

Summary Report
of the
Dietcheck Program
conducted by the
Texas Agricultural Extension Service
in 1980

Prepared by: The Food and Nutrition Specialists of
the Texas Agricultural Extension Service
June 1981

ACKNOWLEDGEMENT

The Texas Agricultural Extension Service wishes to thank the Texas Cattle Feeders Association for their financial support of this project. We also wish to thank the county Extension agents (home economics) and the Texans who participated in the Dietcheck program.

Special thanks to Dr. Charles Shea and Cheryl Northam of the Department of Health Education at Texas A&M University for their assistance with the statistical analysis of the data.

TABLE OF CONTENTS

	Page
Introduction	1
Data Collection	1
Dietcheck and AGNET	2
Limitations of the Data Collection	3
Description of the USDA Nationwide Food Consumption Survey Methodology	4
Comparison of the Texas Dietcheck to the USDA Nationwide Food Consumption Survey	5
Evaluation Methodology	6
Statistical Analysis	6
Comparison of Dietchecks for Texans from Urban, Rural Or Limited Income Locations	7
Comparison of The Urban Residents of Texas With The USDA Urban Residents	7
Comparison of the Nonmetropolitan Individuals of Texas With the USDA Nonmetropolitan Data	8
Limited Income Data	8
Nutrient Summary Score	9
Distribution of Nutrients	10
Distribution of Weights	10
Foods that Promote Dental Caries	10
Implications for Future Nutrition Education Programs For the Texas Agricultural Extension Service	11
Summary and Conclusions	12
Literature Cited	39
Appendices	40
Appendix A - Dietcheck Code Sheet	41
Appendix B	42
Appendix C - Dietcheck Questionnaire	43

List of Tables

	Page
Table 1 - Summary of Dietcheck Locations and Month of Year	14
Table 2 - Comparison of Dietcheck by Location - All Ages/Sex	15
Table 3 - Comparison of Dietcheck by Location - Children 1-3	16
Table 4 - Comparison of Dietcheck by Location - Children 4-6	17
Table 5 - Comparison of Dietcheck by Location - Children 7-10	18
Table 6 - Comparison of Dietcheck by Location - Males 11-14	19
Table 7 - Comparison of Dietcheck by Location - Males 15-18	20
Table 8 - Comparison of Dietcheck by Location - Males 19-22	21
Table 9 - Comparison of Dietcheck by Location - Males 23-50	22
Table 10 - Comparison of Dietcheck by Location - Males 51 +	23
Table 11 - Comparison of Dietcheck by Location - Females 11-14	24
Table 12 - Comparison of Dietcheck by Location - Females 15-18	25
Table 13 - Comparison of Dietcheck by Location - Females 19-22	26
Table 14 - Comparison of Dietcheck by Location - Females 23-50	27
Table 15 - Comparison of Dietcheck by Location - Females 51 +	28
Table 16 - Comparison of Dietcheck by Location - Pregnant 19-22	29
Table 17 - Comparison of Dietcheck by Location - Pregnant 23-50	30
Table 18 - Average Intake per Individual in a Day, Spring 1977, 48 States, Nonmetropolitan Areas, All Incomes Compared to Texas Nonmetropolitan, all Incomes	31 32
Table 19 - Nutrient Intakes Below 1980 RDA	33
Table 20 - Average Intake per Individual in a Day, Spring 1977, South, All Urbanizations, All Incomes Compared to Texas Urban, All Incomes	34 34
Table 21 - Percentage of 1980 Recommended Dietary Allowances in a Day, Spring 1977, 48 States, All Urbanizations, Incomes under \$6,000 Compared to Limited Income Data of Texas	35 35
Table 22 - Nutrient Summary Score by Locations	36
Table 23 - Distribution of Nutrients	37
Table 24 - Distribution of Weights	38
Table 25 - Foods that Promote Dental Caries	39

SUMMARY REPORT OF THE
DIETCHECK PROGRAM CONDUCTED BY
THE TEXAS AGRICULTURAL EXTENSION SERVICE IN 1980

INTRODUCTION

The Texas Agricultural Extension Service conducted a computerized analysis of the diets of 2,500 individuals during 1980. The program was partially funded by the Texas Cattle Feeders Association. The initial objectives of the project were to:

1. Provide individual dietary information and education for consumers based on their Dietchecks.
2. Determine the effectiveness of the immediate assessment of eating patterns of the Texas population.
3. Provide information and background data ultimately improving the nutritional status of Texans through nutrition education.
4. Evaluate the effectiveness of this educational tool in improving nutritional status through changed behavior.

DATA COLLECTION

The Dietcheck program was conducted in 32 locations in Texas (see Table 1) and each program was coded either urban, rural or limited income. Assumptions were made concerning this code. If the location of the Dietcheck program was in a metropolitan area it was assumed that most of the participants were residents of the urban area; if it was rural setting it was assumed that the participants were from a nonmetropolitan area. The limited income participants were individuals who were either enrolled or previously enrolled in the Expanded Nutrition Program, a federally funded program conducted in 18 locations in Texas. Because the Extension Service program does not discriminate by age, race, or sex and the program was open to everyone, no record was made of race or income level of the participants.

The Dietcheck programs were conducted in numerous types of settings but most were in conjunction with Extension programs such as Health Fairs. Table 1 lists where the Dietcheck program was offered. County Extension agents (home economics) received training on the Dietcheck program from the food and nutrition specialists. Each agent in turn was responsible for recruiting and training the volunteers who assisted with the Dietcheck program in each location. The volunteers usually were Extension homemakers, 4-H leaders or professional home economists. The volunteers were responsible for collecting the data from the individuals. A 24 Hour Food Recall form was utilized (see Appendix A) to obtain the food intake record. The volunteers assisted the participants when necessary and checked the food record for completeness, i.e., type of sandwich, amount of sugar in tea, beverages consumed, etc.

DIETCHECK AND AGNET

The 24 Hour Food Recall was then coded for the computer by a trained volunteer. The computer program utilized was AGNET (Nebraska Agricultural Computer Network). Harriet Kohn, Extension Specialist, Food and Nutrition in Nebraska designed the Dietcheck program as an easy, unique method of analyzing the nutrient intake of an individual through a computer. The Dietcheck program does not require the operator to know a computer language to communicate with the computer. The operator simply types in the answers to questions the computer asks. Access to AGNET is through a typewriter-like device called a terminal. The terminal is light weight and can be used wherever there was an electric outlet and a telephone. The one day (24 hour) recall was entered and the terminal typed back the data analysis and a comparison with the Recommended Dietary Allowances (RDA).^{1/} The

^{1/} The RDA is the amount of nutrients needed by healthy, normal Americans to promote good growth for children and optimum health for all. A margin of safety is incorporated in the recommendations to allow for minor variations in utilization and needs of nutrients by individuals. The RDA is reevaluated and revised at approximately 5 year intervals.

total time for each participant was approximately 45 minutes (15 minutes to take to recall, 5 minutes to code, 5 minutes to type the code into the computer, 10 minutes for the printout and 10 minutes to counsel the participants on the nutritional adequacy of their diet.

LIMITATIONS OF THE DATA COLLECTION

The 24 hour recall is a retrospective account taken at an announced time. The use of this method reduces the possibility of a subject modifying his food habits during the time he knows he is going to be assessed. But it does require an acute memory. Women are usually better at remembering than men.² One day records fail to provide for seasonal variations or the individual's physical or emotional state and a 24 hour recall shows higher intakes than a 7 day written record.^{3,4}

The computer coding of foods was limited to items appearing in Calculating The Nutritive Value of Diets, A Manual for the Use of Punch Cards for Machine Tabulation, ARS 62-10-1, USDA, September, 1964.⁵ Therefore, some typical "Texas" foods such as okra, tacos and black eyed peas did not appear on the code sheet and reasonable substitutes had to be selected. Combination dishes, such as casseroles and enchiladas, had to be broken down into their components and an estimation of proportions of ingredients had to be made up by the individual. In some cases this estimation was a guess, due to the fact that the food was prepared by another person or eaten away from home. The serving size also had to be estimated by the individuals. Plastic food models of standard serving sizes of meat, milk, bread, cereals, fruits and vegetables were on display at most of the Dietcheck locations and this facilitated the process. The Nebraska Dietcheck program has incomplete nutrient analysis for numerous foods. Therefore, the following nutrients had to be omitted from the diet summary: Magnesium, Phosphorous, Vitamins E, D, B₆, B₁₂, folic acid, and pantothenic acid.

The use of volunteers in conducting the Dietcheck program had many drawbacks. Some of the volunteers were very proficient at gathering the information, coding and entering the data in the computer, while others were not as skilled. The presence of a professional nutritionist at over 85 percent of the locations improved the reliability of the data gathered.

Because the Dietcheck was open to anyone, it was not possible to obtain a representative sample for each age and sex category. Also, the time of the year that the Dietchecks were done was not controlled. The individual county Extension agents scheduled the events where the computer analysis was offered. Table 1 lists the month each Dietcheck was done. It appears that seasonal fluctuations would be corrected by the fact that Dietcheck was conducted at at least one location during every month in 1980.

DESCRIPTION OF THE USDA NATIONWIDE FOOD CONSUMPTION SURVEY METHODOLOGY

The Nationwide Food Consumption Survey, 1977-78, the sixth nationwide survey of households, conducted by the U.S. Department of Agriculture provides benchmark data on the kinds and quantities of foods and nutritive values of diets ingested by men, women, and children of different ages classified by various household characteristics. Dietary information obtain for individuals included the kind and amount of each food eaten; the time the food was eaten; and if the food was eaten away from home, the place where it was eaten, the type of service, and the cost. Individuals also were asked if the day's intake was typical and if they were on a special diet, were vegetarians, or took vitamins, minerals or other supplements.

