



Nutrition User Manual

Version 1.0

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1. Nutrition Calculator



*For general and detailed information about the Product environment and the instruction for use of the **Control Bar** software see the document USR ENG Control Bar. Reading and understanding this document is necessary for a correct and safe use of the **Nutrition Calculator** module.*

The “Nutrition Calculator” module is a tool that helps creating, managing, prescribing and documenting the patient’s nutrition plan (either enteral, parenteral or total).

When creating a new nutrition plan the data referring to the previous plan prescribed are displayed. This makes it possible to speed-up the prescription procedure by changing, where necessary, the values of the old plan instead of creating a new plan from scratch.

The patient’s nutrition plan, once validated, is automatically added to the patient’s general therapy plan and is displayed on the **Therapy** modules (see the related documentation for further instructions on these modules).

1.1. Module selection

To select the “Nutrition Calculator” module

- Click the corresponding icon on the lateral bar (Fig 1).



Fig 1

The module main screen appears. If no patient is selected no data is displayed. If a patient is selected, the selected patient data are displayed.

1.2. Patient search and selection

To select a patient, if you are using for this purpose a Product software,

- Click the **Patient** button on the Control Bar.

The **Patient Explorer** module opens if the module is present in the system in use; otherwise the patient search and selection functions are accomplished by Control Bar. See the related technical documentation to know the specific search and selection procedures.

If the patient search and selection software in use is not a Product software see the related documentation.



If your Healthcare Structure does not use a Product software for the patient search and selection procedures, please refer to the specific related documentation.

1.3. Main screen description

If a patient is selected the module's main screen displays the information referring to the selected patient (Fig 2).

PRESCRIPTIONS

*	Date	Author	Volume ml	Cal.Tot	Glu/tot	Nitrog	Cal/N2	Glu/Ins	Gluc kCal	Lipids kCal	H2O	Gluc.	Lipids	Insulin	Nitrog g	Na mEq	K mEq	Cl mEq	Mg mEq	Ca mEq	P mEq	
2				1.341	1.649	17	7.4	224	0.0	282	1.367	1.341	70.5	138.5	0	7.4	60	20	50	0	0	16
0	07 mag 09	13:18	ADM	1.476	1.349	21	8.3	163	0.0	282	1.067	1.476	70.5	108.5	0	8.3	52	20	50	0	0	54
1	07 mag 09	13:16	ADM	1.075	1.212	09	4.7	260	0.0	105	1.107	1.075	26.4	113.0	0	4.7	44	31	62	9	13	21

A Nutrition plans list

Type	Name	Amount	Unit
Electrolytes	KCl 2 mEq/ml	10.0	ml
	Na Latt 2 mEq/ml	15.0	ml
	NaCl	10.0	ml
Nutrodip	Nutrodip	500.0	ml
	Oligoelementi Sifra	6.0	ml
Parenteral	AA 10% Sintamin	200.0	ml
	AA Ramil 4.5%	200.0	ml
	Intralipid 30%	400.0	ml

B Preparations table

C Energetic expense and RMR

Harris-Benedict BMR [kCal] 697

Resting Metabolic Rate Correction Factor [%] 120% (Maintenance)

RMR [kCal] 2.036

(*) 0 = Aborted, 1 = Prescribed, 2 = Prescription under development

Other Prescriptions:
Other prescriptions...

D Command bar

EDIT VIEW NEW ABORT DELETE NOTES PRINT STAT UPDATE


Fig 2 - Selected patient data

The screen is formed of four areas:

- 1) a table summarizing the values of the various nutritional therapy plans of the selected patient (Fig 2 A);
- 2) a table indicating the commercial preparations to use to prepare the selected therapy (Fig 2 B);
- 3) an area making it possible to specify the patient's parameters that enable to calculate the Resting Metabolic Rate value (RMR - Fig 2 C); i.e. to choose the correction factor to be applied to the Basal Metabolic Rate.
- 4) a command bar containing the buttons that can be used to use the module's functionalities (Fig 2 D).

1.3.1. Nutrition plans list

The table shown in Fig 3 summarizes the values of all the items forming the nutrition plans.




	Date	Author	Volume ml	Cal.Tot	Glu/tot	Nitrog.	Cal/N2	Glu/Ins	Gluc kCal	Lipids kCal	H2O	Gluc.	Lipids	Insulin	Nitrog. g	Na mEq	K mEq	Cl mEq	Mg mEq	Ca mEq	P mEq
2		ADM	1.341	1.649	17	7.4	224	0.0	282	1.367	1.341	70.5	138.5	0	7.4	60	20	50	0	0	16
0	07 mag 09 13:18	ADM	1.476	1.349	21	8.3	163	0.0	282	1.067	1.476	70.5	108.5	0	8.3	52	20	50	0	0	54
1	07 mag 09 13:16	ADM	1.075	1.212	09	4.7	260	0.0	105	1.107	1.075	26.4	113.0	0	4.7	44	31	62	9	13	21

Fig 3 - Nutrition plans list

Each row in the table corresponds to a nutrition plan. The columns display the values of the nutritional items forming the plan.

The first column (Fig 4 A) displays a numeric code indicating the nutrition plan status. There are three possible values:

- **1** means that the nutrition plan is completed and has already been added to the patient treatment plan;
- **2** means that the specification of the nutrition plan is in progress and that it has not yet been added to the patient treatment plan;
- **0** means that the nutrition plan was aborted.



	Date	Author	Vol. ml
2		ADM	1.341
0	07 mag 09 13:18	ADM	1.476
1	07 mag 09 13:16	ADM	1.075

Fig 4

The second column displays the date and time of the nutrition plan creation.

The third column displays the acronym of the user who created the nutrition plan.

The other columns display the values of the nutrition plan items specified in the heading (Fig 5, for example, displays a part of the table headings).

