Manual

Revision: 12/09/2024

SiDiary

For Windows, Smartphone and Online

www.sidiary.org
https://diabetes.sinovo.net

SINOVO health solutions GmbH
Willy-Brandt-Str. 4
61118 Bad Vilbel
info@sinovo.de
www.sinovo.de

Index

1 General

This software is certified and regulated as a medical device within the European Union and Switzerland. Use of this software outside of these jurisdictions is not covered under its regulatory approval. Users operating this software outside the EU and Switzerland do so at their own risk and are responsible for ensuring compliance with applicable local regulations.

1.1 Program interface in other languages

SiDiary offers numerous translation packages for users of other nationalities so that the interface is available in more than 20 languages.
For details on available languages, please visit **www.sidiary.org/languages**

2 Purpose

The medical device is a stand-alone software for diabetes therapy management. The software can read data from health devices, but it is also possible to enter data manually. Statistical and graphical evaluations of the software support the monitoring of diabetes therapy, which enables improved therapy decisions.
The medical device is intended for people with diabetes and/or their caregivers.

3 Intended use

The SiDiary app is designed to support patients and caregivers in managing diabetes therapy. It provides information on blood glucose levels and other parameters that can be determined individually. The SiDiary app is used to read out displayed values from diagnostic devices used at home, such as blood glucose, blood pressure, scales, pedometers, etc., and to record these individually determinable parameters over a longer period. The SiDiary app saves the data and displays it over the period used. In addition, the SiDiary app offers the exchange of data with mobile devices or other SiDiary applications to record measured variables or transmit data from the diary to the doctor in charge. The ability to record relevant data over a long period of time means that the SiDiary app supports patients in self-monitoring their therapy.

3.1 System requirements

The SiDiary app is an app for Microsoft Windows. It runs on all Windows PCs that support a Windows version between 7 and above.

3.2 Indication

SiDiary supports all types of diabetes mellitus. People with diabetes mellitus or their caregivers must be able to interpret the information in the app and act accordingly. The bolus suggestion calculator is only intended for use with short-acting insulin.

3.3 Contraindication

There are contraindications for the bolus suggestion calculator. It must not be used in the following situations:

- All therapies with mixed insulin or exclusively long-acting insulins
- Basal-assisted oral therapy (BOT) with or without GLP-1 receptor agonists

There is no contraindication for the other functions of the app with regard to the health situation of the person in need of care, with the exception of their mental abilities (see 3.2 Indication)

3.4 User of SiDiary

Users of SiDiary are

- People with Diabetes (PwD)
  - This group includes insulin-dependent people with diabetes as well as people on pure weight reduction therapy or tablet treatment
  - Some of the PwD have visual, hearing and/or motor impairments (e.g. retinopathy, neuropathy).

- Supervisor
  - The participants in this group are typically laypersons who operate the SiDiary app for people with diabetes who are unable to operate the SiDiary app themselves due to various limitations.

3.4.1 User profiles

The SiDiary app is operated by users who require certain mental, physical and demographic characteristics as well as special features.

People with Diabetes (PwD)

In general, the user group of the SiDiary app from a clinical perspective is people with diabetes and intended as the main users of the device. The PwD user group is divided into two subgroups:

1. **Autonomous PwD:** These PwD operate the SiDiary app completely by themselves. They can,
   - interpret the information displayed and act accordingly independently,
   - and are typically 14 years or older. For details and restrictions, see point no. 2 below.

2. **Non-autonomous people with disabilities:** All other people with disabilities. People with diabetes who do not meet the requirements for self-service need the support and/or supervision of caregivers to ensure safe and correct operation of the SiDiary app. This subgroup includes, for example:
   - Users with a lack of skills in understanding therapy management, including the associated consequences, e.g.:
     - Children (typically up to 14 years)
     - People with mental and physical disabilities (e.g. people with disabilities)
   - Users with a complete or partial lack of ability to self-serve the SiDiary app and to understand therapy management and the associated consequences, e.g.: Persons with a lack of skills (e.g. adolescent users, dependent persons, non-autonomous older persons)

Supervisor
A supervisor assumes responsibility for people with disabilities who do not fall under the above definition of autonomous people with disabilities, e.g. pediatric patients, non-autonomous elderly people.
The supervisor must have similar mental, physical and demographic characteristics as an autonomous person without a disability. They must be able to interpret the event history and act accordingly.
Age: To assume responsibility, the supervisor is usually an adult or at least ≥ 18 years old.

In this document, the term “patient” is only used for persons associated with diabetes therapy management. It is not used to refer to a user of the software.

3.5 Combination with other medical devices

SiDiary is a stand-alone software that can read out displayed values from diagnostic devices used at home, such as blood sugar, blood pressure, weight scales, pedometers, etc., and record these individually determined parameters over a longer period. The SiDiary app can be used in combination with the SiDiary online version. The data recorded in the SiDiary app can be synchronized with the SiDiary online

version and vice versa. SiDiary saves the data and displays it over the period used. SiDiary must be assigned to a patient as described in the instructions for use.

3.6 Use of substances/energies

SiDiary does not administer insulin or other substances to the patient. It does not supply the patient with energy.

3.7 Application time

SiDiary is permanently installed on a smartphone. It can be used several times a day. It has an uptime as long as compatible devices are used by people with disabilities or the supervisors. The software does not deteriorate by nature, so a specific lifetime is not applicable. There is no contact with the user, so there is no cumulative handling time over the entire duration of patient treatment.

3.8 Ambient conditions

During storage or operation, the SiDiary app is limited to the respective hardware requirements (temperature, humidity) of the smartphone.

3.9 Maintenance calibration measures

The SiDiary app requires no special maintenance or calibration.

3.10 Preparing the product before use

Before the SiDiary app can be used, it must be downloaded from an app store (Google Play Store) and installed on a smartphone or tablet.

3.11 End of service life

SiDiary reaches its end of life after a maximum of one year on the market or when a new version is available on the market. After this time, no bug fixes or other improvements are expected for the old version.

3.12 Important notes for use for health purposes

If the software is used to record the relevant data for therapy (e.g. diabetes), the software serves only as an aid for recording the measured values entered by you. Of course, the software can in no way replace medical care and therapy. Any changes to your therapy (e.g. BE factors, correction rules, insulin doses) must be agreed with your doctor, as you had to or should have done before using the program. SINOVO is therefore not liable for health complications of any kind resulting from incorrect therapy

(e.g. incorrect insulin doses). This also applies if the program should submit a calculation. Any calculations are completely non-binding and must always be checked in detail with the attending physician for accuracy and applicability.
Particularly, when using the software for medical, especially diagnostic or health monitoring purposes, it may be advisable to keep other records in addition to the evaluation by this software and to make frequent data backups so that the data is not inadvertently lost or so that monitoring can be ensured by other means.
.

3.13 Improving blood glucose control with SiDiary

If you record and manage your blood glucose values with SiDiary and can always see a graphical evaluation and the current (calculated) HbA1c value immediately after an entry, you will quickly notice a real improvement in your glucose levels: The graphical evaluation immediately visualizes a series of poorer values and encourages you to achieve better values again. Although the HbA1c value calculated with SiDiary cannot be directly compared with a laboratory value, it still provides a good indication of trends in your metabolic control.

One thing has been proven and recognized by numerous clinical studies: Keeping a blood glucose diary (even in paper form) is always associated with an improvement in diabetes control; as a rough guide, a one percentage point improvement in HbA1c is not unrealistic. Keeping an electronic diary also opens further potential for improvement, as recurring error situations can be identified more quickly and even the smallest optimizations can be made with the overall better database.
.

3.14 Data security

As the logged data is health-related data that could become relevant for the preparation of certificates, expert opinions, etc. even after a very long time, you should treat this data with appropriate care. This includes regular data backups.
One way of backing up data is to use SiDiary-Online. (https://diabetes.sinovo.net) You can regularly synchronize your blood glucose data with the online server so that you only have to reinstall SiDiary after damage to your device and have your last backed-up data on your device again by synchronizing it once more with SiDiary-Online..

Due to operating system updates and/or hardware updates of your device, the SiDiary software may be affected. Please check if there is also an update for SiDiary or contact us by mail at support.sidiary@sinovo.de

3.15 Procedure in the event of a serious incident

Please inform SINOVO health solutions GmbH and your local health authority in the event of serious health effects (e.g. serious injuries or hospitalization) and/or malfunctions of the SiDiary application.

4 Definition of Terms

This is a short definition of the terms that are used in this instruction manual.

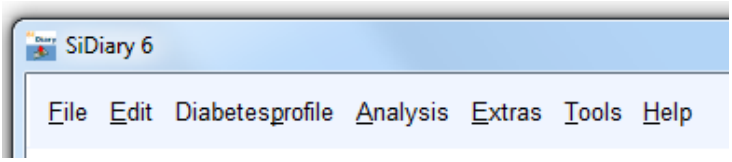
4.1 Button

These are push buttons. For example:

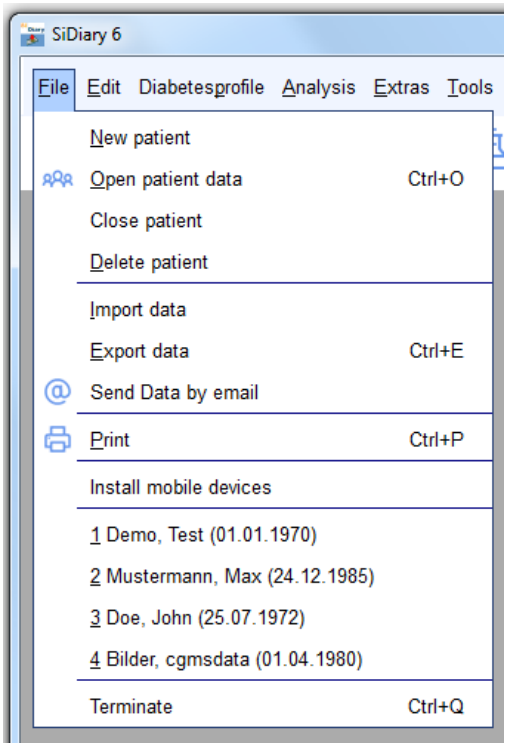
By clicking on one of these buttons you can start a function.

4.2 Menu

That is the row at the head of the SiDiary window.

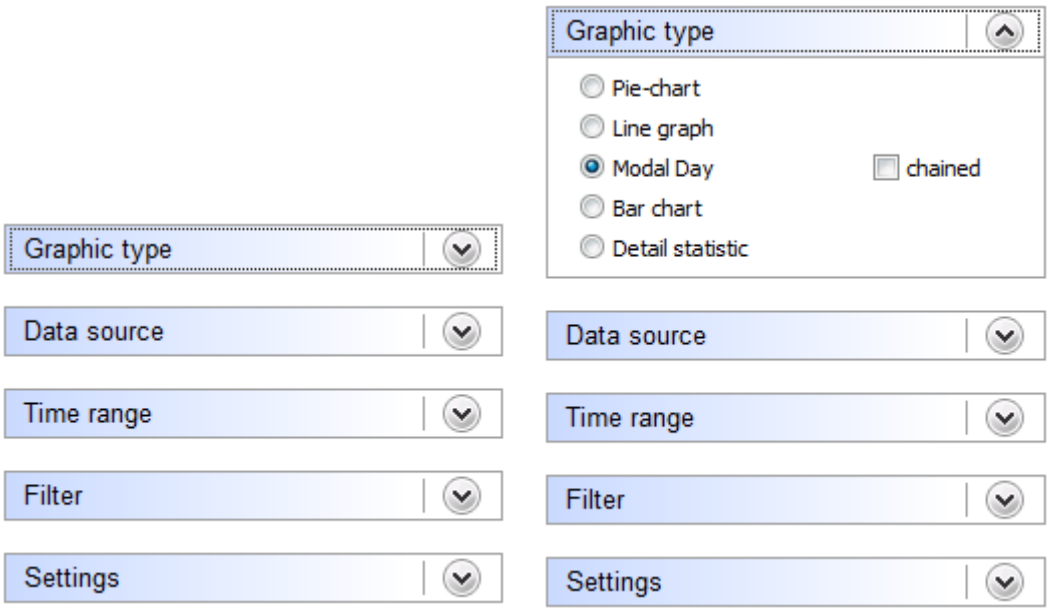


By clicking on “*File”*, “*Edit”* etc. a submenu opens, where you can select further options:



4.3 Dropdown list

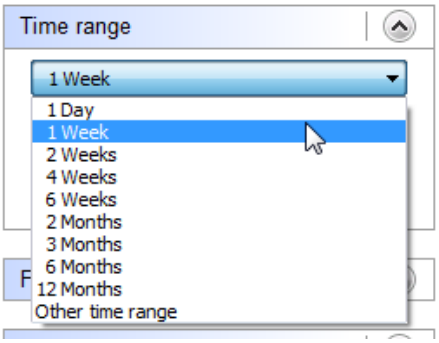
New in SiDiary 6 are the dropdown lists. They keep the user interface well-arranged, and you have very fast access to further options.



As you can see, you can open and close the dropdown lists by clicking on the round buttons on the right.

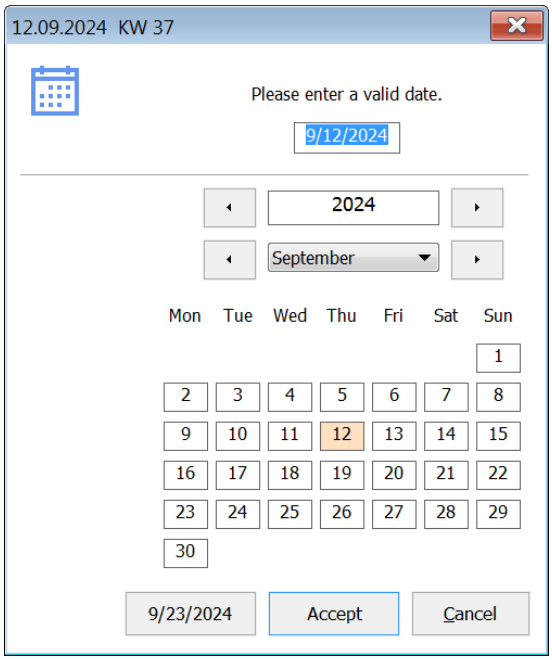
4.4 List box

If you click on a button with a downwards arrow, a list opens, where you can select elements by clicking on them.



4.5 Calendar control element

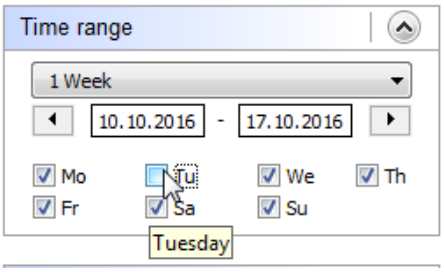
You can open the calendar control element with a double-click in the calendar input box.



You can enter the date manually or by choosing a displayed date. With the navigation control buttons on the left and right side of year and month you can step a year or a month back and forth. The months are also available in a list box.
You can select the precise day in the chosen year/month by clicking on one of the displayed days. With the button *Accept* your choice will be transferred. Left to the *Accept* button you can see a button with the current date, so you can easily find back to the current time.

4.6 Checkbox

These are the small boxes, which you can activate or deactivate with a click. When you can see the check mark the box is activated, when the box is empty it is deactivated.



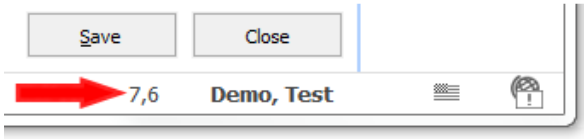
In the above example all boxes except for Tuesday are activated, which means the Tuesday will not be included in the selection.

4.7 Tooltip

In the above example you can see the word "Tuesday" as a tooltip (small box with explanatory text). You can find tooltips for a lot of elements, when you hold the cursor a bit longer on the element.
For example: if a column is too small to show the entire text in this field you can hold the mouse cursor over the cropped text and can see it then as a Tooltip in entire length.

4.8 Status bar

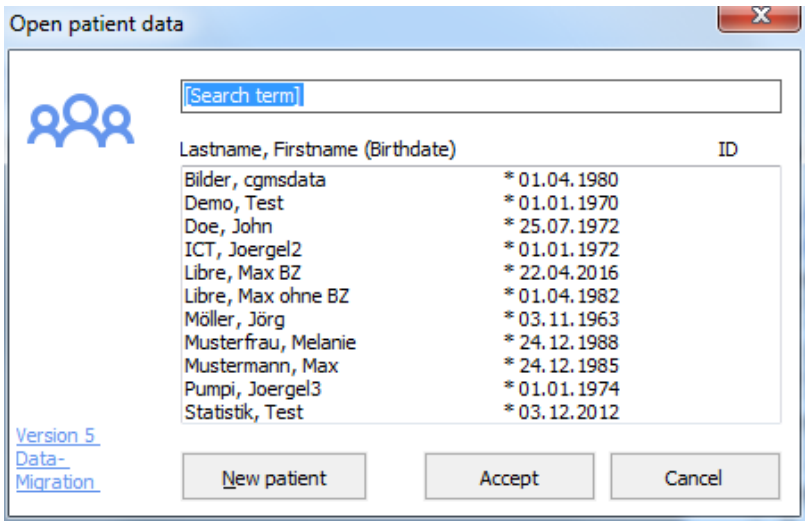
The status bar is the row at the bottom of the SiDiary window.



This is a special feature of SiDiary: When you click on a number (input value), this number will be converted into the other measuring unit (measuring units are: mg/dL or mmol/L) and will be displayed in the status bar. The profile in the example above is configured in mg/dL, so the converted measuring unit in the status bar is mmol/L. If you configure your profile with mmol/L it will be converted into mg/dL.
The name of the patient will be displayed constantly in the status bar. The globe next to this icon reports if you have an activated internet connection right now.

4.9 Screen

The screen is a form on the on-screen display. In the screen in our example below you can choose a patient.



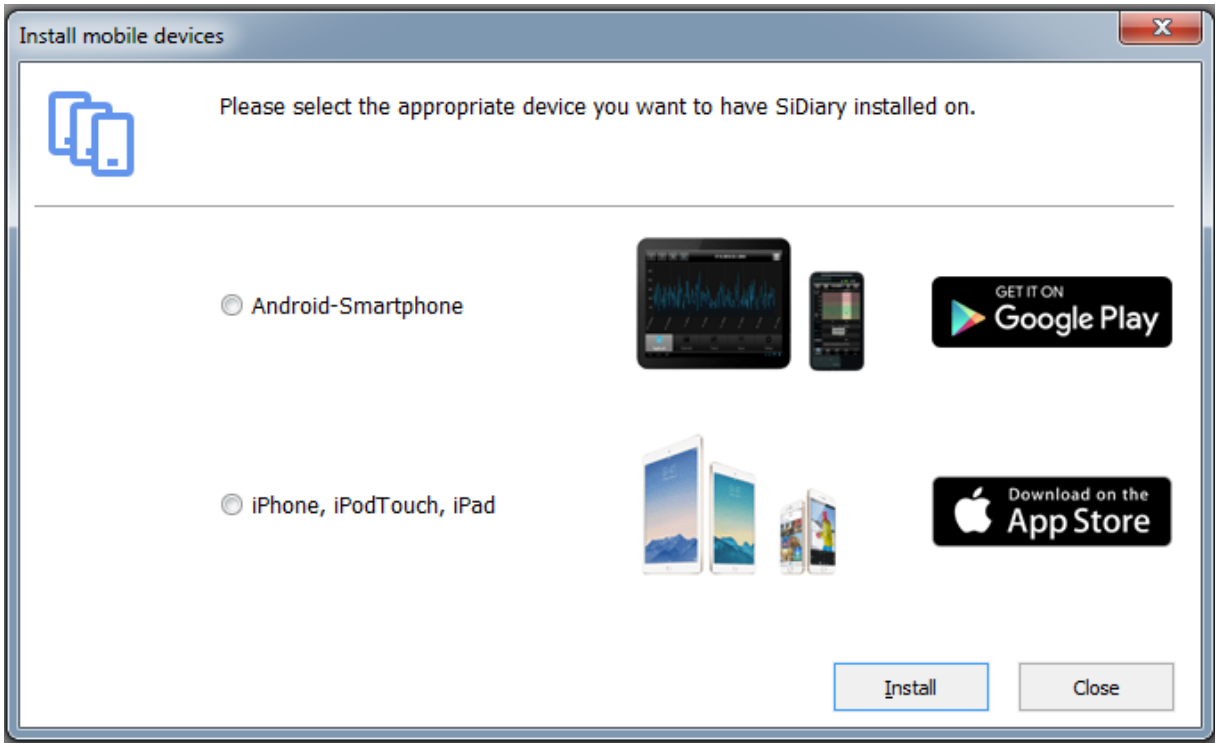
5 Setup

5.1 SiDiary Setup on Windows PC

The program is delivered as an installable Windows setup. To start the installation, you just need to double click the file SiDiaryV6Setup.exe at your download location.
With the setup the wizard will start. The wizard will guide you through all steps of the installation. You can define the installation path for SiDiary.
For inexperienced users: All questions have pre-defined default values so you can run the setup without any changes.
The setup will create a program group with SiDiary icons. You can start the software and additional components from this program group.

5.2 SiDiary Setup on mobile devices

You can use SiDiary not only on your Windows computer, but also on mobile devices, such as Smartphones/tablets with the operating systems Android and iOS.
Just select the operating system of your mobile device and click "Install". You will be redirected then to the App Store of your operating system directly in your browser, where you will find the SiDiary app for your device.
You can also start the app store directly on your device, search for "SiDiary" and then download the app directly to your smartphone or tablet.



6 Registration of the full version

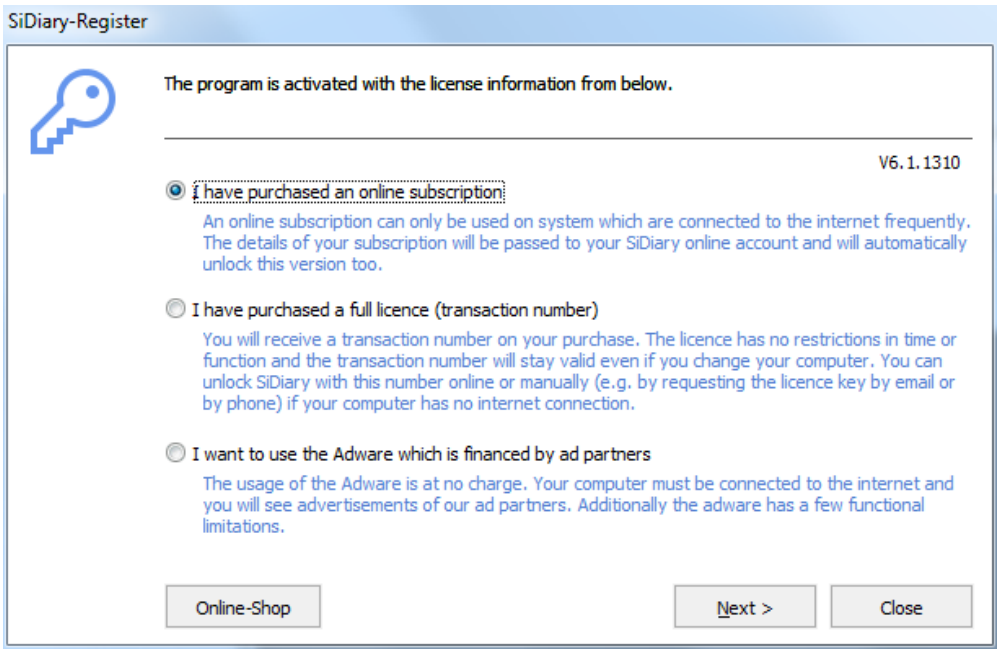
This program has software protection, which identifies you as an authorized holder of a program license. Without registration, you are using the program's promo version, which gives you a chance to test without the time limit the most important functions.

