

User manual

NutriCalculator

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NutriCalculator

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Guide for users

Scope

This user manual relates to the NutriCalculator application.

Intended for

This user manual is intended for people who will be using the NutriCalculator application. This includes installing, configuring, using and deleting the application.

Required knowledge and experience

People using the NutriCalculator application must possess the knowledge, experience and/or training needed to perform the concerned activities in a safe manner.

Instructions for using this manual

People who use this user manual must adhere to the requirements mentioned within it. Failure to comply with these requirements could result in **dangerous situations** for patients.

Explanation about used signs

The signs used in this manual have the following meanings:



offers you suggestions and advice about performing certain tasks or actions in an easier or more efficient manner.



offers you additional information or warns you about a potential problem.



warning; failure to carefully comply with the requirements could result in personal injury.

Accompanying documents

The application is accompanied by additional nutritional information for patients who are in intensive care. This document is part of the user manual and can be referenced for specific information.

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1. Introduction

1.1 Intended use

The NutriCalculator application is intended for doctors, nurses and dieticians who work in intensive care departments. Based on the characteristics of nutritional products and patient details, the application can be used to provide nutritional advice for patients who are in intensive care.

One first needs to identify the patient's energy needs before nutritional advice can be given. This energy need can be calculated and entered in the application using five formulas:

1. the Harris & Benedict formula (1984);
2. the WHO formula (1985);
3. the Mifflin St. Jeor formula (1990);
4. the 20-30 kcal/kg formula (body weight);
5. the Penn State Equation formula (2003/2004; modified 2011);

and using two metabolic measurements:

1. entering the results of indirect calorimetry (IC) (kcal/24h).
2. entering the average VCO₂ (ml/min) over 24 hours.

The application can be used for patients who are in intensive care.

Nutritional advice is based on the article entitled "*An algorithm for balanced protein/energy provision in critically ill mechanically ventilated patients (2007)*" by Rob J.M. Strack van Schijndel, Peter J.M. Weijs, Hans P. Sauerwein, Sabine D.W. de Groot, Albertus Beishuizen and Armand R.J. Girbes.

The NutriCalculator application can only be used by people who have read and understood this manual. In addition, these people must be familiar with the Harris and Benedict, WHO, Mifflin St. Jeor, and the 20-30 kcal/kg formulas, plus the Penn State Equation and the IC and VCO₂ metabolic measurements, as well as the above mentioned article.

1.2 Unintended use

All use other than the intended use will be regarded as unintended use and is **not permitted**. Failure to adhere to requirements in this manual when working with the application, will be regarded as unintended use.

Nutricia, Baxter and AirMedApp cannot be held liable for damage and/or injury caused by unintended use.

2. Technical specifications

Description

NutriCalculator

Version

1.1

Modified in

February/March 2016

Functions

Based on the characteristics of nutritional products and patient details, the application can be used to provide nutritional advice for patients who are in intensive care. Nutritional advice can be generated using three calculation methods.

The application already contains specific properties for nutritional products, and one can indicate if they will be taken into account in the nutritional advice generated by the application. In addition, it is possible to add new nutritional products to the application.

Language

English

Installation requirements

iPhone, iPad or iPod touch with iOS 8.4 or newer.

Classification according Medical Devices Directive (93/42/EEC)

Class I (active medical device).

Registration at CIBG

Unknown

Accompanying documents

The following documents accompany this application and are part of the user manual and/or file:

1. Strack van Schijndel, R.J.M, Weijts, P.J.M., Sauerwein, H.P., De Groot, S.D.W., Beishuizen, A. & R.J. Girbes, A.R.J. (2007). An algorithm for balanced protein/energy provision in critically ill mechanically ventilated patients. *e-SPEN, the European e-Journal of Clinical Nutrition and Metabolism*, 2007 (2), 69–74.

3. Precautionary measures and safety instructions



The application's contents, and the results of calculations, should not be seen as advice, a replacement for medical or other professional assistance or information, or as a recommendation. Contents and results cannot be used as a basis to support decisions or actions.

3.1 Users of the application

Use of the NutrICalculator application is reserved for doctors, nurses and dieticians who are familiar with the Harris and Benedict, WHO, Mifflin St. Jeor and 20-30 kcal/kg formulas, plus the Penn State Equation and IC and VCO₂ metabolic measurements, as well as the article entitled "*An algorithm for balanced protein/energy provision in critically ill mechanically ventilated patients*"

Users of the application must be familiar with how the application works and must be used, as described in this manual.



Failure to carefully comply with requirements stipulated in this manual can result in serious personal injury or death.

3.2 Using the application



The application can only be used in the following conditions:

- the iPhone, iPod touch or iPad cannot be connected to the mains power supply or another power source;
- the iPhone, iPod touch or iPad cannot be located in surroundings where the device could be exposed to more than the maximum (environment) radiation indicated by the manufacturer of the iPhone, iPod touch or iPad;
- the iPhone, iPod touch or iPad must be able to access the internet;
- during installation, users of the application must have agreed to allow Nutricia, Baxter and AirMedApp to send push messages, and users must also have accepted the conditions for use.

Failure to comply with these requirements can cause the iPhone, iPod touch or iPad to malfunction and/or could cause the application to function incorrectly. This could result in personal injury or death.

3.1.1 Using the application with newly added products



Nutricia, Baxter and AirMedApp are not responsible for the results of nutritional advice generated based on product data added by the user. There is no guaranteed that such advice will lead to useful results

4. Description of application

The application can be installed on iPhone, iPod touch and iPad. In principle, the application works the same on all devices. The only difference will be the size of the iPad's screen.

The following paragraphs describe what the application's various screens will look like.

4.1 Start screen – Calculator

The calculator will be displayed once the application has been started (see figure below).



Figure 1 - Calculator

The calculator features the following components:

<i>Component</i>	<i>Description</i>
1	Configuration section calculator
2	Menu button

Table 1 – Calculator components

The menu button will be visible at all times.

Nutritional advice for the patient can be generated by following the various choice and selection fields in the calculator.

4.1.1 Menu screen

The application features a menu. The menu can be displayed by pressing the menu button (see figure 2).