A stratified area probability sample was surveyed in the 48 counterminous states in each of 4 quarters from April 1977 through March 1978 (basic survey). Approximately 15,000 households and about 34,000 individuals in these households participated. Also, 2 supplemental surveys were conducted in the 48 counterminous states.⁶

Trained interviewers collected the data by personal interview with the household member most responsible for food planning and preparation, usually the homemaker. An appointment for the interview was made at least 7 days before the interview. Household food consumption information was obtained using a list to aid the respondent in recalling the kind, form, quantity and cost, if purchased, of foods used during the previous 7 days. The household respondent also supplied the information on household characteristics, such as income, participation in food programs, number of meals eaten at home and away by household members, and educational level and employment status of the heads of the household.

After the household respondent finished giving information about the household, the interviewer proceeded to obtain from each eligible household member present a recall of the previous day's dietary intake. The household respondent usually answered for children under 12 years old and others unable to answer for themselves. Individuals then recorded their intake for the day of the interview and the next day and thus provided data for 3 consecutive days. If a household member was absent at the time of the interview but was expected to return within the next 2 days, forms were left to be completed. The interviewer returned to the home to pick up and review the records.

COMPARISON OF THE TEXAS DIETCHECK TO THE USDA NATIONWIDE FOOD CONSUMPTION SURVEY

The USDA Survey differed from the Texas Dietcheck program in that personal interviews were set up prior to the actual interview, where in Texas it was a spontaneous food recall. The USDA Survey used trained interviewers while Texas had volunteers with varying levels of expertise. USDA compared intakes to the 1980 RDA while the Texas data were compared to the 1974 data.

The similarities include: the use of a 24 hour food recall and a computer analysis of the diet.

EVALUATION METHODOLOGY

The evaluation tool for the Dietcheck Program was designed to measure the extent of nutrition information awareness and possible eating pattern or behavior changes promoted by the Dietcheck analysis for persons in Texas participating in this educational activity. Evaluation helps those who plan and conduct Extension educational activities to measure how successful they were in achieving their goals.

The following evaluation tool was used in support of the Dietcheck Program.

Dietcheck Questionnaire (D-1103) (see Appendix C): This questionnaire was administered to each participant before the person completed the 24-hour food recall. The True-False questions were designed to obtain data that gave insight into the awareness of the general public on basic nutrition information in the areas of nutrient needs related to body weight, foods associated with tooth decay, nutrient composition of foods and specific nutrient needs for different lifestyles and states of health.

STATISTICAL ANALYSIS

Data generated from the Dietcheck was stored by the AGNET System in Nebraska until all of the Dietchecks were completed. At that time, AGNET completed a Dietcheck summary. This summary report included the mean and standard deviations for all nutrients analyzed for each age and sex group and by location (rural, urban or limited income).

The United States Department of Agriculture provided the mean nutrient intakes for individuals in their preliminary Report No. 2 Food and Nutrient Intakes of Individuals for 1 Day in the United States, Spring 1977.⁶

Unfortunately at the writing of this report, the standard deviations were not available to the public. Eleanor M. Pao with USDA was kind enough to retrieve from the computer the standard deviations for a limited number of

the nutrient intakes. Because USDA analyzed the data by age groups that were different from the RDA's age groupings, a pooled mean of the data from USDA was obtained for the individuals 23-50 years and 51 years and over. The pooled means were then compared to the Texas data. The data and the Survey Report from AGNET was analyzed by the Student T test.⁷

Analysis of variance was utilized to determine the possible differences between the mean intake of Texans from urban vs rural or with a limited income.

COMPARISON OF DIETCHECKS FOR TEXANS FROM URBAN, RURAL OR LIMITED INCOME LOCATIONS

As described previously, there were 32 locations in Texas where the Dietcheck program was conducted and each location was given a code, either urban, rural or limited income. Tables 2 through 17 summarize the mean and standard deviations for the fourteen nutrients analyzed in the Dietcheck program for each age/sex group by locations. Table 2 shows that for all ages/sexes the only nutrients that were significantly different at 0.05 percent level were calcium and vitamin C, with calcium being below the RDA.

The Male 15 to 18 years of age group (Table 7) did reveal 7 nutrients that were significantly different. However, it should be noted that the age/sex group contained only 36 individuals and this is not a significant number of subjects to make conclusive statements. It should also be noted that although there was a difference between locations and nutrient intake, none of the locations had mean intakes below the 1980 RDA for this age/sex group.

COMPARISON OF THE URBAN RESIDENTS OF TEXAS WITH THE USDA URBAN RESIDENTS

Table 18 compares the mean nutrient intake of individuals surveyed by the USDA in the Spring of 1977 with the Texans who participated in Dietcheck who were classified as urban residents. Statistical analysis shows that for all individuals there was a significant difference in mean intake for

the following nutrients: calories, protein, calcium, thiamin, vitamins A and C. For each nutrient the means for the Texas population was larger, indicating that Texans from urban areas may be better nourished than the individuals surveyed by USDA.

For each age/sex group where a significant difference exists between the means, it should be noted that in most cases the mean intake for Texans was equal to or greater than the RDA¹ for that age/sex group. The only nutrients below the RDA were calcium and iron. The sample size should also be noted when a significant difference exists because in some cases the Texas sample was insufficient in size.

Table 19 shows the average intake of each nutrient as a percentage of the 1980 RDA¹ by age/sex group. The data indicates that the two nutrients that were deficient in the diet of most of the individuals were calcium and iron, with iron intake being the lowest among females of all ages.

COMPARISON OF THE NONMETROPOLITAN INDIVIDUALS OF TEXAS WITH THE USDA NON-METROPOLITAN DATA

Table 20 compares the mean nutrient intake of individuals surveyed by the USDA in the Spring of 1977 and Texans who participated in Dietcheck and were coded as rural residents. One thousand eleven Texans were compared to the 3,232 individuals surveyed by the USDA.

For all individuals, a significant difference at the 0.05 percent level was found for the following nutrients: calories, fat, carbohydrates, calcium, vitamin A, thiamin, niacin, riboflavin, and vitamin C. Texas consumed less of these nutrients except for carbohydrates, vitamins A and C.

It appears that Texans from nonmetropolitan areas may not be as well nourished as the nonmetropolitan individuals surveyed by the USDA in 1977.

LIMITED INCOME DATA

Table 21 compares the percentage of the 1980 RDA for each nutrient for the Texans who were either enrolled or previously enrolled in the Expanded

Nutrition Education Program with the individuals surveyed by USDA who had incomes below \$6,000 in 1977.

No statistical analysis of this data was possible because USDA only reported this data as a percentage of the 1980 RDA. Standard deviations were also reported as a percentage of the RDA. The AGNET System could not provide the nutrient analysis as a percentage of the 1980 RDA because the data base in Nebraska was based on the 1974 RDA. The Texas Agricultural Extension Service calculated the percentage of the 1980 RDA for all nutrients from the Summary Report provided by AGNET, but it was impossible to determine the standard deviations from this data. Therefore no statistical analysis was possible.

It is unfortunate that a comparison could not be made as this data would have been of interest to the Expanded Nutrition Education Program as well as other programs that work with limited income families in Texas.

NUTRIENT SUMMARY SCORE

The AGNET System made a statistical comparison of the nutrient intake of protein, calcium, iron, vitamin A, thiamin, riboflavin, niacin and ascorbic acid in comparison to calories consumed and calculated being made on individual foods in an attempt to give a simplistic idea of the nutrient value of a food. In the Dietcheck case, a number was generated that indicated whether the individual's diet was providing the necessary nutrients within a calorie constraint. 85-100 indicated good nutrition, 70-84 fair, 55-69 poor and below 54 the individual needs help in food selection. Table 22 displays the nutrient score by location for each age/sex group.

The age/sex group with the lowest nutrient score was females 15-18 years of age. This data confirms other reports concerning the poor dietary habits of teenage girls. The best score was found on the males over 51 years

of age. The score for all individuals who participated in Dietcheck was 78 indicating that most Texans' diets are fair.

DISTRIBUTION OF NUTRIENTS

The computer Summary Report also displayed the time of day the percentage of each nutrient was consumed. Participants were asked to designate if the foods eaten were part of a meal or eaten as a snack and this enabled the computer printout to display the percentage of each nutrient eaten as a meal vs a snack as well as the time of day. Table 23 is a summary of this data. It appears that all of the nutrients were primarily consumed as a portion of a meal. Most nutrients were consumed either at the midday or evening meal with the morning meal contributing the least percentage of all nutrients analyzed. Analysis of the nutrient composition of the diets of all the participants in Dietcheck shows that for the only nutrients that were below the 1974 RDA were calories and calcium.

DISTRIBUTION OF WEIGHT

Each participant of the Dietcheck program was asked to state his or her height and weight. There was no method provided to check the accuracy of the information provided by the participant. The information provided by the participant was then compared to the USDA height/weight tables.⁸

The computer made a comparison and printed on the nutrient analysis form whether the person was over or under their ideal body weight. Table 24 shows that 28 percent of the participants were within 9 percent of their ideal body weight. Only 6.2 percent were below while approximately 66 percent were above their ideal body weight. This data confirms that the majority of Texans have a problem with weight control.