From time to time there are commercial pop-ups in the promo version that you can close after a short time. If you do not want to see the commercial pop-ups, please purchase one of our low-priced license packages.

In the menu item ***Help*** you find the submenu ***Register.*** (In the mobile versions you find the register button menu in the Setup). With your transaction number that you receive after your purchase in our online shop (www.sidiary.org/) and an internet connection you can directly unlock the software.

6.1 How to enter the license keys

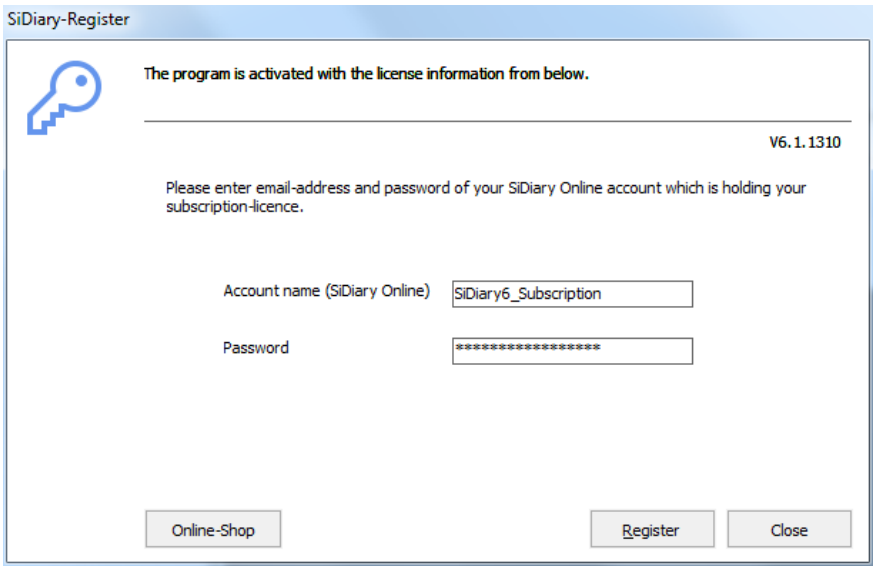
The screenshot shows the registration screen in the PC-version. You can find this screen in the menu ***Help → Register***



If you did not purchase the license for the full version yet, by pressing the button "purchase now", you will be forwarded directly to our Online Shop.

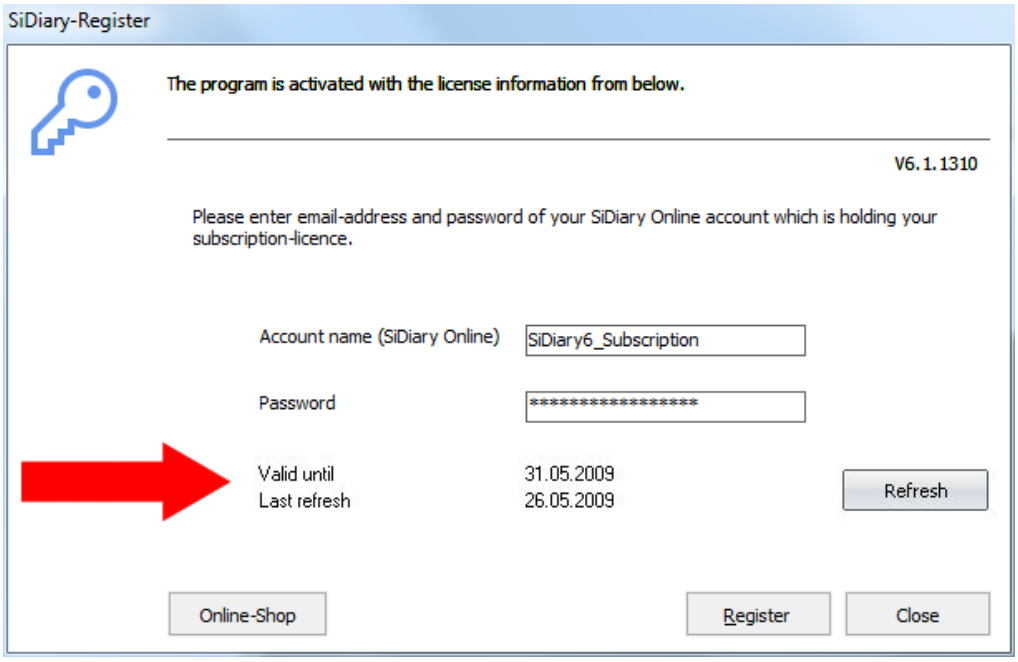
6.1.1.1 Online subscription

If you have purchased an online subscription, please choose the first option and click at '*Next*'. Then you will see the next screen where you can enter your account name or email address (both is possible) and your password.



Then click at *'Register'* (Note! You will need to have an active connection to the internet)

If you open the Register dialogue again you will see the details of your subscription:



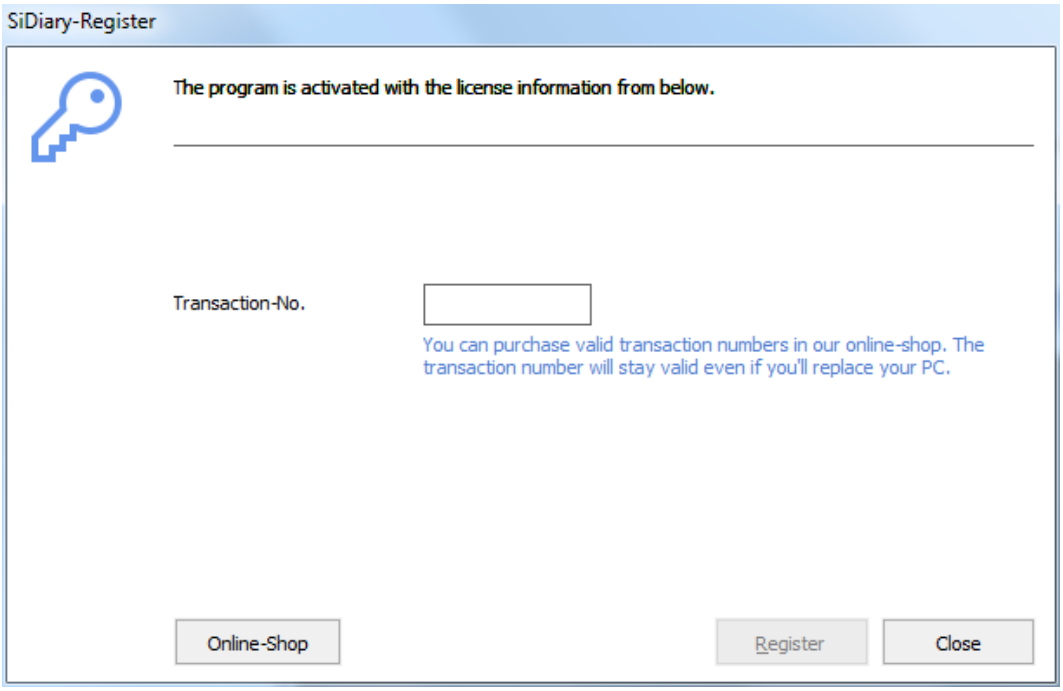
Hint *If you are longer without a connection to the internet (maybe if you are off for holidays) you can refresh your registration short before you go off by using the 'Refresh' button*

The button *'Refresh'* refreshes activation that means it increases the last-refresh date. Over It you can see how long your subscription is valid.
The button *'Edit'* can be used if you want to change the model of your license, for example from a subscription to a full license.

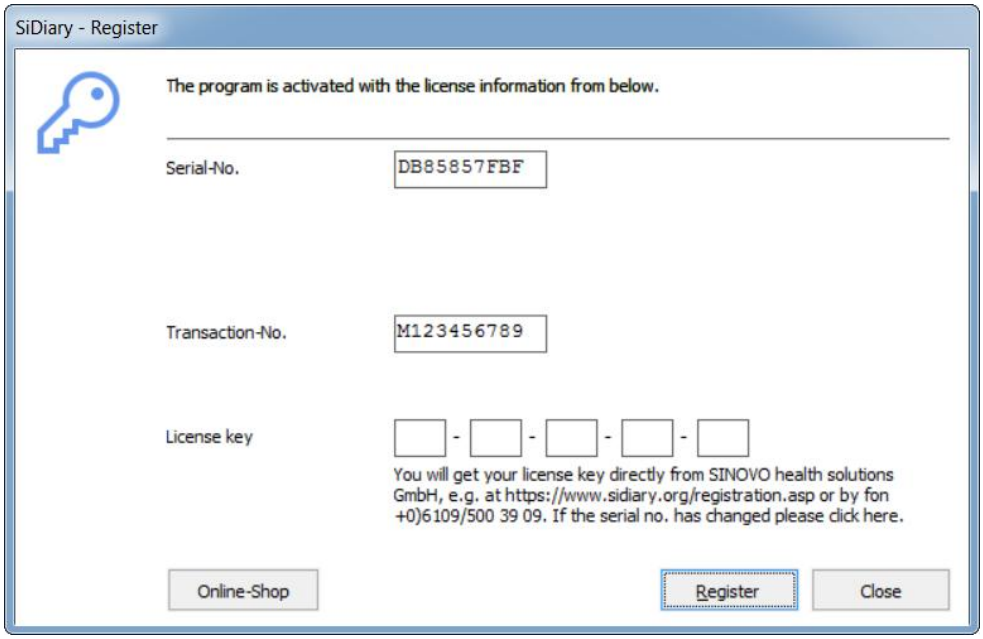
6.1.1.2 Full license

If you have already purchased a license, you received from SINOVO, or an authorized partner shop a license in the form of a transaction number. This number consists of 10 figures and starts with a M – for example: M234567890.

Enter your transaction number in the input box and press the button *register*.
SiDiary tries to get an internet connection to the SINOVO license server (you will need an active internet connection for that) and unlocks your version directly by pressing that button.



If you want to use SiDiary on a PC without an internet connection, SiDiary will ask you to unlock the software manual.
The screenshot above shows you how to unlock SiDiary manual (without internet connection) to get a full version. You need the **transaction number** that you already received and additionally a **license key**, which you can get in the internet from a PC with internet connection at www.sidiary.org or by telephone (the phone number is displayed in the imprint of our website).



Important

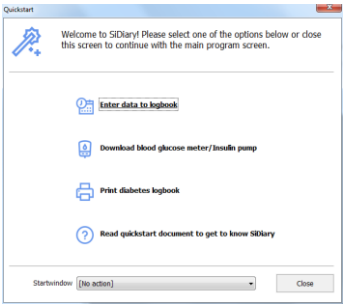
You can never enter the serial number in the mask shown. The **serial number** is given by the program and identifies your personal PC. Please note that if you change your hardware or change system components (hard disks, memory, operating system updates, etc.) the serial number might change also and a new license key is required to fit the new serial number. You can receive the new license key free from SINOVO as described above.

Please avoid typing errors while entering the transaction number and the licence key, because then the unlocking process will be refused. Please also consider mix-ups with similar letters/figures like for example the letter "O" and the figure "0" (zero).

For a request for the license key by telephone, E-Mail or Fax: Please have the serial number and the transaction number ready! Without this information we cannot give you a license key!

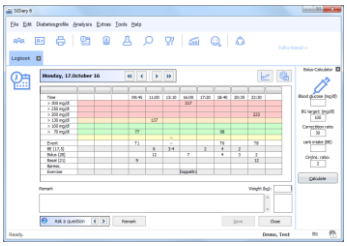
7 Quick start manual

1.)



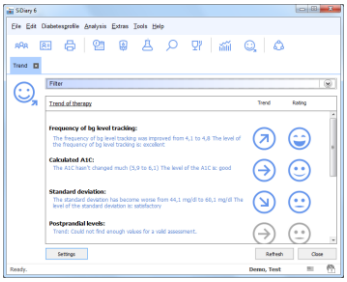
When you start SiDiary for the very first time, the profile wizard will open and ask you some diabetes-related questions to configure the software especially for your individual needs. After that you get into the quick start screen, where you can find the most important functions: manual data entry, readout meter and print logbook.

2.)



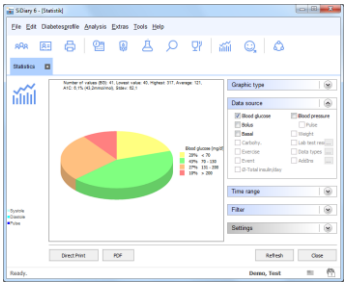
You can start immediately by tracking your data. Click on the grid at any place and enter the related value. (Blood glucose levels will be re-ordered to the appropriate row automatically) With the cursor buttons above the grid you can navigate to the next day, the previous day or week – or you can open the calendar by clicking on the date to choose the exact day you want.

3.)



When you have tracked some readouts, you can use the trend display to see a rating and a trend of your current condition. Please open the Menu ***Analysis*** → ***Trend*** or press the F5-button. Of course, the results will become more significant with more tracked data! All limit values for the ratings can be predefined with your own individual settings (button *Settings*).

4.)



You can analyze your entered or imported data (from blood glucose meters, insulin pumps, blood pressure meters etc.) with detailed statistical graphics. You can set several filters, define control times and select graphic types. Therefore, you can analyze and answer any tricky questions. With the cursor buttons in the time range you can switch the adjusted time range to an equal time range to compare for example different weeks with each other.

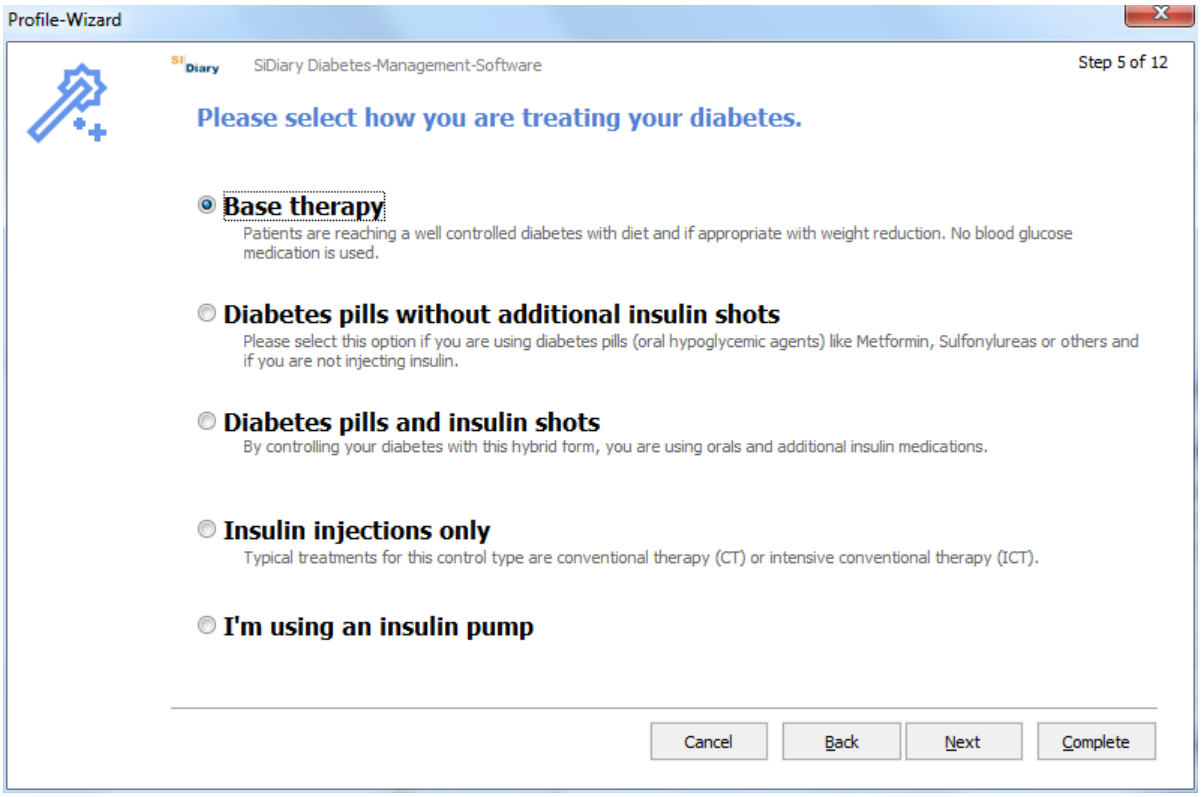
8 How to use the complete program

8.1 First start-up with the "profile wizard"

Once you have installed SiDiary on your computer for the first time, the profile wizard will start automatically.

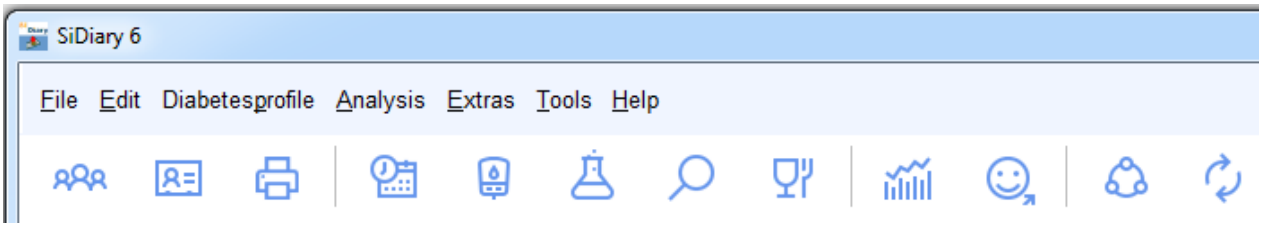
Even the inexperienced computer users will be able to handle the software easily.

The wizard is asking a few simple questions and analyses your answers for the best possible settings in your user profile and configures the software exactly to your individual needs.



All questions of the profile wizard are self-explanatory. A lot of additional information and explanations for the different options will help you with the answers.
Even newly diagnosed or inexperienced people with diabetes will be able to answer the complete questions in a few minutes. You only must do this once with the first start-up of the program. You can also access the profile wizard in the menu ***Diabetesprofile → Profile Wizard***.

8.2 Toolbar



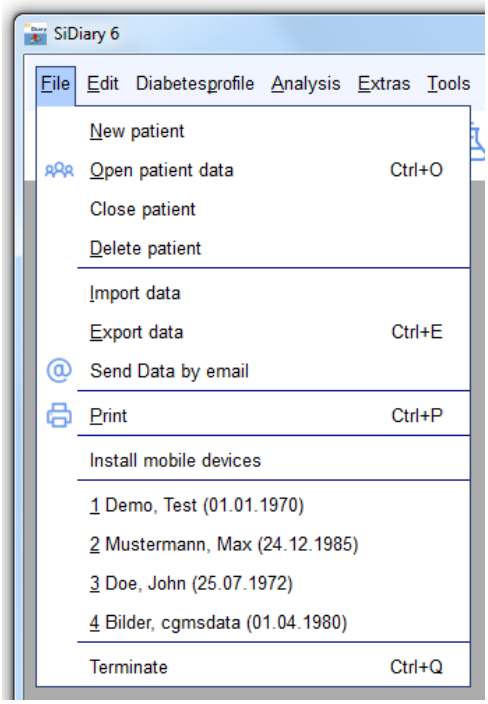
The screen area shows the toolbar with graphic icons for frequently used program functions. To start a program function, you can click on one of the graphic buttons or through the menu selection (see the following sections):

- Select patient
- Diabetes profile / therapy data
- Print
- Enter data by hand or view data
- Import meter or pump
- Enter / view laboratory data
- Search (for example for certain comments or events)
- Nutrition database
- Graphic statistics
- Trend analysis
- Publish (Screenshots from the program)
- SmartSync (with this tool you can start a synchronization with SiDiary-Online directly, provided you have already entered your login data)

Hint *If you want to open the logbook type that is not your standard (for example: you adjusted the detail logbook but want to open now the CT logbook), please click with the right mouse button to open the logbook.*

Hint *If you click with the right mouse button on the button to readout a meter, the last meter driver that you used before will open automatically*

8.3 Menu "File"

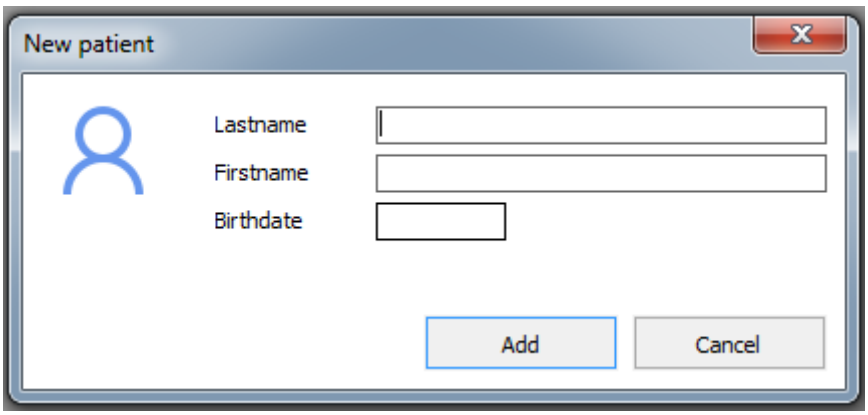


In the menu "*File*" you can open the standard functions, as you are used to from windows programs. You can add a patient or open patient data. You can print, import or export data, send data by email or open the setup for mobile devices.

You can open frequently used functions with direct buttons, the so-called shortcuts / hotkeys - for example by pressing the **Ctrl**-button (Strg-button) and the **O**-button at the same time to open the input dialog, to open a patient file or to open with **Ctrl+P** the screen to print your data.

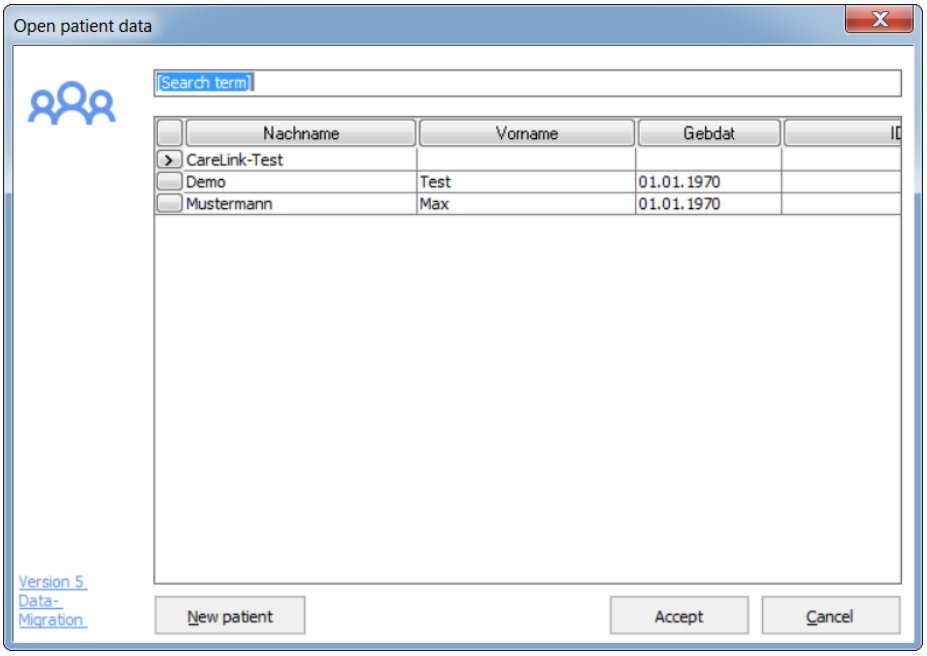
8.3.1 New patient

With this function, you can add a new patient to SiDiary. You can administrate only one patient in our trial version. The day of birth might be helpful for your doctor to be absolute certain with the assignment of the patients.