Volume ml	Cal.Tot	Glu/tot	Nitrog.	Cal/N2	G
-----------	---------	---------	---------	--------	---

Fig 5

A row, when selected, is highlighted blue (Fig 3 A). The values displayed in the area named “commercial preparations table” (Fig 2 B, Fig 6) are the values of the nutrition plan currently selected.

1.3.2. Commercial preparations table

The table indicated in Fig 2 **B** and enlarged in Fig 6 displays the commercial preparations that can be used to prepare the selected nutrition plan. The selected nutrition plan is highlighted blue in the nutritions plan table (Fig 3 **A**).

Type	Name	Amount	Unit
Electrolytes	KCl 2 mEq/ml	10,0	ml
	Na Latt 2 mEq/ml	15,0	ml
Enteral	NaCl	10,0	ml
	Nutrodrip	500,0	ml
Oligoelements	Oligoelementi Sitra	6,0	ml
	AA 10% Sintamin	200,0	ml
Parenteral	AA Ramil 4.5%	200,0	ml
	Intralipid 30%	400,0	ml

Fig 6 - Commercial preparations table.

Every row of the table displays one of the items that are part of the nutrition plan. The items are grouped by “type”. The first column displays the names of the groups: “Electrolytes”, “Enteral”, “Oligoelements” etc...

The second column displays the names of the items. The third column displays the prescribed quantities. The fourth column displays the unit of measure.

1.3.3. Energetic expense and RMR

The area indicated in Fig 2 **C** and enlarged in Fig 7 **A** displays various information.

The screenshot shows a software window with the following components:

- Callout A:** Points to the "Harris-Benedict BMR [kCal]" field, which displays the value 1.697.
- Callout B:** Points to the "RMR [kCal]" field, which displays the value 2.036.
- Callout C:** Points to the "Resting Metabolic Rate Correction Factor [%]" dropdown menu, which is currently set to "120% (Maintenance)".
- Callout D:** Points to the "Other Prescriptions" section, which includes a text area for "Other prescriptions specification..." and a legend: "(*) 0 = Aborted, 1 = Prescribed, 2 = Prescription under development".

Fig 7

These are:

- the Basal Metabolic Rate (BMR - Fig 7 **A**) calculated by the Harris-Benedict equation;
- the correction factor chosen for the resting metabolic rate calculation, selected on a list of standard values (Fig 8); the resting metabolic rate (RMR - Fig 7 **B**) is the basal metabolic rate (BMR - Fig 7 **A**) multiplied by the selected correction factor;

- a key (Fig 7 C) indicating the meaning of the numeric codes associated to the status of the nutrition plans (described in paragraph 1.3.1).
- the list of possible other prescriptions (Fig 7 D) not configured in the system as “standard items”; the “other prescriptions” can be described in a specific window (Fig 24) placed in the “other prescriptions” area (Fig 27).

The screenshot shows a window with the following elements:

- Harris-Benedict BMR [kCal]:** 1.697
- Resting Metabolic Rate Correction Factor [%]:** 120% (Maintenance)
- RMR [kCal]:** 2.036
- Other Prescriptions:** A list of conditions with associated percentages:
 - 120% (Maintenance)
 - 150% (Routine surgery)
 - 150% (Minor infection)
 - 150% (General repletion)
 - 175% (Major surgery)
 - 175% (Trauma)
 - 175% (Sepsis)
 - 175% (Tumor)

Fig 8 - Types of energetic expense

1.3.4. The command bar

The command bar (Fig 2 D, Fig 9) contains the buttons making it possible to perform different actions.



Fig 9 - Command Bar

The functions of the different buttons are briefly described in this paragraph. The detailed procedures are described later in specific paragraphs.

EDIT	Use this button to change the values of a selected nutrition plan (see paragraph 1.5 for the procedure).
VIEW	Use this button to display the data of a selected nutrition plan. Data are displayed in read-only mode (see paragraph 1.6).
NEW	Use this button to create a new nutrition plan for the patient (see paragraph 1.7).
ABORT	Use this button to interrupt the administration of a selected nutrition plan (see paragraph 1.8).
DELETE	Use this button to delete a selected nutrition plan (see paragraph 1.9).
NOTES	Use this button to either add or display patient notes (see paragraph 1.10).
PRINT	Use this button to print the chosen information (see paragraph 1.11).
STAT	Use this button to display in a chart the statistical trends of the values of the patient nutrition plans (see paragraph 1.7).
UPDATE	Use this button to add a nutrition plan to the patient general therapy plan. After clicking this button the nutritional therapy is actually prescribed. The nutrition plan switches from status 2 to status 1 (see Fig 4 for a list of the possible statuses; see paragraph 1.4.1 for the detailed prescription procedure).

1.4. Creating a new nutrition plan

To create a new nutrition plan

- Click the **New** button on the command bar (Fig 10 A).



*The **New** button is disabled when a nutrition plan in status 2 already exists (status 2 is “nutrition plan in progress” - see Fig 4 for a list of the possible statuses of the nutrition plan).*

The screenshot shows a software window titled "PRESCRIPTIONS". At the bottom is a command bar with several buttons: EDIT, VIEW, NEW, ABORT, DELETE, NOTES, PRINT, STAT, and UPDATE. The "NEW" button is circled in red and has a yellow callout bubble with the letter "A" above it. The "UPDATE" button is also circled in red and has a yellow callout bubble with the letter "B" above it. The main area of the window is a large empty box. To the right of this box is a sidebar containing fields for "Harris-Benedict BMR [kCal]" (value 1.244), "Resting Metabolic Rate Correction Factor [%]" (a dropdown menu), and "RMR [kCal]" (value 0). Below these fields is a small text note: "(*) 0 = Aborted, 1 = Prescribed, 2 = Prescription under development".

Fig 10

A window making it possible to specify the details of the nutrition plan opens (Fig 11).



