

# **PROGRAM MANAGEMENT**

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## **DIETARY MANAGER PROGRAM**

**Based on government gazette, 20 July 2007, No. 30075  
No. R. 642, from 69 onwards**

**Food nutrient analysis**

Version 1 was installed in 1986

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***The user selects the nutrition tables***

## **FORMULATION MANAGER**

**Food nutrient analysis with additional programs for food manufacturers**

## **DIETARY RESEARCH**

**Produces research reports from statistical “meals” and 24-hour intakes  
captured by Dietary Manager**

**For use by Honours, MSc and PHD students**

**Windows 7 compatible software  
2011 August**

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**Reference:**

Computers in Biology and Medicine

Pergamon Press

Volume 17 1987

p 111

Software Survey Section:

Software package CIBM-048-S86 Nutrition Monitoring System

## **DIETARY MANAGER** - used internationally

*Comprehensive nutritional analysis of diet recalls / recipes / menus – saving hours*

### **PROGRAM FEATURES (2011 version)**

- **NUTRITIONAL ANALYSIS** of a 24-hour recall / recipe / menu for +/- 80 nutrients  
→ This analysis can be saved on memory stick & printed in MS-Word
- **Printout should be saved to Documents (MS Word) for further processing**
- **> 7000 FOODS** in the database:     USDA food composition tables  
+ selected SA foods, eg **Fortified maize meal**
- The database consists of **comprehensive NUTRITIONAL INFORMATION** for each food
  - Macronutrient analysis             -     micronutrients analysis
  - amino acid profiles                 -     fatty acid profiles
- Use **FOOD NAMES to find FOOD CODES** when entering a dietary recall / recipe / menu
- **FOOD CODE LIST** (easily updated by user as new foods become available in the market place, eg fortified maize meal, and GMF)
- Easily accessible **NUTRITION INFORMATION** on ANY food / recipe / diet recall. This is also useful when **drawing up food labels**.
- **PRINTOUTS:**
  1.     **2–PAGE:** for the Dietitian's record (this can be saved on computer) (Menu 8, 8)
  2.     **6 –PAGE:** Simplified explanation of dietary analysis (Main menu, S)
    - For the patient / client - easy to understand: **Excellent educational TOOL**

Information on printouts:

- RDA COMPARISONS
- IBM (Ideal Body Mass)
- BMI (Body Mass Index)
- PRUDENT DIET RECOMMENDATIONS / COMPARISONS
- DRI's are no longer included

### **ADDED SPECIAL FEATURES OF DIETARY MANAGER**

1. **FOOD EXCHANGE LISTS Food**  
Lists of similar nutritional specifications can be viewed
2. **FOOD SUBSTITUTION LISTS**
3. **DESCENDING LIST OF FOOD NUTRIENT**
4. A descending order list of all foods for a selected nutrient per portion
5. **FOOD / RECIPE COMPARISON PROGRAMS**
6. **MOISTURE CONTENT** (of foods & recipes)  
Nutritional analysis adjusted with moisture change
7. **FOOD COSTING** (Eg for recipe / menu costing)

8. **The program can run from a memory stick**
9. **Printouts may be saved to memory stick or M Documents folder**  
for further processing and renaming the document  
This program does NOT print directly to a printer  
**Saving printout and speeding up work**
10. **For dieticians CEU points may be obtained when attending**  
**A formal **Dietary Manager** training session (PENDING)**  
**The more you know about this program the more you can earn.**
11. **Program may be loaded onto all of the computers the user has.**
12. ****Dietary Manager** is used for BOTH 1<sup>ST</sup> AND 3<sup>RD</sup> WORLD NUTRITION SOLUTIONS**
13. **The PROGRAM comes with a COMPREHENSIVE MANUAL**
14. **DIETARY MANAGER HAS SERVED DIETICIANS FOR 28 YEARS**  
**with continual upgrades**

## RATIONALE FOR USING THE USDA FOOD COMPOSITION TABLES

Food composition tables are used to ESTIMATE the intake of particular nutrients and other food components consumed by groups and /or individuals.

The United States Department of Agriculture USDA maintains a comprehensive system for collecting food composition data.

Their Handbook No. 23 (and later) serves as the STANDARD REFERENCE for food composition in the United States and majority of other countries. Please see USDA webpage for further details.

There are many advantages to using the USDA nutrient database in South Africa - these should be considered very seriously:

1. The USDA food composition tables provide a standard international reference (and are used all over the world). Most nutrition journals and text books standardize on these tables.
2. These tables are continuously updated and can be obtained via the Internet [www.usda.gov/wps](http://www.usda.gov/wps)
  - for free; they may not be resold.
  - anyone is free to use the tables for any purposes.
  - Scientific research claims are therefore easier to verify.
3. Pharmaceutical Companies usually standardize on the USDA tables.
4. Many South African – trained dieticians work abroad in the dietetic field and are then expected to use USDA Tables.
5. Many South African food companies are owned by international corporations, and are required by their parent companies to use the USDA food composition tables.
6. These tables are practical for research purposes -
  - Results can be compared
  - Codes are the same.
  - If a code's nutrient is "wrong" - it is wrong for all the research, i.e. the means could be understated for all researchers so the conclusions would be consistent.
7. USDA tables are preferred for analysis of UN food parcels / sports diets (where the competitors compete internationally) etc, as the results are internationally consistent.
8. Also, it is useful for South Africans to get used to international food terminology (especially where employment overseas is being considered).
  - Our world is getting "smaller" – we are more exposed to foreign cultures now than compared with 20 years ago.
9. The USDA tables have a set of amino acids.
  - (The amino acid profiles match up better to the protein)
  - The total amino acids per 100g should add up to the total protein/100g but they may not.
  - It is easier to use the USDA foods as this is more consistent.