8.3.2 Open patient data (Ctrl+O)

Use **this** screen to select an already existing patient. Mark the patient in the list by clicking on the name and press the button *Accept*. All already opened masks, for example the statistic screen switches automatically to the selected new patient. It is not necessary to close all sub windows, to select a different patient. Please see also the '*Search'* function in chapter 8.4.6.



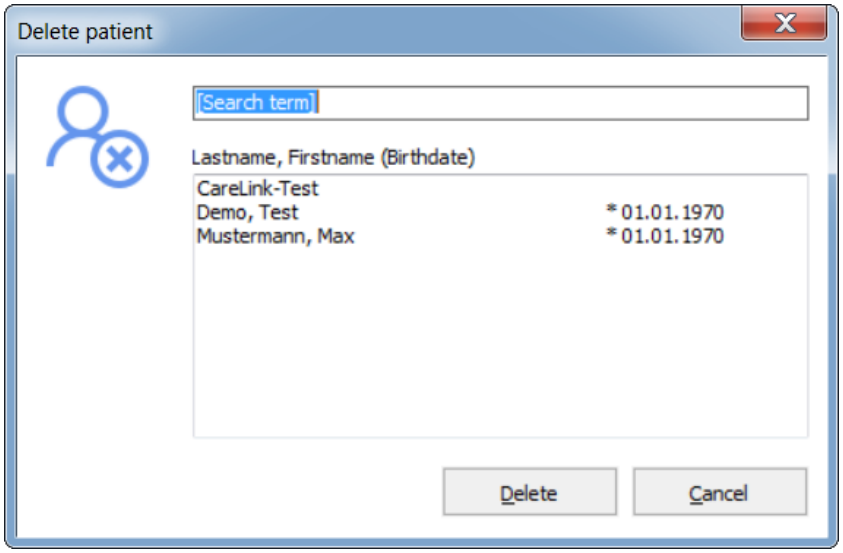
8.3.3 Close Patient

With this option, you can close the currently selected patient, without having to select another previously. (For example: to open this patient in the professional version of SiDiary on another computer in your network)

8.3.4 Delete patient

Select this function to delete a previously entered patient from the list. Mark the name of the patient by clicking it and then clicking the button *Delete*. The patient is now completely erased with all his data and cannot be recovered.

Note: *The demo patient cannot be deleted. To be able to check at any time whether the program works without errors (or whether an error is related to the current data of the open patient), SiDiary checks whether a demo patient is present at the start of the program. If it does not find it, then it will create this demo patient again.*

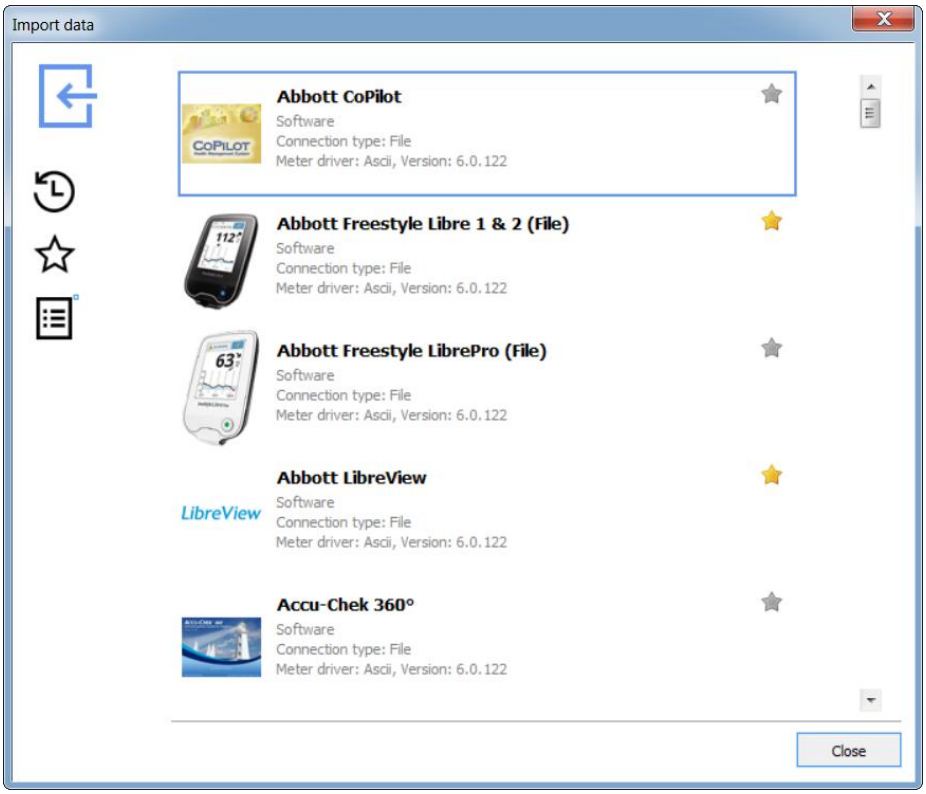


8.3.5 Import data

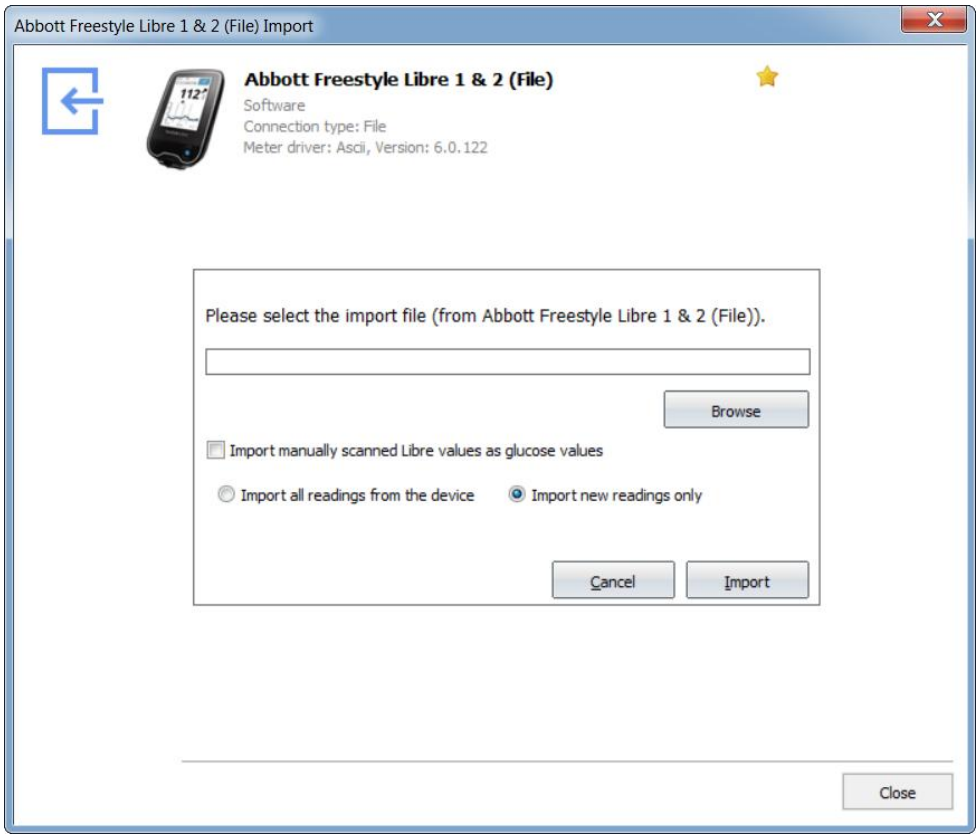
The Import function is just available for the Windows version.

You can import CSV-data with a SiDiary format, CSV-Format of OneTouch/InTouch (Lifescan) and from Diabass transfer data file.

With this function, you can insert data from other diabetes programs or CSV-data files into SiDiary. To check if your previous software is available, please select this function and skip through the list.



Please select the import driver for the selected file format that you want to insert into SiDiary, and the following screen will open:

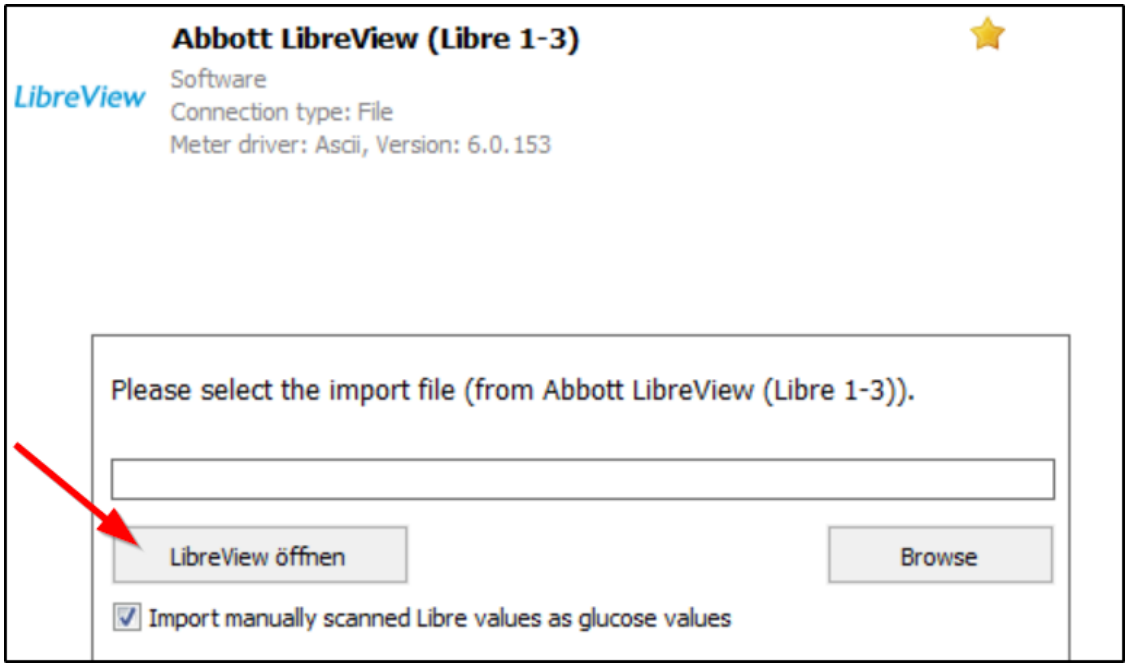


With the *Browse* button, you can navigate to the storage location, where your export data files from other programs are stored.

Just click the import button, after choosing the file which you want to import.

SiDiary also offers other possibilities for file import, which you may find easier:

1. The import filters for Abbott LibreView, Dexcom Clarity, Medtronic CareLink, Glooko, Tidepool, Beurer Healthmanager and Diabeloop YourLoops have a button that opens the website for downloading the export files:



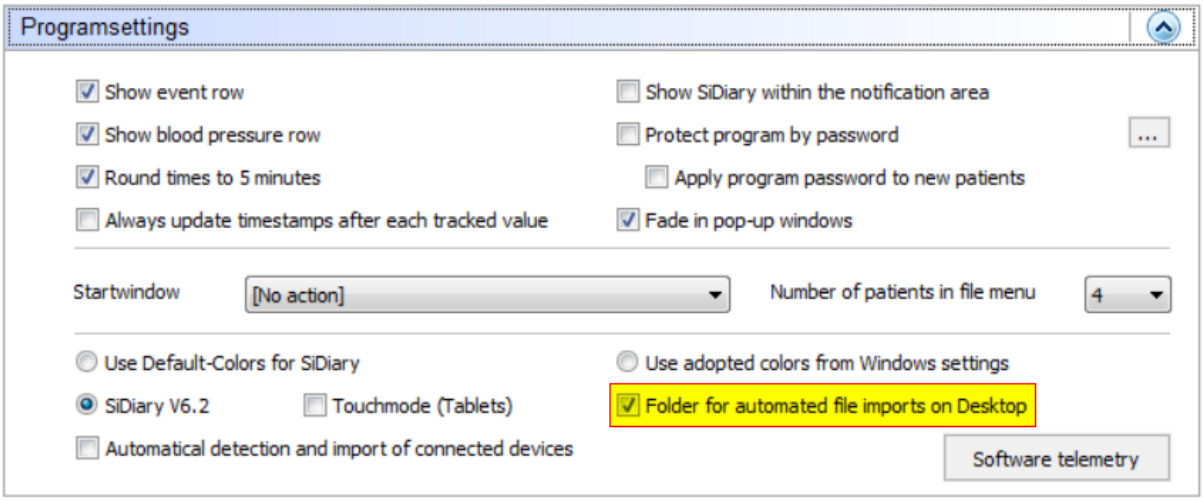
The special thing about this is that if you open the website with this button, log in and export your data, SiDiary will monitor the process and then automatically import this export file. So, you don't have to remember which folder you saved this file in.

2. Double-click on the import file. SiDiary tries to analyze the file, and chooses the appropriate import filter, which then reads the file directly. It will show you the result and you can choose if you want to import the found data into the diary or not.

3. Via Auto-Import folder. SiDiary is placing a link to the folder C:\Users\<YourUsername>\AppData\Local\SiDiary\Auto-Import\ on the desktop for this purpose. Then you only need to drag and drop an export file onto this link and SiDiary will start analyzing and importing data from this file when it has detected it, just like with the double-click option. Again, you can decide if you want to import the found data into your diary or not.

The link to the Auto-Import folder looks like this:

If you delete this link, it will be recreated every time you start the program. If you don't need it and want to remove it permanently from your desktop, please go to the program menu item "Extras →Settings →Program Settings", remove this check mark and then click "Save":



8.3.5.1 Import from a CSV-file

SiDiary can import from SiDiary CSV-format, which is also used with the export of data (Template “SiDiary-Datalis-CSV.txt”). For import, please use the import filter "SINOVO ASCII/CSV-Import".

The structure of the SiDiary own file-format is as follows: The CSV file must use the same fields, which SiDiary uses also with the CSV export as field names. The sequence of the fields is not relevant, but the field name must be typed ACCURATE. As a separator, please use a semicolon

Example:
DAY;TIME;EVENT;BG_LEVEL;CH_BE_KHE;BOLUS;BASAL;BLOODPRESSURE; REMARK

Description of the possible fields:
DAY – date (in date format of your system setting)
TIME – Time
EVENT – Event
BG_LEVEL – blood glucose level in mg/dL
BG_LEVEL_MMOL – blood glucose level in mmol/L
CH_BE_KHE – Amount of meal (Exchange BE or KE/KHE)
CH_GR – Amount of meal in gram carbohydrates
BOLUS – Bolus dose
BASAL – Basal dose
BLOODPRESSURE – (Format “Syst./Diast.”)
REMARK – Remarks
WEIGHT_LBS – weight in lbs. (=Eng. Pound)
WEIGHT_KG – weight in kilogram
UDT_XXX - User defined datatype (XXX must be replaced by the UDT code which you assigned, e.g. if you added a user-defined-datatype “Steps”, you can import the tracked data with the placeholder UDT_STEPS)

You can also copy the field syntax from the CSV export templates of SiDiary, in the folder Templates\export (just open it with notepad).

It is not possible to import CSV-files which were generated from other programs, which are not in the format described above!

Hint

If you have text data or CSV data in another format, you can transfer it very simply, e.g. with MS Excel to the SiDiary format and transfer your data from other programs. For further information about converting, e.g. from MS Excel, please see the appropriate manual. Many users provide their knowledge about this in the SiDiary forum, too!

8.3.5.2 Donbass-Interface (Import/Export; Windows application only!)

You can find the description of importing a Diabass transfer file in the chapter "Diabass interface (import/export)". You can also start the automatic import by selecting a Diabass transfer file, too.
The Diabass transfer file is not comparable with a CSV file exported with Diabass! The format of the transfer file is used, i.e. from DiabassMobile (Palm software) or Diabass drivers, to pass data to the Diabass main software.
Diabass exports data to CSV-files, which cannot be imported directly from SiDiary! For further information about importing CSV. files, please see the previous chapter!

8.3.5.2.1 Diabass interface (Import/Export)

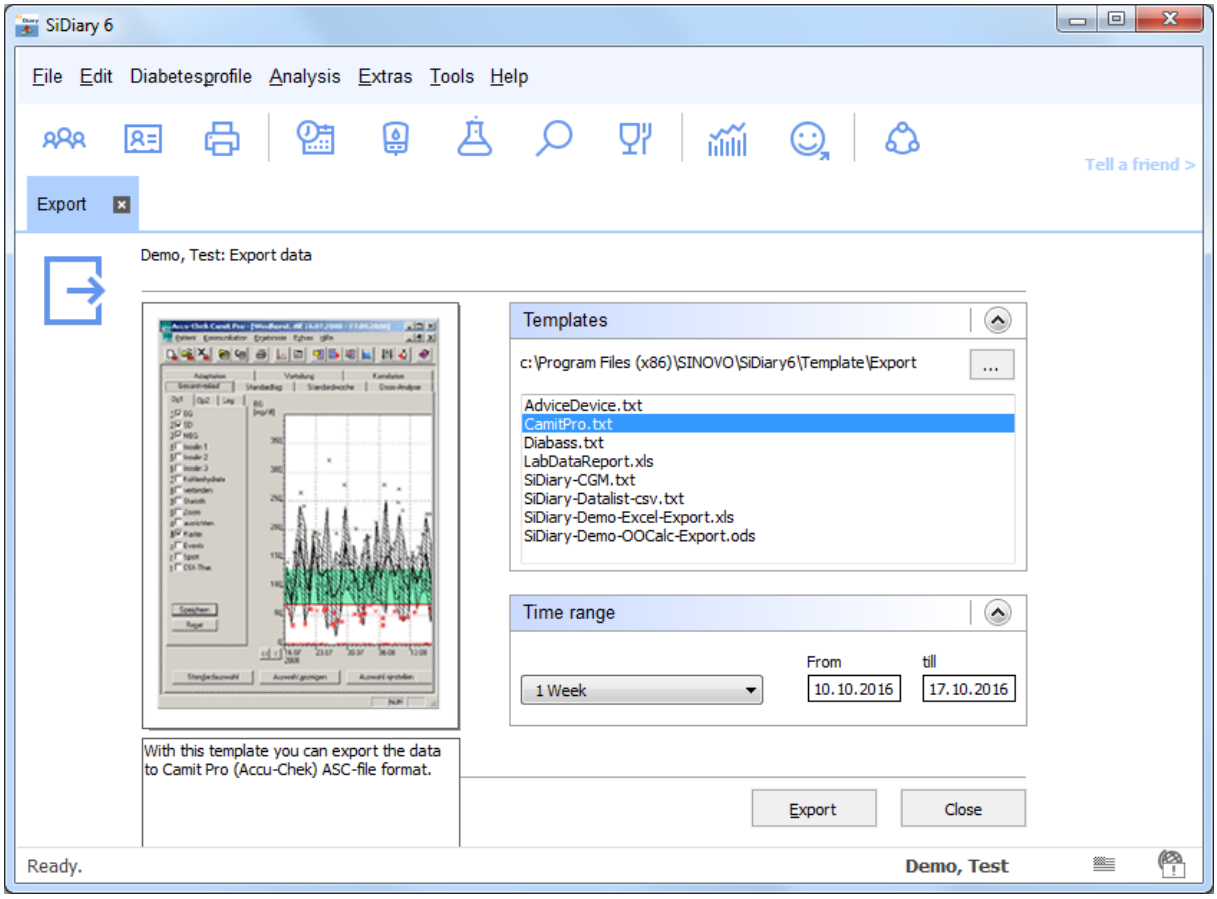
The integrated interface for Diabass application gives you not only the possibility to export data to Diabass but to also read data into SiDiary from any device or application, which can write the Diabass-data format. To export data to Diabass, you just need to select the diabass.txt' template after clicking on the export button.
SiDiary identifies the incoming folder of Diabass automatically and sends all data within the selected date range to this directory.
Please use the appropriate Diabass functionality after SiDiary export, to import the data within Diabass. Please see the Diabass' program documentation for further information!
SiDiary automatically detects (if you have installed Diabass or Diabass Pro) at a 60-second interval if any other device or application has written data into the incoming folder of Diabass and gives you the option to import this data into SiDiary too. If SiDiary has detected a file in Diabass format (or if you've selected such a file after starting the import directly from the settings tab) it will display the following screen. You may notice that this screen is like the Diabass import screen.
If you have not installed Diabass on your system, SiDiary will go to emulation mode and creates an own incoming folder, so that other programs, which can send data to Diabass will then send it to SiDiary.

Hint

You can also open this screen, if you click the "Import" button on the settings tab and select a Diabass file

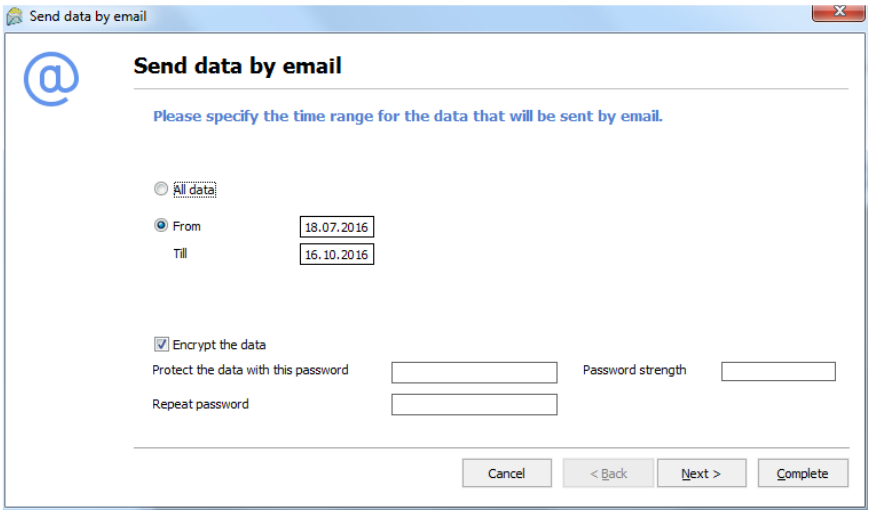
8.3.6 Export data

With this program function, you can export data of a patient in different formats, to use them for example in other programs.
SiDiary offers for this purpose a template-based procedure, alike the print function (see also chapter 8.3.8 "*Print (Ctrl+P)*"). Please choose one of the several existing templates and press the button *Export*, to export your personal data based on the layout of the selected template. Choose the template you want and fix a time range for the export of your data. On our website you can find many templates, which were created and by other SiDiary-users and are free of use. You can export data in different formats by choosing the appropriate type of template, for example Microsoft Excel, CSV, txt, rtf, html, xml, etc. Download under www.sidiary.org *Downloads → Templates*.



