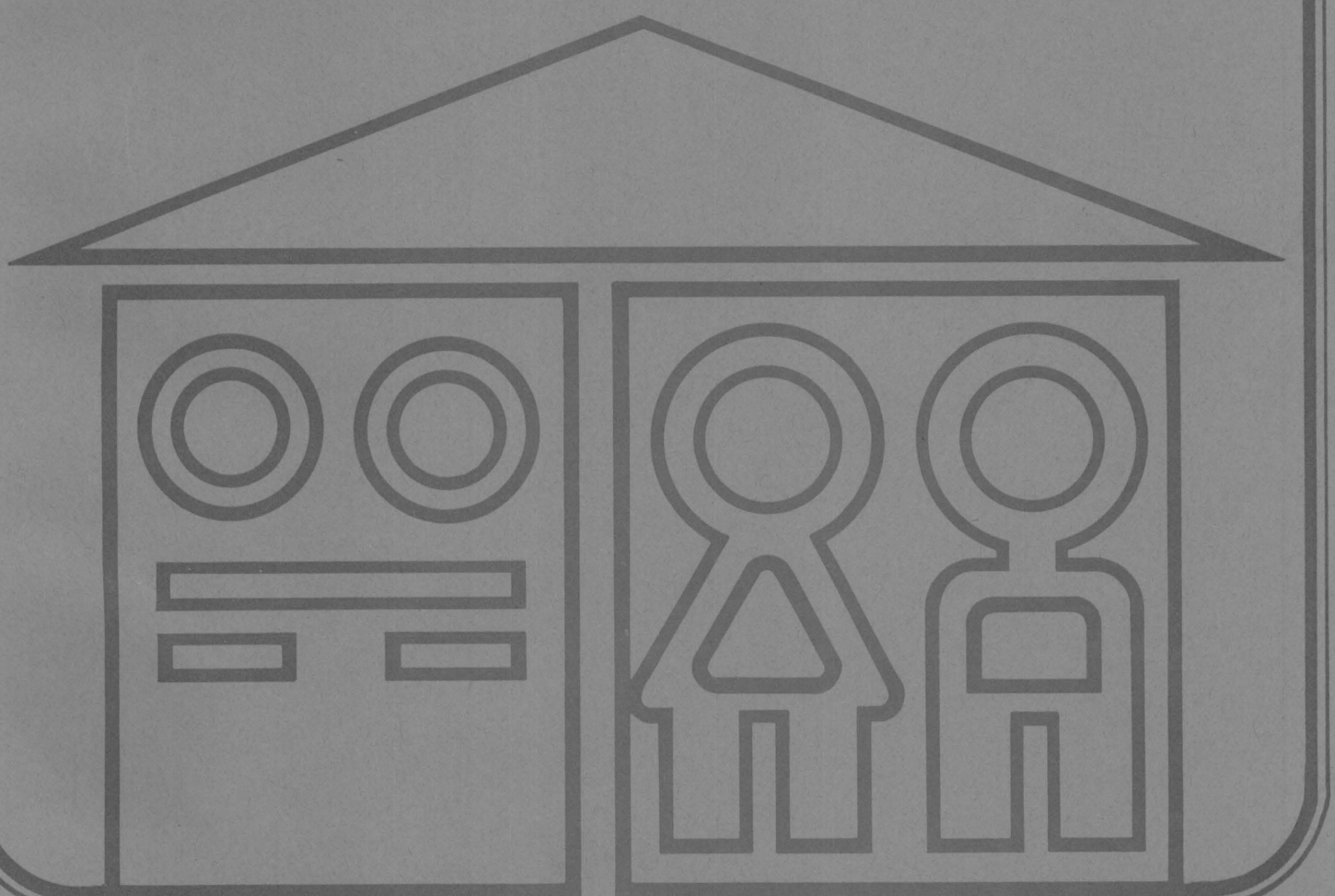
User's Guide for RCALL



Computer Assisted Instructional Program in Family Resources ● Extension Division ● Virginia Polytechnic Institute and State University

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USER'S GUIDE

FOR

"RCALL"

DIETARY ANALYSIS PROGRAM

A COMPUTER ASSISTED INSTRUCTIONAL

PROGRAM IN EXTENSION FAMILY RESOURCES

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FAMILY RESOURCES - CMN PROJECT

USING "RCALL" AS PART OF YOUR ONGOING

NUTRITION EDUCATION PROGRAM

This program is designed to help you to expand your program resources in nutrition education. It is possible for it to stand alone as a meaningful teaching method, but it would be used most effectively if incorporated into an ongoing program.