FOODS THAT PROMOTE DENTAL CARIES

Another aspect of the analysis of the individuals' diet was to determine

the number of foods eaten that might lead to the development of tooth decay. Dr. Abraham Nizel's book Nutrition Preventive Dentistry: Science and Practice⁹ was used as the source of the information. The computer printout listed the foods (3 percent or more of added sugar) eaten that may lead to tooth decay for the individual. Table 25 shows that for the 405 individuals who did not eat any foods that might promote dental caries the computer printout read "Congratulations you have not eaten any foods that promote tooth decay." This portion of the printout was a great awareness tool for the participants in Dietcheck.

The mean number of snacks eaten per day per person was 2.4. The group with the greatest number of snacks eaten (4.1) was the male 15-18 age/sex group while the fewest (1.9) was among pregnant women 19-22 years of age.

IMPLICATIONS FOR FUTURE NUTRITION EDUCATION PROGRAMS FOR THE TEXAS AGRICULTURAL EXTENSION SERVICE

The statistical analysis of the Dietcheck data has made the Extension Food and Nutrition Specialists aware of important areas of concern for future food and nutrition projects.

1. More attention must be directed towards teenage girls' nutrition habits. The nutrient score (Table 22) revealed that they were the poorest nourished age/sex group.
2. Extension must continue to emphasize weight control programs for all audiences, due to the fact that 66 percent of the Dietcheck participants reported weights over their ideal body weight.
3. Calcium and iron were the two nutrients that were deficient for most of the age/sex groups. Nutrition education materials need to emphasize the importance of these nutrients and the best food sources of these nutrients.

4. Extension programs should be developed to make individuals aware of the cavity promoting foods eaten and encourage better dental hygiene.

SUMMARY AND CONCLUSIONS

A computerized nutrient analysis of a 24-hour food recall called Dietcheck was conducted in 32 locations in Texas during 1980 by the Texas Agricultural Extension Service and 2,550 individuals participated in the program. The data generated from the Dietcheck was statistically analyzed for possible differences between nutrient intake of individuals who were residents of urban vs rural locations and for limited income people. The data from this study indicated that neither the location of the resident nor income have a significant impact on nutrients consumed.

Analysis of data generated from the Dietcheck program revealed that approximately 66 percent of Texans surveyed were over their ideal body weight. This confirms the work of other researchers who have found obesity to be in epidemic proportions in America, and that nutrition education needs to be focused on assisting individuals with weight control.

The average number of cavity promoting snack foods eaten per day were 2.4 per person with the greatest number being consumed by teenage males. Nutrient distribution information revealed that the midday and evening meals provided most of the nutrients consumed by Texans. A nutrient score based on nutrients vs calories consumed indicated that the poorest nourished group was teenage girls between 15 and 18 and the best nourished were males over 51 years of age. The implications from this information strongly suggests that educational programs need to be developed that are directed at improving the nutrient status of adolescent females.

The Dietcheck data was also compared to the data generated in the 1977

USDA Nutrient Intake Survey of Individuals. For the urban Texas population there were several nutrients that were significantly different from the USDA data, but in most cases the Texans were consuming larger amounts of most nutrients. For the nonmetropolitan population, the Texas data indicated that Texans were consuming a diet that provided significantly less of several nutrients when compared to the USDA data. It should be noted that Texas Dietcheck program was conducted on a minimal budget and few experiment controls such as sampling size, were maintained. However, the Texas data is consistent with the results of more elaborate, scientific investigation, such as the the USDA Food Consumption Survey.

TABLE 1

Summary of Dietcheck Locations and Month of Year

Location	Type of Event	Month
<u>URBAN:</u>		
Dallas	Mall Exhibit	June
El Paso	Health Fair	April
Harris County	Consumer Seminar	April
Smith Co. - Tyler	Health Fair	April
Travis Co. - Austin	Health Fair	June
Texas A&M	University Health Class	November
San Antonio	Texas Extension Homemakers Conference	October
<u>RURAL:</u>		
Comal Co.	Health Fair	March
Fayette Co.	Health Fair	July
Fort Bend Co.	County Fair	September
Harrison Co.	Health Fair	January
Hemphill	Health Fair	April
Henderson	Health Fair	February
Hutchinson	Health Fair	April
Jim Wells	Health Fair	January
Leon	Health Fair	August
Mills	Heart Seminar	February
Moore	Weight Control Seminar	April
Parker	Food Fair	November
Titus	County Fair	September
Brownwood	4-H Leader Training	September
Waller	County Fair	September
Polk	County Courthouse	October
Athens	Craft Fair	October
Gray	County Extension Office	November
Jackson	Family Food Fair	October
<u>LIMITED INCOME:</u>		
Dallas	ENP Unit	November
Fort Worth	ENP Unit	November
Houston	ENP Achievement Day	August
Hidalgo	Health Fair	August
Starr	Health Fair	August
San Antonio	ENP Unit	May

Table 2
 Comparison Table of Dietcheck by Location
 (All Ages, Sexes)
 Mean of Nutrients \pm Standard Deviation

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories	1802.2 \pm 1000.9	1831 \pm 1133	1744.8 \pm 923.0	1846.1 \pm 979.8
Protein g	78.4 \pm 53.5	78.3 \pm 55.6	76.7 \pm 45.0	80.7 \pm 60.3
*Calcium mg	704.3 \pm 618.2	673 \pm 512.0	650.3 \pm 575.0	789.2 \pm 720.7
Iron mg	12.7 \pm 7.4	12.9 \pm 7.6	12.5 \pm 7.2	12.8 \pm 7.4
Vitamin A iu	5957.1 \pm 8490.0	5956 \pm 8902	5635.2 \pm 8692	6326.3 \pm 7920.5
Thiamin mg	1.09 \pm .78	1.1 \pm .812	1.1 \pm 0.82	1.1 \pm 0.7
Riboflavin mg	1.5 \pm 1.2	1.5 \pm 1.4	1.5 \pm 1.09	1.6 \pm 1.3
Niacin mg	17.6 \pm 11.0	17.0 \pm 9.5	17.8 \pm 11.6	18.0 \pm 11.3
*Vitamin C mg	105.6 \pm 154.9	111.3 \pm 162.5	94.6 \pm 167.3	113.2 \pm 132.3
Fat Total g	79.4 \pm 58.6	77.1 \pm 69.0	78.0 \pm 55.1	82.2 \pm 53.5
Sat. Fat Acids g	27.7 \pm 23.5	27.0 \pm 26.0	27.3 \pm 23.2	28.9 \pm 21.6
Oleic, Unsat. g	29.0 \pm 24.9	28.8 \pm 32.0	28.5 \pm 22.0	29.7 \pm 20.9
Linoleic, Unsat.	7.4 \pm 8.6	6.8 \pm 8.9	7.5 \pm 9.1	7.7 \pm 7.7
Carbohydrate g	192.8 \pm 113.0	202 \pm 127.0	186.2 \pm 107.6	193.1 \pm 107.4
N =	2550	657	1011	882

*Groups significantly different (p < 0.05)

Table 3
Comparison Table of Dietcheck by Location
(for Children 1-3 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (1300)	1730.8 ± 499.3	1392.7 ± 110.2	1676.7 ± 380.9	1767.1 ± 524.57
Protein g (23)	75.6 ± 23.4	66.6 ± 17.9	70.0 ± 30.7	76.9 ± 23.7
Calcium mg (800)	831.7 ± 405.0	882.6 ± 311.4	747.0 ± 645.7	834.9 ± 402.1
Iron mg (15)	10.3 ± 3.1	8.0 ± 0.52	10.2 ± 3.9	10.6 ± 3.1
Vitamin A iu (200)	3663 ± 2551	5708.6 ± 5620	3076.7 ± 670.7	3526.3 ± 2289.8
Thiamin mg (.7)	0.9 ± 0.3	0.7 ± 0.1	0.9 ± 0.15	1.0 ± 0.4
Riboflavin mg (.8)	1.6 ± 0.58	1.4 ± 0.55	1.6 ± 1.0	1.7 ± 0.56
Niacin mg (9)	13.3 ± 5.6	10.3 ± 1.9	11.1 ± 2.9	13.9 ± 5.9
Vitamin C mg (40)	89.2 ± 75.2	68.6 ± 57.8	29.0 ± 8.5	96.8 ± 78.5
Fat Total g	79.4 ± 26.8	53.3 ± 8.6	92.3 ± 24.1	80.7 ± 27.0
Sat. Fat Acids g	28.8 ± 10.9	23.0 ± 3.6	34.3 ± 16.8	28.8 ± 10.8
Oleic, Unsat. g	26.6 ± 9.3	19.0 ± 1.0	30.7 ± 14.2	26.9 ± 9.1
Linoleic, Unsat.	5.6 ± 3.0	5.6 ± 3.7	3.0 ± 1.0	5.8 ± 3.0
Carbohydrate g	177.5 ± 66.9	168.0 ± 64.4	148.0 ± 32.4	181.2 ± 70.0
N =	38	3	3	32