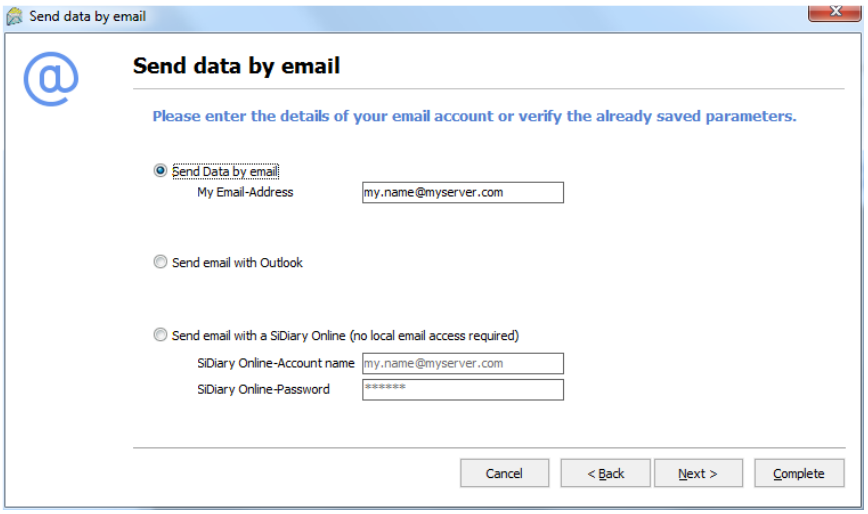
8.3.7 Send Data by email

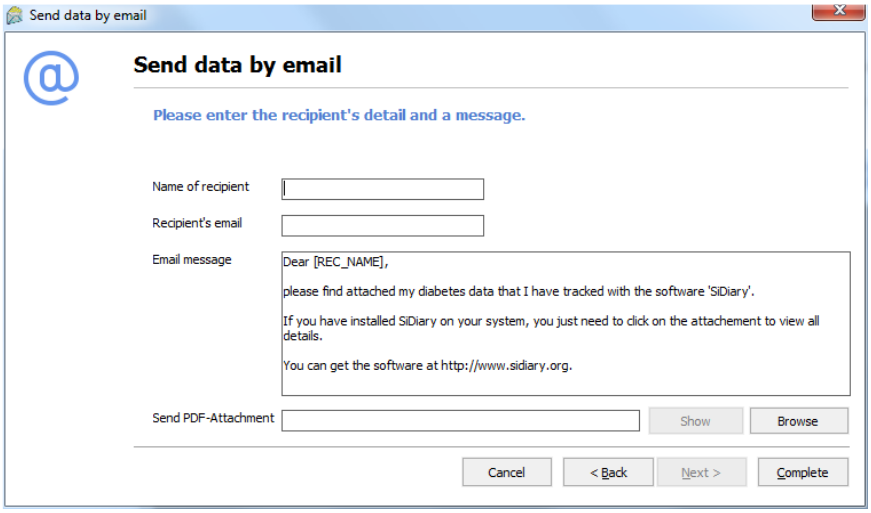
With this program function, you can send your diabetes data to your doctor or a confident by email. Select the required time range, whether the data shall be encrypted and/or protected with a password and insert the details for your Email account. If you use Microsoft Outlook, SiDiary can use the already arranged Email-program.



You can send the data with your email address or optional with Microsoft Outlook.

The third option: You have a SiDiary-Online account (https://diabetes.sinovo.net/). Then you do not have to enter your account data, and you do not have to use Outlook as your mail program. You can send you mails then with SiDiary-Online.

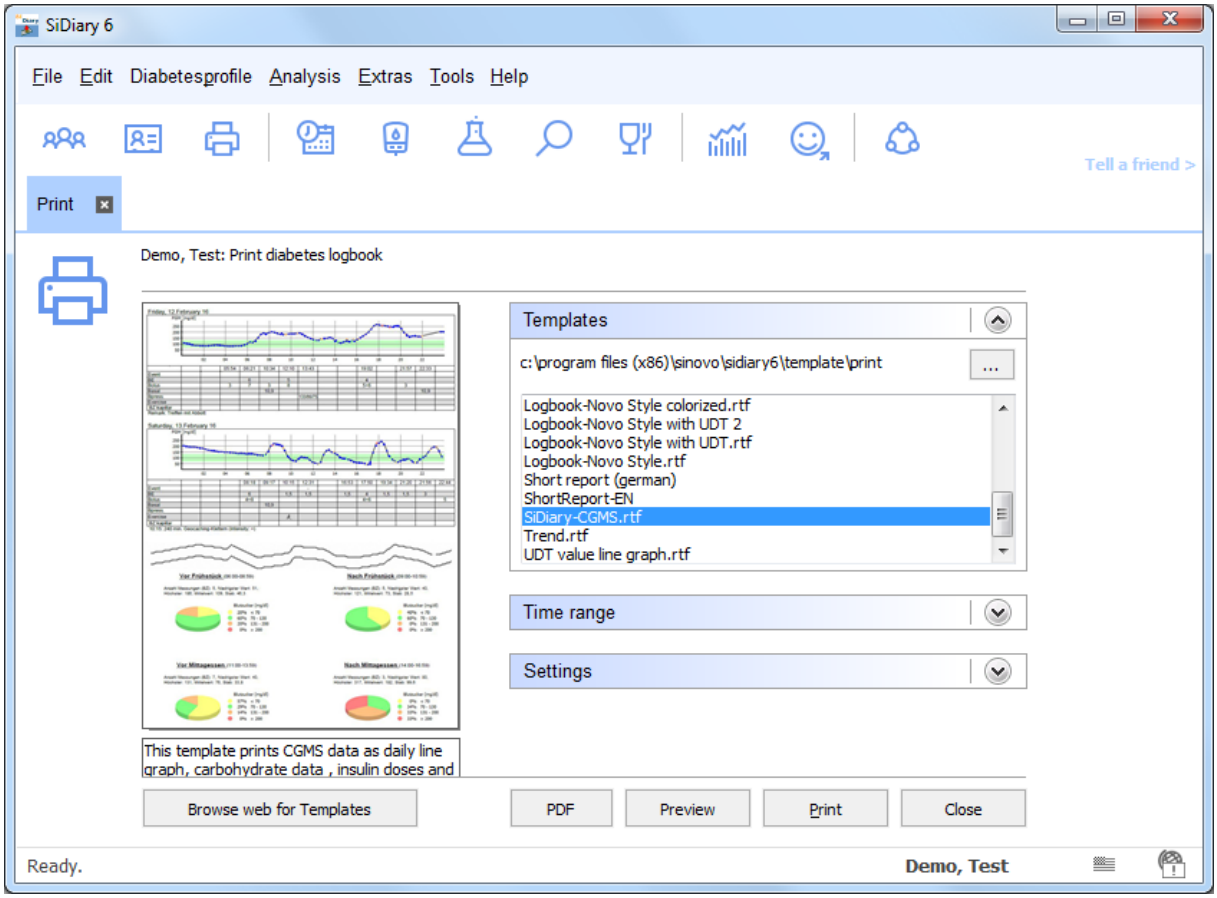




8.3.8 Print (Ctrl+P)

In the screen “Print” you can print your diabetes data in a variety of layouts such as logbook, data list, with or without graphical interpretation.

SiDiary offers for this purpose a template-based procedure. You just must choose one of the several existing templates and press *Print* to print your personal data in the layout of your selected template on your standard printer. The button *Preview* opens the same print result as in your standard word processing program, so you have the possibility to make more individual adjustments before printing.



Choose the template you want and define a time range for the data that you want to print. You can select more options for the printing in the selection list "Settings". If you choose another template in the selection list, a graphic will appear in the preview window and shows how your data would look like with the new template.

If you have installed MS Office 2007 or higher, Open Office or a PDF printer-driver you are able to print/create directly a PDF document by clicking on the button *PDF*. But you can also use SiDiary's inbuild PDF function for it.

The button *Preview* opens the document in your standard word processing program, where you can edit the document before printing.

Hint *You can also use the function 'Preview' if you have installed more than one printer and SiDiary should NOT use your standard printer this time.*

To print the document on your standard printer, just click on the button "*Print*". The document will then be printed without further inquiry.

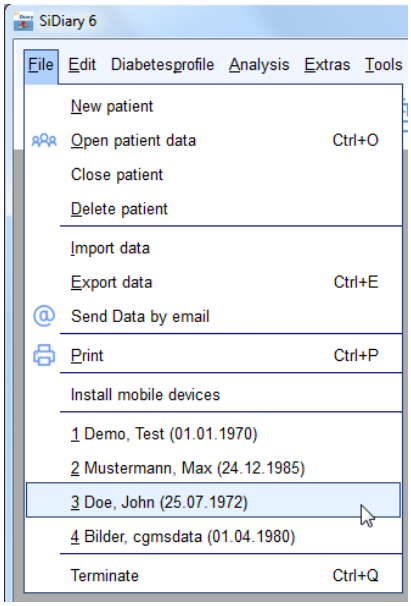
Hint *If you want to print a few blank drafts, for example to take them on a journey (because you have no possibility to use SiDiary on a mobile device), please enter in the time range a date that ends in the future. SiDiary will print you the sheets until this day without any entries.*

8.3.9 Install mobile devices

Please see chapter ***5.2. SiDiary Setup on mobile devices***

8.3.10 Recently patients opened

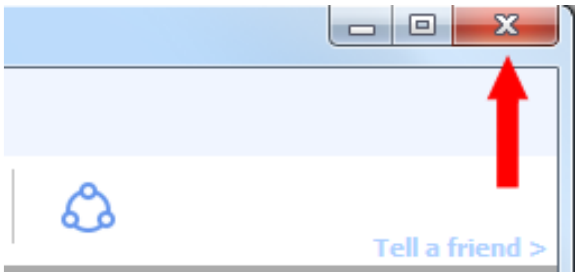
In the file menu you find at the end of the menu list a list of recently opened patients. So, you can access the data of these patients without the patient selection.



In the program settings you can define how many of the recently opened patients are listed in the file menu (0/2/4/6/8 patients).

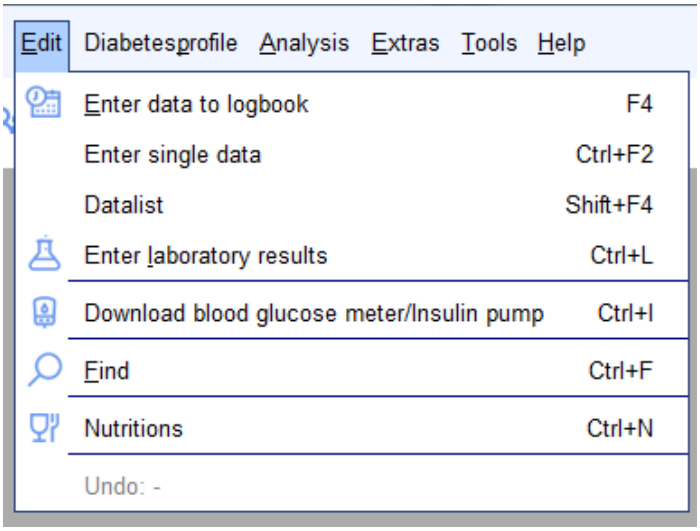
8.3.11 Terminate (Ctrl+Q)

With this menu item or the shortcut **Ctrl+Q** you can close the program. Still opened files will be saved, if necessary, before the program closes. The program can also be closed with the small cross button in the top bar on the right side (see screenshot below).



Note: If the program does not end when you click on the small cross in the upper right, but only minimizes into the Systray (the area on your Windows screen in the lower right), then you have activated the option "Show SiDiary within the notification area" in the Programsettings (menu 'Extras ->Settings ->Programsettings). If you remove the checkmark, the program will close completely when you exit.

8.4 Menu “Edit”

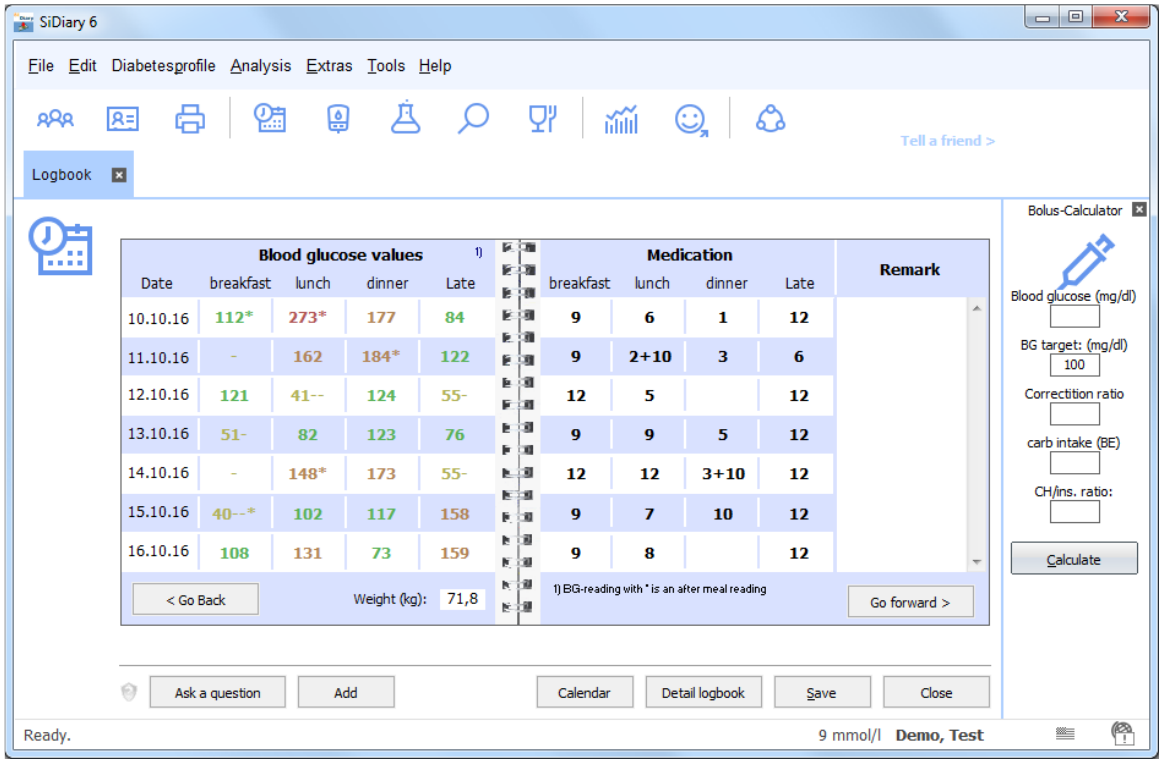


In the “Edit” screen you can find a lot of standard functions, which are also contained in other standard Windows programs. For example, the search function or undo (reverse) function etc.
You have also the possibility to edit your diabetes data, which means you can make manual entries in the diabetes logbook, enter laboratory data, import data from blood glucose meters, blood pressure meters and insulin pumps or just open the large nutrition database, which contains about 6,800 data sets with details about carbs, fat contents, proteins etc.

8.4.1 Enter data to logbook (F4)

Depending on the settings in your profile, SiDiary starts with the standard logbook or the detailed logbook. The standard logbook is suitable for the CT therapy of people with Type2-diabetic. People with Type1-diabetic, who have more intensive therapy or pump therapy, can also use the detail-diary where they can enter more information.

8.4.1.1 Standard logbook (CT)



Click in any cell to enter values. You can add a star (*) to the blood glucose values to mark these values as "postprandial" – this means a value after meal.
You can also enter your intake of tablets in the area medication with a star (*) in order to add an entry of a second medication.

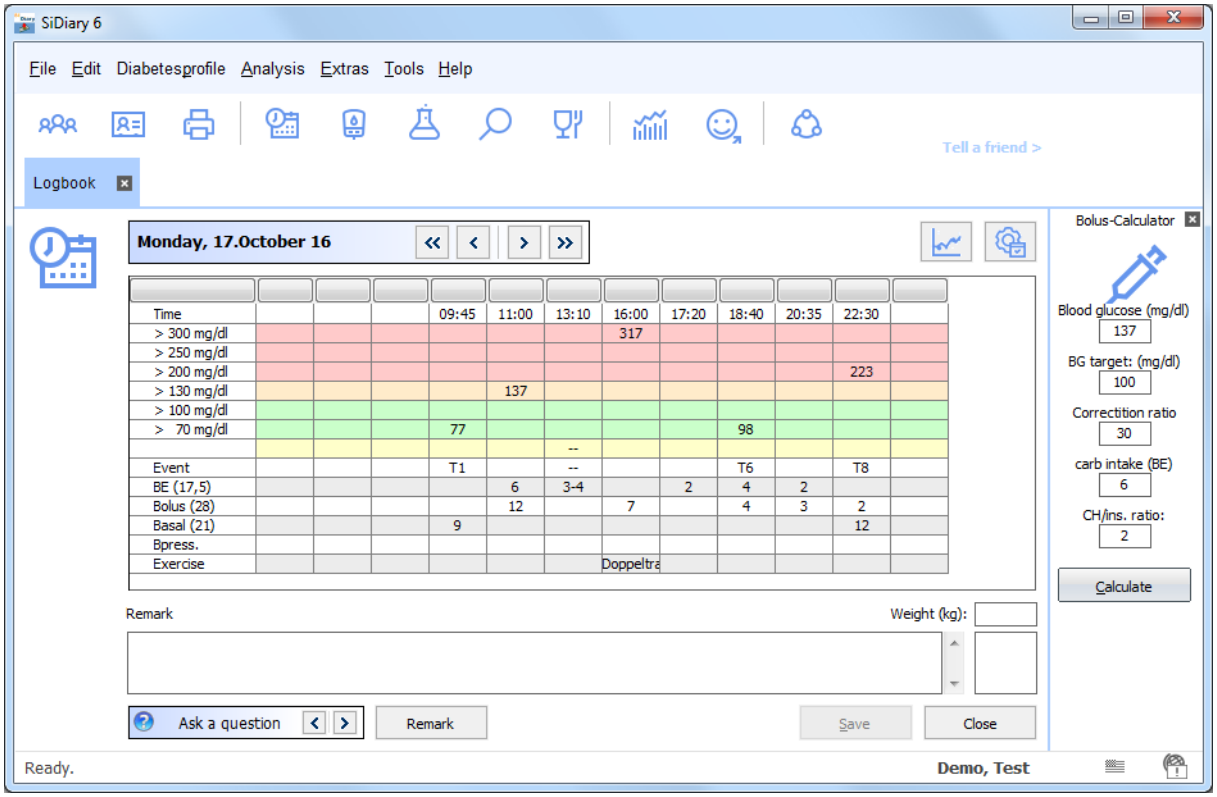
With the entry of the date, you can relate the notes to an adequate day. SiDiary is selecting automatically the right column, when the screen opens.

With the two navigation control buttons you can step to the previous or following week. You can also protocol your weight on this screen.
With the button *Detail logbook,* you can open the data display as described in the following chapter – and protocol here additional data if necessary.

You can save a question or a comment for a specific day with the button *Ask a question.* These entries will be pointed out in the printouts, so you can discuss these matters with your doctor. Please see also the chapter 8.4.1.6. „Ask a question“.

8.4.1.2 Detail logbook

In the screen *Detail logbook,* you can track all your daily diabetes data. You will be able to do the entry rapid and efficiently, because the entry mask is built up very intuitive like the widely used hard copy versions of diabetes logbooks that you may have used before.



Click on any cell of the grid and enter a value - for example the blood glucose level or the insulin injections. You can define the data you want to enter in the logbook as you prefer it (see also chapter 8.5.3 „data types“). So, you are not limited to the standard data types/categories of SiDiary!

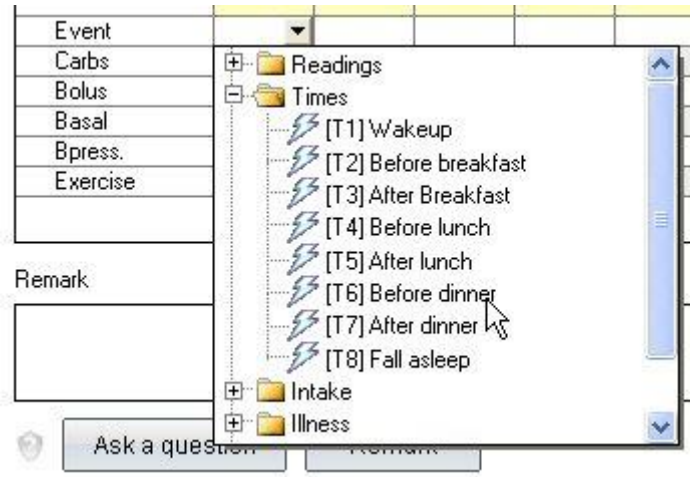
Hint

You can mark a hypoglycemia (low sugar) depending upon strength with one minus (–) or a double minus (--), for example 60- or 47--. Even tracking hypoglycemia without having taken a blood glucose reading is possible, e.g. (-) or (--) can be entered without numeric values. The marked values are counted and shown separately in the statistics as the number of hypoglycemia's.

Hint

To delete an entry of the logbook, just delete the entered value and click on Save. The time of day for this entry will then be deleted automatically

The row "Event" gives you the possibility to categorize your values in SiDiary. So you can declare for example a blood glucose value as „FBG - fasting blood glucose level“ or as a „postprandial value“ (value after lunch).



The list of selectable events contains several standard entries. But you can also expand the list with your own entries (see also chapter 8.5.4 „Events“).

Hint

You can use the following system in the row with the insulin values to protocol a correction bolus and a meal bolus separate: 4+7. Such a data record stands for 4 insulin units correction bolus and 7 insulin units meal bolus. SiDiary sums the values for the statistics up to 11.

If you use more than one sort of pills or insulin types e.g. for bolus injections, you can mark the intake / injection of the second medication with a star. For example, “6*” protocols the injection of the second bolus insulin in form of 6 units.

Hint

You can enter the blood pressure together with the pulse: Just enter your value like this format: 130/80/70 (systole/diastole/pulse). Systole = higher value; diastole = lower value

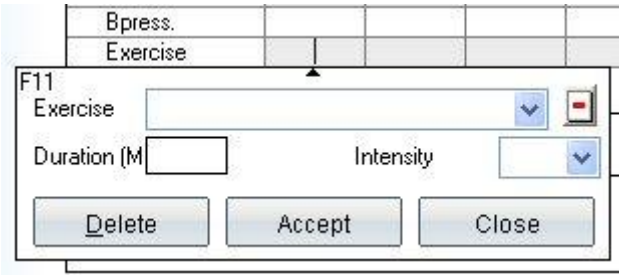
Enter your carbohydrate intakes, exchanges (for example bread units or carbohydrate units), insulin or tablet information, blood pressure readings and exercises directly in the provided rows (see also chapter 8.7.3 „Settings“). In the window of the selected day, you can also enter your body weight in the input box *weight*. You can add further information in the user-defined text fields.

Next to the names in the rows you can also find the daily sums for carbs, bolus and basal insulin:

			48--
Event		T1	T3
Carbs (270)		72	24
Bolus (29)		12	
Basal (12)			
Bpress.			

8.4.1.3 Exercises

If you are using exercises entry for the first time the selection list "exercises" is still empty.



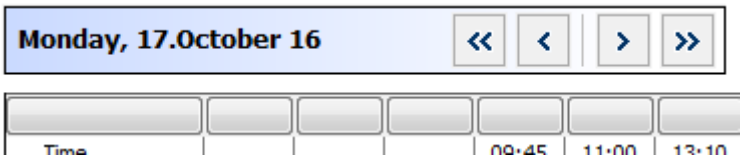
You can enter new kinds of exercises/sports into this dropdown list. Your entries will be saved so you can pick them from the list the next time. The list of entries can be deleted with the minus (-) icon button.
Additionally, you can enter the duration of the sport activity as well as the intensity, from more easily movement (-) to normal training (o), up to strong physical effort (+). If you want to delete an exercise entry, just empty all fields and save it.