The program individualizes the problem of providing an adequate diet for a person to maintain good health. It will help the individual user to evaluate his food intake far beyond just the basic four food groups.

The aim of the program is not to change the user's meal plan to "the ideal meal," but rather to stimulate and create interest in forming healthier food habits by expanding on areas where a need for improvement is indicated through evaluation of the computer printout.

The program is capable of presenting the user with a nutrient analysis of foods eaten, a comparison of these to the RDA, and a breakdown of the total caloric intake into calories and percentage of calories contributed by fat, protein, and carbohydrate. For the latter, suggested percentages are provided to enable the user to make a comparison with those of his own diet.

Lessons specifically provided by the program's capabilities are (1) The number of servings from the Basic Four Food Groups that were consumed, (2) the percentage of calories contributed by fat, protein, and carbohydrates, (3) the foods which provided the richest source of those nutrients. With some thought, many other uses for the program may be discovered.

Many ongoing projects may be supported by the program's capabilities. For example, programs illustrating how the various nutrients affect health showing which foods contain certain nutrients in significant amounts, or programs showing the relationship between body size, activity levels, food consumption, and nutrient utilization by the body. All of these topics can be supported and illustrated by the use of the "RCALL" printout. Even the most successful meal plans can raise stimulating questions. To say that an individual selects a well-balanced diet is not to say that he is aware of the standard by which it is considered balanced or other nutrient sources that may be used to vary diet and maintain balance.

"RCALL" may also effectively support ongoing programs in weight control. The program is capable of presenting the user with a total number of calories consumed and a look at the percentage of those calories contributed by fat, protein, and carbohydrate. The user may then evaluate the contribution of individual foods to his nutrient and caloric intake.

It would perhaps reinforce the user's learning if the program were run a second time allowing the user to make corrections or substitutions of foods to meet the suggested number of servings per day from the Basic Four Food Groups. The comparison between the nutrient composition of his selected diet and the RDA, and the comparison of protein, fat, and carbohydrate to suggested amounts will enable the user to make alternative food selections to provide adequate nutrients and calories to meet his needs.

When assisting the user in analyzing his dietary intake, the RDA should not be confused with requirements. The National Research Council states that the RDA's (except for energy) are estimated to exceed the requirements of most individuals, and thereby insure that the needs of nearly all are met. A person is not necessarily under-nourished if the dietary analysis reveals that the RDA is not met for an individual nutrient. Therefore, the best assurance of eating a nutritionally adequate diet is to eat a wide variety of foods.

The "RCALL" program may also be used to help the user to strengthen meal planning habits -- again emphasizing the nutritional aspects. It could be incorporated into ongoing programs in meal planning and serve as a means to introduce the "GROCR" program to users which deals more in the financial aspect of meal planning and also deals on a larger scale of time than "RCALL". "GROCR" works on a weekly basis and "RCALL" on a daily basis.

The following pages contain a copy of the user's input sheet and the program explanation that accompanies it. This may be ordered from the Extension Distribution Center (pub. # 641). Not included in this publication is the "RCALL" Food List which may also be ordered from the Extension Distribution Center (pub. # 642). Both of these publications are necessary aids to the user of the computer assisted "RCALL" program.

A follow-up worksheet has also been developed by Foods & Nutritions Specialists to assist you in helping the individual user to get the most satisfaction from his computer printout. It will help the user to evaluate his printout in depth and to think about alternate food sources of nutrients. A copy of this worksheet is included in this publication. You might wish to duplicate this in your unit for use with your programs.