When the new nutrition plan is the first plan created for the patient the window is empty (Fig 11). When there are previous nutrition plans the window contains the data of the latest plan created. This feature makes it possible to use the values of the latest plan instead of creating a new nutrition plan from scratch.

Parenteral solutions					Electrolytes						
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Volume	Na	K	Ca	Mg	Cl
Enteral solutions					Oligoelements			Vitamins			
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Unit	Qty	Name	Unit	Qty	
					Insulin Insulin <input type="text" value="0"/> U Glucose/Insulin <input type="text" value="0"/> g/U						
Other substances			Volume and Water			Nitrogen			<input type="checkbox"/> /kg <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">A</div> <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">B</div> <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">Cancel</div>		
Name	Unit	Qty	Volume	H2O	Nitrogen	Cal NP/N2					
			<input type="text" value="0"/> ml	<input type="text" value="0"/> ml	<input type="text" value="0"/> g	<input type="text" value="0"/> kcal/g					
			Calories		Electrolytes						
			Total NP	kCalGlu	Na	K	Ca	Mg	P	Fe	
			<input type="text" value="0"/> kCal	<input type="text" value="0"/> kCal	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> g	
			Gluc/Tot NP	kCalLip	Cl						
			<input type="text" value="0"/> %	<input type="text" value="0"/> kCal	<input type="text" value="0"/> mEq						
			Lipid/Tot NP	Gluc/Insulin							
			<input type="text" value="0"/> %	<input type="text" value="0"/> g/U							
			Osmolarity								
			<input type="text" value="0"/> mO/l								
			Parenteral	Enteral	Total	Parenteral	Enteral	Total			
Other prescriptions											

Fig 11 - Nutrition plan specification (empty window)

- Specify the items and the values of the new nutrition plan (Fig 12).

Parenteral solutions					Electrolytes						
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Volume	Na	K	Ca	Mg	Cl
AA Ramif 4.5%	500	0	0	2.21	Esafosfina	100	43.5	0.0	0.0	0.0	0.0
Intralipid 30%	500	0	1.500	0.00	Na Latt 2 mEq/ml	10	20.0	0.0	0.0	0.0	0.0
Enteral solutions					Oligoelements			Vitamins			
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Unit	Qty	Name	Unit	Qty	
Nutrodrip	500	282	167	3.44	Oligoelementi Sifra	ml	5				
Water	100	0	0	0.00							
					Insulin Insulin <input type="text" value="20"/> U Glucose/Insulin <input type="text" value="10"/> g/U						
Other substances			Volume and Water			Nitrogen			<input type="checkbox"/> /kg <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">A</div> <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">B</div> <div style="border: 1px solid red; border-radius: 50%; width: 20px; height: 20px; text-align: center; line-height: 20px; color: red; font-weight: bold;">Cancel</div>		
Name	Unit	Qty	Volume	H2O	Nitrogen	Cal NP/N2					
			<input type="text" value="1.115"/> ml	<input type="text" value="600"/> ml	<input type="text" value="1.715"/> g	<input type="text" value="679"/> kcal/g					
			Calories		Electrolytes						
			Total NP	kCalGlu	Na	K	Ca	Mg	P	Fe	
			<input type="text" value="1.500"/> kCal	<input type="text" value="282"/> kCal	<input type="text" value="64"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="0"/> mEq	<input type="text" value="104"/> mEq	<input type="text" value="0"/> g	
			Gluc/Tot NP	kCalLip	Cl						
			<input type="text" value="0"/> %	<input type="text" value="167"/> kCal	<input type="text" value="0"/> mEq						
			Lipid/Tot NP	Gluc/Insulin							
			<input type="text" value="100"/> %	<input type="text" value="4"/> g/U							
			Osmolarity								
			<input type="text" value="412"/> mO/l								
			Parenteral	Enteral	Total	Parenteral	Enteral	Total			
Other prescriptions											

Fig 12 - Plan specification

- Click the **Exit** button (Fig 12 A).

The window closes. A line is automatically added to the nutrition plans table on the main screen (Fig 13). The new nutrition plan is in status 2, i.e. it is “in progress”.

A

PRESCRIPTIONS																						
*	Date	Author	Volume ml	Cal.Tot	Glu/tot	Nitrog.	Cal/N2	Glu/Ins	Gluc. kCal	Lipids kCal	H2O	Gluc.	Lipids	Insulin	Nitrog. g	Na mEq	K mEq	Cl mEq	Mg mEq	Ca mEq	P mEq	r
2		ADM	1.715	1.949	14	5,7	345	0,0	282	1.667	1.715	70,5	168,5	0	5,7	64	0	0	0	0	104	

Fig 13 - Nutrition plans table

When the plan is in status 2 date and time are not specified. They appear later, when the plan is actually prescribed, indicating the time of the actual prescription.

1.4.1. How to prescribe a nutrition plan

To prescribe a nutrition plan, after the specification of all the items and their corresponding values,

- Click the line corresponding to the plan to be prescribed on the nutrition plans table. The plan must be in status 2.
- Click the **Update** button on the command bar (Fig 10 B). User confirmation is required (Fig 14).

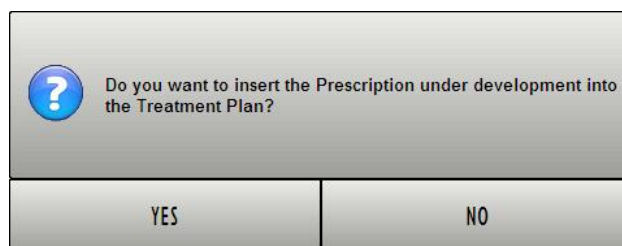


Fig 14

- Click **Yes** to prescribe the nutrition plan.

A print report listing all the items of the nutrition plan and the exact amounts is automatically created. A print preview is displayed. This document can be transmitted to the pharmacy or used to create the nutrition bag.

- Click the **Close** button on the command bar to close the print preview screen.