Times can be entered automatically by the program, or you can enter them by hand. You can enter times as a 4-digit number. The entry of 1100 will be converted automatically in 11:00 by SiDiary.

Hint

If you enter times without a colon, SiDiary converts your entry automatically. 1100 will turn automatically into 11:00.

8.4.1.4 Navigation panel



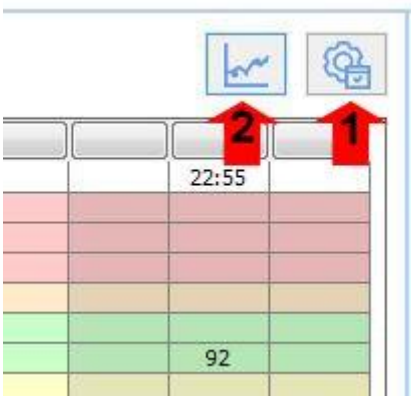
With the navigation panel above the grid, you can skip it from the current day to another day. With the buttons < and > you can skip to the previous day or to the following day. With the buttons << and >> you can skip to the previous week or the following week.

One click at the date or the calendar symbol will open the calendar element where you can enter your desired date manually.

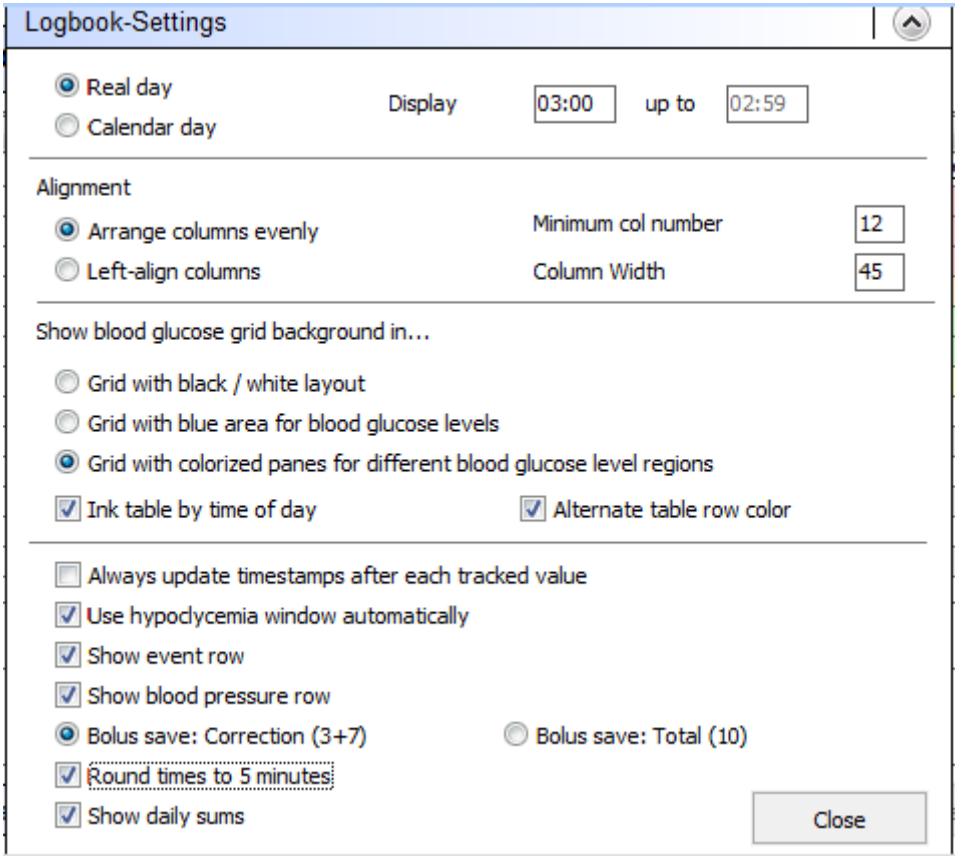
Hint *If you open the calendar element you will find at the bottom left a button with the actual date to make it easy to navigate to ‚today'.*

With a click at ‘Ask a question’ you can use the *Ask-a-question* function (see also chapter 8.4.1.6 “Ask a question”). The arrow buttons will then lead you to the day with the previous or next stored question. So, you can see not only the question but the exact day with the stored question. The advantage is that you can look through selected days that were unclear somehow without searching, before you go to see your doctor.

Here you can see two additional buttons in the detail logbook: Settings (1) and the changeover button between the blood glucose table and the CGM daily curve (2). Button 2 is only visible if you have already imported CGMS data into your diary.



With the (Gearwheel) icon button “settings” you can open a screen, where you are able to make various settings.



Hint

The setting "Real day" (from getting up until going to sleep) allows you to insert values after midnight for the current day. For example: When you read out your blood glucose level before going to bed and take an injection of a nightly dosage long-acting insulin, this can happen sometimes after midnight. For a better overview these details will be shown in the past day.

Select the setting “Real Day”, to see values from a whole day in the logbook, although the entered date of the injection or blood glucose measuring was located already at the following calendar day.

You are also able to define the color settings of the grid. Choose *Grid with black / white layout*, when you use the special contrast functions of Windows because of reduced eyesight.
Apart from that you can color the blood glucose area blue or the several blood glucose areas in the SiDiary-common colors for the target area (values below the target area, high values and extreme high values).
You can color the grid in parts of the day (morning, noon, evening), so you can see faster in which part of the day you made an entry.
For better clarity you can choose the option *Alternate table row color*. The rows for events, carbs, basal etc. get alternate different background colors.

With the settings "*Minimum col number"* and "*Column Width"* you can define how much columns will be displayed minimum (even if you are using only 2 columns a day) and the width of the column. So, you can configure the design according to your daily routine: If you read out your blood glucose level infrequently, but also protocol blood pressure values, you can choose a less number of columns but choose the columns in a larger column width. If you need to take readouts frequently – for example in a pump therapy – choose a higher number of columns and a smaller column width.

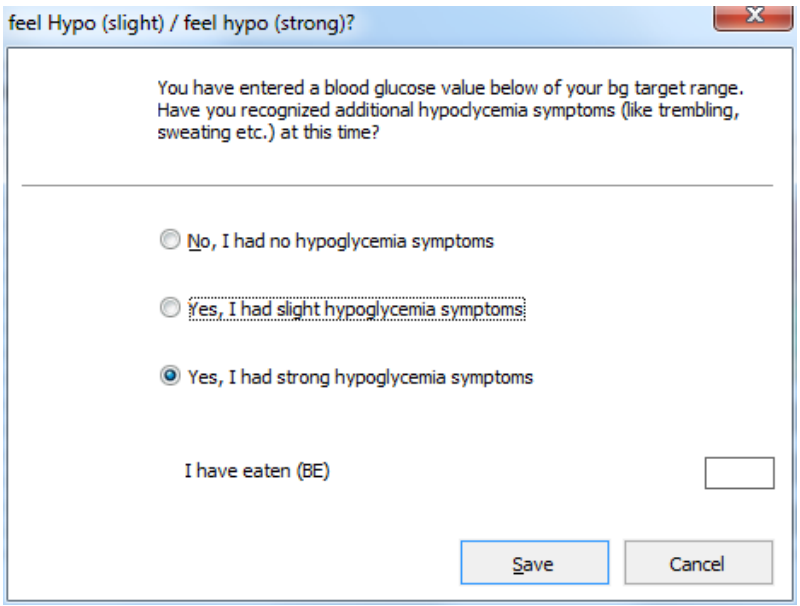
The settings *Left-align columns* or *Arrange columns even* allow you to arrange your logbook entries according to the times of day. Then you see the morning values displayed on the left side and the evening values on the right side of the grid – like the entered time.

Times of day will only be set, if a value is entered into a column. If there is no value, the time of day stays blank. With *Always update timestamps after each tracked BG reading* you can adjust how the already existing times should be handled.

In this option the times of day that are already tracked, will be adjusted to the current time of day. For example: If the time of day is 09:15 o'clock and you enter in the evening at 18:30 o'clock a value, this column will be changed to 18:30 o'clock

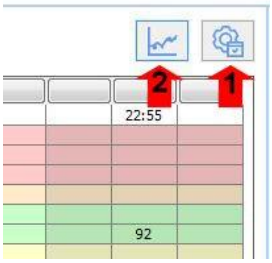
Important: All automatic adjustments of times always refer to the current day. If you change a value from the day before – the already tracked times of that day will remain the same.

The option *Use hypoglycemia window automatically* will show the following screen after entering a blood glucose value that is below the target limit:

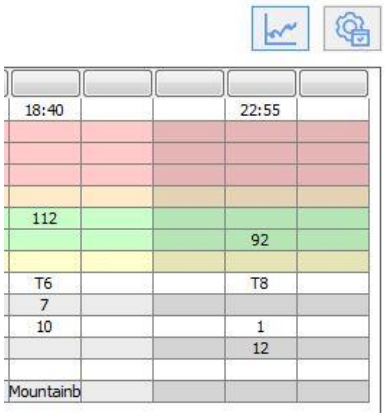


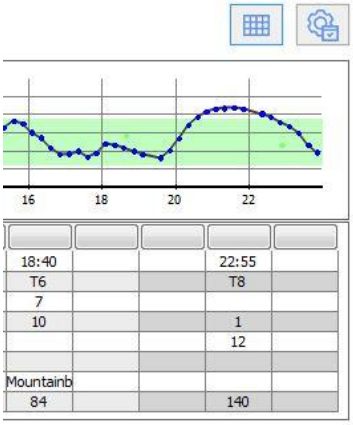
In this screen you could select if you sensed / noticed the low sugar symptoms or not and how many carbs you ate then. After a click on *Save* this information will be saved in the logbook.

8.4.1.5 CGMS view

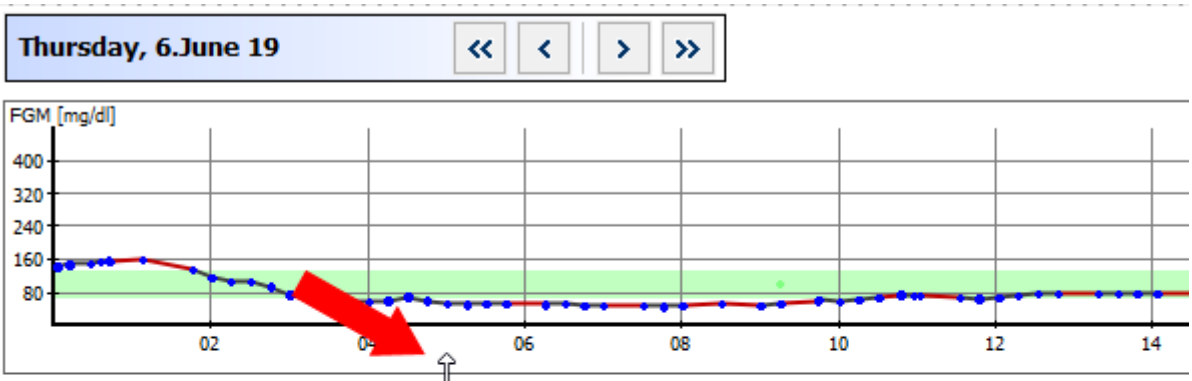


If you use a device for continuous glucose measurement, a CGMS (Continuous Glucose Monitoring System) or a FGM (Flash Glucose Monitoring), then SiDiary can also read the values and save it as CGMS data type. The detail logbook in SiDiary 6.1 or above detects if such a data type is present and then displays the button 2.
With it you can switch between the conventional blood glucose table or the CGMS/FGM curve of the current day.





If you have selected the curve graphic for the view, the CGMS/FGM value will be displayed for each entry in the table in the lowest line. In addition, a further line for the BG value (measured in the blood) will be displayed in this view, so you can better compare BG and CGM/FGM values.

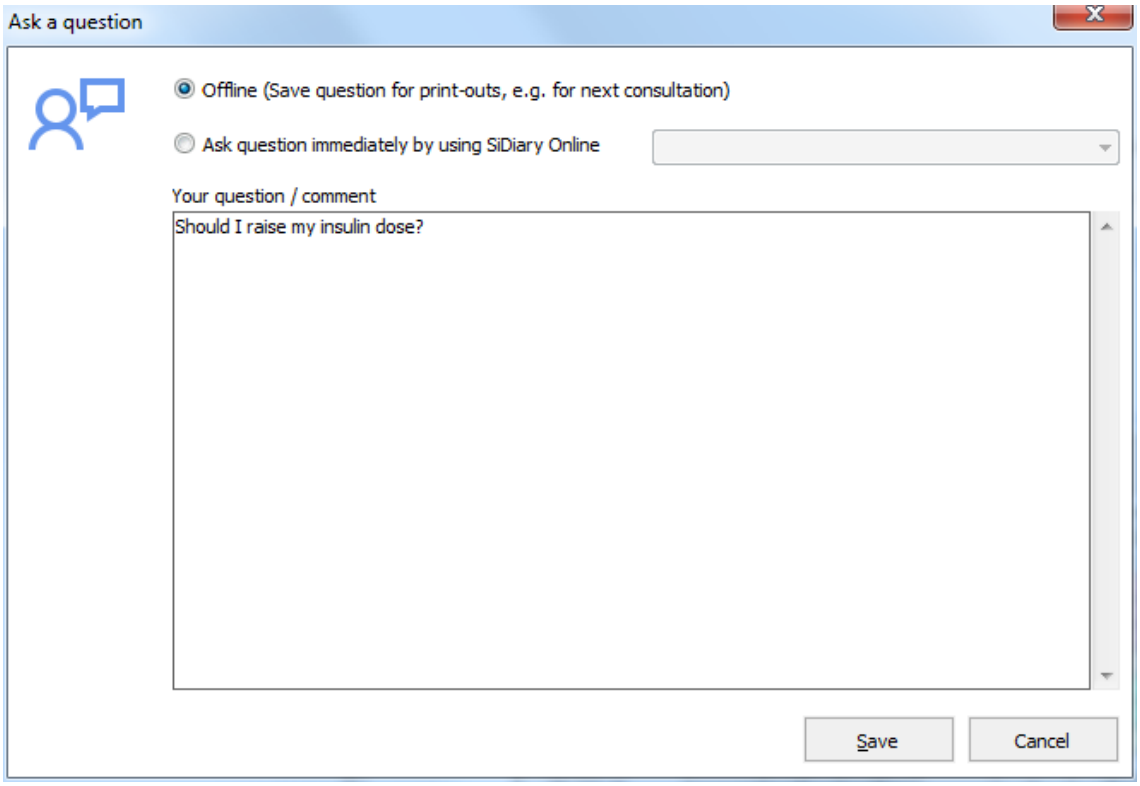


	09:15	10:30	13:00	15:00	18:30	21:20	22:25
Event	T1				-	-	
Carbs (312)	72	24	24	36	24+72	24+36	
Bolus (22)	10				9	3	
Basal (21)	9						12
Bpress.							
Exercise		Tennis;210;+					
Walking (75)		45	30				
Marcumar							
BG [mg/dL]	100				60-	62-	
FGM [mg/dl]	51	67	76	77	92	65	93

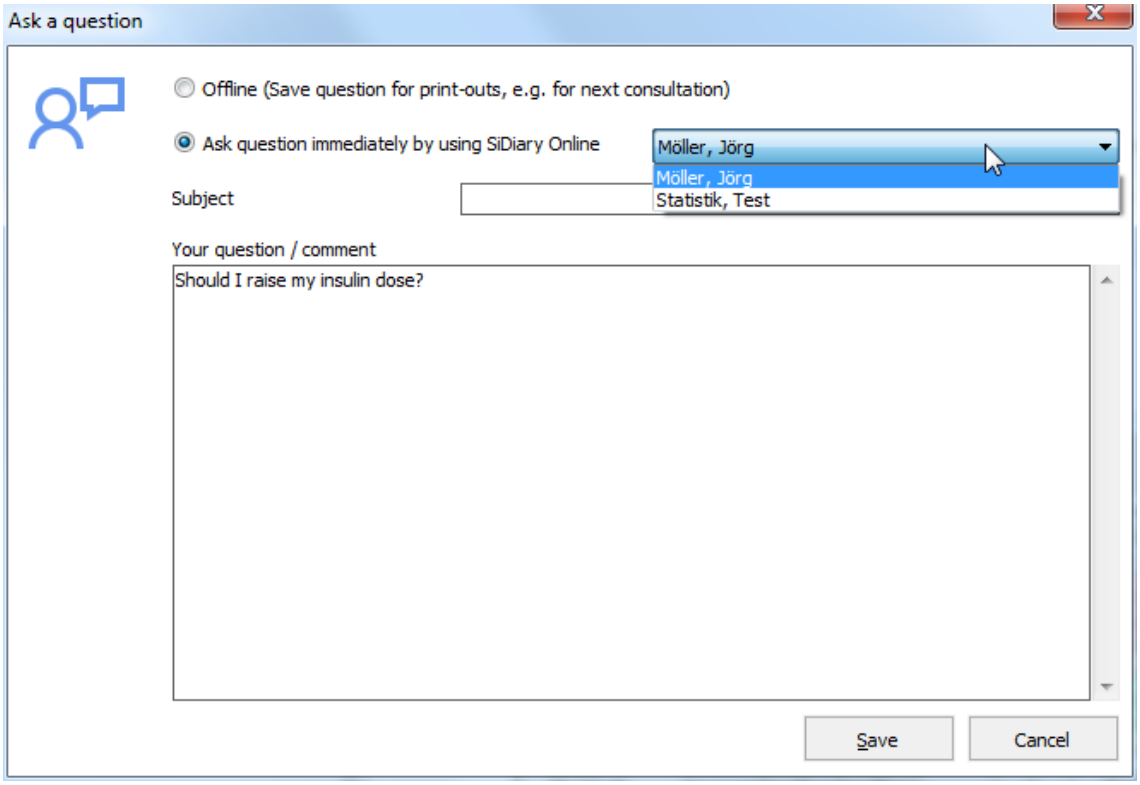
If the gradient graphic is too high or too low for you, you can touch the dividing line with the left mouse button (the mouse arrow then turns into a double arrow) and change the height with the left mouse button held down.

8.4.1.6 Ask a question

The following screen shows you that you can save a question or a comment for any day. These entries (in the *Offline* option) will be marked when you print them, so you can discuss them with your doctor.



Please note the specialty for users that own a SiDiary-Online account (https://diabetes.sinovo.net/).
You are not only able to use this space as backup for your data – you can also share your data with confidants that also have a SiDiary-Online account. You just must grant them access to your account.
These people will be displayed in the list of your contacts. You can send directly a question about a specific date of your logbook to one of your contacts.
With SiDiary 6 you can do this directly from the program without logging in at SiDiary-Online.
When you ask a question with the option "*Online*" and your account details are saved in the SmartSync-settings, the question will be sent directly to the selected contact persons in your contacts.



The contact persons match the contact persons in SiDiary Online which you gave a data release. The selected person automatically gets a note with your question.

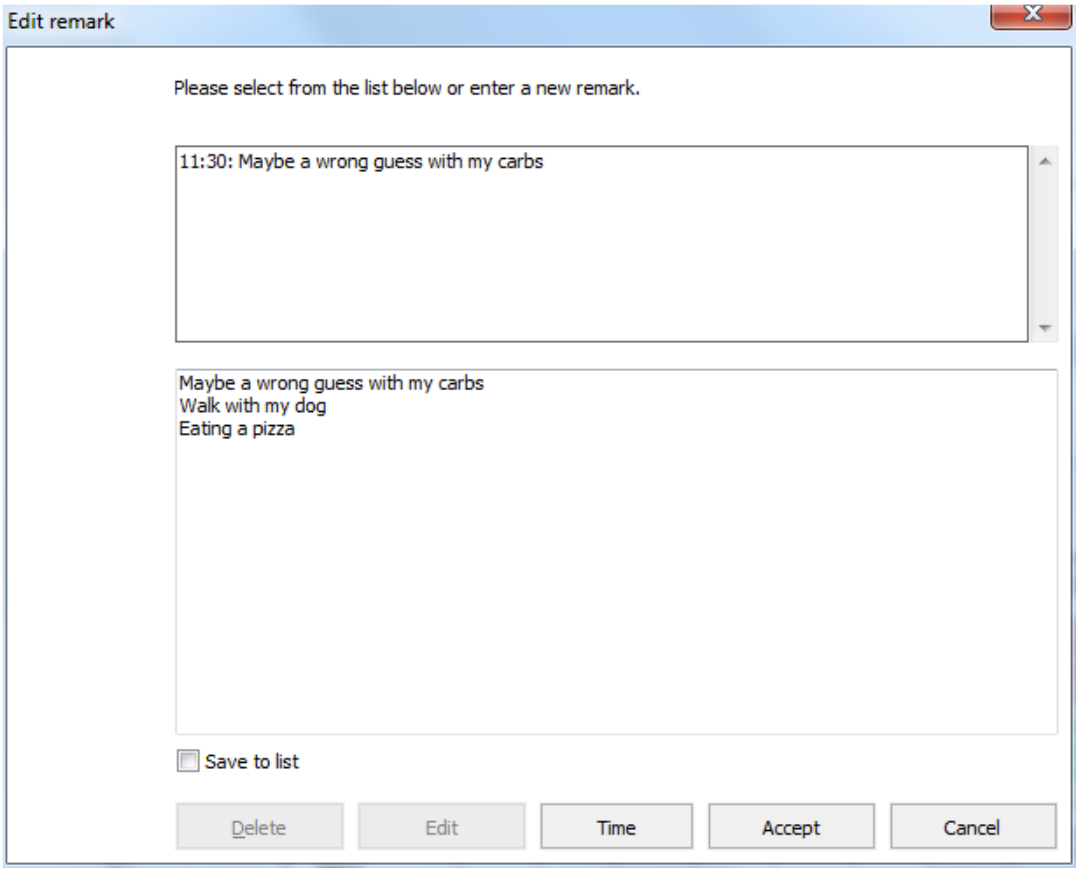
You can see if a question is stored for a day, when the question mark icon next to the button changes its color:

No question is stored:

A question is stored:

8.4.1.7 Remarks

You can write your notes for the day on the screen for notes of course. But with the button *Remark* an extra screen for remarks opens, that makes your work easier.

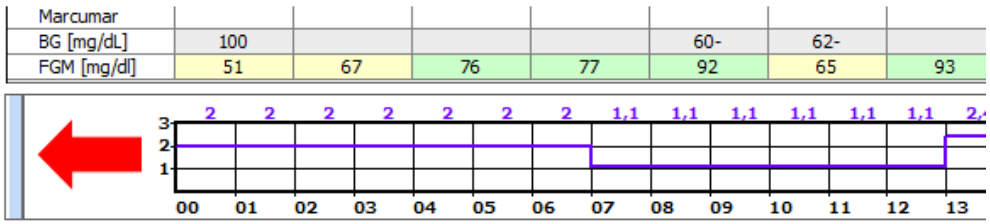


Above you can see the input box and below a shortlist with saved text blocks. You can save a text permanently to the shortlist by activating the checkbox *Save to list* and then clicking *Accept*. So, the next time you do not have to write down this text – you can click on it and adopt it.
With the button *Delete* you can delete a saved text block from the list. With the button *Edit* you can change the text later. With the button *Time* you can enter the current system time.