Familiarity will stimulate creativity and lead to other uses for "RCALL". Hopefully, some of the above thoughts or some of your own will make this computer assisted instructional program have a significant inpact on your ongoing work in nutrition education.

Patti Burke

OBJECTIVES

- To provide the user with an opportunity to plan well balanced meals.

- To provide the user with an opportunity to have a nutritional analysis of a planned daily menu or a past daily menu and to make corrections or adjustments in nutrient intake.

- To enable the user to see how his or her meal plan compares with a set standard, Recommended Dietary Allowance.

- To enable the user to plan meals with a higher or lower calorie content but rich nutritive value to reach or maintain a desired body weight.

RCALL

PROGRAM EXPLANATION TO USER

This program will help you to determine the nutritive value of one day's food consumption for one person.

The program will provide you with a breakdown of foods eaten and compare them to a standard of suggested guidelines - the Recommended Dietary Allowance. RDA's are not the same for all family members. Requirements are based on age and sex groups. Your own individual activity levels and body size should also be considered with the RDA evaluation, especially where calorie intake is concerned.

You will begin by providing some basic information such as age and sex. Then as completely as possible, you will recall all foods eaten in the last 24 hours or those that will be eaten in the next 24 hours. Please list ingredients of combination foods separately when totaling the day's consumption. (Example: If salad is eaten in the midday meal, you should list it as salad on the menu sheet and lettuce, tomato, celery, etc. on the total sheet.)

Each food is assigned an item number in the "RCALL" Food List. This number and the number of servings eaten must be listed when totaling the day's foods. A column for item name and food group is optional. Filling these columns will help you to see which food groups are contributing to your calorie intake and nutrient intake in the greatest amounts.

The computer will total your foods in terms of nutritive values for you. It will compare these values to the RDA. It will then provide you with a breakdown of total caloric intake into calories and percentage of calories contributed by protein, fat, and carbohydrate.

This program should be of value to you in forming good meal planning techniques, balancing a diet nutritively, and helping you to control body weight in a safe and healthy way.

INPUT WORKSHEET - RCALL

NAME _____

SEX (0=Female, 1=Male) _____

AGE GROUP _____ (Please enter the number which corresponds with your age group below.)

(1) 0-6 months

(2) 6 months - 1 year

(3) 1-3 years

(4) 4-6 years

(5) 7-10 years

(6) 11-14 years

(7) 15-18 years

(8) 19-22 years

(9) 23-50 years

(10) 51 years or over

If the infant is under one year of age, please give weight in pounds. _____

Are you pregnant or nursing? (0=No, 1=Pregnant, 2=Nursing) _____.

YOUR 24-HOUR MENU

From your RCALL food list select the foods you have eaten in the last 24 hours or those you plan to eat in a 24-hour period. You may order partial servings if you wish. (If ordering partial servings, you must order in decimal equivalents - not fractions - example: #1 (milk) 2.5 servings.)

Space is provided for you to list food eaten or planned by individual meals and snacks. This should help you to think through your day's meals with less chance of forgetting a food item. Be sure to include ingredients of combination foods. Then on the next page you must list the foods in a day's total. Please list food items in numerical order according to your RCALL Food List. You should give item number, number of servings, name of food item, and food group.

MORNING

_____

_____

_____

_____

_____

SNACKS

_____

_____

_____

_____

_____

MIDDAY

_____

_____

_____

_____

_____

EVENING

_____

_____

_____

_____

TOTALS

Food Group Categories:

(1) Milk (2) Meat (3) Fruit & Vegetables (4) Bread & Cereal

ITEM NUMBER	NUMBER OF SERVINGS	ITEM	FOOD GROUP
EXAMPLE:			
1	3	Milk, Whole	1

TOTALS

Food Group Categories:

(1) Milk (2) Meat (3) Fruit & Vegetables (4) Bread & Cereal

ITEM NUMBER	NUMBER OF SERVINGS	ITEM	FOOD GROUP

PROCEDURE FOR SIGNING

ON THE TERMINAL

Program Name: RCALL

Program Title: Dietary Intake Analysis

Contact Person: Patti Burke (703) 951-6638

Subject: Foods & Nutrition

Purpose: To improve individual health by emphasizing areas requiring improvement in the diet.