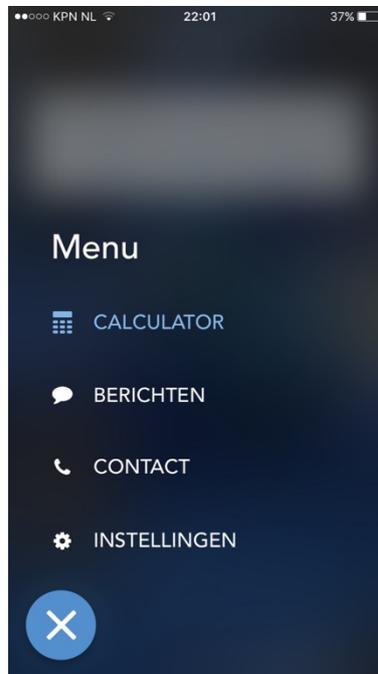


Figure 2 –Menu

The menu can be used to select various components. The selected component will appear once a choice has been made in the menu and the concerned button has been activated. The menu can be closed by pressing the 'close' button.

The menu features the following components:

- Calculator;
- Messages;
- Contact;
- Settings;
- Close button (X).

The various components will be described in the following paragraphs. The workings of the calculator have been described in paragraph 7.3.

4.1.2 Messages

It is possible for Nutricia, Baxter and AirMedApp to send push messages to users of the application. These messages will appear in the Messages section. If a new message is received, a number will appear in the menu to indicate the number of new, unread messages. The following screen will appear when the “Messages” button is activated in the menu.

4.1.4 Settings

The following screen will appear when the “Settings” button is activated in the menu.

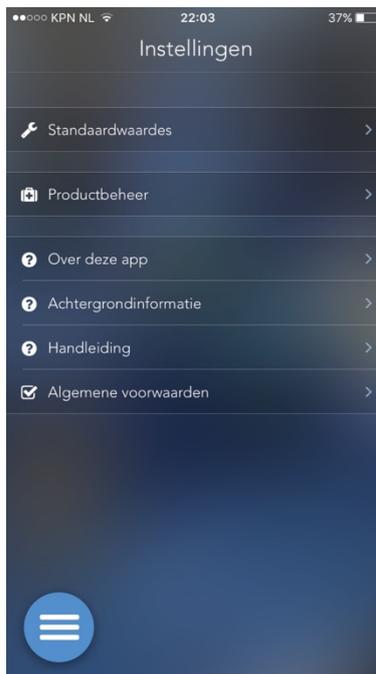


Figure 5 - Settings

The Standard values section under Settings can be used to change standard values for the various formulas and measurements, whereby three formulas and/or measurements can be selected. The Product management section can be used to view all nutritional products that have been included in the application as standard. Product properties and nutritional values can be found for all products. It is also possible to add new products. Furthermore, the Settings section also contains the 'About this app', 'Background information', 'Manual' and 'General conditions' sections. The various components can be accessed and displayed by pressing the concerned button.

4.2 Markings

In all versions, the CE mark can be found in the 'About this app' screen. This screen can be displayed by pressing the “Settings” button in the menu and then selecting “About this app”.



Figure 6 – CE mark

5. Workings of the application

Based on the characteristics of nutritional products and patient details, the NutriCalculator application can be used to provide nutritional advice for patients who are in intensive care. Nutritional advice can be generated using five formulas and two metabolic measurements, namely:

- the Harris & Benedict formula (1984);
- the WHO formula (1985);
- the Mifflin St. Jeor formula (1990);
- the 20-30 kcal/kg formula (body weight);
- the Penn State Equation formula (2003/2004 & modified 2011);
- entering the results of indirect calorimetry (IC) (kcal/24h).
- entering the average VCO₂ (ml/min) over 24 hours.

The application already contains specific properties for nutritional products, and one can indicate if they will be taken into account in the nutritional advice generated by the application. In addition, it is possible to add new nutritional products to the application.

A formula or metabolic measurement must be selected if a calculation for nutritional advice is started. Depending on the selected formula or metabolic measurement, several steps then need to be followed which involve selecting patient details and parameters for the formula. One must then select the preferred nutrition type (enteral or parenteral) (**NB: The international version only allows enteral nutrition to be selected!**). If enteral nutrition is selected, one must indicate whether or not the diet must contain fibres. The means of administration must be selected in the next step. Depending on the choice, the last step will involve selecting the number of portions or the period of administration.

If parenteral nutrition is selected as preferred nutrition type, one must select the administration period in the final step.

The application will generate nutritional advice once all steps have been completed. This nutritional advice can be e-mailed or printed.

6. Installation and commissioning

6.1 Installation

To install the application, one must use the iPhone, iPod touch or iPad to visit the App Store and to search for “NutriCalculator”. The application can then be installed on the iPhone, iPod touch or iPad. Make sure you have your Apple ID and password to hand; this password is needed to install the application.

6.2 Commissioning

The application can be commissioned by starting the application on the iPhone, iPod touch or iPad (see paragraph 7.1.). The following message will be displayed:

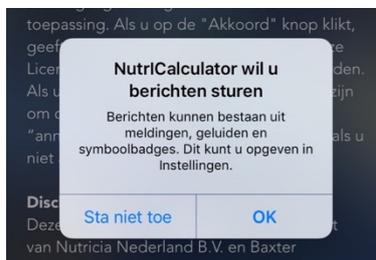


Figure 7 - Push messages

Press the “OK” button to allow the NutriCalculator to send you push messages. This will allow Nutricia, Baxter and AirMedApp to inform you about changes, modifications, etc. in the NutriCalculator.

Once you have allowed the NutriCalculator to send you push messages, the screen (below) featuring conditions for use will appear.



Figure 8 – Conditions for use

You must read the conditions for use and, if you agree with them, press the “Agree” button at the bottom of the screen to accept the conditions. The application is now ready and the start screen will be displayed.

7. Use



Requirements

- Before using the application, you must be familiar with the precautionary measures and safety instructions in this chapter and chapter 3.
- Failure to comply with these requirements and safety instructions could result in personal injury.
- You must be familiar with, and have understood, the workings of the application described in chapter 5.

7.1 Starting the application

You can start the application as follows:

- Activate the icon for the NutrICalculator application on your iPhone, iPod touch or iPad.



Figure 9 – NutrICalculator icon

7.2 Stopping the application

You can stop the application as follows:

- Stop the application by pressing the Home button on your iPhone, iPod touch or iPad.

7.3 Using the calculator

The following paragraphs explain how to use the calculator. The calculator is used in the same manner whether it be installed on iPhone, iPod touch or iPad.

The calculator will appear once the application is started. The calculator can also be selected from the menu.

7.3.1 Select formula or metabolic measurement

The screen below will be displayed when the calculator is started.