10. For certain foods – chemically analysed in South Africa, there is a slight (up to 20%) difference in nutritional content when compared with the USDA equivalent food..... BUT that same difference could also be found in South Africa when taken from 2 different geographical regions.

Example – maize grown in the Natal Midlands will be chemically different from the maize grown in Klerksdorp; or grapes grown in the Cape Peninsular will be chemically different to Orange River grapes or imported grapes.

So there is even a large standard deviation within South African foods.

Also differences in SA food analysis vs. USDA is more likely to be a reflection of the differing lab techniques, eg, if nuts from the same plantation are sent to different labs, different chemical analysis will be obtained from each lab.

The argument in favour of using NRIND - MRC Tables is that the soil in SA is different from that in the USA thus affecting the nutritional analysis of any SA food.

BUT our food is not solely dependent upon the type of soil it is grown in, but rather the arable farmland in which it is grown (which has been ploughed, fertilized and irrigated over many years) – which constitutes 9% of our surface area.

Considering the standard deviation of food analysis (which is flat), this becomes an irrelevant argument.

Anyway – we all know RAIN plays the biggest role.

Why do our South African trained dieticians have so few problems obtaining work overseas if our food was so different? Some even work in Saudi Arabia.

When buying food one does not know exactly where it comes from (often it is imported without the consumer knowing that it is).

Eg, Woolworth's lettuce comes from Zimbabwe; surplus turkey meat regularly comes from the USA; chickens are often imported from Thailand; most out-of-season fruit comes from Israel in refrigerated containers; dry legumes come from Turkey / Canada. Brazil also exports food items to SA.

If the assumption is made that SA foods are different from foods from other countries:

- a) we would NOT be able to export our foods;
- b) Tourists with special dietary needs would have to have their diets re-evaluated / planned, at the airports. Stopping all diabetic tourists?!
- c) GMO foods would not be accepted either;

Also: in any set of food composition tables, there is a range: i.e. 100g product could mean 97-103g of that product (i.e. accuracy is further diminished).

Sources of error in food composition data:

- a) Values in a table can differ from the actual nutrient content of a food because of the way the food was grown, stored, or processed. (Differences in plant variety, animal breed, geographic location, season for production, growing conditions, maturity, and transport & storage conditions). Eg the ascorbic acid content of a food could be 20-80mg/100g.

Therefore, the values in food composition tables are AVERAGE VALUES and apply to food as it is usually produced and marketed for year-round and country-wide use by consumers. The actual amount of a nutrient in any food may vary substantially from the average value given in the food composition tables.

It is thought, however, that use of representative/average values does not contribute greatly to the VARIABILITY in the estimate of usual nutrient intake. A TREND of nutritional intake is thus established.

Eg, there are at least 5 apple cultivars grown in SA, and there are more than 5000 cultivars in the USA.

Exactly what apple was eaten may be unimportant  
- rather that an apple WAS eaten would be more important

Therefore USDA Tables are adequate for SA food analysis.

We do NOT have to pay bio-chemists millions of Rand to analyze our foods.

- b) Biases due to incorrect identification of food items, use of inappropriate analytical methods, and use of imputed values.
- c) Differences in the bioavailability of certain nutrients.
- d) Shelf-life of foods can also effect the chemical composition of the food.

### **DIETARY MANAGER**

This version of Dietary Manager has therefore included the recently updated USDA food composition tables in its database, as well as certain South African foods:

- Foods on SA tender hospitals
- Specific SA – made cereals, eg Pronutro, Special K
- Certain foods specifically obtained from various South African Food Manufacturers.

The user may add any foods they want to add.

Many industrial users clear the files of all data and recapture what they want.

**USDA FOOD TABLES****TABLES ABBREVIATIONS - COMPULSORY READING!****READ THIS LIST BEFORE USING THE TABLES: learn this list!****A**

ACL = ALCOHOL  
 ASPRT= Aspartame (artificial sweetener)

ART = artificial  
 AL = Aluminum (sulfate)

**B**

BF = BEEF  
 BKD = BAKED  
 BTTR = BUTTER  
 BRY = BERRY  
 BEV = BEVERAGE  
 BRKFST = BREAKFAST

BN = BEANS, BONE  
 BRSD = BLD = BLANCHED  
 BR = BRAISED  
 BRWN = BROWN  
 BTLD = BOTTLED  
 BNLESS = BONELESS - DEBO

**C**

CRL = CEREAL  
 CAL = CALORIES  
 CKD = COOKED  
 COND = CONDENSED, CONDIMENT  
 CHS = CHEESE  
 CHIC = CHICKEN  
 CHOC = CHOCOLATE  
 COMM = COMMERCIAL  
 CTTNSD = COTTON SEED  
 CONDMNT= CONDIMENTS  
 CTNG = COATING - COVERING

CAFF = CAFFEINE (mg)  
 CHOL = CHOLESTEROL  
 CORN = MAIZE - MEALIES  
 CRM = CREAMED  
 CINN = CINNAMON  
 CHOIC= CHOICE - GRADE  
 CNTR = COUNTRY  
 CND = CANNED - TIN  
 COCNT = COCONUT  
 COMP = COMPOSITE - GROUP  
 COMMLY = COMMONLY - USUAL