*Groups significantly different (p < 0.05)
() = RDA for age/sex

Table 4
Comparison Table of Dietcheck by Location
(for Children 4-6 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (1800)	1882.3 ± 736.4	1615.5 ± 620	1766.5 ± 166.1	2187.7 ± 903.8
Protein g (30)	77.6 ± 29.7	61.3 ± 20.3	79.0 ± 12.7	93.3 ± 35.2
Calcium mg (800)	1000.4 ± 569.7	895.8 ± 453	1095.0 ± 534.5	1073.5 ± 747.3
Iron mg (10)	12.1 ± 4.7	12.5 ± 5.9	9.6 ± 0.99	12.5 ± 4.5
Vitamin A iu (2.500)	3567.1 ± 2234.8	3216.7 ± 2350	2373.0 ± 1032.3	4315.5 ± 2419.7
Thiamine mg (9)	1.2 ± 0.6	1.1 ± 0.45	1.4 ± 0.21	1.3 ± 0.87
Riboflavin mg (1.1)	1.9 ± 0.9	1.6 ± 0.55	2.1 ± 0.354	2.1 ± 1.2
Niacin mg (12)	15.6 ± 6.4	13.5 ± 6.0	16.6 ± 3.1	17.5 ± 7.7
Vitamin C mg (40)	113.4 ± 94.0	83.3 ± 80.6	79.5 ± 86.9	154.7 ± 106.9
Fat Total g	77.1 ± 41.2	56.2 ± 27.5	91.5 ± 47.3	93.2 ± 47.9
Sat. Fat Acids g	26.7 ± 14.9	20.2 ± 8.9	31.5 ± 20.5	31.7 ± 18.0
Oleic, Unsat. g	26.4 ± 15.7	18.7 ± 10.2	37.5 ± 20.5	30.5 ± 17.8
Linoleic, Unsat.	7.1 ± 4.8	6.3 ± 5.2	12.0 ± 0.0	6.3 ± 4.8
Carbohydrate g	223.6 ± 100.3	231.2 ± 113.5	164.0 ± 86.2	235.8 ± 100.7
N =	14	6	2	6

*Groups significantly different (p < 0.05)

() = RDA for age/sex

Table 5
Comparison Table of Dietcheck by Location
(for Children 7-10 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2400)	1758.4 ± 614	1651.3 ± 491	1732.5 ± 700	2062.0 ± 244.6
Protein g (36)	67.8 ± 18.0	68.3 ± 16.5	66.5 ± 20.6	74.0 ± 0.0
Calcium mg (800)	856.0 ± 443	898.0 ± 153.0	822.3 ± 534	978.5 ± 19.0
Iron mg (10)	10.9 ± 4.9	16.4 ± 9.0	9.5 ± 2.9	10.8 ± 1.1
Vitamin A iu (700)	3366.5 ± 2102	3081.3 ± 1396	3208.2 ± 2370	4665.0 ± 1527.
Thiamine mg (1.2)	1.0 ± 0.38	0.9 ± .05	1.0 ± 0.45	1.2 ± 0.0
Riboflavin mg (1.2)	1.7 ± 0.82	1.7 ± .36	1.7 ± 0.99	1.8 ± 0.14
Niacin mg (16)	13.8 ± 3.3	15.6 ± 4.4	13.3 ± 3.4	13.6 ± 0.91
Vitamin C mg (40)	107.1 ± 93.6	140.3 ± 105.3	96.9 ± 102.3	113.0 ± 8.4
Fat Total g	85.0 ± 39.6	56.7 ± 9.6	89.9 ± 44.7	100.5 ± 14.8
Sat. Fat Acids g	32.0 ± 14.8	24.0 ± 7.5	33.9 ± 16.9	33.5 ± 7.7
Oleic, Unsat. g	30.1 ± 13.5	21.7 ± 3.7	31.5 ± 15.1	35.0 ± 1.4
Linoleic, Unsat.	9.8 ± 10.4	3.7 ± 2.5	11.5 ± 12.1	9.5 ± 2.1
Carbohydrate g	186.4 ± 81.2	222.0 ± 120.8	168.6 ± 75.7	230.5 ± 34.6
N =	16	3	11	2

*Groups significantly different (p < 0.05)

() = RDA for age/sex

Table 6
Comparison Table of Dietcheck by Location
(for Males 11-14 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2800)	1996.7 ± 796.4	1697.3 ± 544	2007.2 ± 529.7	2437.0 ± 1147.6
Protein g (44)	85.8 ± 24.9	81.2 ± 17.8	92.2 ± 33.5	87.2 ± 29.5
Calcium mg (1200)	1021.0 ± 427.2	1027.8 ± 496	937.0 ± 381.2	1080.8 ± 414.8
Iron mg (18)	11.2 ± 5.1	10.1 ± 5.5	12.0 ± 4.8	12.1 ± 5.4
Vitamin A iu (1000)	161.3 ± 3147	3061.6 ± 2086	3624.0 ± 2307	6258.8 ± 4321.4
*Thiamine mg (1.4)	1.0 ± 0.4	0.9 ± 0.37	1.5 ± 0.33	0.9 ± 0.37
Riboflavin mg (1.5)	2.0 ± 0.5	1.9 ± 0.63	2.3 ± 0.49	1.7 ± 0.48
Niacin mg (18)	18.8 ± 7.7	17.3 ± 8.1	23.0 ± 8.3	17.5 ± 64
Vitamin C mg (45)	59.5 ± 54.7	53.3 ± 63.8	44.4 ± 42.3	81.3 ± 50.75
Fat Total g	94.1 ± 62.3	73.3 ± 25.8	79.0 ± 32.6	138.0 ± 97.7
Sat. Fat Acids g	33.0 ± 20.0	29.1 ± 12.7	26.2 ± 10.5	44.7 ± 30.6
Oleic, Unsat. g	31.8 ± 20.4	25.3 ± 12.1	27.4 ± 7.3	45.3 ± 31.6
Linoleic, Unsat.	11.0 ± 16.6	5.2 ± 4.9	5.4 ± 3.6	24.3 ± 26.5
Carbohydrate g	204.0 ± 82.4	174.2 ± 89.7	239.0 ± 47.2	219.5 ± 89.7
N =	20	9	5	6

*Groups significantly different (p < 0.05)

() = RDA for age/sex

Table 7
Comparison Table of Dietcheck by Location
(for Males 15-18 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (3000)	3112.8 ± 1661.4	4782.5 ± 3063.0	2716.9 ± 1360	3465.9 ± 1193.
*Protein g	125.8 ± 74.8	217.7 ± 146.0	112.4 ± 57.6	120.0 ± 48.
*Calcium mg (1200)	1246.3 ± 1013.0	2807.2 ± 2226.0	991.9 ± 599.4	1229.1 ± 465.5
*Iron mg (18)	17.7 ± 8.4	28.2 ± 13.5	16.0 ± 7.3	17.6 ± 5.4
*Vitamin A iu (5000)	5026.2 ± 5992.3	11680.5 ± 14356	3516.1 ± 3588	6229.4 ± 375
*Thiamine mg (1.5)	1.5 ± 0.9	2.6 ± 1.7	1.4 ± 0.71	1.4 ± 0.6
*Riboflavin mg (1.8)	2.6 ± 1.8	4.9 ± 4.3	2.1 ± 1.0	2.7 ± 1.0
*Niacin mg (20)	26.9 ± 15.8	41.7 ± 27.6	22.7 ± 11.6	32.1 ± 16.0
Vitamin C mg (45)	95.3 ± 146.8	238.2 ± 392.6	65.5 ± 86.	113.1 ± 48.
Fat Total g	144.1 ± 88.8	236.5 ± 176.8	124.3 ± 68.8	157.4 ± 64.1
Sat. Fat Acids g	53.9 ± 35.3	82.5 ± 75.5	45.7 ± 25.8	64.3 ± 27.85
Oleic, Unsat. g	51.3 ± 32.1	75. ± 68.	45.6 ± 25.8	56.6 ± 22.
Linoleic, Unsat.	13.1 ± 12.1	14.5 ± 14.8	11.4 ± 9.7	17.4 ± 17.
Carbohydrate g	324.1 ± 175.9	475.7 ± 272.1	287. ± 168.2	359.4 ± 103.9
N =	36	4	24	8

*Groups significantly different (p < 0.05)
() = RDA for age/sex

Table 8
Comparison Table of Dietcheck by Location
(for Males 19-22 Years)

	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (3000)	3022.4 ± 1624.4	2241.4 ± 1218.3	2492.0 ± 1550.	3332.8 ± 1663
Protein g (54)	119.8 ± 67.2	82.9 ± 66.9	115.9 ± 68.0	128.7 ± 66.3
*Calcium mg (800)	1151.2 ± 922.4	561.9 ± 258	474.2 ± 522.8	1460.8 ± 944.3
Iron mg (10)	17.2 ± 9.1	15.2 ± 11.5	15.8 ± 9.7	18.0 ± 8.6
Vitamin A iu (5000)	5184.4 ± 4146.2	4715.9 ± 3812.1	2745.4 ± 2028	5948.9 ± 4439.5
Thiamine mg (1.5)	1.8 ± 1.3	1.3 ± .98	1.8 ± 1.5	1.9 ± 1.3
Riboflavin mg (1.8)	2.4 ± 1.7	1.5 ± 1.2	1.9 ± 1.3	2.8 ± 1.8
Niacin mg (20)	23.6 ± 13.7	16.9 ± 13.5	27.2 ± 14.4	24.0 ± 13.5
Vitamin C mg (40)	209.3 ± 222.3	262.0 ± 229.8	113.3 ± 159.3	224.3 ± 233.4
Fat Total g	139.1 ± 87.8	83.7 ± 59.5	123.2 ± 97.8	155.2 ± 86.7
Sat. Fat Acids g	49.8 ± 35.8	31.3 ± 22.9	44.8 ± 37.8	55.2 ± 36.7
Oleic, Unsat. g	49.8 ± 36.2	31.0 ± 28.2	48.6 ± 42.5	54.1 ± 35.7
Linoleic, Unsat.	10.8 ± 9.8	2.7 ± 4.7	12.9 ± 8.9	12.0 ± 10.2
Carbohydrate g	306.4 ± 171.3	275.1 ± 143.2	213.0 ± 112.1	338.5 ± 182.5
N =	49	7	9	33