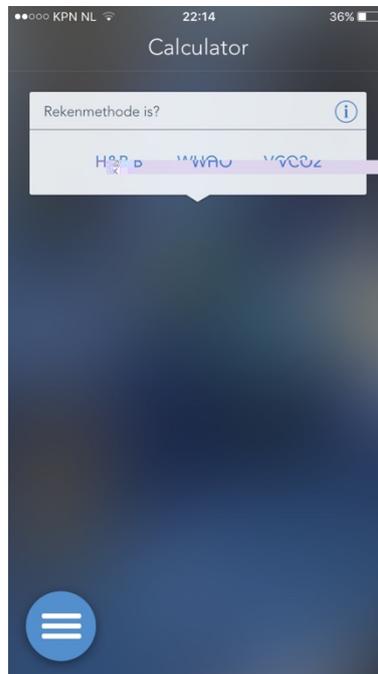


Figure 10 – Select calculation method

The calculator can use three formulas and/or metabolic measurements to generate nutritional advice. The Harris & Benedict and WHO formulas, as well as the VCO2 metabolic measurement, will be shown as standard. It is possible to select other formulas and/or metabolic measurements under Settings > Standard values.

Press the information button (i) for further information about formulas and metabolic measurements. The following screen will be shown.

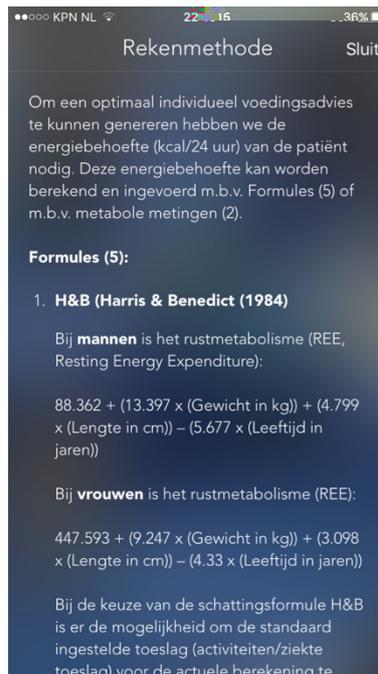


Figure 11 - Calculation methods

Information about the formulas and metabolic measurements can be closed by pressing the 'close' button in the top-right corner. The calculator will then be displayed.

Once the required formula or metabolic measurement has been selected, the choice must be confirmed by pressing the confirmation button.



Figure 12 – The confirmation button

The reset button will appear in the bottom-right corner once a choice has been made or the confirmation button has been pressed.



Figure 13 – The reset button

The menu below will appear once the reset button is pressed.



Figure 14 – The reset button

Press the “Reset the calculator” button to reset the calculator and start a new calculation, or press the “Cancel” button to return to the calculator.

Before selecting the Harris & Benedict, WHO, Mifflin and Penn State formulas, or the IC metabolic measurement, it is possible to change the configured supplement (activity/illness supplement). This can be done by following the steps in paragraph 7.3.1.1

Different steps could be needed in specific formulas or metabolic measurements in order to provide nutritional advice to patients. Steps for the Harris & Benedict, WHO and Mifflin formulas have been described in paragraph 7.3.2; steps for metabolic measurement VCO₂ in paragraph 7.3.3; for the kcal/kg formula in paragraph 7.3.4; for the Penn State formula in paragraph 7.3.5 and for metabolic measurement IC in paragraph 7.3.6.

7.3.1.1 Change supplements

The supplement configured for formulas or metabolic measurements can be changed by pressing the underlined percentage next to the calculation method (see figure below).



Figure 15 – Change supplement

A screen with possible supplement percentages will appear. Select the required supplement percentage by pressing the percentage. The supplement has been configured. The supplement can also be changed under Settings > Standard values (see paragraph 7.4.2). Then press the confirmation button to select the required formula or metabolic measurement.

7.3.2 Harris & Benedict, WHO and Mifflin formulas

The first step in the Harris & Benedict, WHO and Mifflin formulas involves selecting the sex of the patient. Select the required sex. Press the confirmation button to confirm your choice.



Figure 16 – Select sex

Once the sex of the patient has been selected, the calculator will show a section where the height of the patient can be configured.

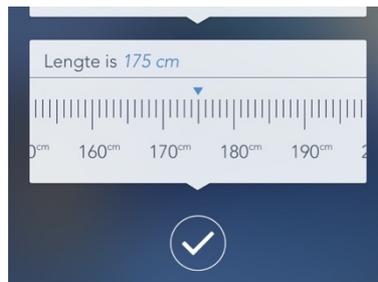


Figure 17 – Configure the height

The required height can be configured by moving the height scale to the right or left until the specific height is displayed. The configured height must be confirmed using the confirmation button.

Once the height of the patient has been selected, the calculator will show a section where the weight of the patient can be configured. The required weight can be configured by moving the scale to the right or left until the required weight is displayed. The configured height must be confirmed using the confirmation button.



Figure 18 – Configure the weight

Once the weight of the patient has been selected, the calculator will show a section where the age of the patient can be configured. The required age can be configured by moving the age scale to the right or left until the specific age is displayed. The configured height must be confirmed using the confirmation button.

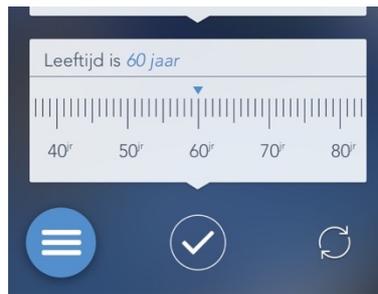


Figure 19 – Select age

Once the age of the patient has been selected, the calculator will show a section where the protein target of the patient can be configured. The required protein target can be configured by moving the protein target scale to the right or left until the required protein target is displayed. The configured height must be confirmed using the confirmation button.



Figure 20 – Configure protein target

Press the information button (i) for further information about protein target.

The required nutrition type must be selected once the patient's protein target has been selected. It is possible to choose between enteral and parenteral.



Figure 21 – Select required nutrition type

The choice must be confirmed using the confirmation button.

If enteral nutrition is selected as required nutrition type, the following section of the calculator will appear. This section must be used to indicate whether the enteral nutrition needs to contain fibres or whether all nutrition can be included in the calculations (both with and without fibres).



Figure 22 – Selection nutritional fibres

The choice must be confirmed using the confirmation button.

The following section of the calculator must then be used to select the means of administration.



Figure 23 – Select means of administration

The choice must be confirmed using the confirmation button.

If one decides to administer via a continuous pump for 24 hours, the result (of the calculation) will recommend the most appropriate source of enteral nutrition (see figure below).