**D**

DRK = DRINK  
 DI = DIETARY IODINE  
 DRND = DRAINED

DSSRT = DESSERT – PUDDING  
 DK = DARK COLOR (MEAT)  
 DOM = DOMESTIC ie USA

**E**

EVAP = EVAPORATED  
 EQ = EQUAL  
 EX = EXTREMELY (eg EX HVY= EXTREMELY HEAVY)

ENR = ENRICH (as in fortified)

**F**

FD = FRIED  
 FRZ = FROZEN  
 FRSH = FRESH  
 FORT = FORTIFIED - ENRICHED

FR = FRIES, FRENCH  
 FLR = FLOUR  
 FRT = FRUIT  
 FRSTNG = FROSTING (icing sugar)

**G**

GRN = GREEN  
 GROUND = MINCE (Eg ground beef)

GRDS = GRADES

**H**

HVY = HEAVY  
 HYDR = HYDROLYZED (HYDROGEN – OIL-FAT)  
 HI = HIGH

HM = HARD MARGARINE  
 H2O = WATER

**I**

IMIT = IMITATION - ARTIFICIAL  
 IMP = IMPORT - foreign - ie from N Z

INST = INSTANT  
 INCL = INCLUDE

**J**

JR = JUNIOR

JUC = JUICE

**K**

	K	= POTASSIUM			
L	LO	= LOW	LT	= LIGHT (COLOR) not Liter	
	LIQ	= LIQUID	LN	= LEAN (meat with little fat)	
	LRG	= LARGE			
M	MOIST	= MOISTURE (WATER)	MXD	= MIXED	
	MLLW	= MARSH MELLOW (soft sweet)	M	= MARGARINE (HM, SM, PUM)	
O	OZ	= OUNCE = 28 GRAMS			
P	P	= PHOSPHORUS	PNAPPL	= PINEAPPLE	
	PDR	= POWDER	PLN	= PLAIN (nothing added)	
	PO4	= PHOSPHORUS OXATE	PUDD	= PUDDING	
	PNUT	= PEANUT			
R	RED	= REDUCED = LESS (not color)	RED FAT	= REDUCED FAT	
	RTL	= RETAIL	RT	= READY TO	
	RTS	= READY TO SERVE	RTE	= READY TO EAT	
	RTF	= READY TO FEED (BABY)	RTB	= READY TO BAKE	
	RTD	= READY TO DRINK	REFR	= REFRIGERATE	
	RTD	= ROASTED			
S	SD	= SEED	SANDWICH	= SANDWICH	
	SELL	= SELECT	SUBMARINE	= LONG BREAD ROLL	
	SMALL	= SMALL	STUD	= STEWED	
	SOL	= SOLUTION	SHOD	= SHOULDER	
	SOY	= SOYA	SPEP	= SPEARED	
	SWAT	= SWEET	SIMMERED	= SIMMERED	
	SAUL	= SAUCE	SKIN	= SKIN	
	STY	= STICK	STIR	= STRAINED	
		TODD	= TODDLER	TSTD	= TOASTED
		TSP	= TEASPOON	TANGERINE	= NAARTJIE
U	USDA	= UNITED STATES DEPT. OF AGRICULTURE			
	UN	= NOT	UNSPEC	= UN SPECIFIED	
	UNHTD	= UN-HEATED	UNPREP	= UN PREPARED	
	UNENR	= UN ENRICHED (NOT FORTIFIED)			
V	VIT	= VITAMIN	VAR	= VARIETY	
W	W/	= WITH (ADDED)	WO/	= WITH OUT (NOT WITH)	
	W/K	= WITH POTASSIUM	W/P	= WITH PHOSPHORUS	
	WHL	= WHOLE, FULL			
	W/EQ	= WITH EQUAL VOLUME -AMOUNTS 50/50			
Y	YEL	= YELLOW			

**COMMON USER MISTAKES WITH THE TABLES:****When finding a food code:**

- Margarine (NOT margerine)
- Sugars (NOT sugar)
- Yoghurt (spelled as Yogurt on the tables)
- Carbonated drinks = cold drinks
- Millet = Sorghum
- Soy not Soya
- WHISKEY - ALCOHOLIC

## **PASSWORD = NATAL**

The number appearing in the password is the version number of the program, i.e. 2011x means version 2011 windows 7 compatible.

Type in the word NATAL – this is your password – strangers are then prevented from entering data into the program.

If you have any problems in your Dietary Manager program, type "INDEX" into the Password. Or run # 2 Index all the files

Before typing in the password, Check that the day and date shown on the screen is correct.

Once the password has been typed in, the following menu appears:

<b>Dietary Manager (by Program Management) 082 212 0324</b>	
<b>1</b>	<b>Leave Dietary Manager programs</b>
<b>2</b>	<b>Index all the files</b>
<b>3</b>	<b>Essential amino and fatty acids</b>
<b>4</b>	<b>All amino acids and fatty acids</b>
<b>5</b>	<b>Additional recipe – 24h recall programs</b>
<b>6</b>	<b>Food values and print nutrients &amp; Food codes lists</b>
<b>7</b>	<b>Exchange &amp; substitution lists</b>
<b>F</b>	<b>Find a food code</b>
<b>P</b>	<b>alter devices &amp; copy files</b>
<b>8</b>	<b>Meal nutrient evaluations &amp; patient R D A</b>
<b>Enter</b>	
<b>Number:</b>	
	<b>Your name</b>
	<b>In..\folder\NUT</b>

Dietary Manager consists of the above screen (menu) - from which you select other screens (menus) by entering the menu number and pressing "Enter".