The nutrition plan is now prescribed. If the modules [Therapy Prescription](#) and [Therapy Execution](#) are in use, two new items (one for the enteral and one for the parenteral nutrition) are added to the patient's general treatment plan displayed on these modules. See the related documentation for a detailed description of the [Therapy Prescription](#) and [Therapy Execution](#) modules. Two specific messages inform the user about this fact (Fig 15):

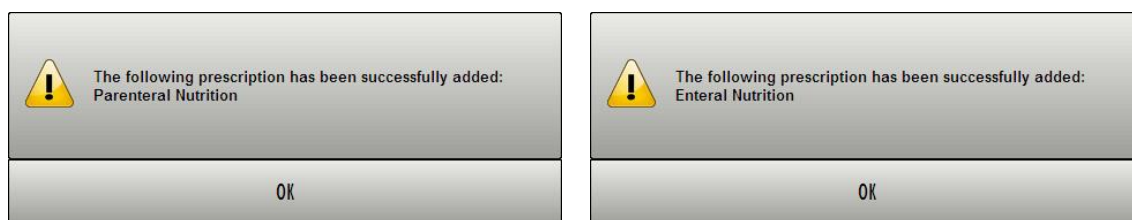


Fig 15a/b

When the nutrition plan is prescribed it switches to status 1 (see Fig 4 for a list of the possible nutrition plan statuses).

1.4.2. Nutrition specification window (description)

The window shown in Fig 16 makes it possible to specify in detail all the items that will be part of the patient nutrition plan and the corresponding values.

The present paragraph describes this window.

The screenshot shows a complex nutrition specification window with several sections. Callouts A through H point to specific areas:

- A:** Parenteral solutions table (Name, Volume, kCalGlu, kCalLip, Nitrogen)
- B:** Electrolytes table (Name, Volume, Na, K, Ca, Mg, Cl)
- C:** Enteral solutions table (Name, Volume, kCalGlu, kCalLip, Nitrogen)
- D:** Oligoelements table (Name, Unit, Qty)
- E:** Vitamins table (Name, Unit, Qty)
- F:** Insulin section (Insulin 0 U, Glucose/Insulin 0 g/U)
- G:** Other substances table (Name, Unit, Qty)
- H:** Other prescriptions table (Name, Unit, Qty)

Other sections include:

- Volume and Water:** Volume 0 ml, H2O 0 ml
- Calories:** Total NP 0 kCal, kCalGlu 0 kCal, Gluc/Tot NP 0 %, kCalLip 0 kCal, Lipid/Tot NP 0 %, Gluc/Insulin 0 g/U, Osmolarity 0 mO/l
- Nitrogen:** Nitrogen 0 g, Cal NP/N2 0 kCal/g
- Electrolytes:** Na 0 mEq, K 0 mEq, Cl 0 mEq, Mg 0 mEq, Ca 0 mEq, P 0 mEq, Fe 0 g
- Buttons:** Exit, Cancel

Fig 16

The window is divided into several areas. A heading placed on top of each area informs the user on the kind of nutrition items that are specified in the specific area. The heading is characterized either by the green color (Fig 17)

Parenteral solutions				
Name	Volume	kCalGlu	kCalLip	Nitrogen

Fig 17

or the pink color (Fig 18).

Volume and Water	
Volume	0 ml
H2O	0 ml

Fig 18

Use the green areas to specify the items and their values. The pink areas display a summary of the values progressively specified. There are 8 green areas, making it possible to

- specify the quantity and the kind of parenteral solutions to be administered (Fig 16 **A**);
- specify the quantity and the kind of electrolytes to be administered (Fig 16 **B**);
- specify the quantity and the kind of enteral solutions to be administered (Fig 16 **C**);
- specify the quantity and the kind of oligoelements to be administered (Fig 16 **D**);
- specify the quantity and the kind of vitamins to be administered (Fig 16 **E**);
- specify the quantity of insulin to be administered (Fig 16 **F**);
- specify the possible other substances to be administered (Fig 16 **G**);
- specify (as free text) the possible other prescriptions (Fig 16 **H**).

The pink areas (Fig 19) display a summary of all the nutrition plan parameters. The summaries make it possible to display the enteral and the parenteral nutrition separately.

Volume and Water				Nitrogen			
Volume	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> ml	Nitrogen	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> g
H2O	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> ml	Cal NP/N2	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> kCal/g

Calories				Electrolytes			
Total NP	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> kCal	Na	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
kCalGlu	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> kCal	K	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
Gluc/Tot NP	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> %	Cl	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
kCalLip	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> kCal	Mg	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
Lipid/Tot NP	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> %	Ca	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
Gluc/Insulin	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> g/U	P	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mEq
Osmolarity	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> mO/l	Fe	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> g
	Parenteral	Enteral	Total		Parenteral	Enteral	Total

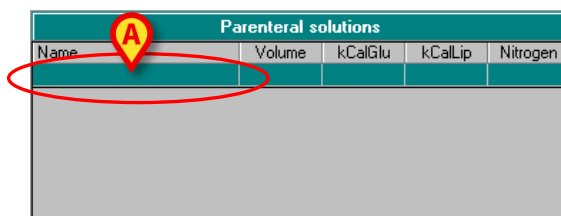
☐ /kg

Fig 19

1.4.3. How to specify an item and its value

To specify an item of the nutrition plan:

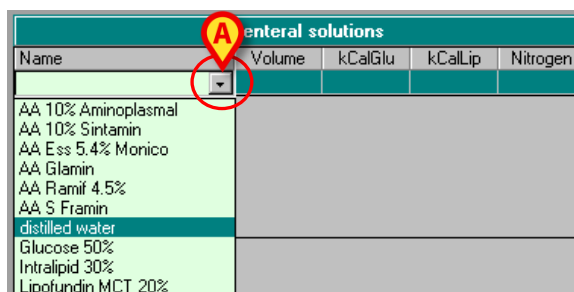
- Click, within the relevant area, the “name” cell indicated in Fig 20 A.



