurately as possible. Size of dishes and utensils regularly used by a particular family member were noted and recorded.

The interpreter assisted the nutritionist in recording food intakes for those whose knowledge of English was limited. (see illustration no. 1)

Most of the diet records were collected during the nutritionist's two or three week visits to the village. A limited number of records, however, were kept by either a family member or the interpreter-helper in the interim between the nutritionist's visits and a small number of them consisted of weighed amounts.

Food values from Handbook 8 (1950)⁽⁵⁾, Bowes and Church (1951)⁽⁶⁾ as well as the results of the analysis of local foods by the Arctic Health Research Center and the U.S. Army Medical, Research and Nutrition Laboratory, Denver, Colorado, were used to convert food intakes into nutrient values. Recipes for common mixed food preparations were collected. The final nutritive values assigned them were average values of a series of recipes. Individual family recipes of uncommon food mixtures were also collected and converted to nutrient values.

Samples of the raw, edible portions of local foods as commonly prepared and consumed by Eskimos and Indians were collected for analysis. Moisture, protein, fat, fiber, ash, calcium, phosphorus and iron were determined by methods of the Association of Official Agricultural Chemists.⁽⁷⁾ Vitamin A (Carr-Price), carotene (chromatography and spectrophotometry), thiamine (microbiological), riboflavin (microbiological), niacin (microbiological) and ascorbic acid (Roe and Kuether) were determined by methods of the Association of Vitamin Chemists.⁽⁸⁾ The results are shown in Table 87, Appendix.