Example: (practice these to get to know the program)  
 "F" (Find a food code) initially. Find a couple of food codes (by typing in food) – and then do a simple short 24-hour recall, and print this out.  
 Then start working systematically through each menu.

**NOTE: In all programs where information/results can be printed - the option is given for you to display rather than print your work; simply by entering a SPACE will display the "printout on the screen instead of an "M" into the print command.  
In this way, your work is substantially speeded up.**

**M sends the print-out to your Documents folder for further processing**

**(NOTE: the documents must be opened in MS-Word, NEVER NotePad)**

### **HOW TO DO A 24-HOUR RECALL**

Using the form (Appendix A):

Enter patient name and details

Record the 24-hour recall: note down the foods and portion sizes and then find the codes and quantities by using program F – fill in on form.

### **DESCRIPTION OF EACH MENU**

#### **1 NUMBER 1 "Leave Dietary Manager Programs"**

This allows you to leave the Dietary Manager program and return to your WINDOWS desktop.

Use this number when you have finished

#### **2 NUMBER 2 "Index all the files"**

Select this number if you have any problems whatsoever. This program will fix the files if they are damaged.

You may run this program whenever and as often as necessary.

This program creates index files (like a book's index).

If there was a power failure while you were working in the program - run this number when you start again and check the last thing you did.

### 3 MENU "Essential amino and fatty acids"

#### 4 Enter (or change) amino and fatty values per 100g

Enter food code for the food you want to enter the information of  
(Use menu 6 number 4 to enter new foods)

- Press "Enter" or "Page down"
- Type in essential amino acid and fatty acid values
- User variables 1, 2 and 3 can be used for other variables such as caffeine, phytic acid and oxalic acid.
- Remember the amino acid total must add up to the protein.

#### P Print foods' amino & fatty acids per portion??g

- Enter food code
- Enter amount of food to be analysed in grams
- The results can either be printed or displayed on the screen,  
Or sent to Documents for printing and further processing

#### 5 Store a recipe or meal with food codes and quantities

Same program as Menu **8 number 5** OR Menu **5 number 5**

#### Q Protein quality assessment

- Protein quality of either individual foods, or a recipe/meal/24 hr recall (as entered & stored in no.5 above of this menu) can be determined using this program.
- The food's code OR recipe / meal / 24 hr recall code is entered - and the following is automatically calculated, displayed on the screen and printed if required:-
  - total amino acids )
  - total protein ) per 100g
  - total nitrogen )
  - protein energy )

**Table: essential amino acid patterns** - indicating

- i. mg amino acid per gram of the food or recipe
- ii. mg amino acid per gram of that food's protein
- iii. standard amino acid pattern (this can be altered by the user)
- iv. amino acid patterns for
  - human milk )
  - cow's milk ) HBV proteins
  - egg. )

This table, then, shows the comparative amino acid profiles between the foods or meal, and standard profiles of high quality (high biological value) proteins.

**Table: Chemical scores (%) for the amino acids**

- in the food or recipe/meal; i.e. the standard essential amino acid profiles are shown up as a percentage of the total amino acids present in the particular food or recipe.
- The limiting amino acids of the food or recipe are then displayed, compared with both the standard pattern and the egg reference

Practical implication:

E.g. both methionine and cystine might be the limiting amino acids of a particular food when compared with both the standard and egg references; therefore, in order to improve the protein quality of the particular diet/recipe/product, another food high in methionine and cystine must be added.

**E Print essential amino and fatty acids (omega 3 and 6)**

The mass in grams is entered for all foods (eg 100g) - and the following will then be displayed for all foods (comparative list):

- amount of protein
- protein energy
- amino acid values (g) per mass entered of product
- amino acid values (mg) per gram of protein in the product

These results can be sent to Documents for printing.

**8 Enter a recipe for amino and fatty acid analysis**

- Enter recipe or food code, and the edible quantity
- The following information will be displayed:
  - amount of protein
  - total of essential amino acids
  - grams of individual essential amino acid present with percentage RDA comparison
  - grams of fatty acids (SFA & USFA) present with percentage RDA comparison

These results can be sent to Documents for printing

**MENU 4 "All amino acids"****4 Enter all amino acid values per 100g**

- Enter all 22 amino acid values
- Enter your product's amino acid values per 100g (the product's total protein will have been entered in menu 6 number 4)
- Once this has been done, the total amino acid mass and the total protein mass will appear on the screen: these 2 values should be equivalent - if not, a discrepancy on input of initial amino acid OR protein data is indicated. Correct if necessary.

**P Print a food's amino acid value per portion??g**

- Enter food code and portion size
- The amino acid values (in mg) for that food of specified portion will be displayed.
- Send to Documents for printing.

**D SORT foods in descending order for essential amino acids or fats**

- Select an amino or fatty acid
- A list is displayed of all foods containing that nutrient in descending order

Example:

If you have a patient with a metabolic disorder, such as PKU (phenylketonuria), a list of all foods containing phenylalanine can be printed with amounts of phenylalanine/portion. This list is printed in descending order (i.e. the foods with greatest amount/portion).

**S Food substitution list for essential amino acids and fats**

This program is used to find all foods with a specified amount (in g) of an amino acid or fatty acid present, within a given range of food portion sizes.

- Follow screen instructions to obtain this information.
- The foods are displayed in code numerical order, and can be printed from Documents if required.

Example: find all foods containing 4g leucine within the portion size range of 10-100g.

## **MENU 5 "Additional recipe programs"**

### **2 Print the recipe(s) and their ingredients**

- Enter the recipe / 24 hour recall code
- Follow screen instructions to print out all the ingredients / meal items with their codes and masses.