Name	Volume	kCalGlu	kCalLip	Nitrogen
------	--------	---------	---------	----------

Fig 20

An arrow button  appears. The arrow button  opens a menu containing all the selectable items. The list of selectable items is created by configuration (Fig 21 A).

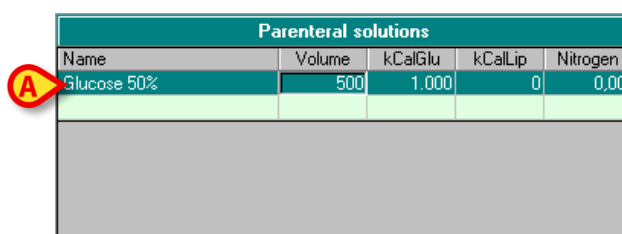


Name	Volume	kCalGlu	kCalLip	Nitrogen
AA 10% Aminoplasmal				
AA 10% Sintamin				
AA Ess 5.4% Monico				
AA Glamin				
AA Ramif 4.5%				
AA S Framin				
distilled water				
Glucose 50%				
Intralipid 30%				
Lipofundin MCT 20%				

Fig 21 - Item specification

- Click the name of the relevant item.

The name of the item appears in the cell (Fig 22 A). The system assigns default values to the item.



Name	Volume	kCalGlu	kCalLip	Nitrogen
Glucose 50%	500	1.000	0	0.00

Fig 22

To change the values:

- Click the value to be changed.

A cursor appears in the corresponding cell.

- Type the new value (Fig 23 A).

Partial solutions				
Name	Time	kCalGlu	kCalLip	Nitrogen
Glucose 50%	400	1.000	0	0.00

Fig 23

Other prescriptions specification

The possible “Other prescriptions” are specified in textual form. To edit the “Other prescriptions” area (Fig 16 H) click the area and type the wanted text (Fig 24).

Other prescriptions

Other Prescriptions 1
Other prescriptions 2

Fig 24

The “Other prescriptions” are displayed on the module’s main screen (Fig 2 C, Fig 25).

Harris-Benedict
BMR [kCal]
1.244

Resting Metabolic Rate
Correction Factor [%]

RMR [kCal]
0

(*) 0 = Aborted, 1 = Prescribed, 2 = Prescription under development

Other Prescriptions
Other Prescriptions 1
Other prescriptions 2

Fig 25 - Other prescriptions

Insulin

Use the cell “Insulin” to specify the insulin quantity (Fig 16 F, Fig 26). Type the needed quantity (in Insulin Units) in the “Insulin” field. The Glucose/Insulin ratio is automatically calculated and displayed below the insulin value.

Insulin

Insulin 20 U
Glucose/Insulin 7,43 g/U

Fig 26

The summary (pink table) is progressively updated while the different values are specified (Fig 27).

Parenteral solutions					Electrolytes						
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Volume	Na	K	Ca	Mg	Cl
AA Ramif 4.5%	500	0	0	2.21	Esafosfina	100	43.5	0.0	0.0	0.0	0.0
Intralipid 30%	500	0	1.500	0.00	Na Latt 2 mEq/ml	10	20.0	0.0	0.0	0.0	0.0

Enteral solutions					Oligoelements			Vitamins		
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Unit	Qty	Name	Unit	Qty
Nutrodrip	500	282	167	3.44	Oligoelementi Sifra	ml	5			
Water	100	0	0	0.00						

Other substances			Volume and Water			Nitrogen		
Name	Unit	Qty	Volume			Nitrogen		
			1.115	600	1.715	2	3	6
			H2O	1.115	600	1.715	679	130

Other prescriptions			Calories			Electrolytes		
			Total NP			Na		
			1.500	449	1.949	64	0	64
			kCalGlu	0	282	K	0	0
			Gluc/Tot NP	0	63	Cl	0	0
			kCalLip	1.500	167	Mg	0	0
			Lipid/Tot NP	100	37	Ca	0	0
			Gluc/Insulin	0	4	P	104	104
			Osmolarity	412	208	Fe	0	0

Parenteral			Enteral			Total		

Fig 27

“Pro kilo” mode

The checkbox indicated in Fig 27 A makes it possible to display the table values in “pro kilo” mode, i.e. referred to the weight unit. For instance, the values displayed in Fig 28,

Volume and Water					Nitrogen		
Volume					Nitrogen		
831	510	1.341	ml		4	3	7
H2O	831	510	1.341	ml	Cal NP/N2	305	130

Calories					Electrolytes		
Total NP					Na		
1.200	449	1.649	kCal		30	30	60
kCalGlu	0	282	282	kCal	K	20	20
Gluc/Tot NP	0	63	17	%	Cl	20	50
kCalLip	1.200	167	1.367	kCal	Mg	0	0
Lipid/Tot NP	100	37	83	%	Ca	0	0
Gluc/Insulin	0	0	0	g/U	P	16	16
Osmolarity	610	363		mO/l	Fe	0	0

Parenteral			Enteral			Total		

Fig 28

are displayed in Fig 29 in “pro kilo” mode (the “pro kilo” checkbox is selected).

Volume and Water					Nitrogen		
Volume					Nitrogen		
9.2	5.7	14.9	ml		0.0	0.0	0.1
H2O	9.2	5.7	14.9	ml	Cal NP/N2	305	130

Calories					Electrolytes		
Total NP					Na		
13.3	5.0	18.3	kCal		0.3	0.3	0.7
kCalGlu	0.0	3.1	3.1	kCal	K	0.2	0.2
Gluc/Tot NP	0	63	17	%	Cl	0.2	0.6
kCalLip	13.3	1.9	15.2	kCal	Mg	0.0	0.0
Lipid/Tot NP	100	37	83	%	Ca	0.0	0.0
Gluc/Insulin	0	0	0	g/U	P	0.2	0.2
Osmolarity	610	363		mO/l	Fe	0.0	0.0

Parenteral			Enteral			Total		

Fig 29

Exit / Save

Use the **Exit** button (Fig 30 A) to close the “nutrition specification” window and save the inserted data as “work in progress”.