Data Required: Input Worksheet must be completed before user approaches the terminal. The last two pages must be completed in full.

Input:

1. Log on

   User number : _____

   Recover/charge: _____

   Ready

   -CMN

2. Enter RCALL for program name.

3. Enter data from input worksheet. The computer will call for data line by line (It will indicate readiness to accept data by printing a question mark "?".). Item must be ordered in ascending numerical order.

   A zero ("0") indicates end of input.

Output:

1. Nutritive analysis of menu planned or recalled by (a) one serving and (b) cumulative servings ordered.

2. Recommended Dietary Allowance for the age and sex status of the user.

3. Comparison of user's food intake to the prescribed RDA.

4. Breakdown of total caloric intake into calories provided by protein, fat, and carbohydrate.

Termination: Automatic - type bye.

FOLLOW-UP WORK SHEET FOR RCALL

1. How was your caloric intake calculated?

   Refer to your computer printout of your food recall nutrient analysis (first line of totals).

   Protein, fat, and carbohydrate are the nutrients which supply calories. One gram of fat furnishes nine calories. Protein and carbohydrate each supply about four calories per gram.

   Multiply the total number of grams of protein you ate by 4 = _____ calories

   Multiply the total number of grams of fat you ate by 9 = _____ calories

   Multiply the total number of grams of carbohydrate you ate by 4 = _____ calories

   Total = _____ calories

   This total number of calories you calculated should be about the same total number of calories as the computer printed out.

2. What percent of your calories came from

   Protein _____

   Fat _____

   Carbohydrate _____

   How do your figures compare with those of the suggested percentage on your printout?

3. Which five foods supply the greatest amount of protein to your diet?

   _____
   _____
   _____
   _____
   _____

   What food group(s) are represented by the foods you have just named?

   _____
   _____
   _____
   _____

4. Which five foods supplied the greatest amount of fat to your diet?

_____
_____
_____
_____
_____

What food group(s) are represented by the foods you have just named?

_____
_____
_____
_____

5. Which five foods supplied the greatest amount of carbohydrate to your diet?

_____
_____
_____
_____
_____

What food group(s) are represented by the foods you have just named?

_____
_____
_____
_____

6. From the computer printout of the nutrient composition of your 24 hour recall, list the 5 foods you ate which had the highest calorie value?

_____
_____
_____
_____
_____

7. Nutrients which are most often lacking in the American diet are: iron, calcium, vitamins A and C.

List the 5 foods you ate which contributed the greatest amount of iron.

_____
_____
_____
_____
_____

Iron is found in a variety of foods in varying amounts. The only group which does not furnish some iron is the milk group. Good food sources are:

liver	mature beans
lean meats	dark green vegetables
heart	egg olks
kidney	dried fruit
mature peas	enriched or whole grain products

8. List the 2 foods you ate which were the best sources of calcium.

_____

_____

Calcium is present in greatest amounts in milk and milk products. Dark green leafy vegetables provide some calcium. Food sources include:

milk	yogurt
cheddar cheese	collards
cottage cheese	kale
processed cheese	mustard gree s
ice cream	

9. List the 3 foods you ate which contributed the greatest amount of vitamin A.

_____

_____

_____

Vitamin A is present in dark, green leafy vegetables and deep yellow vegetables as carotene. Butterfat, liver and other foods fortified with vitamin A are other sources. Vitamin A sources include:

apricots	collards
broccoli	pumpkin
cantaloupe	spinach
carrots	sweet potatoes
	winter squash

10. List the 2 foods you ate which contributed the greatest amount of vitamin C.

_____

_____

Vitamin C is found in a variety of fruits and vegetables which include:

broccoli	raw cabbage
brussels sprouts	potatoes
cantaloupe	tomatoes
grapefruit	spinach
green pepper	greens (beet, collard,
oranges	mustard, turnip)

If you are interested in more specific information about the content of foods listed above which are good sources of iron, calcium, vitamins A or C, refer to the agent's copy of Home and Garden Bulletin No. 72, Nutritive Value of Foods, a USDA publication.