*Groups significantly different (p < 0.05)
() = RDA for age/sex

Table 9
Comparison Table of Dietcheck by Location
(for Males 23-50 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2700)	2305.0 ± 1092	2238. ± 890.6	2319.6 ± 1316.4	2338.9 ± 935
Protein g (56)	97.8 ± 44.0	93.8 ± 37.2	96.7 ± 48.0	102.5 ± 43.8
Calcium mg (800)	780 ± 576	742.9 ± 443.4	726.5 ± 613.8	876.4 ± 615.4
Iron mg (10)	15.5 ± 8.0	14.2 ± 5.2	15.0 ± 6.9	17.3 ± 10.5
*Vitamin A iu (1000)	4863 ± 5007	3660.4 ± 2555.5	4487.8 ± 4039.9	6246.4 ± 6887.5
Thiamine mg (1.4)	1.3 ± 0.99	1.2 ± 0.66	1.4 ± 1.2	1.4 ± 0.85
Riboflavin mg (1.6)	1.7 ± 0.98	1.6 ± 0.86	1.7 ± 1.0	1.9 ± 0.91
Niacin mg (18)	23.6 ± 12.5	21.6 ± 9.5	24.0 ± 13.5	24.5 ± 13.3
Vitamin C mg (45)	93.1 ± 143.4	87.5 ± 100.2	81.9 ± 85.2	111.3 ± 211.9
Fat Total g	108.5 ± 76.9	94.1 ± 53.1	116.5 ± 99.8	110.0 ± 57.4
Sat. Fat Acids g	38.7 ± 32.9	31.3 ± 21.5	42.8 ± 44.2	39.5 ± 21.2
Oleic, Unsat. g	39.6 ± 30.2	33.6 ± 22.19	42.8 ± 38.7	40.6 ± 22.6
*Linoleic, Unsat.	11.2 ± 12.4	7.5 ± 6.0	13.4 ± 16.3	11.5 ± 9.8
*Carbohydrate g	224.0 ± 112.0	2428 ± 106.1	217.0 ± 108.0	219.3 ± 119.8
N =	206	53	84	69

*Groups significantly different (p < 0.05)
() = RDA for age/sex

Table 10
Comparison Table of Dietcheck by Location
(for Males 51+ Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2400)	2031.9 ± 1018	2232.5 ± 1359.4	2084.4 ± 1111.4	1882.0 ± 649
Protein g (56)	87.6 ± 50.5	89.1 ± 38.7	94.4 ± 70.6	81.5 ± 34.7
Calcium mg (800)	767.7 ± 756.0	778.4 ± 455.6	840.5 ± 1144.0	704.3 ± 439.9
Iron mg (10)	14.8 ± 6.9	15.1 ± 6.3	15.1 ± 6.9	14.5 ± 7.3
*Vitamin A iu (5000)	7252.0 ± 8361	6111.1 ± 4834.8	7939.7 ± 9252.7	7331.4 ± 9110.8
Thiamine mg (1.2)	1.3 ± 0.7	1.2 ± .56	1.4 ± 0.94	1.2 ± 0.66
Riboflavin mg (1.5)	1.7 ± 1.3	1.7 ± .78	1.9 ± 2.0	1.7 ± 8.3
Niacin mg (16)	19.9 ± 9.7	19.4 ± 8.3	20.1 ± 10.6	19.9 ± 9.9
Vitamin C mg (45)	115 ± 154	90.9 ± 75.4	124.6 ± 195.2	115.5 ± 148.8
Fat Total g	88.5 ± 67.0	99.9 ± 89.9	96.1 ± 74.0	76.5 ± 40.2
*Sat. Fat Acids g	31.4 ± 26.6	36. ± 26.5	35.0 ± 34.8	26.3 ± 16.7
*Oleic, Unsat. g	34.6 ± 32.2	42.2 ± 50.4	36.6 ± 28.9	28.9 ± 18.4
Linoleic, Unsat.	7.4 ± 7.6	8.4 ± 11.8	8.0 ± 6.2	6.4 ± 5.4
Carbohydrate g	220.7 ± 109.3	244.3 ± 142	215.6 ± 91.1	211.9 ± 100.7
N =	221	51	74	94

*Groups significantly different (p < 0.05)
() = RDA for age/sex

Table 11
 Comparison Table of Dietcheck by Location
 (for Females 11-14 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2400)	2003.6 ± 1046.6	1726.1 ± 951.1	2104.9 ± 1151.2	2204.1 ± 817.0
Protein g (44)	71.8 ± 37.1	65.3 ± 37.2	73.3 ± 38.8	79.5 ± 32.5
Calcium mg (1200)	795.0 ± 546.0	789.0 ± 395.2	738.9 ± 628.9	1003.4 ± 499.
Iron mg (.5)	12.8 ± 8.5	10.7 ± 7.2	14.3 ± 9.9	11.7 ± 3.5
Vitamin A iu (4000)	3784.9 ± 5084	2174.0 ± 1715.6	4831.2 ± 6442.4	3344.6 ± 3382
Thiamine mg (1.2)	1.0 ± 0.7	0.8 ± 0.55	1.1 ± 0.8	0.9 ± 0.31
Riboflavin mg (1.3)	1.6 ± 0.9	1.4 ± 0.70	1.6 ± 1.0	1.8 ± 0.86
Niacin mg (16)	14.8 ± 10.0	10.5 ± 7.4	17.7 ± 11.6	13.4 ± 4.4
Vitamin C mg (45)	136.1 ± 380.3	52.6 ± 93.3	209.3 ± 505.8	46.8 ± 43.6
Fat Total g	81.7 ± 44.7	73.9 ± 36.5	80.5 ± 44.7	101.5 ± 58.1
Sat. Fat Acids g	28.3 ± 16.8	25.8 ± 14.8	27.6 ± 17.5	35.4 ± 18.4
Oleic, Unsat. g	26.4 ± 15.0	22.3 ± 13.4	27.9 ± 15.6	29.5 ± 16.0
Linoleic, Unsat.	9.1 ± 18.6	5.8 ± 7.4	10.8 ± 24.3	9.9 ± 8.7
Carbohydrate g	251.7 ± 163.9	206.5 ± 146.8	277.6 ± 189.7	251.4 ± 57.7
N =	52	16	28	8

*Groups significantly different (p < 0.05)
 () = RDA for age/sex

Table 12
 Comparison Table of Dietcheck by Location
 (for Females 15-18 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2100)	1712 ± 715.0	2132.1 ± 909.3	1664.0 ± 702.2	1753.0 ± 641.5
Protein g (48)	67.3 ± 35.3	73.2 ± 43.0	67.0 ± 35.9	66.1 ± 30.4
Calcium mg (1200)	612.8 ± 461.5	625.4 ± 328	586.3 ± 473.0	728.4 ± 462.7
Iron mg (18)	10.7 ± 6.2	13.2 ± 9.6	10.7 ± 6.2	10.2 ± 4.3
Vitamin A iu (4000)	5232 ± 1073.4	9059.9 ± 17322.5	5082.7 ± 11034	4241.9 ± 3620.3
Thiamine mg (1.1)	0.9 ± 0.6	1.1 ± .673	0.9 ± 0.65	1.0 ± 0.81
Riboflavin mg (1.4)	1.3 ± 1.2	1.5 ± 1.0	1.4 ± 1.3	1.3 ± 0.61
Niacin mg (14)	14.3 ± 9.8	16.2 ± 12.7	14.5 ± 10.0	14.0 ± 7.4
*Vitamin C mg (45)	67.9 ± 75.7	104 ± 69.4	55.8 ± 67.7	107.4 ± 96.7
Fat Total g	75.3 ± 38.2	94 ± 59.3	71.7 ± 34.2	83.5 ± 44.0
Sat. Fat Acids g	25.7 ± 14.9	29.4 ± 22.9	24.4 ± 13.1	30.6 ± 18.3
Oleic, Unsat. g	26.1 ± 15.4	31.1 ± 21.5	24.9 ± 14.1	30.0 ± 18.3
Linoleic, Unsat.	7.0 ± 6.1	10.7 ± 9.8	6.5 ± 6.0	8.4 ± 4.5
Carbohydrate g	195.0 ± 102	254.5 ± 106	191.2 ± 106.5	186.8 ± 74.3
N =	96	7	73	16

* Groups significantly different (p >0.05)

() = RDA for ages/sex

Table 13
 Comparison Table of Dietcheck by Location
 (for Females 19-22 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2100)	1802.1 ± 774	1858.8 ± 677.4	1631.3 ± 627.7	1820.3 ± 883.0
Protein g (46)	72.3 ± 35.0	71.9 ± 29.9	66.7 ± 23.2	74.7 ± 41.7
Calcium mg (500)	717.6 ± 609.9	674.7 ± 435.2	601.3 ± 400	791.5 ± 762.2
Iron mg (18)	11.2 ± 5.1	11.2 ± 4.7	11.6 ± 5.6	11.2 ± 5.3
Vitamin A iu (4000)	5264 ± 6221	4592.2 ± 4005.2	5228.9 ± 7080	5816.1 ± 7218.7
Thiamine mg (1.1)	1.0 ± 0.68	1.05 ± .53	0.9 ± 0.36	1.0 ± 0.86
Riboflavin mg (1.4)	1.4 ± 0.83	1.34 ± .635	1.3 ± 0.8	1.5 ± 0.96
Niacin mg (14)	15.6 ± 9.9	17.0 ± 10.53	13.7 ± 6.4	15.3 ± 8.6
Vitamin C mg (45)	95.8 ± 85.6	96.5 ± 74.8	90.0 ± 96.1	97.4 ± 90.3
Fat Total g	83.7 ± 50.3	80.8 ± 36.4	71.7 ± 29.0	90.3 ± 63.2
Sat. Fat Acids g	28.1 ± 19.1	25.3 ± 12.9	25.4 ± 11.8	31.1 ± 24.1
Oleic, Unsat. g	30.5 ± 20.5	28.9 ± 15.9	27.8 ± 14.3	32.8 ± 24.9
Linoleic, Unsat.	9.0 ± 8.0	9.2 ± 7.2	7.2 ± 5.7	9.5 ± 9.2
Carbohydrate g	194.3 ± 91.5	216 ± 90.4	184.7 ± 95.9	181.3 ± 88.9
N =	154	55	21	73