Volume and Water				Nitrogen					
Volume	1.115	600	1.715	ml	Nitrogen	2	3	6	g
H2O	1.115	600	1.715	ml	Cal NP/N2	679	130	345	kCal/g

Calories				Electrolytes					
Total NP	1.500	449	1.949	kCal	Na	64	0	64	mEq
kCalGlu	0	282	282	kCal	K	0	0	0	mEq
Gluc/Tot NP	0	63	14	%	Cl	0	0	0	mEq
kCalLip	1.500	167	1.667	kCal	Mg	0	0	0	mEq
Lipid/Tot NP	100	37	86	%	Ca	0	0	0	mEq
Gluc/Insulin	0	4	4	g/U	P	104	0	104	mEq
Osmolarity	412	208		mO/l	Fe	0	0	0	g

Parenteral Enteral Total Parenteral Enteral Total

A Exit **B** Cancel

Fig 30

A row is added to the nutrition plans table on the module’s main screen (Fig 13). The plan is now in status 2 (“in progress”). See paragraph 1.4.1 for the actual prescription procedure.

Use the **Cancel** button (Fig 30 B) to close the nutrition specification window without saving the data.

1.4.4. How to delete an item from the nutrition plan

To delete one of the items on the nutrition plan

- Click the item to be deleted. The item is this way highlighted.
- Click the **Canc** button on the PC keyboard. User confirmation is required.
- Click **Yes** to delete the item.

1.5. Editing an existing nutrition plan

To edit an already existing nutrition plan, on the nutrition plans table (Fig 31)

- Click the row corresponding to the plan that must be edited.

PRESCRIPTIONS

*	Date	Author	Volume ml	Cal.Tot	Glu/tot	Nitrog.	Cal/N2	Glu/Ins	Gluc. kCal	Lipids kCal	H2O	Gluc.	Lipids	Insulin	Nitrog. g	Na mEq	K mEq	Cl mEq	Mg mEq	Ca mEq	P mEq
2		ADM	1.341	1.649	17	7.4	224	0.0	282	1.367	1.341	70.5	138.5	0	7.4	60	20	50	0	0	16
0	07 mag 09 13:18	ADM	1.476	1.349	21	8.3	163	0.0	282	1.067	1.476	70.5	108.5	0	8.3	52	20	50	0	0	54
1	07 mag 09 13:16	ADM	1.075	1.212	09	4.7	260	0.0	105	1.107	1.075	26.4	113.0	0	4.7	44	31	62	9	13	21

Nutrition plans table

Type	Name	Amount	Unit
Electrolytes	KCl 2 mEq/ml	10.0	ml
	Na Latt 2 mEq/ml	15.0	ml
	NaCl	10.0	ml
Enteral	Nutrodrip	500.0	ml
Oligoelements	Oligoelementi Sifra	6.0	ml
	AA 10% Sintamin	200.0	ml
Parenteral	AA Ramif 4.5%	200.0	ml
	Intralipid 30%	400.0	ml

Harris-Benedict BMR [kCal] 1.697
 Resting Metabolic Rate Correction Factor [%]
 RMR [kCal] 0

(*) 0 = Aborted, 1 = Prescribed, 2 = Prescription under development
 Other Prescriptions
 Other prescriptions specification...

EDIT VIEW NEW ABORT DELETE NOTES PRINT STAT UPDATE

Fig 31 - Nutrition plans table

The row is highlighted.

- Click the **Edit** button (Fig 31 A).

The **Edit** button is enabled only if the selected therapy is in status 2, i.e. it has not been prescribed yet (Fig 32). A therapy cannot be edited after prescription.

*	Date	Author	Volume ml
2		ADM	
0	07 mag 09 13:18	ADM	1
1	07 mag 09 13:16	ADM	2

Fig 32

After clicking the **Edit** button the nutrition plan details window opens (Fig 33).



Parenteral solutions					Electrolytes						
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Volume	Na	K	Ca	Mg	Cl
AA 10% Sintamin	200	0	0	3,05	KCl 2 mEq/ml	10	0,0	20,0	0,0	0,0	20,0
AA Ramif 4.5%	200	0	0	0,88	Na Latt 2 mEq/ml	15	30,0	0,0	0,0	0,0	0,0
Intralipid 30%	400	0	1.200	0,00							
Enteral solutions					Oligoelements			Vitamins			
Name	Volume	kCalGlu	kCalLip	Nitrogen	Name	Unit	Qty	Name	Unit	Qty	
NaCl	10	0	0	0,00	Oligoelementi Sifra	ml	6				
Nutrodrip	500	282	167	3,44							
					Insulin Insulin <input type="text" value="0"/> U Glucose/Insulin <input type="text" value="0"/> g/U						
Other substances			Volume and Water			Nitrogen			<input type="checkbox"/> /kg 		
Name	Unit	Qty	Volume			Nitrogen					
			831	510	1.341 ml	4	3	7 g			
			831	510	1.341 ml	Cal NP/N2	305	130	224 kcal/g		
			Calories			Electrolytes					
			Total NP			Na					
Other prescriptions Other prescriptions specification...			kCalGlu	0	282	282 kcal	K	20	0	20 mEq	
			Gluc/Tot NP	0	63	17 %	Cl	20	30	50 mEq	
			kCalLip	1.200	167	1.367 kcal	Mg	0	0	0 mEq	
			Lipid/Tot NP	100	37	83 %	Ca	0	0	0 mEq	
			Gluc/Insulin	0	0	0 g/U	P	16	0	16 mEq	
			Osmolarity	610	363		Fe	0	0	0 g	
			Parenteral	Enteral	Total	Parenteral	Enteral	Total			

Fig 33

- Edit the plan items and amounts on the window.
- Click the **Exit** button (Fig 33 A).