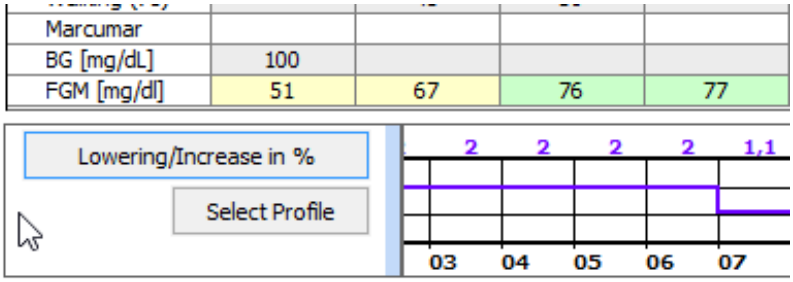
In the example above we first clicked the button *Time* and then on the relevant text block.

8.4.1.8 Basal rates

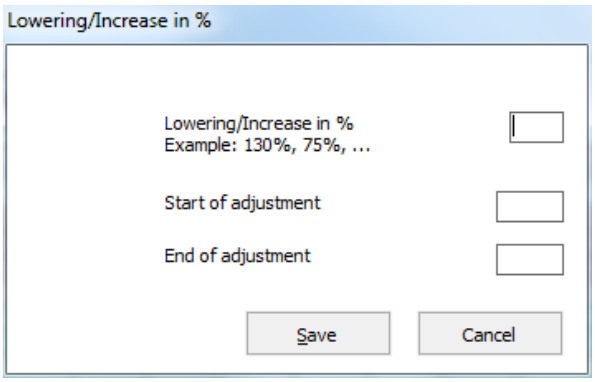
When you are using a pump, you can display your current basal profile for the day with the button “*Basal rates”*. On the left side of the basal rate chart you see the insulin units, below the daytime in a 24h grid and above the basal rate delivered for this time.



When you move the cursor button over the narrow blue bar, the following additional buttons will be displayed:



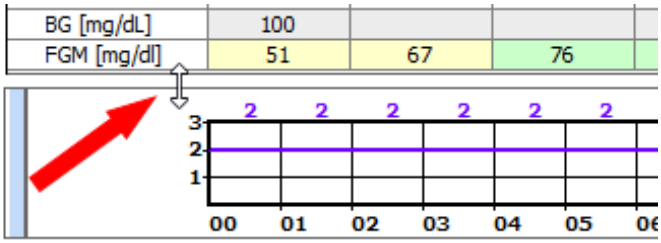
With the button *Lowering/Increase in %* you can make an entry of a temporary basal rate modification:



The button *Select Profile* shows a list box of all basal rate profiles that you have edited so far. So, you are able to select a different profile for the current day (for example, when you have a holiday on a day on that you are usually working).

Hint *If you want to clear or delete a temporary basal rate modification you can just click on 'Select Profile' and choose the profile which should be accurate for this day. After that you could start again with the temporary modification of your basal rates.*

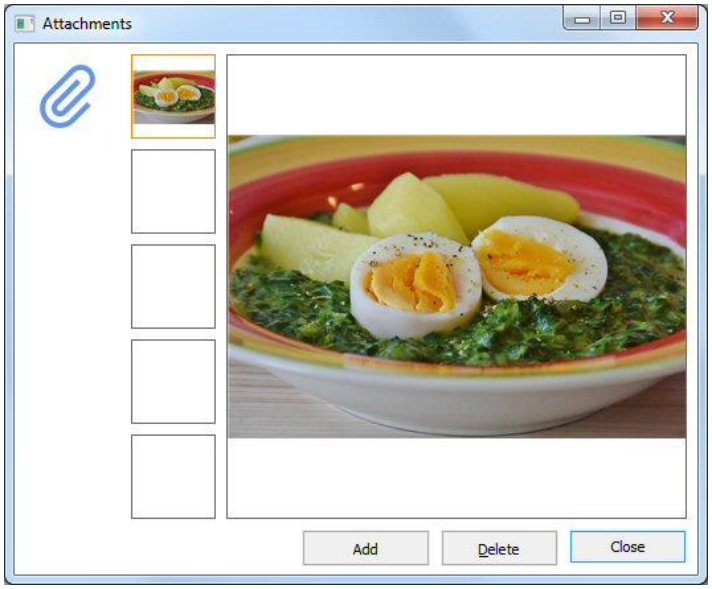
If the height of the basal profile graphic is too large or too small for you, you can grab the frame with the left mouse button and change the height of this graphic while holding down the left mouse button.



8.4.1.9 Store photos/pictures

With SiDiary it is also possible to save pictures. For example, to capture photographs of your meals or to document a wound healing process. These pictures are displayed in the PC version as a symbol at the bottom right under the field for the body weight (marked yellow in the screenshot).

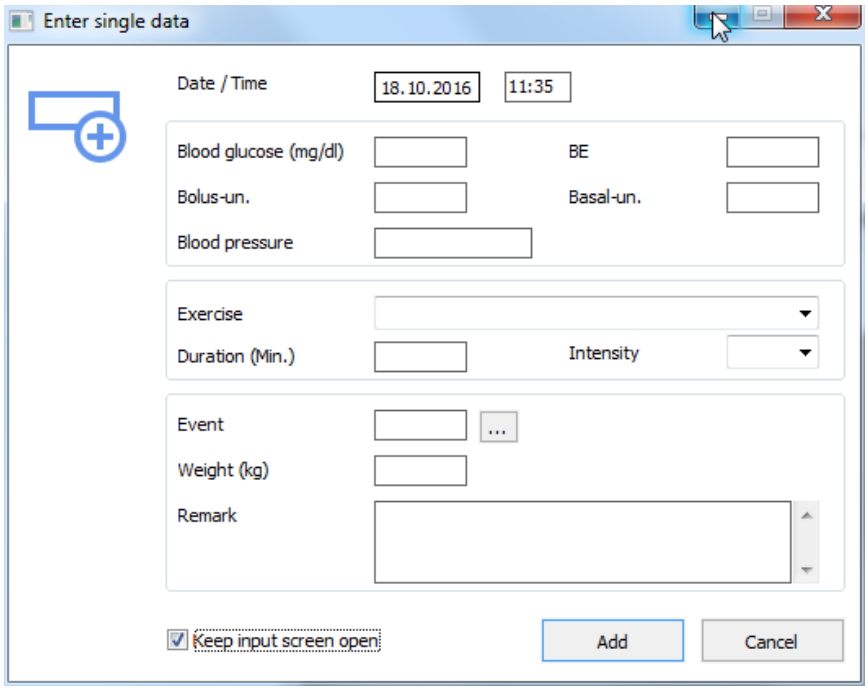
Clicking on it opens a window where you can view, add, or delete images.



Up to 5 images can be saved per day. Apart from the PC, you can also add pictures to the apps, which you have shot with the camera of your smartphone/tablet.

8.4.2 Enter single data (F2)

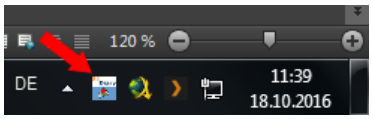
With this function you can open a screen, where you can enter all your values instead of entering them directly into the grid:



All elements from the detailed logbook are available in this screen. You can use this screen for quick data entries. When you activate the checkbox “*Keep input screen*

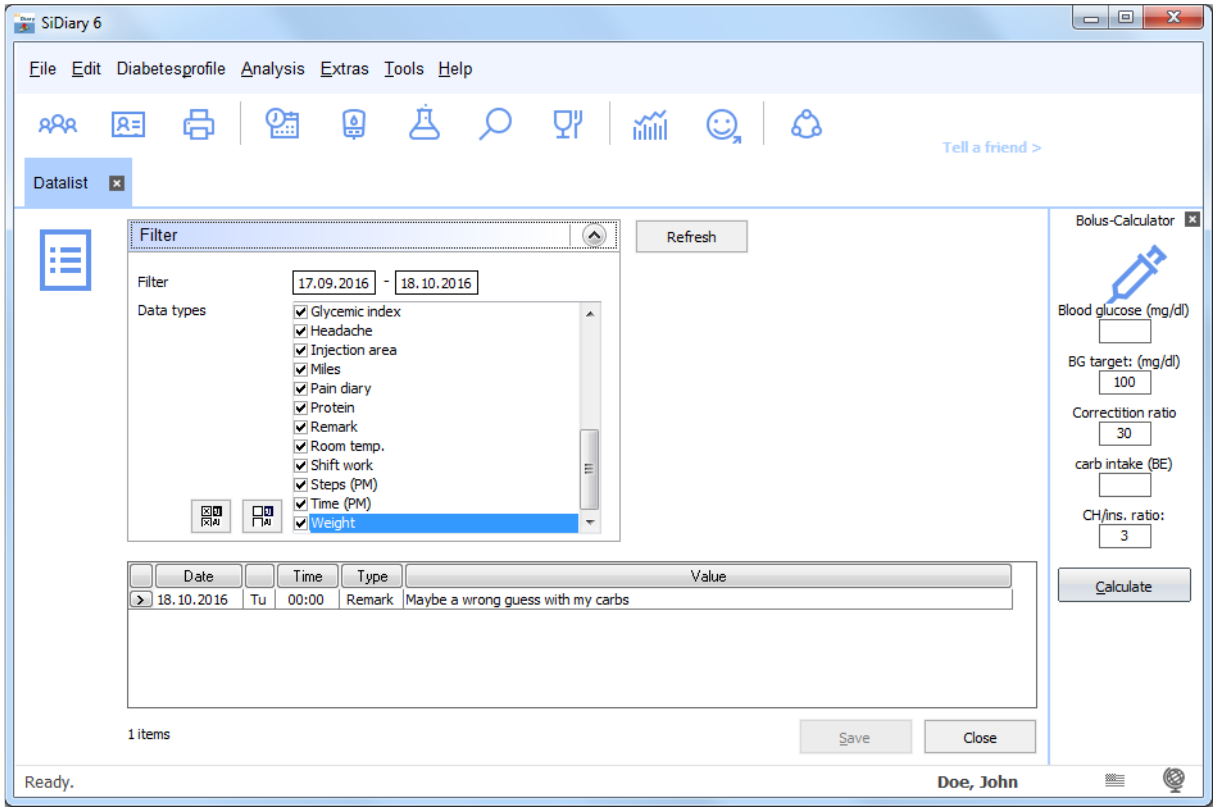
open" and press the minimize button (see mouse arrow) the program screen disappears in the background. The time is running out until you manually change it (e.g. to enter a value later).
To save a data record, please click on the button "*Add"* or press the *Enter/Return*-button on your keyboard.

You can define this screen as your start window in the program settings, so you can make your entries and minimize the program until your next entry. A click on the SiDiary icon in the Systray (area on the right bottom next to the clock, see screenshot) opens SiDiary again with the start window and you can make your next entry.

Systray with SiDiary icon: 

8.4.3 Data list (Shift+F4)

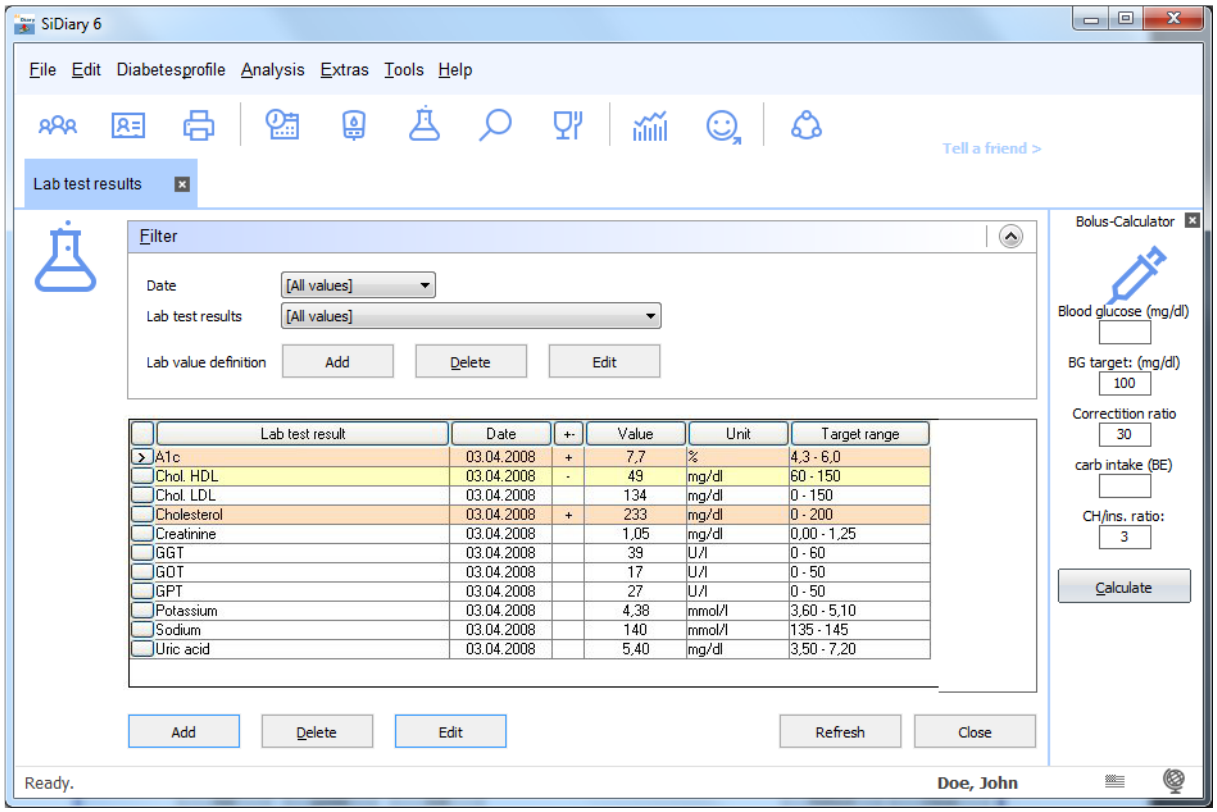
In this screen you can find all entered data tabular listed. You can define an exact time range that will be displayed. In the filter you can filter your data by time and/or by data type. Then you will see for example only your exercise data or your blood glucose data etc.



This list is qualified to make changes in certain records (for example in the data type "basal") because you do not have to skip through every single day.

8.4.4 Enter laboratory results (Ctrl+L)

In this screen you can enter your lab result values and laboratory reports. For example, results from blood tests, urine tests / kidney parameters or from the eye specialist.



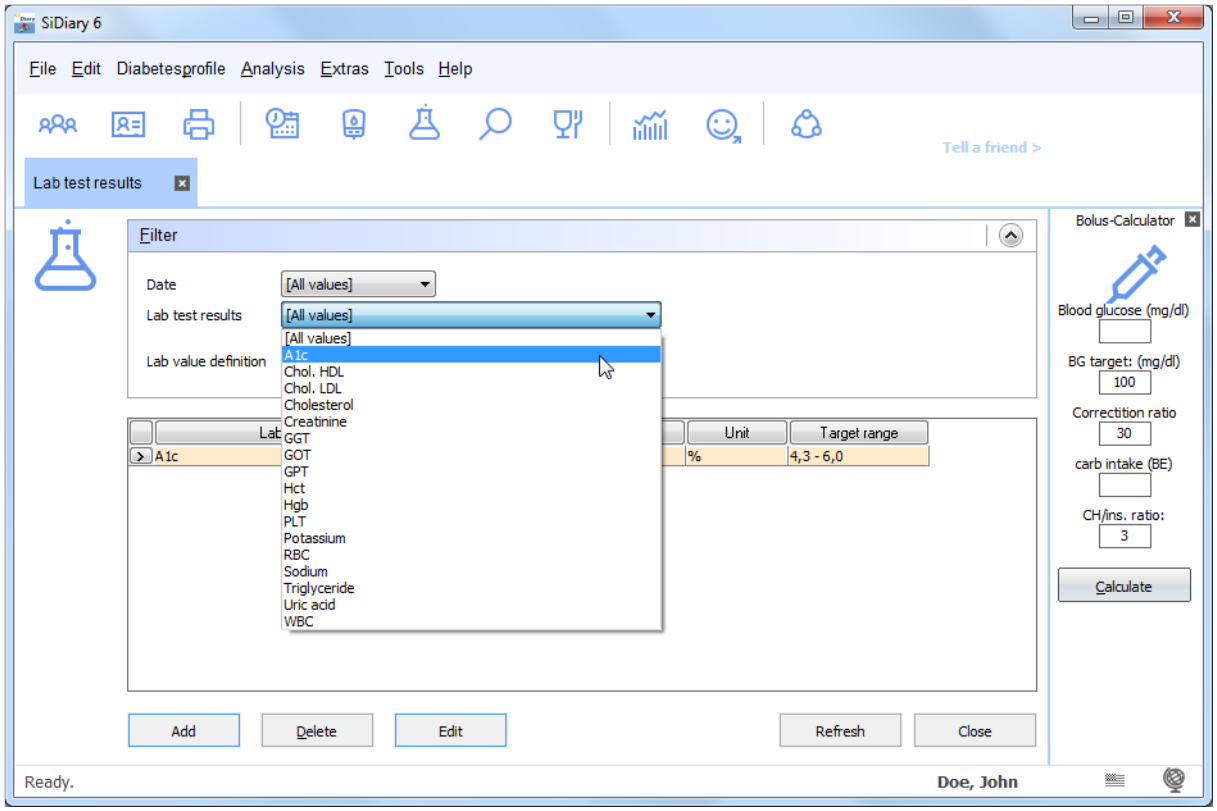
With SiDiary you can define any lab parameters for yourself, i.e. you can add your own parameters to the several standard parameters and track results in these new parameters.

Additionally, you can enter for every lab parameter and lab result the reference range from the laboratory. SiDiary implements this data and shows you the exact values that are beyond the standard values with a colored accentuation. Laboratory results below the standard are colored in yellow, values above the target range are colored in orange.

You can enter the reference range not only for the lab value definitions, but for every single lab result value. This is very important, because with a change of lab result it can be possible that other measuring methods were used, and the results would not be directly comparable with each other. Statements about the trend of parameters cannot be made until the additional consideration of the reference ranges (that you can ask for at your medical practice or the laboratory if necessary)!

Please remember to adjust the reference range to the reference range of your laboratory before the first use of the pre-set standard lab results!

For this purpose, please click on *Filter* and the screen for filter adjustments opens.



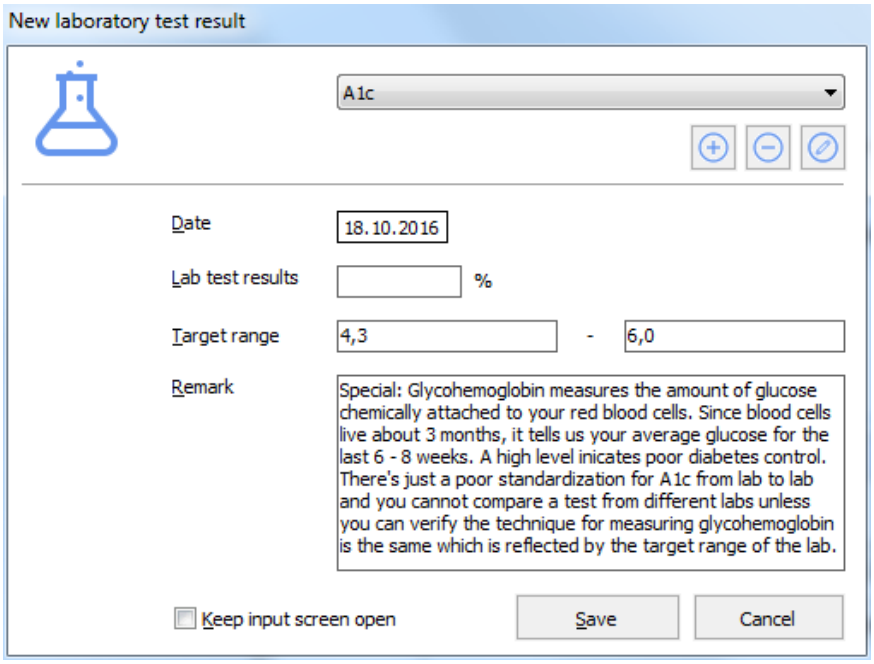
Select a lab result and click on *Lab value definition → Edit.* Now you can enter the reference range (normal range) that your laboratory is using and save this value permanently. With the next entry of a lab value the reference range will be automatically entered by SiDiary (but can still be changed manually).
With the button *Lab value definition –> Delete* you can delete the selected lab value definition completely from the list.
To add a new lab value definition, click on *Lab value definition –> Add*.

Hint

Next to the lab values you can manage also all other medical examinations. For example, eye ground check-up (fundoscopy). Name the new lab value definition e.g. "fundoscopy" with a normal range 0 until 0, unit: points. Define which point value stands for which statement: 0= everything okay, 1= slight changes, 2= profound changes, 3= needs to be lasered

With the filter options you can also filter the data records of an exact day (that you already entered) or single values.

To add a new lab value, please click on *Add* and a screen to add the value opens.

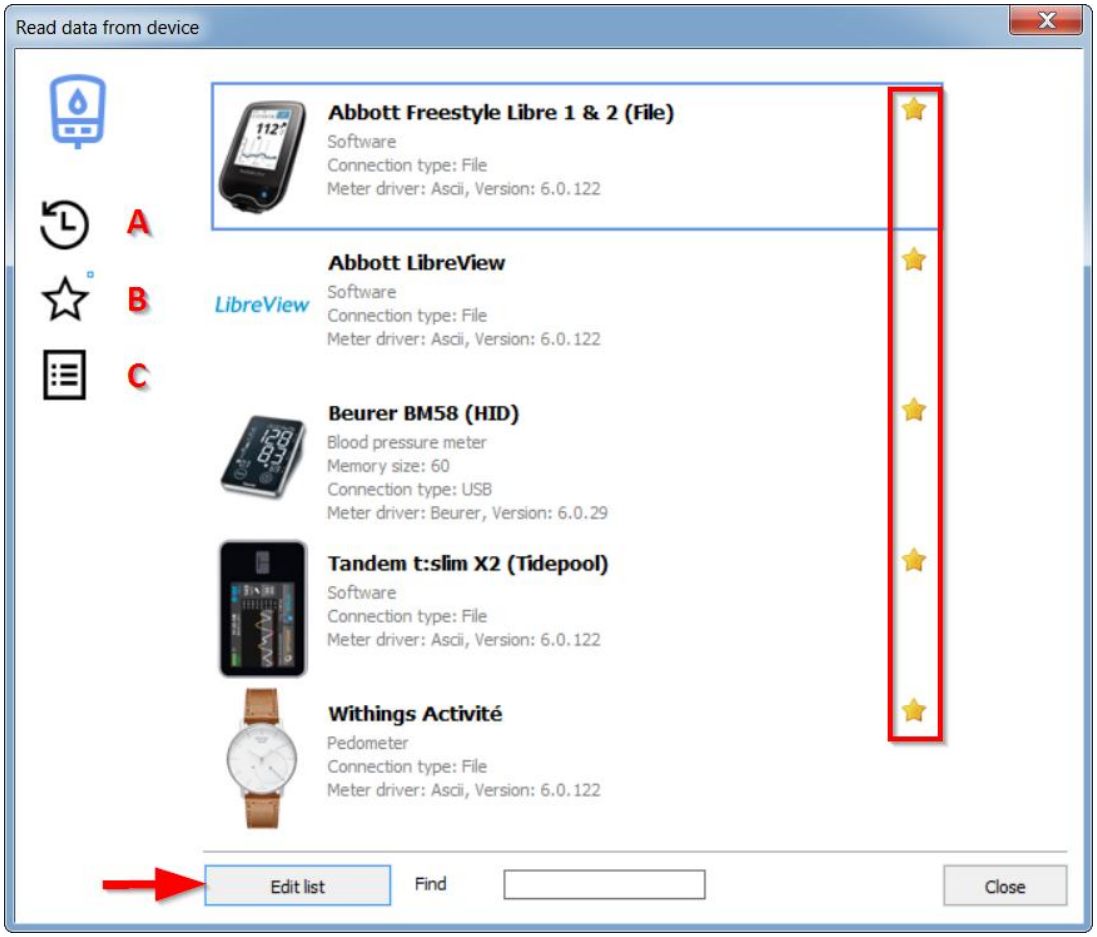


In the dropdown list you can choose the lab value type. With the three small buttons under the dropdown list, you can add a lab value (**+**), delete a value (**-**) or change a value (third icon).
You can click the checkbox *Keep input screen open* when you are adding more than one value. After entering a value, please click on *Save* to save this value permanently. Then you can choose the next lab value type from the dropdown list and continue, if you want.