### **3 Find an ingredient within the recipes**

Example: find salt / eggs in a group of menus

OR: finding a food item in an experimental group and comparing it to a food item in the control group

- Enter the code of the ingredient you wish to find
- Follow screen instructions, and this ingredient will be searched for amongst all the recipes, and displayed.
- Enter the code of the food and that ingredient's quantities will be displayed

### **R Renumber a recipe/24 hour recall – replace the code**

This program is also used in research studies to match the experimental and control groups by changing their codes to matching codes.

- Enter the current recipe code needing to be changed
- Then enter the new recipe code: this code will then replace the existing code

### **4 Replace an ingredient within the recipes**

Example: replace whole full cream milk (01078) with low fat milk (01152)

- Enter the code of the ingredient you wish to replace (01078).
- Enter the code for the replacement ingredient (01152).
- All recipes/recalls containing the initial ingredient will be replaced by the replacement ingredient.

### **5 Store meal / recipe / 24 hour recall**

This is where a recipe is stored with all ingredient codes and quantities.

### **M Multiply a recipe's ingredients by any amount**

Use this program in order to obtain the amounts of ingredients/meal items for either a multiple of a recipe/recall or a larger batch mass.

- Enter the recipe code, and the multiple or batch mass required  
Eg, 100g for a food label

**F Frequency count of foods within recipes**

(From a recipe to a recipe)

This program indicates the number of times a food occurs within a group of recipes. It also indicates the total mass, the average mass, the energy, protein, fat, carbohydrate, calcium, iron, Vitamin A (retinol), and Vitamin C of that food.

Eg, how many times does EGG occur in a menu?

**6 List the recipes in code sequence**

Follow screen instructions in order to obtain the recipe/24 hour-recall in code sequence.

**7 List the recipes in alphabetic (name) sequence**

Follow the screen instructions in order to obtain a list of recipes/24 hour recalls in name (of recipes/recalls) sequence.

This program is also useful for menus.

**8 Copy a food code to a new food code**

Use this when changing the present code of a food.

Eg, copy a salt to another salt (and change the cost).

**9 Copy a recipe to another new recipe**

Use this in the case when the ingredients of one recipe/24 hour recall are very similar to or the same as another.

Simply copy the recipe by entering that recipe's code, and that of the new (i.e. same / similar) recipe. Follow screen instructions further.

If necessary make minor changes within the new recipe/recall.

This saves a lot of time.

**D Delete food & recipe codes from the files**

Enter the food code or recipe code you want deleted, and these will be removed from the files.

NB: Do a backup before running this program.

**E Erase (delete) all the recipes you have entered**

This gives you the option to delete **all** entered recipes/24 hour recalls, and not just individual ones.

There is no real reason to run this program when starting again; rather load your program from your CD and use that to start afresh.

NB: Do a backup before running this program.

## **MENU 6 "Enter food values and Print nutrients & food codes lists"**

### **3 Update food costs per 100g**

Food costs which have been entered for food items in number 4 (next) can be updated here.

Example: food costs from Rand burg Pick'n Pay can be added to selected foods, then relative meal costing can be done.

### **\*4 Enter food and nutrients per 100g**

The food code is entered, and its nutrient specifications for macro- and micronutrients, per 100g are then filled in.

Follow screen instructions

For adding vitamin supplements treat the nutrient content of a pill / serving as 100g when entering the product's nutrient information.

### **7 Print energy, protein, fats, carbohydrates in all foods per??g**

The food code(s) and mass are entered - and the macronutrients for this (these) will be printed or displayed (as required).

### **8 Print fats and cholesterol in all foods per???g**

The food code(s) and mass are entered - and the fat and cholesterol content of this (these) will be printed or displayed (as required).

## **C Print food list in code sequence & their costs**

All foods on file will be printed in code (numeric and alpha-numeric) sequence

It is preferable to use F (Find a food code) instead.

## **A Print food list in alphabetic name sequence**

All foods on file will be printed in alphabetic name sequence.

It is preferable to use F (Find a food code) instead.

## **N Print foods' values per portion???g**

Enter the food / recipe code and mass to be analysed.

All nutrient values (as entered) will be displayed and / or printed for that mass.

This is a good program to use for food labels.

## **P Compare a food & portion with another food & portion**

The two foods to be compared codes and their respective masses are entered.

A comparison with respect to complete nutrient profile is displayed and can be sent to Documents for printing.

Example Pronutro can be compared with a Kellogg's product

## **E Moisture change of a food and effect on nutrient concentrates**

This program solves the following problems:

The raw ingredients are entered into your recipe (program 5): example fresh ingredients for jam, eg apricots, water, sugar.

The cooked mass is weighed and compared with the raw weight: the difference is water loss.

The program will calculate the new moisture content and then give a new nutrient analysis, considering the % water loss from cooking.

Alternatively, enter the average moisture content of jam (check the food database), and the new nutritional analysis will be calculated.

This also works with the rehydration of the food.

## **MENU 7 "Food exchange and substitution lists"**

### **1 Protein & salts controlled (portion size varies) (Renal) Exchange List**

- Enter food code range within which you want the exchange list.
- Enter the following criteria: amounts of protein (g); Na,K,P (mg).
- The program will identify foods within the chosen range that have less than the specified amounts for Na, K, P and still provide the required protein.
- The values can be displayed or printed from Documents.
- **Use this list with discretion** (eg alcohol has no protein in it so will appear on this list, however, you may not want to allow your patient to have alcohol – so send the list to Documents, edit and delete any inappropriate foods, then print)

### **3 Portion size controlled (protein and salts vary) (Renal) Exchange List**

- Enter the food code range; and a chosen portion mass.
- The program will calculate the amounts of protein, Na, K, and P provided for this portion mass.
- The values can be displayed or printed from Documents.