The new values are displayed on the row corresponding to the plan on the nutrition plans table.

1.6. How to display the values of a nutrition plan

To display the details of a nutrition plan in “read only” mode, on the nutrition plans table (Fig 31)

- Click the row corresponding to the plan to be displayed. The row is this way highlighted.
- Click the **View** button on the command bar (Fig 31 **B**).

The window displaying the details of the selected plan opens (Fig 33). The window is in read-only mode - i.e. it cannot be edited.

1.7. Statistics of nutritional therapy

The “Nutrition calculator” module makes it possible to display in charts the trends of the patient’s nutritional values.

To do that

- Click the **Stat** button on the command bar (Fig 31 **C**).

The following window opens (Fig 34).

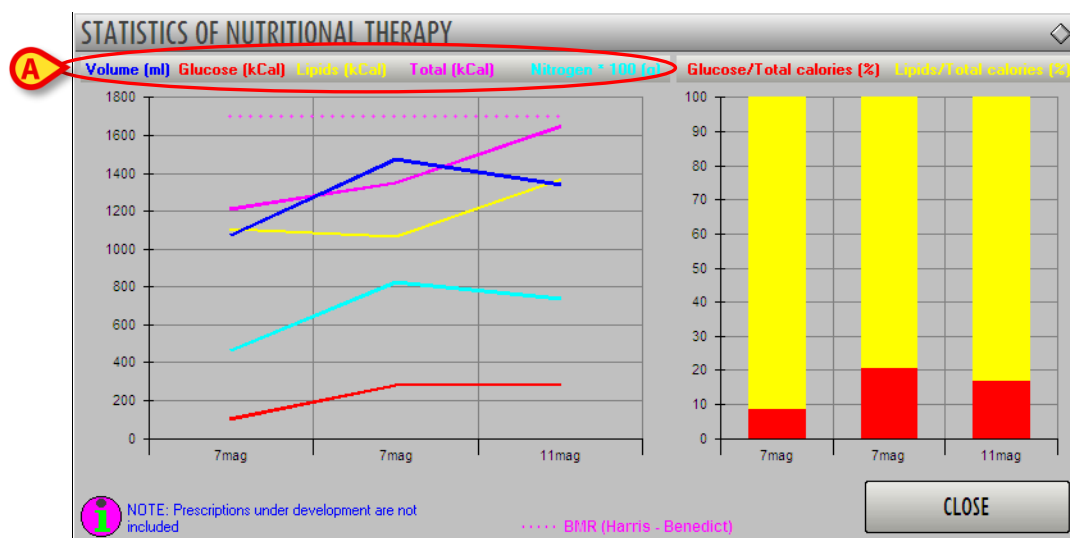


Fig 34 - Statistics of nutritional therapy

The “statistics of nutritional therapy” window offers a visual representation of the trends of the patient’s nutrition plans. The window contains two charts. The one on the left (linear) displays the trends of several values separately:

- volume,
- glucose,
- lipids,
- total calories,
- nitrogen.

The color of the line on the chart corresponds to the color used to write the name of the value represented. For example: on the window's heading (Fig 34 A) the word "Volume" is written in blue, therefore the line representing the volume on the chart is blue; the word "Glucose" is written in red and the corresponding line is red etc... The hatched line indicates the Basal Metabolic Rate.

On the horizontal axis the different plans are indicated by their date of prescription. The vertical axis displays the different values. The unit of measure is indicated on the window's heading, alongside the names of the represented values.

The chart on the right (histograms) summarizes some meaningful values. Each column represents the 100% of the calories provided to the patient by a specific nutrition plan. The red color indicates the percentage of calories deriving from glucose; the yellow color indicates the percentage of calories deriving from lipids.

1.8. How to abort an ongoing nutrition plan

To abort an existing nutrition plan, on the nutrition plans table (Fig 35),

*	Date	Author	Volume ml	Cal.Tot	Gluc/tot	Nitrog.	Cal/N2	Gluc/Ins	Gluc. kCal	Lipids kCal	H2O	Gluc.	Lipids	Insulin	Nitrog. g	Na mEq	K mEq	Cl mEq	Mg mEq	Ca mEq	P mEq	r
2		ADM	826	779	14	5,3	147	0,0	113	667	826	28,2	67,4	0	5,3	44	10	40	0	0	8	
1	11 mag 09 09:38	ADM	1.341	1.649	17	7,4	224	0,0	282	1.367	1.341	70,5	138,5	0	7,4	60	20	50	0	0	16	
0	07 mag 09 13:18	ADM	1.476	1.349	21	8,3	163	0,0	282	1.067	1.476	70,5	108,5	0	8,3	52	20	50	0	0	54	
1	07 mag 09 13:16	ADM	1.075	1.212	09	4,7	260	0,0	105	1.107	1.075	26,4	113,0	0	4,7	44	31	62	9	13	21	

Fig 35 - Nutrition plans table


- Click the row corresponding to the plan to be aborted. The row is this way highlighted.

If the therapy is in status 1 (prescribed), the **Abort** button is enabled on the command bar.

EDIT	VIEW	NEW	ABORT	DELETE	NOTES	PRINT	STAT	UPDATE
------	------	-----	-------	--------	-------	-------	------	--------

Fig 36 - Command bar

- Click the **Abort** button (Fig 36). User confirmation is required (Fig 37).



Are you sure you want to permanently ABORT the current nutrition?

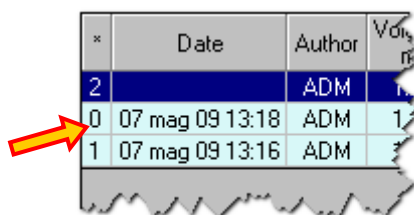
YES

NO

Fig 37

- Click **Yes** to permanently abort the selected plan. The aborted plan cannot be resumed later.