With the buttons *Delete* and *Edit* you can delete / edit already entered values. Therefore, click on the value you wish to delete / edit and then on the appropriate button. The button *Refresh* makes an update of the screen display. Sometimes this is necessary, when a data entry or data modification is not directly viewable.

8.4.5 Download blood glucose meter / insulin pump

With this function you can readout data from all standard meters, lots of insulin pumps and blood pressure meters, which have a data interface in SiDiary. After clicking on the menu entry *Download blood glucose meter/ Insulin pump* the following screen with a list of the available drivers will be opened - so you can transfer data from your meter to SiDiary.



On the left side you see three black buttons:

A. = Show last used devices
B. = Show devices marked as Favorites
C. = Show all devices

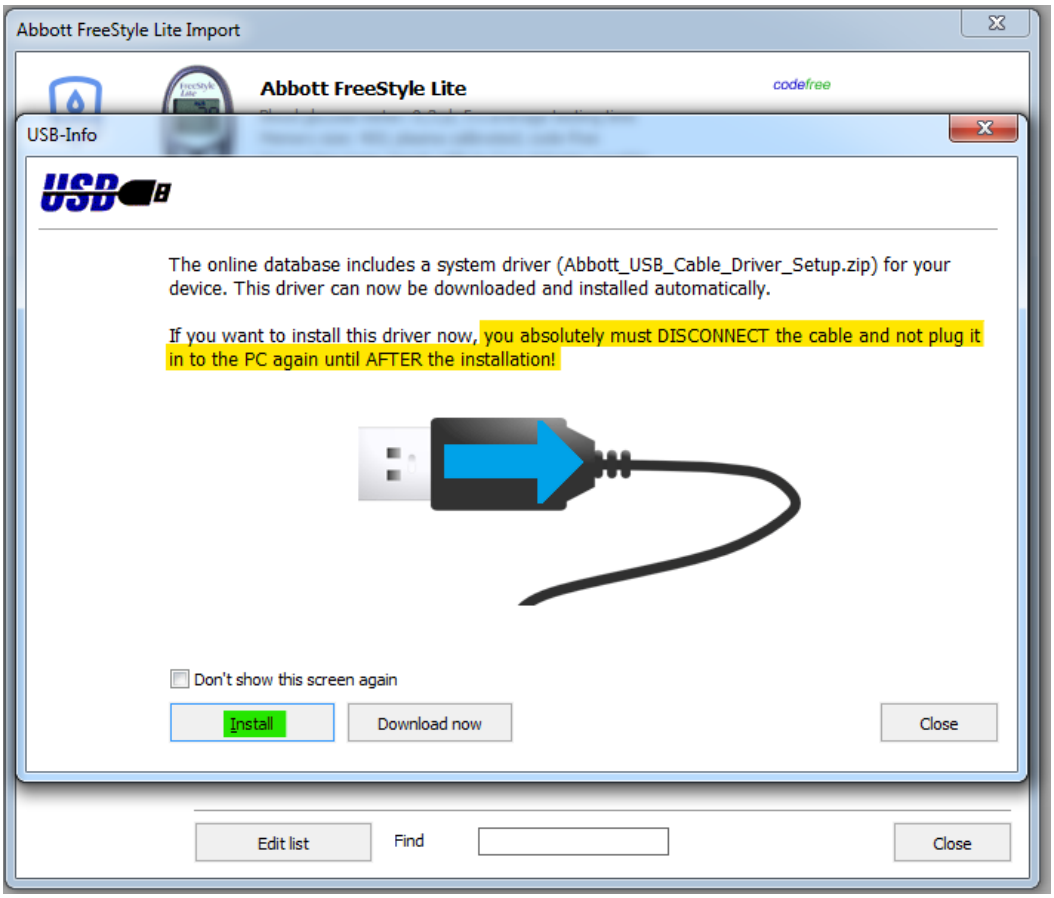
The small blue square next to the button (here next to button B (Favorites)) always shows you which of the three lists is currently displayed.

The stars on the right side are used to allow you to easily add or remove certain devices or import filters from your favorites by simply clicking on the corresponding star.

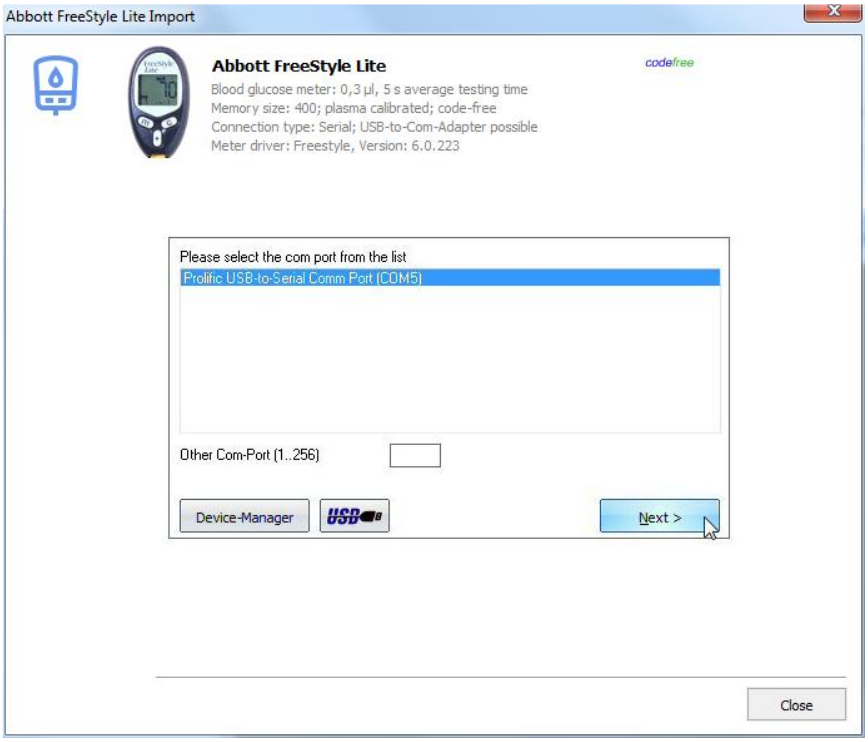
With the button ‘Edit List ' you can hide all the meters that you do not use (to make the list clearer).
There you can also specify which devices should be displayed as your favorites in a smaller, clearer list

You can also use the search box and type the name of the meter, to find it in the list faster. A part of the name is enough. For example, if you enter "Omni" and then press the Enter key on your keyboard, all devices with the string "Omni" in their name will be displayed (e.g., **Omni**Pod and **Omni**test).

You can see various details in the selection list about the meters and how to connect the meter with your computer. If the connection type there is "Serial", a Windows system driver must usually be installed to be able to read out this device. SiDiary supports you here as well:



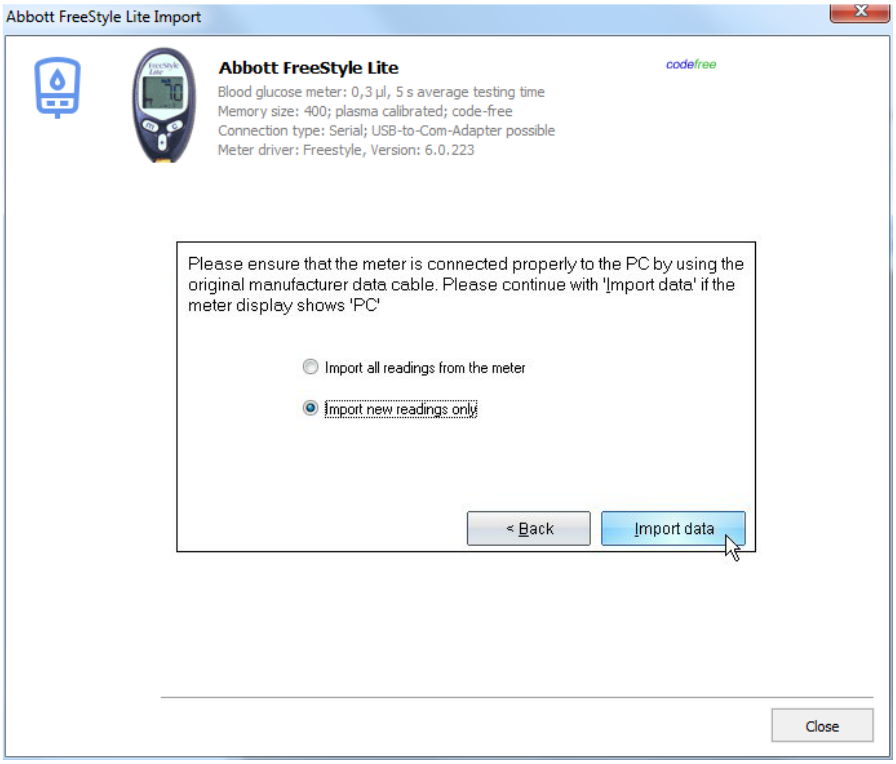
In the next step you can select with which port the meter should be connected. Most of the producers offer a serial interface and an appropriate transfer cable.



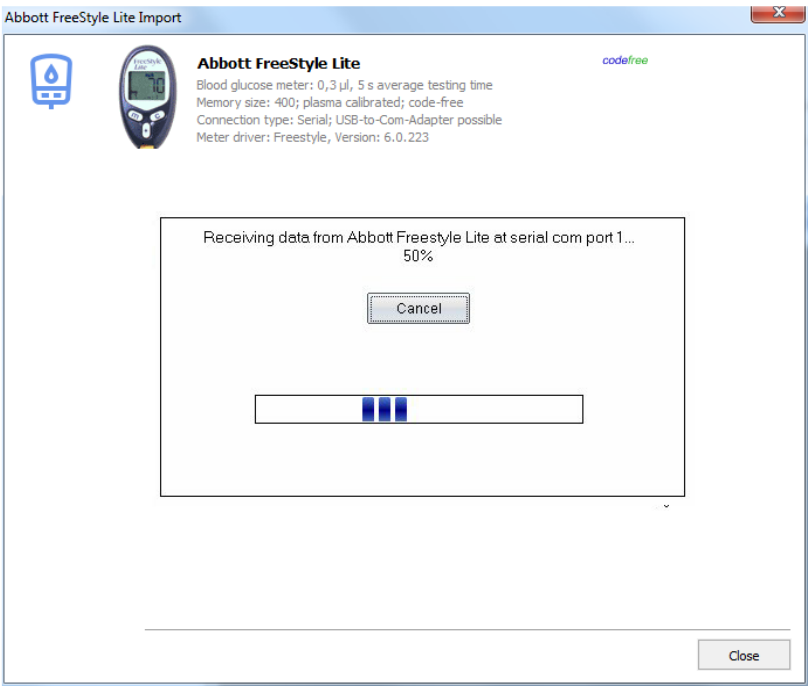
In some cases, the producer of a device generates a virtual serial interface at the USB-port or Bluetooth-port. **In this case it is important that you have also installed the original driver of the producer, to make the virtual serial interface available on your computer!**

If your computer does not provide a serial interface anymore you can also use a USB-to-serial adapter. You must install the original driver from the adapter as well. You cannot continue until the new serial interface is visible in your screen (see our example in screenshot above – here it is the "Prolific USB-to-Serial Com-Port")!

With the button *Device-Manager* you can open the Windows-Device manager and check if there are maybe device conflicts. The button *USB* opens a message box with a link to the SINOVO-driver-website. We collected a lot of standard drivers; in case you lost the driver CD of the producer.
When you have selected the Com-Port you can open the next screen with the button '*Next'* to continue with the data import.



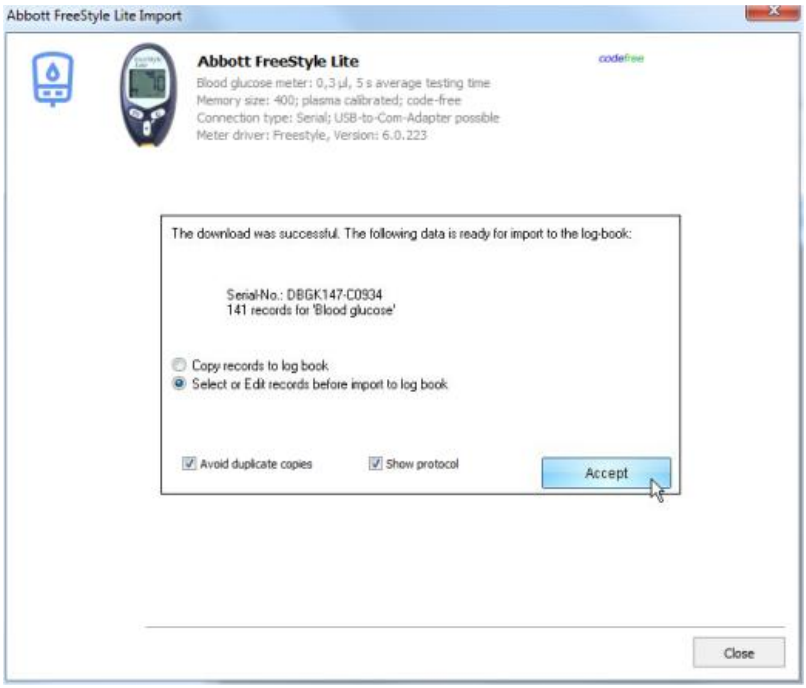
Click on this screen on the button *Import data* in order to start the connection with your device. In the following screen you can see the import status.



When the communication with the device is finished, you can see a screen with the serial number of your device and how much data is ready for transmission (see screenshot below), Please notice that some devices do not send their serial numbers to the PC. SiDiary cannot display these serial numbers.

Below you will also find the checkboxes "Avoid duplicate copies" (so that the same value does not appear several times in the diary) and "Show protocol" (so that after the transfer of the data, you get listed which values were transferred to the diary and at which date/time).

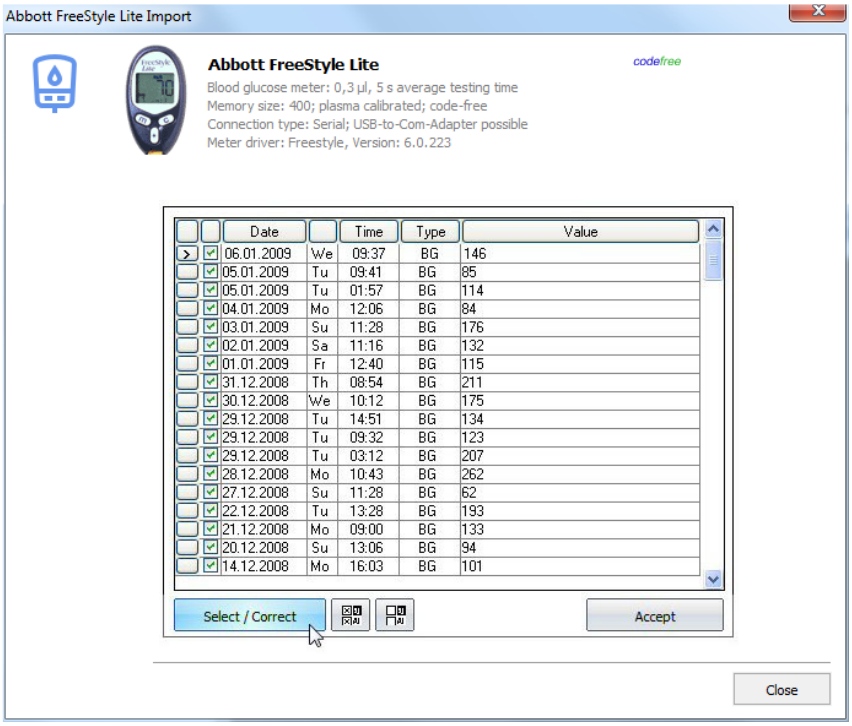
You can additionally select the option if you want to transfer the data unchanged or if you want to change some details before the transmission. This option is useful when, for example, the date or time in your device was wrong. You can change with SiDiary date / time of the data you want to import. Select one of both the options and click *Accept.*



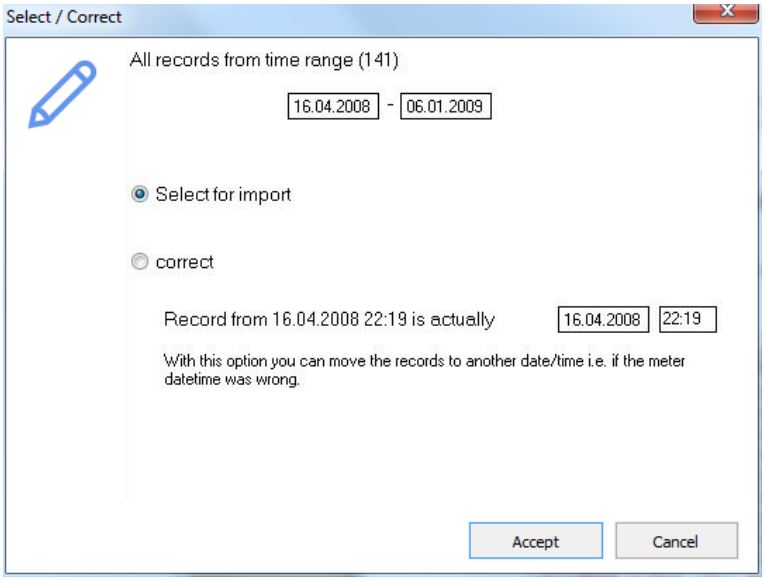
Now you can see in the following screen details of your data. With the checkboxes in the first column of the grid you can select the data that you wish to import. With the buttons  you can select all columns for the import or deselect all of them.

You will also find the button for category selection: 

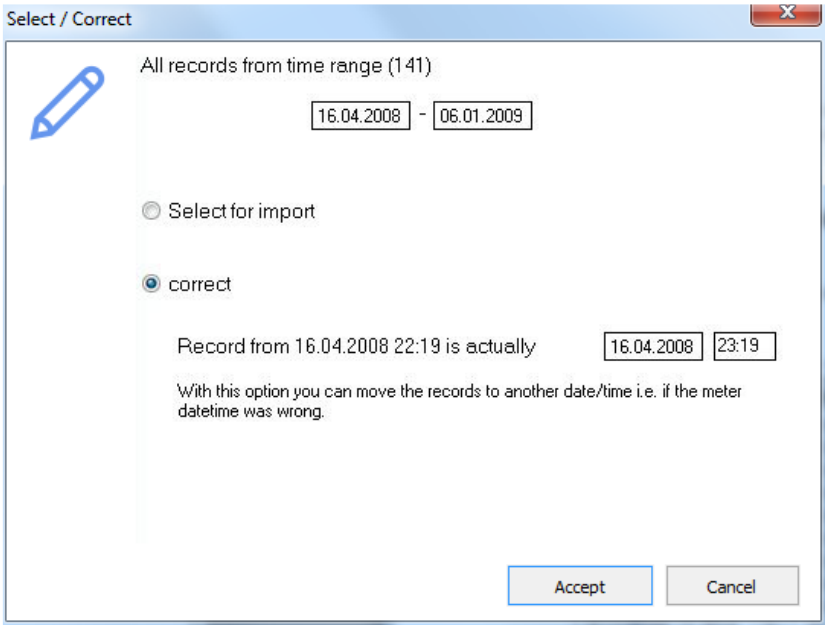
With this, you can determine which category shall be entered into the logbook and which not, if the import has found more than one category with data (e.g. in the case of insulin pumps, in which SiDiary reads data from the category bolus, basal, remarks, etc.).



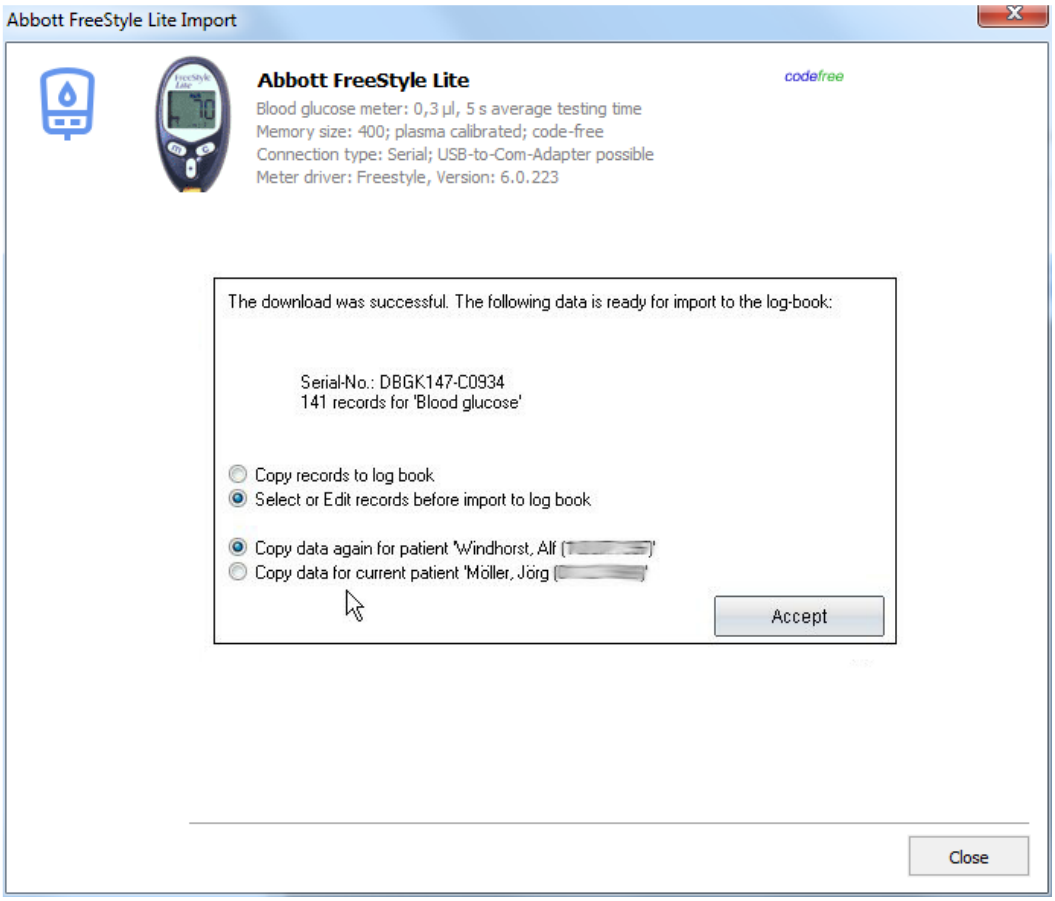
Click on the button *Select/Correct* to open the following screen:



In this screen you can select an exact period of the data that you want to import. You can also select data and adjust the date and/or time.