*Groups significantly different (p < 0.05)
 () = RDA for ages/sex

Table 14
Comparison Table of Dietcheck by Location
(for Females 23-50 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2400)	1683.0 ± 960.0	1755.1 ± 1256.9	1616.5 ± 710.0	1691.1 ± 842.0
Protein g (46)	74.1 ± 52.3	77.2 ± 70.3	72.1 ± 43.5	73.5 ± 34.7
Calcium mg (300)	612.8 ± 495.0	588.3 ± 496.9	582.6 ± 4929.0	689.3 ± 490.
Iron mg (18)	12.5 ± 8.3	13.2 ± 9.4	12.1 ± 8.3	12.4 ± 6.8
Vitamin A iu (4000)	5751.0 ± 9203	5863.1 ± 9992.3	5303.3 ± 9461	6303.8 ± 7640.1
*Thiamine mg (1.0)	1.0 ± 0.8	1.09 ± 0.99	0.9 ± 0.73	1.0 ± 0.60
Riboflavin mg (1.2)	1.4 ± 1.2	1.4 ± 1.826	1.3 ± 0.83	1.4 ± 0.80
Niacin mg (13)	17.0 ± 10.9	16.4 ± 9.6	17.0 ± 11.8	17.8 ± 11.1
Vitamin C mg (45)	98.9 ± 163	113.8 ± 193	84.0 ± 166.5	102.4 ± 105.3
Fat Total g	73.3 ± 58.4	74.9 ± 82.1	71.5 ± 38.8	74.1 ± 43.8
Sat. Fat Acids g	25.1 ± 22.9	26.4 ± 32.1	24.0 ± 15.8	25.3 ± 17.3
Oleic, Unsat. g	26.2 ± 26.7	28.4 ± 39.9	25.5 ± 15.9	25.9 ± 17.1
*Linoleic, Unsat.	6.7 ± 7.5	6.0 ± 8.9	7.3 ± 7.0	25.9 ± 6.3
Carbohydrate g	180.4 ± 109.8	190.2 ± 136.2	173.7 ± 95.9	177.9 ± 861.0
N =	881	274	332	215

*Groups significantly different (p < 0.05)

() = RDA for ages/sex

Table 15
 Comparison Table of Dietcheck by Location
 (for Females 51+ Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (1800)	1563.0 ± 835.6	1482.5 ± 711.9	1554.3 ± 810.1	1597.3 ± 920.8
Protein g (46)	72.0 ± 58.7	68.9 ± 33.6	72.0 ± 37.3	74.2 ± 83.5
Calcium mg (800)	655.6 ± 557.0	652.3 ± 409.7	614.1 ± 440	705.4 ± 416.
Iron mg	11.7 ± 6.2	11.4 ± 4.35	11.9 ± 5.9	11.7 ± 7.3
Vitamin A iu (4000)	6874 ± 9509	8053.1 ± 10760.4	6417.1 ± 9030.5	6774.5 ± 9321
Thiamine mg (1.0)	1.0 ± 0.65	.99 ± .53	1.1 ± 0.75	1.0 ± 0.59
Riboflavin mg (1.1)	1.5 ± 1.2	1.4 ± .903	1.4 ± 0.92	1.5 ± 1.5
Niacin mg (.2)	16.5 ± 10.9	15.5 ± 7.1	17.1 ± 11.3	16.4 ± 11.7
Vitamin C mg (45)	107.1 ± 131.0	112.8 ± 127.9	101.5 ± 146.6	110.5 ± 112.
Fat Total g	67.5 ± 45.1	64.4 ± 42.8	67.3 ± 45.2	69.4 ± 46.2
Sat. Fat Acids g	23.6 ± 18.6	22.3 ± 16.5	23.5 ± 18.0	24.6 ± 20.3
Oleic, Unsat. g	25.1 ± 18.4	22.8 ± 16.9	25.3 ± 18.7	26.1 ± 18.7
Linoleic, Unsat.	6.1 ± 7.0	6.7 ± 9.07	5.7 ± 6.5	6.4 ± 6.4
Carbohydrate g	169.0 ± 97.0	168.2 ± 83	167.9 ± 100.2	170.7 ± 100.3
N =	787	155	335	297

*Groups significantly different (p < 0.05)
 () = RDA for ages/sex

Table 16
 Comparison Table of Dietcheck by Location
 (Pregnant 19-22 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2400)	1792.4 ± 1111.5	2937.5 ± 1694.9	1140.5 ± 453	1463.7 ± 518.7
Protein g (76)	88.7 ± 54.1	140 ± 87.6	62.0 ± 21.2	72.3 ± 31.5
Calcium mg (1200)	847.2 ± 508.3	1040 ± 977.9	741.0 ± 164	789.3 ± 479.5
Iron mg (36)	11.8 ± 7.5	20.0 ± 9.6	6.8 ± 4.4	9.6 ± 3.9
Vitamin A iu (5000)	3744.1 ± 3380.0	5403.5 ± 7189.1	2100.5 ± 1843.	3733.7 ± 1134.
Thiamine mg (1.4)	1.3 ± 1.0	2.1 ± 1.9	0.8 ± 0.56	1.1 ± 0.32
Riboflavin mg (1.7)	1.8 ± 1.2	2.7 ± 2.4	1.4 ± 0.28	1.5 ± 0.85
Niacin mg	19.3 ± 8.3	27.2 ± 14.0	14.8 ± 5.5	17.1 ± 2.9
Vitamin C mg (60)	159.4 ± 72.3	163. ± 19.8	115.0 ± 140.0	186.7 ± 50.8
Fat Total g	76.4 ± 74.1	138. ± 141.4	47.0 ± 9.8	55.0 ± 33.0
Sat. Fat Acids g	27.4 ± 29.3	54.0 ± 55.1	16.0 ± 0.0	17.3 ± 9.0
Oleic, Unsat. g	27.7 ± 33.6	58.5 ± 62.9	14.0 ± 1.4	16.3 ± 9.0
Linoleic, Unsat.	8.7 ± 4.7	12.0 ± 5.6	7.0 ± 0.0	7.7 ± 6.0
Carbohydrate g	188.4 ± 73.9	279.7 ± 51.6	123.0 ± 76.3	179.3 ± 38.5
N =	7	2	2	3

*Groups significantly different (p < 0.05)
 () = RDA for ages/sex

Table 17
Comparison Table of Dietcheck by Location
(Pregnant 23-50 Years)

<u>Nutrient</u>	<u>All Locations</u>	<u>Limited Income</u>	<u>Rural</u>	<u>Urban</u>
Calories (2300)	2425.8 ± 1196.0	3109.6 ± 1440.3	1919.4 ± 1020.7	2297.4 ± 1032.0
Protein g (76)	118.3 ± 75.9	124.7 ± 66.5	81.7 ± 39.5	132.0 ± 90.4
Calcium mg (1200)	1536.0 ± 1787.1	908.0 ± 461.2	1381.9 ± 877.8	1942.9 ± 2401.0
*Iron mg (36)	15.1 ± 7.6	20.0 ± 8.7	9.3 ± 4.1	15.2 ± 6.6
Vitamin A iu (5000)	5722.8 ± 4242.2	3939.0 ± 2844.4	4248.0 ± 1983.0	7362.5 ± 5075.0
Thiamine mg (1.3)	1.5 ± 0.98	1.9 ± 1.3	0.9 ± 0.35	1.5 ± 0.8
Riboflavin mg (1.5)	2.7 ± 2.8	1.5 ± .9	1.8 ± .93	3.4 ± 3.8
Niacin mg (15)	19.9 ± 9.4	23.8 ± 10.8	14.8 ± 9.3	20.2 ± 8.1
Vitamin C mg (60)	198.3 ± 228.0	269.1 ± 291.3	94.4 ± 117.8	208.9 ± 225.0
Fat Total g	93.2 ± 50.4	104.2 ± 55.5	89.0 ± 49.0	89.3 ± 51.0
Sat. Fat Acids g	35.5 ± 21.0	34.8 ± 18.68	36.0 ± 23.7	35.6 ± 22.3
Oleic, Unsat. g	32.3 ± 17.7	35.1 ± 19.0	31.7 ± 18.8	31.1 ± 17.0
Linoleic, Unsat.	7.0 ± 10.8	12.7 ± 18.59	5.4 ± 6.7	4.6 ± 5.0
Carbohydrate g	266.4 ± 2164.3	374.6 ± 233.2	198.1 ± 112.2	240.7 ± 116.5
N =	30	8	7	15

*Groups significantly different (p < 0.05)
() = RDA for ages/sex

TABLE 18
Average intake per individual in a day,¹ spring 1977
South, all urbanizations, all incomes compared to Texas urban, all incomes