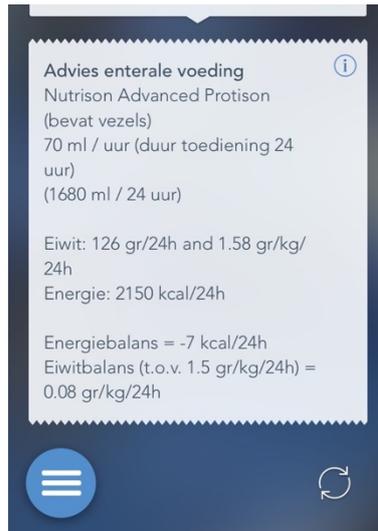


Figure 24 – Enteral nutrition advice

It is possible to display extra information about the nutritional advice. This extra information can be displayed by pressing the information button in the top-right corner. The following screen will be shown.



Figure 25 – Extra information nutritional advice

The displayed extra information features specifications about the nutritional product, the entered patient details and the calculation values. The extra information can be closed by pressing the 'close' button in the top-right corner.

Nutritional advice and the extra information can be e-mailed or printed. This can be done by pressing the share button in the top-left corner. The screen and selection menu below will then be shown.

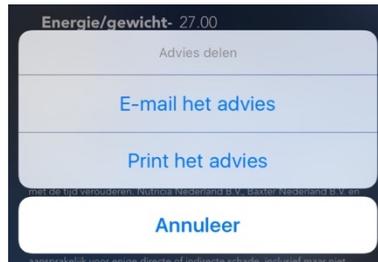


Figure 26 – Share results

Press the “E-mail the results” button to e-mail the nutritional advice or the “Print the results” button to print the nutritional advice. Press the “Cancel” button to return to the nutritional advice.

If a decision is made to administer in portions over the course of 24 hours, the following section of the calculator will appear, where the number of feeding portions must be selected.

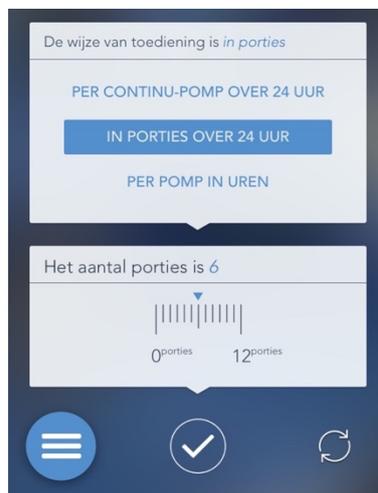


Figure 27 – Select number of portions

The required number of portions can be configured by moving the scale to the right or left until the specific number of portions is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 24).

If a decision is made to administer via a pump for a certain number of hours, the following section of the calculator will appear, where the duration of administration must be selected.

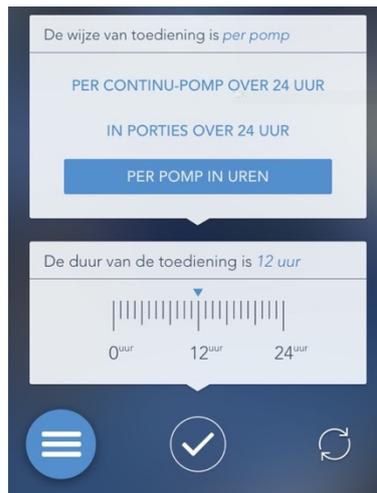


Figure 28 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 24).

If parenteral nutrition is selected for nutrition type, the following section of the calculator will appear, where the duration of administration must be selected.

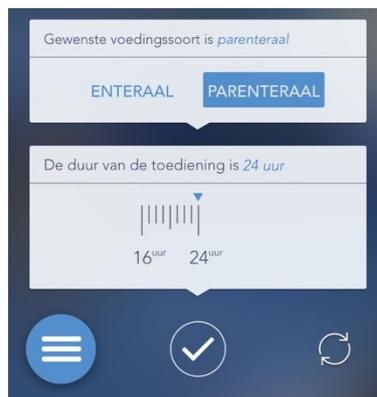


Figure 29 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable parenteral nutritional product (see figure 24).

7.3.3 Metabolic measurement VCO₂

The first step in the VCO₂ metabolic measurement involves selecting the height of the patient.

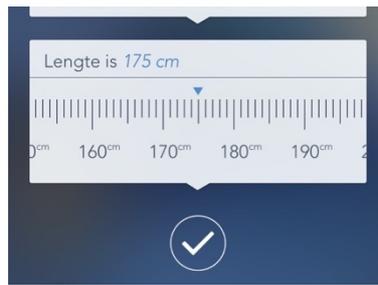


Figure 30 – Configure the height

The required height can be configured by moving the height scale to the right or left until the specific height is displayed. The configured height must be confirmed using the confirmation button.

Once the height of the patient has been selected, the calculator will show a section where the weight of the patient can be configured. The required weight can be configured by moving the scale to the right or left until the required weight is displayed. The configured height must be confirmed using the confirmation button.



Figure 31 – Configure the weight

Once the weight of the patient has been selected, the calculator will show a section where the patient's average VCO₂ over 24 hours can be configured. The average VCO₂ in question can be selected in the following section of the calculator. The scale must be moved to the left or right until the average VCO₂ in question is displayed. The configured height must be confirmed using the confirmation button.



Figure 32 – Select average VCO₂ over 24 hours

Once the required average VCO₂ has been selected, the calculator will show a section where the protein target of the patient can be configured. The required protein target can be configured by moving the protein target scale to the right or left until the required

protein target is displayed. The configured height must be confirmed using the confirmation button.



Figure 33 – Configure protein target

Press the information button (i) for further information about protein target.

The required nutrition type must be selected once the patient's protein target has been selected. It is possible to choose between enteral and parenteral.



Figure 34 – Select required nutrition type

The choice must be confirmed using the confirmation button.

If enteral nutrition is selected as required nutrition type, the following section of the calculator will appear. This section must be used to indicate whether the enteral nutrition needs to contain fibres or whether all nutrition can be included in the calculations (both with and without fibres).



Figure 35 – Selection nutritional fibres

The choice must be confirmed using the confirmation button.

The following section of the calculator must then be used to select the means of administration.



Figure 36 – Select means of administration

The choice must be confirmed using the confirmation button.

If one decides to administer via a continuous pump for 24 hours, the result (of the calculation) will recommend the most appropriate source of enteral nutrition (see figure below).