### **5 Find the substitute (equivalent) foods for a given nutrient**

This program finds the required MASS of food substitutes needed to supply a given amount (e.g.40mg) of a nutrient (e.g. calcium)

- Enter the amount of the nutrient required (eg 40mg calcium)
- Enter the nutrient number

The program then finds all foods containing this specification (i.e.40 mg calcium) with their respective masses. These foods are displayed, and can be printed if required.

**SPECIFIC EXCHANGE LISTS / FOOD GROUPINGS:**

<b>FOOD GROUP:</b>	<b>Food Code Range</b>
<b>M MILK</b>	<b>01000 - 01999</b>
<b>V VEGETABLE</b>	<b>11000 - 11999</b>
<b>F FRUIT</b>	<b>09000 - 09999</b>
<b>B STARCH</b>	<b>18000 - 20999</b>
<b>R MEAT</b>	<b>05000 - 17999</b>
<b>A FAT</b>	<b>04000 - 04999</b>
<b>S SUGAR</b>	<b>19000 - 19999</b>

- Enter the food code range (eg 01000 and 01999 for the Milk Group)
- Enter the average portion size, e.g. 240g
- Enter specified amounts of the most important nutrients for that specific group

All foods and their masses within the specified food code range, matching up to these criteria will be listed.

In addition other relevant nutrients to the specific food group (eg calcium in the Milk Group, Vitamin A for the Vegetable Group, Vitamin C for the Fruit Group, and iron for the Meat Group), and also kilojoules, CHO and protein values will be displayed.

The results may be printed from Documents if required.

**L List the foods that have the same range of nutrient values**

Enter the largest reasonable portion mass (e.g. 30g), and up to three nutrients with specified minimum and maximum amounts required.

All foods having those nutrient values within the specified range, with a mass equal to or less than the specified mass, will be listed. These foods can be printed if required.

**D Sort, List the foods in descending order of magnitude for any given nutrient**

All foods with a specified portion size (defined by the user) will be listed in descending order of magnitude for a specified nutrient.

- Enter nutrient (number) required; and portion size (g)

The program finds all foods on file supplying the most amount of that specific nutrient down to the foods supplying the least amount of that nutrient – for a given portion size.

This list is particularly useful for research purposes.

This list is also useful for educational purposes when educating patients about foods high in a specific nutrient (eg VITAMIN C, IRON or CHOLESTEROL) versus those low in that nutrient.

**NUMBER 8 "Recipes & meal evaluations & RDA"****C Calculate patient's kilojoules**

See Dietary Assistant System.

**R Enter (change) a patient's "RDA"**

- National Academy of Sciences 1989 tables are loaded for infants, children and adults
- The patient's name and details are entered here
  - Enter sex: "I" for infant 0-11 months "C"for child 1-10 years
  - "M" for adult male 11-51 years
  - "F" for adult female 11-51 years

The RDA's will display for the specific sex.

These can be altered, tailored and saved (stored) if required.

To delete (remove) one patient's RDA: enter spaces into surname block.

**D Delete all patient's "R D A" you have entered**

This program allows you to delete ALL the patients' RDAs you have entered.

To delete one individual patient, use "R" above.

**P Print a patient's "R D A"****S Print all patient's name detail list****F Find a food code**

Enter the food name - and the code will be found. Enter the code for the quantities

## 5 Store meal, recipe or “24-hour recall” in codes and quantities

This program is used for storing:

- Recipe }
- 24 hour recall } details
- Meal e.g. breakfast, }
  - lunch & supper }

[a recipe = statement of ingredients for preparing either a dish, e.g. spaghetti bolognaise / high protein egg nog; OR a food product, e.g. protein-enriched porridge (the full specification of this product could also be entered as a new code in menu 6 number 4) ]

Select a coding system to suit your requirements:

Examples

- \* **recipe**
  - SPBOL (spaghetti bolognaise)
  - HPEN (high prot. egg nog)
- \* **24 hr recall**
  - BRO01 (patient: BROWN day 1)
- \* **meal**
  - N01B1 (N = normal meal cycle 01 = day 01 B1 =breakfast1)
  - N01L1 (N = normal meal cycle 01 = Day 01 L1=Lunch1)
  - N01S1 (N = normal meal cycle 01 = day 01 S1 = supper1)
  - N01L2 (N = normal meal cycle 01 = Day 01 L2 = Lunch 2)

Use Food Code programs (F) – code ingredients / foods by finding code and writing on actual recipe / recall / meal

If no code for a food/product is available on computer, enter this first in menu 6 no.4

- Enter recipe code into program, then food codes & masses.

## 8 Enter a meal per patient for analysis

This program is used to analyse:

- a single food item OR
- a group of food items (entered here) OR
- a recipe/24 hr recall/meal (entered in no.5)

Have available:

- **food codes** (if the codes are not available, a search facility has been incorporated into the program - where a food item can be typed in, and the program automatically searches for its code. It is, however, faster and more efficient to work using codes, i.e. code all the items in the diet recall/recipe first, before starting)
- **recipe/recall/meal codes** (if stored in no.5)
- **patient's sex, age, height and weight**

**Procedure:**

- Enter food/recipe codes and quantities (follow screen instructions - read screen carefully).
- Alternatively, when a food code is not at hand, enter the food item - the computer then searches automatically for its code.
- Enter spaces into food code block once this is all entered.
- Enter patient details  
first name, surname, age, gender, height ( in cm) & weight
- Type in the number of days the meal covered (i.e. enter "1" if covered 1 day; enter "3" if covered 3 days - the program will then automatically divide the total nutrients by 3).