Sex and age (years)	Individuals	Food energy	Protein	Fat	Carbohydrate	Calcium	Iron	Vitamin A min value	Thiamin	Riboflavin	Niacin	Vitamin C
	Number	Kcal	G	G	G	Mg	Mg	IU	Mg	Mg	Mg	Mg
Males:												
15-18	129 (8)	2,586(3,465)*	103.9(120)	116.1(157)*	284.1(359)*	959(1,229)	16.7(17)	4,834(6,229)	1.72(1.4)	2.21(2.7)	24.3(32.1)*	95(113)
19-22	98 (33)	2,313(3,332)*	95.8(128)*	105.5(155)*	240.0(338)*	772(1,460)*	16.1(18)	4,510(5,948)	1.55(1.9)	1.94(2.8)*	24.0(24)	73(224)*
23-34	236 (69)	2,345(2,338)	93.9(102)	106.2(110)	242.9(219)	703 (876)	15.5 (17.3)	4,822	1.52	1.79	23.6(24.5)	81
35-50	238	2,277	94.4(102)	106.7(110)	225.9(219)	739	16.0(17.3)	6,109	1.54(1.4)	1.89(1.9)	23.4(24.5)	84
51-64	212	2,075	86.5	97.1	213.1(211)	724	15.5(14.5)	7,332	1.50	1.91	21.8	92(111.3)
65-74	104 (94)	1,923(1,882)	82.8 (81)	91.3 (76)*	197.0 (211)	664 (704)*	14.5 (14.5)	7,455 (7,331)	1.42 (1.2)*	1.99(1.7)	21.1 (19.9)	98
75 and over	41	1,820	76.0	88.8	191.4	635	13.3	6,454	1.44	1.99(1.7)	20.1 (19.9)	80(115)*
Females:												
15-18	135 (16)	1,796(1,753)	71.3 (66)	79.3 (89)	202.5(186)	708 (728)	11.6(10)	4,337(4,241)	1.22(1.0)	1.57(1.3)	17.5(14.0)*	87(101)
19-22	94 (73)	1,522(1,820)*	60.4 (74)*	68.9 (90)*	167.1(181)	536 (791)*	10.1(11.2)	3,838(5,816)*	.97(1.0)	1.28(1.5)*	14.7(15.3)*	76 (97)
23-34	289 (215)	1,500(1,691)*	61.3 (73)*	67.9 (74)	157.6(177)*	476 (689)*	10.2 (12.4)*	3,699	.96	1.18(1.4)*	15.2 (17.8)*	62 (102)
35-50	290	1,492(1,691)*	63.7 (73)*	69.2 (74)	153.4(177)*	492	10.6(12.4)*	4,337	1.02(1.0)	1.25(1.4)*	16.4 (17.8)*	72 (102)
51-64	276	1,436(1,597)	60.4	64.2	154.8	522	11.1	6,117	1.05	1.43	16.0	82
65-74	125(297)	1,359	58.0 (74)	60.9 (69)	146.7(170)	540 (705)	10.0(11.7)	5,220(6,774)	1.07 (1.0)	1.31(1.5)	14.9(16.4)	83(110)
75 and over	62	1,284	50.5	56.8	144.3	610	9.6	5,523	.96	1.40	12.5	70
All individuals	3,071(882)	1,782(1,846)*	72.3 (80)*	80.4 (82)	191.7(193)	652 (789)*	12.5(12.8)	4,979(6,326)*	1.25(1.1)*	1.60(1.6)	18.1(18.0)	79(113)*

¹Based on 24-hour dietary recall of day preceding interview.
() = Texas Data

Source: USDA Nationwide Food Consumption Survey 1977-78,
48 contiguous States, spring 1977 (preliminary).
*Significant difference (<0.05)

Table 19 NUTRIENT INTAKES BELOW 1980 RECOMMENDED DIETARY ALLOWANCES
Average intake as percentage of 1980 RDA, all incomes, all locations

Sex and age (years)	No. of participants	Calories	Protein	Calcium	Iron	Vitamin A	Thiamin	Riboflavin	Niacin	Vitamin C
Males:										
11-14	20	...		..	....	..	....
15-18	36				.					
19-22	49									
23-50	205	..		.		.	.
51 +	221	..		.						
Females:										
11-14	52	..		....	....	.	..
15-18	94	..		....	....		..	.	.
19-22	160	..		..	....		..
23-50	881	..		....	....		..
51 +	815	..		..	....	

. 90 - 99% RDA
 .. 80 - 89% RDA
 70 - 79% RDA
 Below 70% RDA

TABLE 21
 Percentage of 1980 Recommended Dietary Allowances in a day, spring 1977
 48 States, all urbanizations, incomes under \$6,000² compared to Limited Income Data of Texas

Sex and age (years)	Individuals (number)	Food energy	Protein	Calcium	Iron	Vitamin A	Thiamin	Riboflavin	Niacin	Vitamin C
Males:										
15-18	40	85(159)	179(403)	82(233)	88(156)	125(233)	123(176)	125(275)	126(208)	171(526)
19-22	40	82(74)	173(153)	109(70)	152(151)	94(94)	99(87)	110(84)	118(84)	118(582)
23-34	58	85(82)	156(167)	106(92)	146(142)	93(73)	106(86)	119(103)	111(120)	212(194)
35-50	41	86(82)	175(167)	98(92)	164(142)	99(73)	121(86)	107(103)	130(120)	154(154)
51-64	57	82	147	79	135	110	116	117	128	134
65-74	81	80(93)	140(159)	83(97)	138(151)	122(122)	120(102)	121(113)	118(121)	139(199)
75 and over	44	85	131	82	133	157	110	126	108	139
Females:										
15-18	39	81(101)	156(152)	62(52)	59(73)	98(226)	108(102)	124(107)	129(116)	108(231)
19-22	56	69(88)	138(156)	73(84)	56(62)	86(113)	96(95)	95(96)	95(121)	111(214)
23-34	104	74(87)	138(167)	65(73)	55(73)	97(146)	101(109)	103(121)	115(116)	115(252)
35-50	77	72(87)	144(167)	64(73)	58(73)	91(146)	111(109)	103(121)	118(126)	130(252)
51-64	118	80	144	65	107	126	109	119	123	142
65-74	117	80(84)	136(149)	73(81)	107(114)	130(201)	115(100)	119(133)	121(129)	142(250)
75 and over	92	83	124	81	104	138	102	120	106	132
All individuals	1,222	80(87)	154(163)	80(81)	99(96)	119(145)	115(102)	125(121)	117(124)	144(244)

¹Based on 24-hour dietary recall of day preceding interview.

²Based on Recommended Dietary Allowance values as milligrams performed niacin rather than niacin equivalents.

() = Texas Dietcheck

Source: USDA Nationwide Food Consumption Survey 1977-78.
 48 conterminous States, spring 1977 (preliminary).

Table 22
NUTRIENT SUMMARY SCORE*
By Location

Sex and Age (years)	All locations	Limited	HELP		POOR		FAIR		GOOD	
			0-54	55-69	70-84	85-100				
			Rural	Urban						
0-6 months	87	100	75	0						
1-3	84	88	83	84						
4-6	89	88	91	89						
7-10	86	93	82	98						
Males:										
11-14	78	73	83	80						
15-18	79	89	74	88						
19-22	82	75	69	86						
23-50	81	81	79	84						
51 +	84	86	84	83						
Females:										
11-14	67	61	69	72						
15-18	64	63	62	69						
19-22	73	74	72	73						
23-50	74	74	73	78						
51 +	82	84	80	82						
Pregnant:										
15-18	71	81		68						
19-22	77	84	65	79						
23-50	83	79	71	90						
all ages/sex	78	78	76	81						

* Based on amount of:
protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin, and
vitamin C
Adjusted for calorie level and nutrient needs

Table 23
DISTRIBUTION OF NUTRIENTS

NUTRIENT	MEAN % OF RDA	MEAN OF TOTAL		% OF RDA		MID DAY		EVENING	
		MEALS	SNACKS	MEAL	SNACK	MEAL	SNACK	MEAL	SNACK
Calories Kcal	86.6	72.3	14.3	17.9	3.1	26.1	5.2	28.3	6.0
Protein g	164.8	148.1	16.3	29.2	3.6	56.7	5.9	62.2	6.8
Calcium mg	84.4	70.4	14.0	20.7	2.5	24.5	4.4	25.1	7.1
Iron mg	100.4	90.9	9.5	21.5	2.3	32.5	3.6	36.8	3.6
Vitamin A Iu	144.2	130.9	13.5	22.9	2.4	48.1	6.1	59.9	5.0
Thiamine mg	100.9	89.9	10.9	28.6	2.7	28.4	4.0	32.8	4.2
Riboflavin mg	121.8	104.7	15.7	28.7	3.1	35.4	5.1	40.6	7.5
Niacin mg	128.7	115.9	12.8	20.3	3.6	45.0	5.0	50.6	4.2
Vitamin C mg	232.7	198.6	33.9	67.0	8.5	64.1	11.7	67.4	13.7