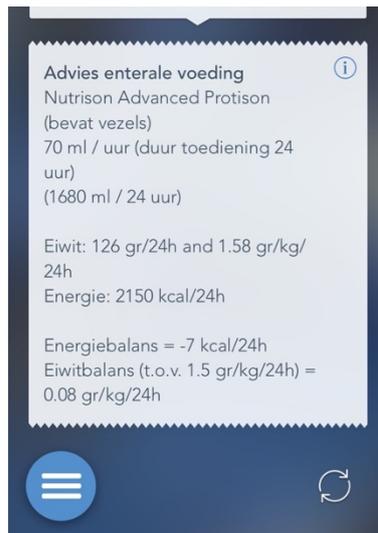


Figure 37 – Enteral nutrition advice

It is possible to display extra information about the nutritional advice. This extra information can be displayed by pressing the information button in the top-right corner. The following screen will be shown.



Figure 38 – Extra information nutritional advice

The displayed extra information features specifications about the nutritional product, the entered patient details and the calculation values. The extra information can be closed by pressing the 'close' button in the top-right corner.

Nutritional advice and the extra information can be e-mailed or printed. This can be done by pressing the share button in the top-left corner. The screen and selection menu below will then be shown.



Figure 39 – Share results

Press the “E-mail the results” button to e-mail the nutritional advice or the “Print the results” button to print the nutritional advice. Press the “Cancel” button to return to the nutritional advice.

If a decision is made to administer in portions over the course of 24 hours, the following section of the calculator will appear, where the number of feeding portions must be selected.

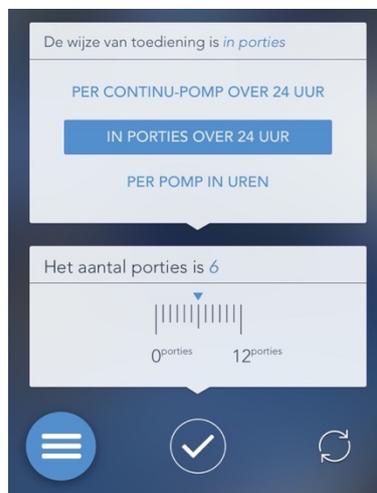


Figure 40 – Select number of portions

The required number of portions can be configured by moving the scale to the right or left until the specific number of portions is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 37).

If a decision is made to administer via a pump for a certain number of hours, the following section of the calculator will appear, where the duration of administration must be selected.

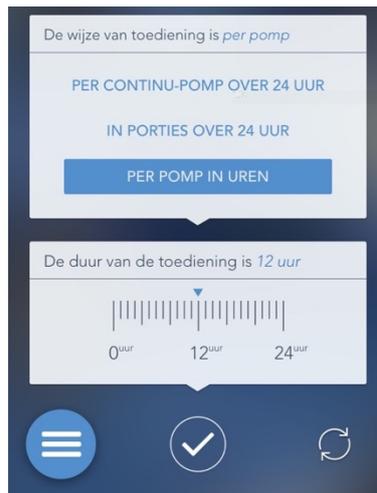


Figure 41 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 37).

If parenteral nutrition is selected for nutrition type, the following section of the calculator will appear, where the duration of administration must be selected.

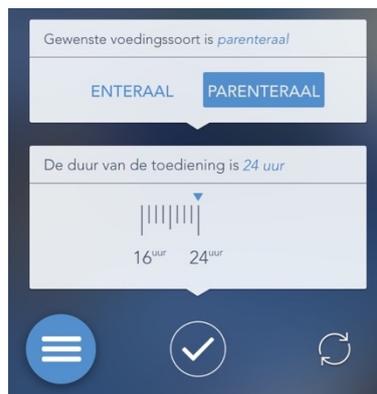


Figure 42 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable parenteral nutritional product (see figure 37).

7.3.4 Kcal/kg formula

The first step in the kcal/kg formula involves selecting the height of the patient.

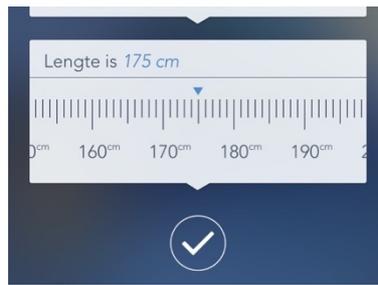


Figure 43 – Configure the height

The required height can be configured by moving the height scale to the right or left until the specific height is displayed. The configured height must be confirmed using the confirmation button.

Once the height of the patient has been selected, the calculator will show a section where the weight of the patient can be configured. The required weight can be configured by moving the scale to the right or left until the required weight is displayed. The configured height must be confirmed using the confirmation button.



Figure 44 – Configure the weight

Once the weight of the patient has been selected, the calculator will show a section where the energy/weight ratio of the patient can be configured. The required ratio can be selected in the following section of the calculator. The scale must be moved to the left or right until the required ratio is displayed. The configured height must be confirmed using the confirmation button.



Figure 45 – Configure energy/weight ratio

Once the energy/weight ratio has been selected, the calculator will show a section where the protein target of the patient can be configured. The required protein target can be configured by moving the protein target scale to the right or left until the required protein target is displayed. The configured height must be confirmed using the confirmation button.

Figure 46 – Configure protein target

Press the informatiVōVm mriōdbCdiounruru>m>u un uruVen ufrmoñuuiābounruurmuruaVN



Figure 49 – Select means of administration

The choice must be confirmed using the confirmation button.

If one decides to administer via a continuous pump for 24 hours, the result (of the calculation) will recommend the most appropriate source of enteral nutrition (see figure below).



Figure 50 – Enteral nutrition advice

It is possible to display extra information about the nutritional advice. This extra information can be displayed by pressing the information button in the top-right corner. The following screen will be shown.



Figure 51 – Extra information nutritional advice

The displayed extra information features specifications about the nutritional product, the entered patient details and the calculation values. The extra information can be closed by pressing the 'close' button in the top-right corner.

Nutritional advice and the extra information can be e-mailed or printed. This can be done by pressing the share button in the top-left corner. The screen and selection menu below will then be shown.

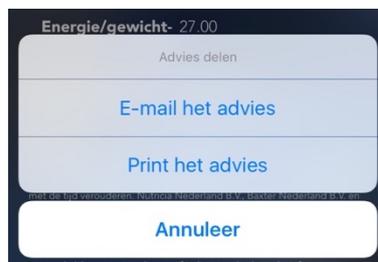


Figure 52 – Share results

Press the “E-mail the results” button to e-mail the nutritional advice or the “Print the results” button to print the nutritional advice. Press the “Cancel” button to return to the nutritional advice.

If a decision is made to administer in portions over the course of 24 hours, the following section of the calculator will appear, where the number of feeding portions must be selected.



Figure 53 – Select number of portions

The required number of portions can be configured by moving the scale to the right or left until the specific number of portions is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 50).