**The program does the following:**

- Calculates the patient's BMI
- Produces an analysis for macro- and micronutrients of the stored food/recipe compared with the patient's RDA (% RDAs are indicated) together with the full description of the food/recipe/recall/meal appearing at the end.
- Displays the nutrient density for each nutrient.
- If costs have been allocated to the individual food items (using program 6, no.3/4), then these will be displayed for each food ingredient, as well as the total cost.
- A summary of the Prudent Diet recommendations as compared with this diet/recipe is displayed.

These results can be printed if required (in duplicate if necessary).

Attached is an example of the analysis of:

- Mr Brown's 24 hour recall (stored in no.5)
- Jane Smith's 24 hour recall (stored here in no.8).

**Appendix A. 24-HOUR RECALL**

Maximum 24 food codes per 24-hour recall code

Otherwise a new 24-hour recall code ending with B must also be used

**CODE NUMBER:** \_\_\_\_\_ **A/B/C**      **DATE:** \_\_\_\_\_**DETAILS:** First Name / Number: \_\_\_\_\_ Surname: \_\_\_\_\_

Age: \_\_\_\_\_ M / F / C / I      Height: \_\_\_\_\_ in cm      Weight \_\_\_\_\_ inKg

CODE	QUANTITY (g)	PORTION SIZE	MEAL & FOODS
			<b><u>On waking:</u></b>
			<b><u>Breakfast:</u></b>
			<b><u>Mid-morning:</u></b>
			<b><u>Lunch:</u></b>
			<b><u>Mid-afternoon:</u></b>
			<b><u>Supper:</u></b>
			<b><u>Late Evening:</u></b>
			Extra daily intake of sundry food items:
			Total extra milk, sugar, carbonated drinks, sweets, alcohol, etc

**USING DIETARY MANAGER**

<b>STAPPE</b>	<b>WAT OM TE DOEN</b>
<b>1</b>	Vul die “ <b>24-hour Recall</b> ” kaart in
<b>2</b>	Skakel die rekenaar aan en wag tot die skerm met all die ikone verskyn.
<b>3</b>	Laai die “MEMORY STICK” en gaan na My Computer en vind die MS DEVICE LETTER: F:? D:?
<b>3</b>	Click op die ikon “Rooi appel”, Dietary Manager,NUTDM.EXE Die program se “password is “NATAL”
<b>4</b>	Druk <b>F</b> en vind al die naaste kodes vir die voedsel items op jou 24-uur recall. Skryf die kodes in op jou “recall”.
<b>5</b>	Druk die nommer * <b>8</b> by die eerste menu en “ <b>Enter</b> ”.
<b>6</b>	By <b>menu 8</b> kies nommer * <b>8</b> = Enter a meal per patient for analysis; en “ <b>Enter</b> ”.
<b>7</b>	Sleutel die <b>kodes</b> een vir een in – sleutel in die <b>massa</b> (g). Druk “Enter” om verder te beweeg → ignoreer die makro-nutrient waardes. Nadat die volledige dieetgeskiedenis/resep ingetik is, druk die ‘n <b>spasie</b> oor die punt, en “ <b>Enter</b> ”. Sleutel die <b>pasient inligting</b> in soos gevra word, en “ <b>Enter</b> ”. Die volledige <b>nutrient analise met RDA vergelykings</b> verskyn nou op die skerm. “Enter” totdat jy by die einde kom: Druk nou “ <b>A</b> ” om die text data na ‘n <b>stiffy A:</b> toe te stuur OF “ <b>E</b> ” om die text data na ‘n <b>memory stick</b> toe te stuur. Of “ <b>M</b> ” om na My documents toe te stuur
<b>8</b>	“Enter” <b>L</b> om die program te verlaat. Indien geen verdure navorsing met hierdie 24-uur recall moet gedoen word nie, los ‘n <b>spasie</b> .
<b>9</b>	Druk <b>1</b> om hierdie menu te verlaat, en weer <b>1</b> om die program te verlaat, dan haal die memory stick versigtig uit.

## Installations

The Windows "Add a Program / Software...(in the Control panel) are NOT used.

The program is manually installed

The program does not affect any other applications as it is a stand alone

Application – No problem

For windows 7 - Vista - phone us

0 Click on your user name icon

1 Create folder called NUT

2 Copy the contents from the folder into folder NUT on your hard disk

. for **Linux** - phone us

**The program NUTDM . EXE and DATA FILES must be copied into a folder called NUT**  
**C:\DOCUME~1\USER\NUT** at the same level as Documents or the same level as Documents for  
 VISTA and Windows 7.

## Appendix XP WINDOWS 7

The Windows "Add a Program / Software (in the Control panel) is NOT used. Please close all programs before loading a new program.

The objective is:

To create a Folder called NUT into which the program & data is loaded

The Icon for this program is manually put onto the Desktop,

For telephonic support to work – Programs must be in folder NUT

And at the same level as **Documents**

But **not** in the Documents Folder

Copying programs from folder \NUT on the memory stick or CD

to your C: hard disk into folder ..\NUT

We do **not** use the Windows Install system to install dietary manager.