Table 25
FOODS THAT PROMOTE DENTAL CARRIES

Category	Sample Size	Mean No.	Individuals Eating Foods that Promote Dental Caries										
			0	1	2	3	4	5	6	7	8	9	10
Total Population	2550	2.4	405	539	561	422	621	78	89	45	29	9	13
Child 1-3	38	2.2	1	9	14	7	1	3	1	1	1	0	0
Child 4-6	14	2.5	0	5	2	3	3	1	0	0	0	0	0
Child 7-10	16	2.8	4	3	0	1	4	2	1	1	0	0	0
Male 11-14	20	2.9	2	1	6	4	4	1	2	0	0	0	0
Male 15-18	36	4.1	0	3	8	5	8	3	1	1	4	0	2
Male 19-22	49	3.6	3	6	8	9	8	9	3	0	2	0	1
Male 23-50	206	2.8	28	35	44	31	26	17	10	8	4	2	1
Males 51+	219	2.6	28	37	55	44	25	12	8	1	4	2	3
Females 11-14	52	3.5	2	7	12	11	5	7	4	1	1	0	2
Females 15-18	96	2.9	9	14	13	27	15	13	1	2	2	0	0
Females 19-22	154	2.7	21	20	31	38	17	13	9	3	1	1	0
Females 23-50	811	2.3	154	189	173	112	67	54	30	19	6	3	4
Females 51+	787	2.0	145	201	182	123	71	37	18	8	2	0	0
Preg. 15-18	5	2.2	1	1	1	1	0	1	0	0	0	0	0
Preg. 19-22	7	1.9	1	2	3	0	0	1	0	0	0	0	0
Preg. 23-50	30	2.9	4	5	8	2	7	0	1	0	2	1	0

Literature Cited

1. National Academy of Science (1980). Recommended Dietary Allowances 9th Edition, Washington, D.C.
2. Guthrie, H.A. (1975) Introductory Nutrition, 3rd Edition, St. Louis, Mo. Mosby Time Mirror, St. Louis, Mo.
3. Pike, R.L. and M.L. Brown (1967) Nutrition and Integrated Approach. New York, John Wiley and Son, New York.
4. Bowering, J., Morrison, M.A., Lowenberg, R.L. and N. Tirado (1977) Evaluating 24-Dietary Hour Recalls. Journal of Nutrition Education 9,1, p. 20.
5. ARS (1964) Calculating the Nutritive Value of Diets. A Manual for Instructors for the use of Punch Cards For Machine Tabulation. USDA September 1964, ARS 62-10-1.
6. USDA. (1980) Food and Nutrition Intakes of Individuals in 1 Day in the United States, Spring 1977. Nationwide Food Consumption Survey 1977-78. Preliminary Report No. 2.
7. Li, J.C. (1969) Statistical Inference I. Edwards Brothers, Inc., Ann Arbor, Michigan, pg. 100 and 118.
8. Robinson, C.H. (1967) Proudfit - Robinson's Normal and Therapeutic Nutrition, 13th Edition. MacMillan Company, New York.
9. Nizel, A. (1972) Nutrition in Preventive Dentistry: Science and Practice. W.B. Saunders Company, Philadelphia, Penn.

APPENDICES

DIETCHECK CODE SHEET

R-50.18

Instructions:

Complete all blanks on this form except the columns labeled "Food Code" and "Amount Code." Be sure to write down all foods and beverages consumed in as much detail as possible, for example: Whole Wheat Bread, 2 slices.

Name _____ Date _____

Sex Code: _____

- 1. Male
- 2. Female
- 3. Pregnant
- 4. Nursing mother

Age _____ (For children under 3: _____ Years and _____ Months)

Height: _____ Feet and _____ Inches

Weight: _____ pounds

Build (19 years and over) Small _____ Medium _____ Large _____

WHEN	WHAT DID YOU EAT OR DRINK IN 24 HOURS?	AMOUNT EATEN	Food Code	Amount Code
Morning Meal				
Morning Snacks				
Mid-day Meal				
Mid-day Snacks				
Evening Meal				
Evening & Night Snacks				

FOOD AND NUTRITION BOARD, NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL
 RECOMMENDED DAILY DIETARY ALLOWANCES,* Revised 1980
 Designed for the maintenance of good nutrition of practically all healthy people in the U.S.A.

Age (years)	Weight (kg)	Height (cm)	Protein (g)	Fat-Soluble Vitamins				Water-Soluble Vitamins				Minerals							
				Vita- min A ($\mu\text{g RE}^b$)	Vita- min D (μg^c)	Vita- min E (mg $\alpha\text{-TE}^d$)	Vita- min C (mg)	Vita- min (mg)	Ribo- flavin (mg)	Niacin (mg NE ^f)	Vita- min B-6 (μg)	Fola- B-12 (μg)	Vitamin B-12 (μg)	Calcium (mg)	Phosphorus (mg)	Magnesium (mg)	Iron (mg)	Zinc (mg)	Iodine (μg)
Infants	0.0-0.5	6	7.3	60	24	kg \times 2.2	35	0.3	0.4	6	0.3	30	0.5 ^g	360	240	50	10	3	10
Children	0.5-1.0	9	20	71	28	kg \times 2.0	35	0.5	0.6	8	0.6	45	1.5	540	360	70	15	5	50
	1-3	13	29	90	35	25	45	0.7	0.8	9	0.9	100	2.0	800	800	150	15	10	70
	4-6	20	41	112	44	30	45	0.9	1.0	11	1.3	200	2.5	800	800	200	10	10	90
Males	7-10	28	62	132	52	34	45	1.2	1.4	16	1.6	300	3.0	800	800	270	10	10	120
	11-14	45	99	157	62	45	50	1.4	1.6	18	1.8	400	3.0	1200	1200	350	18	15	150
	15-18	66	145	176	69	56	60	1.4	1.7	18	2.0	400	3.0	1200	1200	400	18	15	150
Females	19-22	70	134	177	70	56	60	1.5	1.7	19	2.2	400	3.0	800	800	350	10	15	150
	23-50	70	154	178	70	56	60	1.4	1.6	18	2.2	400	3.0	800	800	350	10	15	150
	51+	46	101	157	62	46	60	1.2	1.4	16	2.2	400	3.0	800	800	350	10	15	150
Pregnant Lactating	15-18	55	120	163	64	46	60	1.1	1.3	15	1.8	400	3.0	1200	1200	300	18	15	150
	19-22	55	120	163	64	44	60	1.1	1.3	14	2.0	400	3.0	1200	1200	300	18	15	150
	23-50	55	120	163	64	44	60	1.0	1.2	13	2.0	400	3.0	800	800	300	18	15	150
	51+	55	120	163	64	44	60	1.0	1.2	13	2.0	400	3.0	800	800	300	10	15	150
						+30	+20	+0.4	+0.3	+2	+0.6	+400	+1.0	+400	+400	+150	h	+5	+25
						+20	+40	+0.5	+0.5	+5	+0.5	+100	+1.0	+400	+400	+150	h	+10	+50

* The allowances are intended to provide for individual variations among most normal persons as they live in the United States under usual environmental stresses. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined. See text for detailed discussion of allowances and of nutrients not tabulated. See Table 1 (p. 20) for weights and heights by individual year of age. See Table 3 (p. 25) for suggested average energy intakes.

^b Retinol equivalents. 1 retinol equivalent = 1 μg retinol or 6 μg β carotene. See text for calculation of vitamin A activity of diets as retinol equivalents.

^c As cholecalciferol. 10 μg cholecalciferol = 400 IU of vitamin D.

^d α -tocopherol equivalents. 1 mg α -tocopherol = 1 IU. See text for variation in allowances and calculation of vitamin E activity of the diet as α -tocopherol equivalents.

^e 1 NE (niacin equivalent) is equal to 1 mg of niacin or 60 mg of dietary tryptophan.

^f The folacin allowances refer to dietary sources as determined by *Lactobacillus casei* assay after treatment with enzymes (conjugases) to make polyglutamyl forms of the vitamin available to the test organism.

^g The recommended dietary allowance for vitamin B-12 in infants is based on average concentration of the vitamin in human milk. The allowances after weaning are based on energy intake (as recommended by the American Academy of Pediatrics) and consideration of other factors, such as intestinal absorption; see text.

^h The increased requirement during pregnancy cannot be met by the iron content of habitual American diets nor by the existing iron stores of many women; therefore the use of 30-60 mg of supplemental iron is recommended. Iron needs during lactation are not substantially different from those of nonpregnant women, but continued supplementation of the mother for 2-3 months after parturition is advisable in order to replenish stores depleted by pregnancy.

DIETCHECK QUESTIONNAIRE

Name _____
 (Print) Last First Middle

Address _____
 Street City State County

Telephone Number _____ Rural _____ Urban _____

- | | True | False |
|---|--------------------------|--------------------------|
| 1. If a person consumes the recommended number of calories to maintain his/her body weight, he/she automatically consumes all the other nutrients needed. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. There are four basic categories into which the various foods are grouped and a specific number of servings from each group is recommended per day. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Certain foods promote tooth decay. Circle each of those below that does: | | |
| a. Beef | | |
| b. Granulated sugar | | |
| c. Peanut butter | | |
| d. Peppermint candy | | |
| 4. Fat contributes fewer calories to the diet than protein. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Iron is widely distributed in all the food groups and is easily obtained in the diet. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. The number of calories I need per day depends only on my body build and desired weight range. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If I find from Dietcheck that I am not getting enough vitamin A, I should start taking vitamin pills. | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Almost no one is ever deficient in vitamin C. | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. If I need to lose weight, I can cut my calories to below 1,000 per day and have no difficulty getting the other nutrients I need. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Calcium is a vitamin found in milk. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Snacks for most people are usually high-calorie foods. | <input type="checkbox"/> | <input type="checkbox"/> |

12. How did you hear about the program?

Newspaper _____ Radio _____ TV _____ Passing by _____

County Extension agent's newsletter _____ Other _____

(write in)