If a decision is made to administer via a pump for a certain number of hours, the following section of the calculator will appear, where the duration of administration must be selected.

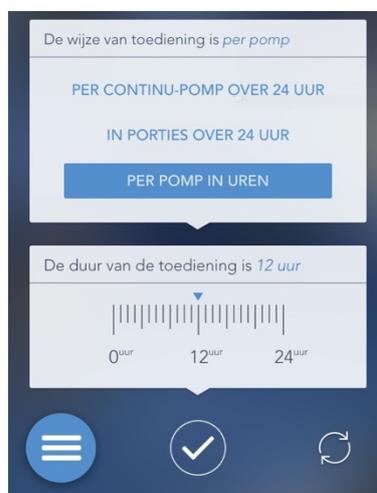


Figure 54 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 50).

If parenteral nutrition is selected for nutrition type, the following section of the calculator will appear, where the duration of administration must be selected.



Figure 55 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable parenteral nutritional product (see figure 50).

7.3.5 Penn State formula

The first step in Penn State formula involves selecting the sex of the patient. Select the required sex. Press the confirmation button to confirm your choice.



Figure 56 – Select sex

Once the sex of the patient has been selected, the calculator will show a section where the height of the patient can be configured.

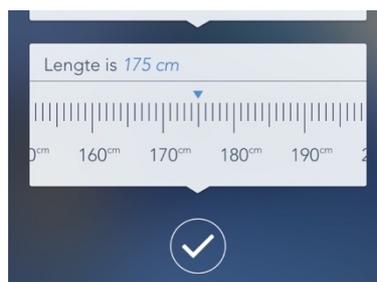


Figure 57 – Configure the height

The required height can be configured by moving the height scale to the right or left until the specific height is displayed. The configured height must be confirmed using the confirmation button.

Once the height of the patient has been selected, the calculator will show a section where the weight of the patient can be configured. The required weight can be configured by

moving the scale to the right or left until the required weight is displayed. The configured height must be confirmed using the confirmation button.

Figure 58 – Configure the weight

Once the weight of the patient has been selected, the calculator will show a section where the age of the patient can be configured. The required age can be configured by moving the age scale to the right or left until the specific age is displayed. The configured height must be confirmed using the confirmation button.

Figure 59

to the right or left until the specific value is displayed. The configured height must be confirmed using the confirmation button.



Figure 61 – Select Ve

Once the Ve of the patient has been selected, the calculator will show a section where the protein target of the patient can be configured. The required protein target can be configured by moving the protein target scale to the right or left until the required protein target is displayed. The configured height must be confirmed using the confirmation button.



Figure 62 – Configure protein target

Press the information button (i) for further information about protein target.

The required nutrition type must be selected once the patient's protein target has been selected. It is possible to choose between enteral and parenteral.



Figure 63 – Select required nutrition type

The choice must be confirmed using the confirmation button.

If enteral nutrition is selected as required nutrition type, the following section of the calculator will appear. This section must be used to indicate whether the enteral nutrition needs to contain fibres or whether all nutrition can be included in the calculations (both with and without fibres).



Figure 64 – Selection nutritional fibres

The choice must be confirmed using the confirmation button.

The following section of the calculator must then be used to select the means of administration.



Figure 65 – Select means of administration

The choice must be confirmed using the confirmation button.

If one decides to administer via a continuous pump for 24 hours, the result (of the calculation) will recommend the most appropriate source of enteral nutrition (see figure below).



Figure 66 – Enteral nutrition advice

It is possible to display extra information about the nutritional advice. This extra information can be displayed by pressing the information button in the top-right corner. The following screen will be shown.



Figure 67 – Extra information nutritional advice

The displayed extra information features specifications about the nutritional product, the entered patient details and the calculation values. The extra information can be closed by pressing the 'close' button in the top-right corner.

Nutritional advice and the extra information can be e-mailed or printed. This can be done by pressing the share button in the top-left corner. The screen and selection menu below will then be shown.

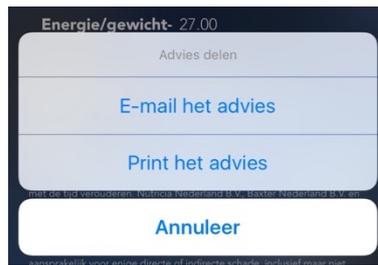


Figure 68 – Share results

Press the “E-mail the results” button to e-mail the nutritional advice or the “Print the results” button to print the nutritional advice. Press the “Cancel” button to return to the nutritional advice.

If a decision is made to administer in portions over the course of 24 hours, the following section of the calculator will appear, where the number of feeding portions must be selected.

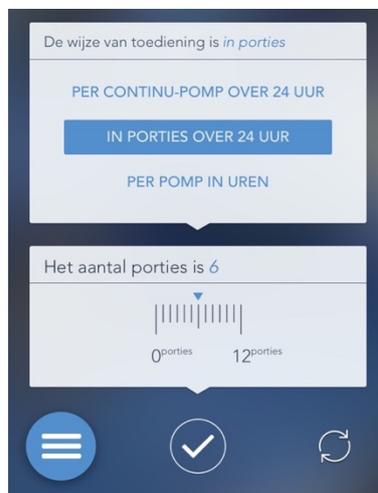


Figure 69 – Select number of portions

The required number of portions can be configured by moving the scale to the right or left until the specific number of portions is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 66).

If a decision is made to administer via a pump for a certain number of hours, the following section of the calculator will appear, where the duration of administration must be selected.

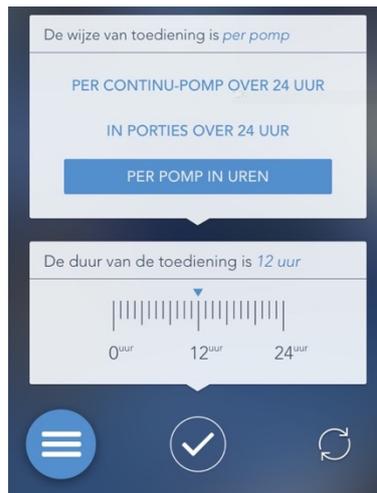


Figure 70 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 66).

If parenteral nutrition is selected for nutrition type, the following section of the calculator will appear, where the duration of administration must be selected.

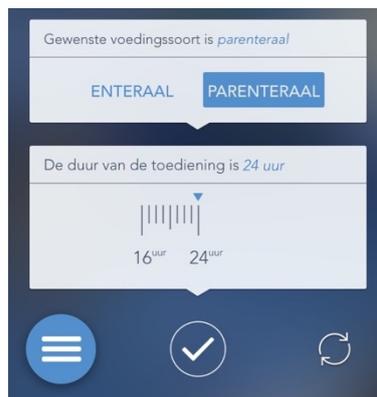


Figure 71 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable parenteral nutritional product (see figure 66).