The aborted plan is still visible on the nutrition plans table. The corresponding status is 0 (Fig 38).



ID	Date	Author	Volume
2	07 mag 09 13:18	ADM	1
0	07 mag 09 13:18	ADM	1
1	07 mag 09 13:16	ADM	1

Fig 38

1.9. How to delete a nutrition plan

To delete a nutrition plan, on the nutrition plans table (Fig 35),

- Click the row corresponding to the plan to be deleted. The row is this way highlighted.

The **Delete** button is enabled on the command bar

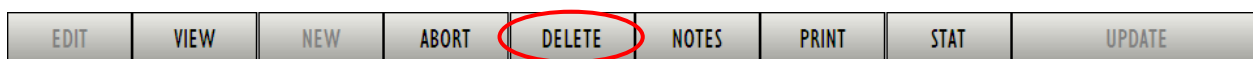


Fig 39 - Command bar

- Click the **Delete** button. User confirmation is required (Fig 40).

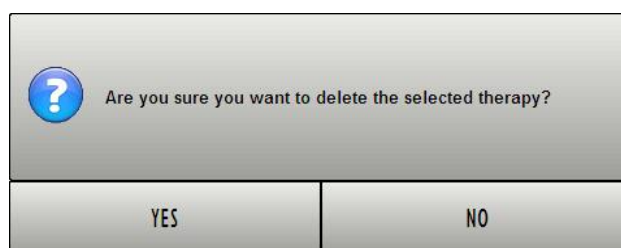


Fig 40

- Click **Yes** to delete the selected nutrition plan. The corresponding row disappears from the nutrition plans table.

The deletion of a plan is always enabled, independently from the plan status.

1.10. Patient notes

The **Notes** button on the command bar (Fig 41) makes it possible to add notes relating to the patient.

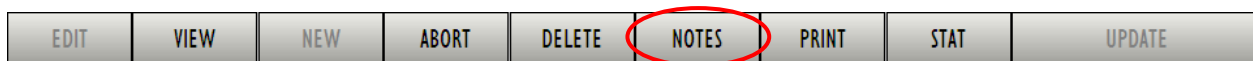


Fig 41 - Command bar

To add a patient note

- Click the **Notes** button.

The following window opens.

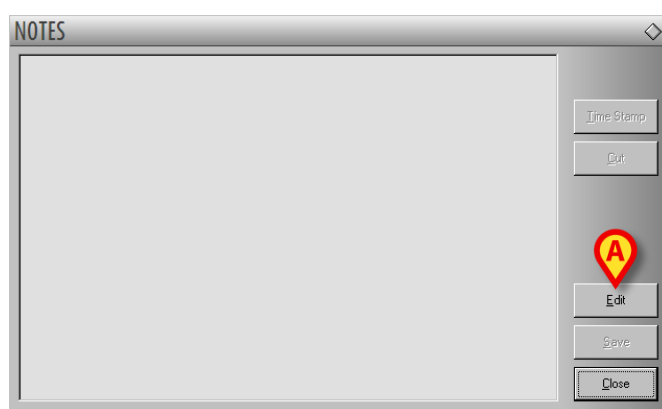


Fig 42 - “Notes” window

- Click the **Edit** button (Fig 42 A). The window changes and turns to “edit” mode (Fig 43).

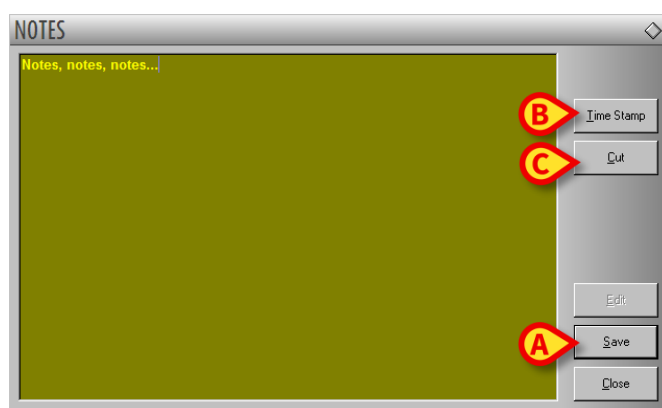


Fig 43 - “Notes” window (edit mode)

- Type the note. The text is displayed in the window.
- Click the **Save** button to save the note (Fig 43 A).

The window closes automatically. The presence of a note is indicated by the color of the button on the command bar, which becomes yellow. Click the button again to display the note again.

Use the **Time Stamp** button on the right (Fig 43 **B**) to display the date, time and the cronym of the user who is adding the note (Fig 44).



Fig 44 - Date and time

Use the **Cut** button (Fig 43 **C**) to cut a selected text portion from the note. To cut a text portion from a note

- click the **Edit** button (Fig 42 **A**).
- Select the text to be cut using either the mouse device or the workstation keyboard.
- Click the **Cut** button. The selected text disappears from the note.



*The notes inserted this way are visible - after clicking the **Notes** button on the command bar - on every Product module currently in use implementing the **Notes** button.*

1.11. Print reports

To create a print report

- Click the **Print** button on the command bar (Fig 45).



Fig 45 - Command Bar

A menu containing several options opens (Fig 46).

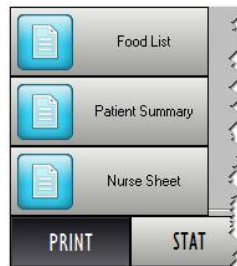


Fig 46 - Print options

Each one of the buttons displayed in Fig 46 makes it possible to print a specific kind of documentation. The options shown in the figure are:

- print food list;
- print patient summary;
- print nurse sheet.

Different choices can be enabled by configuration.

- Click the button corresponding to the wanted document.

A print preview is displayed.