This is may be done manually as follows:

Programs must be loaded onto the same level as folder **Documents**  
 (But not into the Documents Folder)

- 1 Insert the CD (Program Management) or memory stick.
- 2 Click onto your User Name
- 3 Click All Programs, move cursor to Accessories
- 4 Click on Command Prompt c:\

Or Go to Run: Type in CMD, click **OK**

- 5 A black screen appears  
 Now make a Folder called NUT  
 By typing in  
MD NUT then press Enter (this Makes a new Directory / Folder)

CD NUT press Enter (this Changes to the Folder NUT on C:)

→ Type in: COPY D:\nut\\*.\* press Enter

→ If this memory stick is used for daily backup, then it must not be used to install the program again, because you may overwrite data

→ Phone Program Management if you ever overwrite your data:

we can recover your live data using \*.DBK or DBR or from backup

Type EXIT to return to the Windows Desktop

To place icon on your Desktop for NUTDM

→ Click on 'Start', then 'Search', then 'All Files and Folders'

→ In the first box type in NUTDM.EXE;

"Look in" HARD DRIVE; C:

Click on 'Search'

→ NUTDM.EXE will appear: right click on this,

select 'Send to',

then select 'Desktop'

→ Right click the icon for "Shortcut to NUTDM":

Rename 'Shortcut to NUTDM' to 'NUTDM DIETARY MANAGER

Now to make the program full screen

→ Double click the icon to open the program:

the program now appears in a window;

move the cursor onto the title bar 'blue line'

just to the right of the name NUTDM.EXE

Right click on this title bar

→ select **Properties**:

select **Font**: choose **Lucida Console** and then size **24**:

click **OK**

Apply Properties screen appears:

tick 'Save properties for future windows with same title'

and click **OK**

You are now back at the opening screen of the program:

press Enter,

then using the space bar, type spaces over the password

to take you back to the Desktop

Right click the icon again: go to **Properties**

→ **Program** → tick "close on exit"

→ **Change Icon**: choose 'the red apple

click **OK**

→ **Screen**: tick **Full Screen** (NOT window) then **Apply**

Now double click your new red apple icon to activate NUTDM

When upgrading the programs,

make sure all programs are **closed**

You **cannot** upgrade - overwrite an open- running- program.

Also , when getting a newer version- It may be better to create a new folder (NUT2) and new icon for the new version .Leave the old version as a historical reference

Upgrading from a stiffy (stiffies are out of date )

You may receive the program update on a stiffy, in the post.

To load the program:

- log onto your User Name where the programs icons are
- the programs must be closed
- go to Command Prompt:  
type in CD NUTDM, press Enter
- the following should appear:  
C:\DOCUME~1\your name\NUTDM
- Insert the stiffy into A:
- COPY A:\*. \* press Enter
- Overwrite? **must** appear: answer **A** to “copy all” (if this question does not appear, it indicates that you are in the wrong folder)
- Once everything is copied from the stiffy, then remove the stiffy.
- Type EXIT to return to Windows Desktop

Upgrading from a Memory Stick MS

You may receive the program update on a **MS**.

Insert the MS into a working USB port

Wait a minute for the MS to be found

Go to My Computer to “see” the device letter eg F: G: D: J: I:

Then return to Windows desktop

To load the program:

- Click onto your User Name where the programs icons are
- the programs must be **closed**
- then go to Command Prompt:  
type in CD NUT, press Enter
- the following should appear:  
C:\DOCUME~1\your name\NUT
- Insert the memory stick into E, F, or D:
- if E:
- COPY E:NUT\\*. \* press Enter
- Overwrite? **must** appear: answer **A** to “copy all” (if this question does not appear, it indicates that you are in the wrong folder)
- Once everything is copied, then remove the memory stick.
- Type EXIT to return to Windows Desktop

### Upgrading from an E-mail Upgrade (as an attachment)

- Please ensure that your Outlook Express will not block the program as part of its anti virus procedure\*
- Eg go to Outlook express click on Tools ;click on Options; click on Security :  
Under "Viruses Protection" UNTICK. Do not allow attachments to be saved.....  
log onto your User Name where the programs icons are and the medical programs must be closed
  - go to Command prompt  
type in CD NUT, press Enter
  - the following should appear:  
C:\DOCUME~1\your name\NUT
  - COPY the attachments into NUT. Press Enter
  - Then type Unzip. Press Enter (this uncompresses the program)
  - Type EXIT to return to Windows Desktop

0 Make sure the program (Dietary Manager NUTDM)  
is closed on the "desktop"

1 Copy these attachments onto a stiffy / memory stick(flash card)  
or  
Copy straight into the folder where your programs are eg ..\NUT

2 Go to Command PROMPT

3 Change to the Folder/directory in which the programs are eg ..\NUT

4 Copy the 2 attachments into the Folder from stiffy/ memory stick

### Upgrading from a cd

You may receive the program update on a cd, in the post.

One way to load the program: (window XP & VISTA?)

This will not overwrite your data

Always do a backup before upgrading

Close all programs before upgrading

Open your User Name,

Click on Command prompt (black box with small blue line on top)

Insert the cd into D: ( or other appropriate drive letter, ie E:

- Change to folder NUT CD NUT (press Enter)
- the following should appear:  
C:\DOCUME~1\your name\NUT
- then
- COPY D:\NUT\\*.\* Then press Enter
- **Overwrite?** must appear: answer A to "copy All"
- (if this question does not appear, it indicates that you are in the wrong folder)
- Once everything is copied from the CD, then remove the CD.
- Type EXIT to return to Windows Desktop