7.3.6 Metabolic measurement IC

The first step in the IC formula involves selecting the height of the patient.

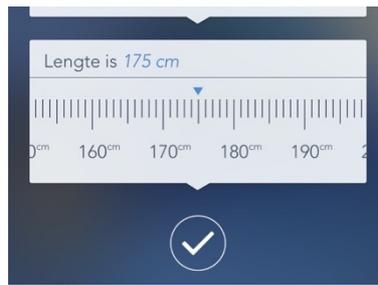


Figure 72 – Configure the height

The required height can be configured by moving the height scale to the right or left until the specific height is displayed. The configured height must be confirmed using the confirmation button.

Once the height of the patient has been selected, the calculator will show a section where the weight of the patient can be configured. The required weight can be configured by moving the scale to the right or left until the required weight is displayed. The configured height must be confirmed using the confirmation button.



Figure 73 – Configure the weight

Once the weight of the patient has been selected, the calculator will show a section where the patient's last measured REE can be configured. The required REE can be selected in the following section of the calculator. The scale must be moved to the left or right until the required REE is displayed. The configured height must be confirmed using the confirmation button.



Figure 74 – Configure last measured REE

Once the last measured REE has been selected, the calculator will show a section where the protein target of the patient can be configured. The required protein target can be configured by moving the protein target scale to the right or left until the required protein target is displayed. The configured height must be confirmed using the confirmation button.



Figure 75 – Configure protein target

Press the information button (i) for further information about protein target.

The required nutrition type must be selected once the patient's protein target has been selected. It is possible to choose between enteral and parenteral.



Figure 76 – Select required nutrition type

The choice must be confirmed using the confirmation button.

If enteral nutrition is selected as required nutrition type, the following section of the calculator will appear. This section must be used to indicate whether the enteral nutrition needs to contain fibres or whether all nutrition can be included in the calculations (both with and without fibres).



Figure 77 – Selection nutritional fibres

The choice must be confirmed using the confirmation button.

The following section of the calculator must then be used to select the means of administration.



Figure 78 – Select means of administration

The choice must be confirmed using the confirmation button.

If one decides to administer via a continuous pump for 24 hours, the result (of the calculation) will recommend the most appropriate source of enteral nutrition (see figure below).



Figure 79 – Enteral nutrition advice

It is possible to display extra information about the nutritional advice. This extra information can be displayed by pressing the information button in the top-right corner. The following screen will be shown.



Figure 80 – Extra information nutritional advice

The displayed extra information features specifications about the nutritional product, the entered patient details and the calculation values. The extra information can be closed by pressing the 'close' button in the top-right corner.

Nutritional advice and the extra information can be e-mailed or printed. This can be done by pressing the share button in the top-left corner. The screen and selection menu below will then be shown.

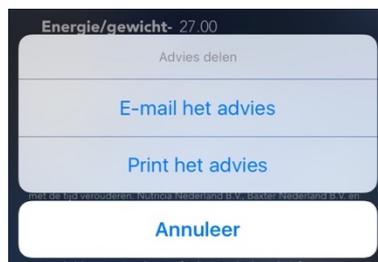


Figure 81 – Share results

Press the “E-mail the results” button to e-mail the nutritional advice or the “Print the results” button to print the nutritional advice. Press the “Cancel” button to return to the nutritional advice.

If a decision is made to administer in portions over the course of 24 hours, the following section of the calculator will appear, where the number of feeding portions must be selected.

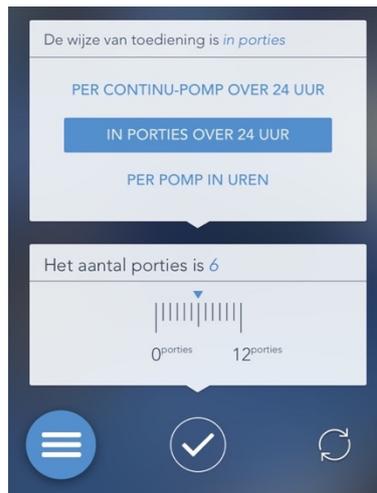


Figure 82 – Select number of portions

The required number of portions can be configured by moving the scale to the right or left until the specific number of portions is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 79).

If a decision is made to administer via a pump for a certain number of hours, the following section of the calculator will appear, where the duration of administration must be selected.

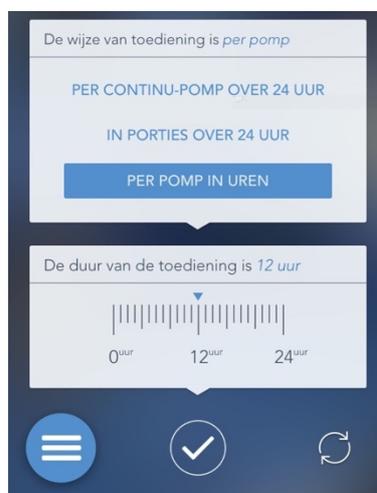


Figure 83 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable enteral nutritional product (see figure 79).

If parenteral nutrition is selected for nutrition type, the following section of the calculator will appear, where the duration of administration must be selected.

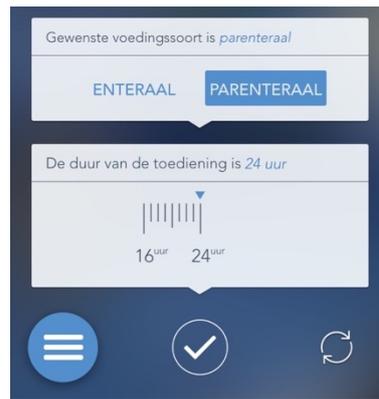


Figure 84 – Select administration duration

The required administration duration can be configured by moving the scale to the right or left until the specific administration duration is displayed. The configured height must be confirmed using the confirmation button. The result of the calculation will then appear, and will contain advice about the most suitable parenteral nutritional product (see figure 79).

7.3.7 Reset calculator

The calculator can be reset at any moment when calculating the nutritional advice. A new calculation can be started once the calculator has been reset.

The calculator can be reset by pressing the reset button in the bottom-right of the screen. The selection menu below will then appear.

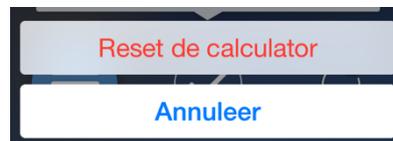


Figure 85 – Reset calculator

Press the “Reset the calculator” button to reset the calculator or press the “Cancel” button to continue the existing calculation.

7.4 Change settings

The following settings can be changed in the Settings section of the application:

- formulas and/or metabolic measurements for performing calculations can be selected under Standard values;
- standard values for supplements in formulas, as well as metabolic measurements and the standard protein target, can be selected under Standard values;
- product settings can be selected under Product management

The Settings section can be displayed by selecting the Settings section in the menu. The following screen will be shown.

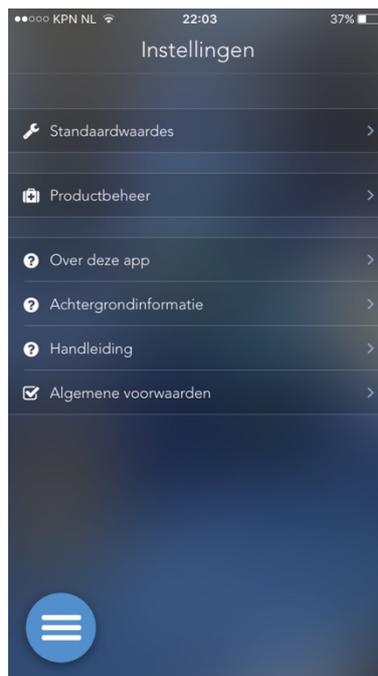


Figure 86 – Settings screen

The following paragraphs describe how settings for the above-mentioned components can be changed.

7.4.1 Select calculation methods

The calculator allows three different formulas or metabolic measurements to be used when calculating nutritional advice. Three methods can be selected from the Calculation methods section. The following screen will be shown.



Figure 87 – Select calculation methods

Select three methods that will be used to perform the calculations. Then press the back button (<) in the top-right corner of the screen. It will not be possible to use the button if more than three methods have been selected.

7.4.2 Change supplements

Go to the Standard values section to change standard values for supplements used in formulas and metabolic measurements. The following screen will be shown.

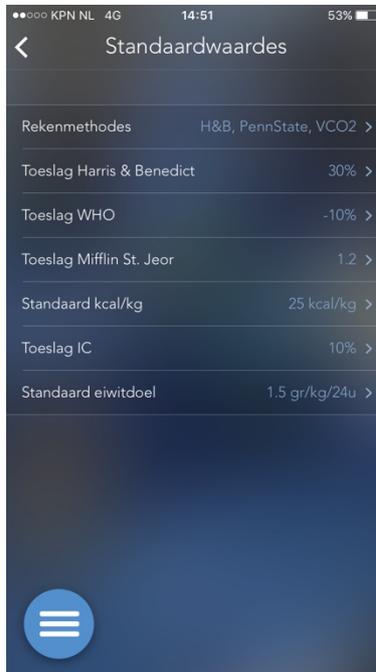


Figure 88 – Change supplement percentage

Then select the formula or metabolic measurement where the supplement needs to be changed. Select the required supplement percentage by pressing the button in question. The selected supplement percentage will be saved and shown in the Standard values screen and the calculator.

The supplement can also be changed when performing a calculation in the calculator (see paragraph 7.3.1.1).

7.4.3 Product management

The Product management section can be displayed by pressing the “Product management” button in the settings screen. The following screen will be shown.



Figure 89 - Product management

The Product management section shows all nutritional products that have been included in the application as standard. Product properties and nutritional values can be found for all products. These properties and values can be accessed by pressing the button for the product in question. The following screen will appear if the product Nutrison is selected.



Figure 90 - Product properties

If you want to return to the overview featuring all products, press the back button (<) in the top-left corner.

7.4.3.1 Change product selection

In principle, all products included in the application will be taken into account when formulating nutritional advice for patients. However, one can also decide not to include certain products in the advice. To exclude a certain product from the advice, the product in question must be unselected by sliding the button next to the product to the left.



Figure 91 – Unselect a product

The product will then be unselected and not be included in the nutritional advice.

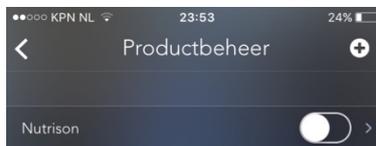


Figure 92 – Unselected product

The product can be selected once again by sliding the button to the right.

7.4.3.2 Add products



Nutricia, Baxter and AirMedApp cannot accept any responsibility for products added to the application by users, or for nutritional advice generated based on the products in question.

It is possible to add new products to the list of products. These products will then also be taken into account when formulating nutritional advice. A product can be added by pressing the add button (+) in the top-right corner of the Product management screen.

(NB: The international version only allows enteral nutrition to be selected!).

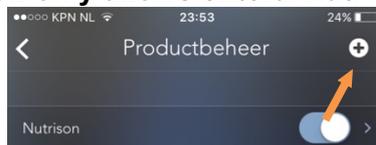


Figure 93 - Add button

The following screen will be shown.



Figure 94 – Add a product

The following properties and nutritional values must be entered for each product:

- Product name: to be entered;
- Nutrition type: select either enteral or parenteral;
- Energy factor: to be entered;
- Protein factor: to be entered;
- Fibre: select yes or no.

Properties and values for the product can be entered or selected by pressing the button for the property or value in question. If you want to return to the 'Add product' screen, press the back button (<) in the top-left corner.

Once all properties and values have been entered, press the "Add" button in the top-right corner. The product has now been added to the list of products.

7.4.3.3 Change products

It is possible to change product properties and nutritional values for all newly added products. However, properties and values cannot be changed for products that are part of the application as standard.

A product can be changed by going to the list of products and pressing on the name of the product in question. The following screen will be shown.



Figure 95 – Change product

The following properties and nutritional values can be changed for the product:

- Product name: to be entered;
- Nutrition type: select either enteral or parenteral;
- Energy factor: to be entered;
- Protein factor: to be entered;
- Fibre: select yes or no.

Properties and values for the product can be changed by pressing the button for the property or value in question. If you want to return to the “Change product” screen, press the back button (<) in the top-left corner.

Once all properties and values have been entered, you must press the “Done” button in the top-right corner. The product has now been changed.

It is also possible to delete any new products that may have been added. Press the “Delete product” button to delete the product from the list of products.

8. Uninstallation

The following actions must be carried out to uninstall the NutrICalculator from your iPhone, iPod touch or iPad:

- Close the application in accordance with paragraph 7.2;
- Keep the application icon pressed until the icon starts to move;
- Press the 'x' in the corner of the application;
- Press the Delete button to remove the application and all accompanying data from your iPhone, iPod touch or iPad.