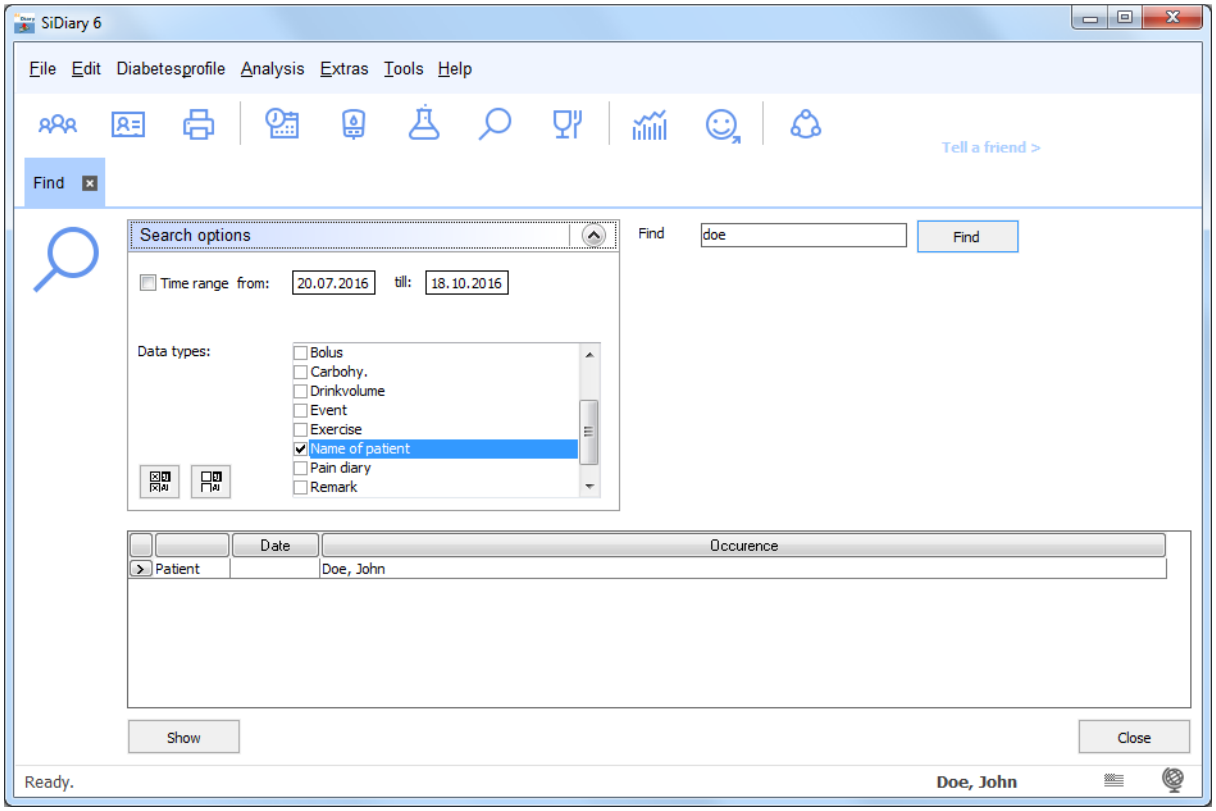
In our example (screenshot above) we entered in the two upper input boxes the time range for the data we want to import and all data in this time range will be adjusted (1 hour backwards).
This will be for example the case when you missed to change the time on your device at the clock changes (daylight-saving time/summertime or winter time).



This screen shows a specialty of SiDiary: If you read out a device repeatedly and open by mistake a different patient, you can change at this time the patient that you want to import. SiDiary gives you a pre-selection of the patient, whose data you imported with that device (and identical serial number) the last time.

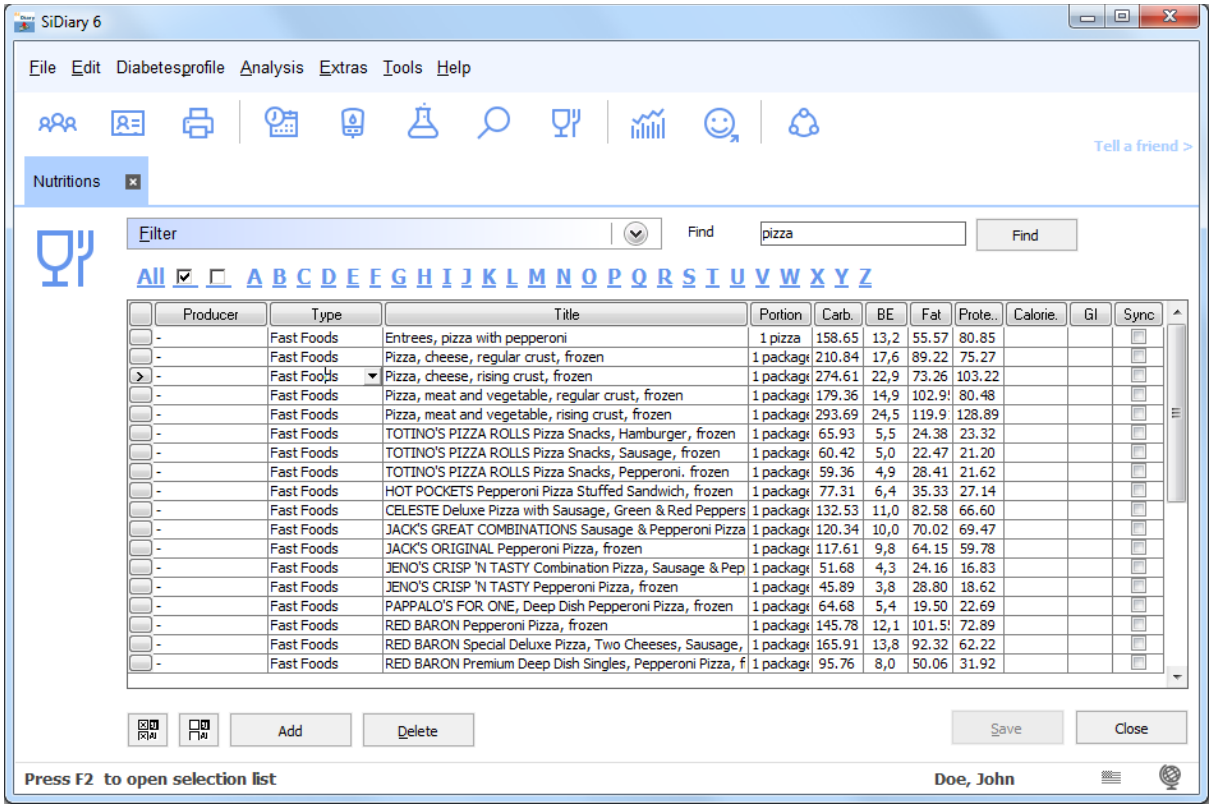
8.4.6 Find (Ctrl+F)

The search screen *Find* helps you to find patients or details from your data records. In the search options you can define a time range and if necessary, the input boxes where you want to search for a key word. After clicking *Find* SiDiary lists you all source of information that matches your search criteria. When you double-click one of the matches SiDiary opens the found day in the logbook and you can see further details. For patient search, the search options are unnecessary. You can search for the patient's name, the day of birth or the year of birth (in case you entered this information in the patient's data before).



8.4.7 Nutrition (Ctrl+N)

In SiDiary's nutrition database you can find many details about nutrition, foods and instant meals.
The nutrition data is stored in country related databases. So, if your SiDiary for example is adjusted in the German language, you can only see the nutrition database of food which is available in Germany or the German speaking countries.
As you can see in the screenshot you can also search for a specific item, or you can click on an alphabetic character and see all entries for this character.

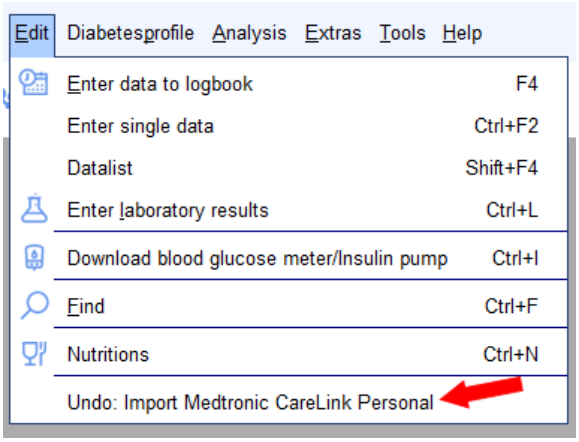


In the nutrition table you find columns for the producer, type, nutritional values and a column with checkboxes where you can select the entries that you want to synchronize with your mobile device. All selected entries will be synchronized with your mobile device on the next synchronization with your mobile device and will then be also available on your mobile device (only available for Pocket-PC and Smartphone with Windows Mobile).

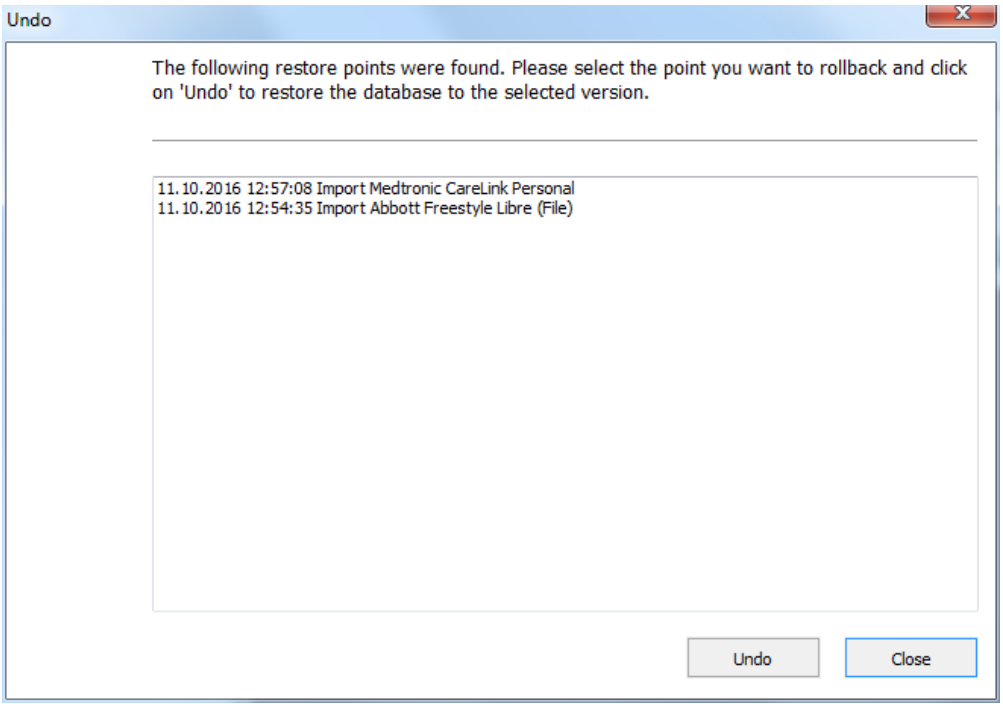
At the end of the screen, you find these buttons:  With these buttons you can select or deselect all data entries. You can also edit data entries on this screen. You can add nutrition values or edit the standard entries of SiDiary with the buttons *Add* or *Delete* or by direct editing within the grid.
If you open the dropdown list *Filter,* you see additional filter functions for the display of the nutrition database. You can list for example all foods of one producer or all foods of a type. You can also adjust the sorting of entries.
With the buttons right to the dropdown lists you can as well edit the standard producers or edit / add food types.

8.4.8 Undo

With the *Undo* function you can reset the database, which can be necessary in some situations. SiDiary works like Windows with restore points, so you can get back to such a step if required. The most recent restore point is displayed in the menu name.



After clicking on the menu entry, a selection screen opens that shows you all the restore points.

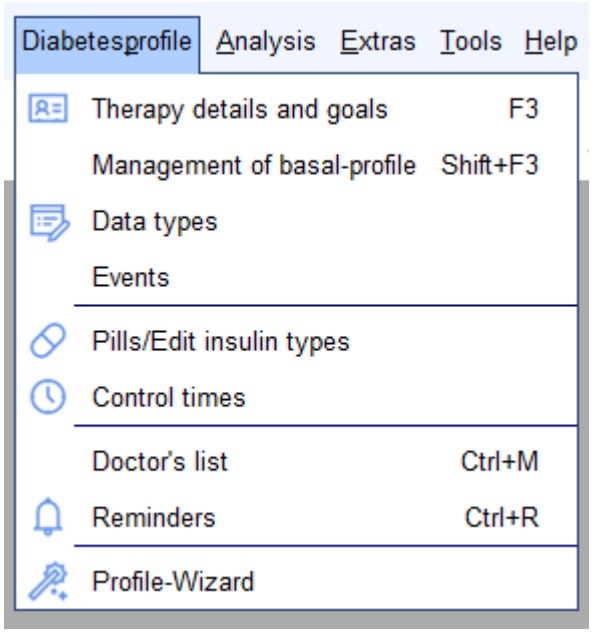


You can select an entry from the list and start the restoring by clicking on *Undo*. SiDiary restores the data to the selected restore point after asking the security question.

SiDiary sets automatically restore points when using certain program functions (for example when you import data, when you read out a meter or when you synchronize data with the online server. You can also "mark" a restore point manual for a data entry (see also chapter 8.7.2 „Backup“).

If you plan to make imports, make a lot of editing or just want to try the several functions of SiDiary it can make sense to set a restore point manual. In case something goes wrong you can step back anytime to the previous data set.

8.5 Menu „Diabetesprofile“



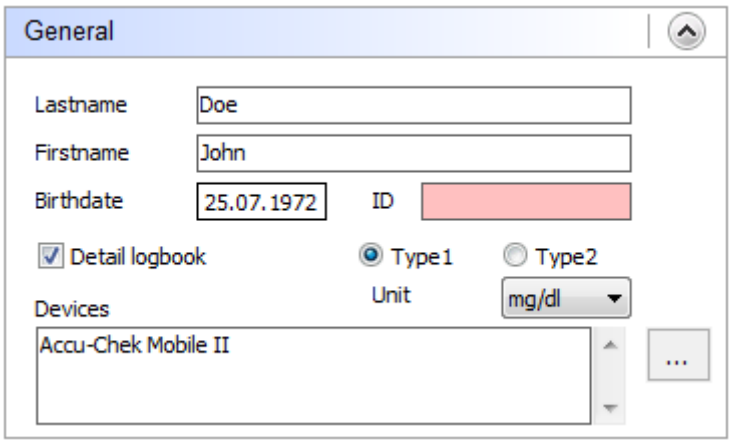
In this menu you can find the program functions regarding the settings of diabetes therapy or the individual settings of your own diabetes therapy.

You can edit for example the sorts of pills or insulin, define measuring time ranges or adjust your individual therapy data.

8.5.1 Therapy details and goals (F3)

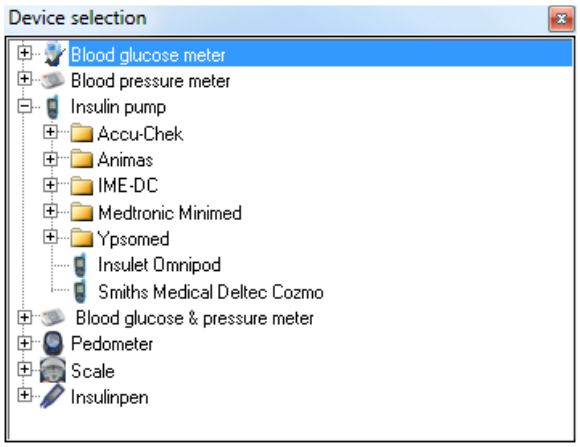
In this screen you can define the parameter of your own diabetes therapy or the diabetes therapy of the current opened patient. The following screen opens when you select the menu: *Diabetesprofile* → *Therapy details and goals* or by pressing the **F3**-button. You can enter your first and last name as general information and your date of birth (which is optional but recommended for medical practices to identify a patient certainly).

In the dropdown list *General* you can select additionally the diabetes type and select the measuring unit type (mg/dL or mmol/L).



When you activate the checkbox *Detail logbook* SiDiary will start automatically the Detail logbook when you enter your data. Otherwise, the standard logbook will start. In the standard logbook you can also switch to the Detail logbook.

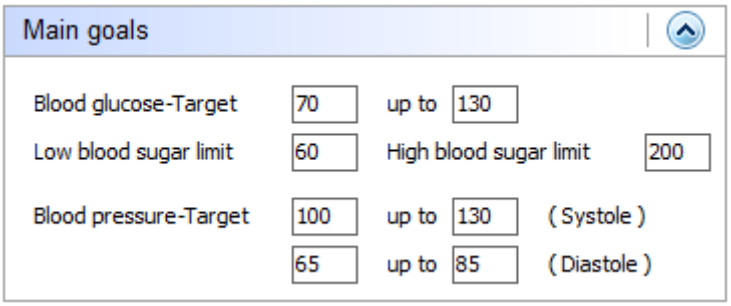
In the input box *Devices,* you can list all devices that you use in your therapy (blood glucose devices, blood pressure devices and insulin pumps). When you click on the button with the 3 points you see a list of the devices that can be imported with SiDiary. Select the devices that you use by clicking on them and close the selection screen by clicking on the cross on the top right.



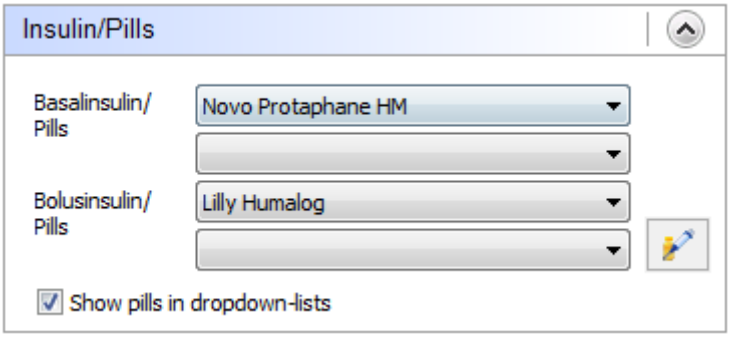
You don't necessarily have to enter it there manually. Whenever you read out a meter/pump that has not been used yet, SiDiary will automatically add this device to this list.

In the dropdown list *Main Goals,* you can select your goal settings, i.e. the blood glucose target, the blood pressure target and define the limits for low blood sugar (hypoglycemia) and high blood sugar (hyperglycemia).

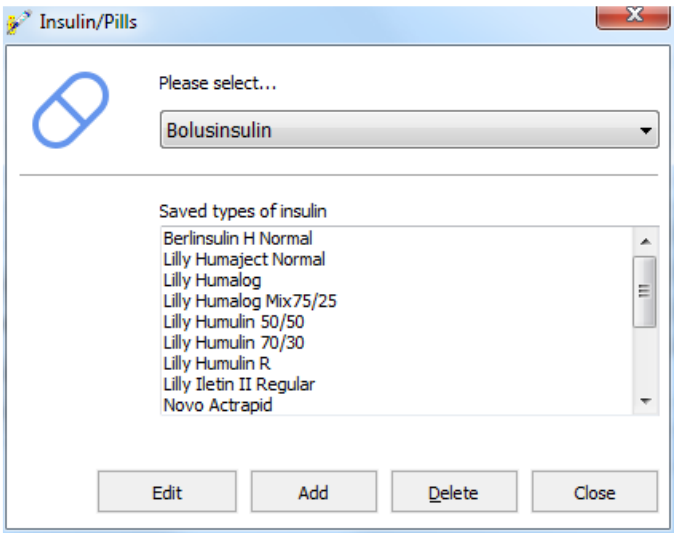
With these limit values SiDiary detects hypoglycemia in the statistics, even if the blood glucose value was not marked with the hypo-symptoms (with one or two minus signs → see also chapter 8.4.1 Enter data to logbook (F4) and chapter 8.6.2 Statistics (F6)). The limit values for hypo- / hyperglycemia are displayed in the statistics with red lines for better differentiation.



In the dropdown list *Insulin/Pills* you can choose the medication which you use in your therapy.

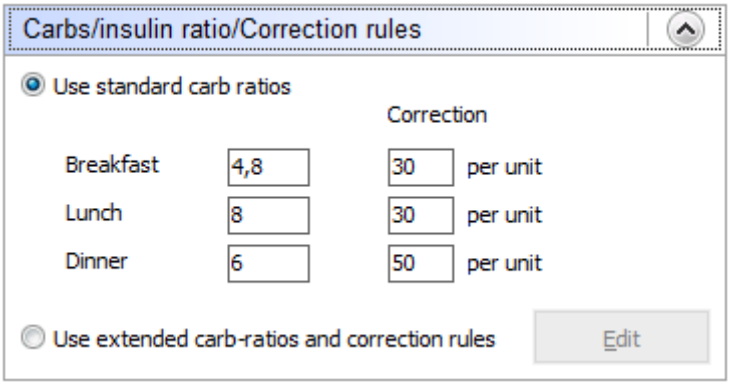


If you use an insulin type or pill type that is not listed in the standard list, yet you can add new medication anytime by clicking the button  or by selecting the menu entry *Diabetesprofile → Pills/Edit insulin types.*

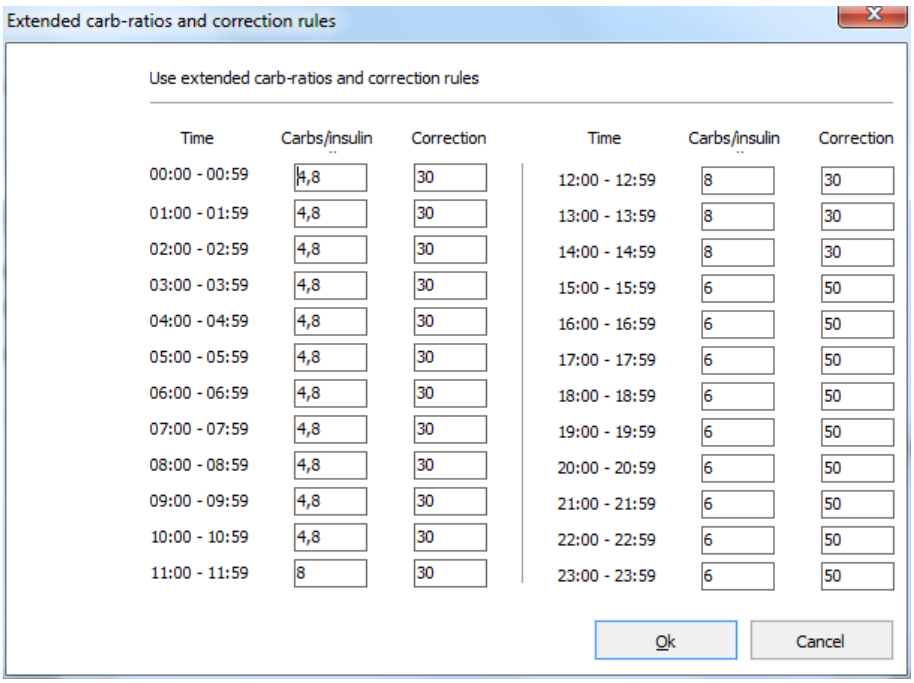


In this screen you can select a category for the data entry (pills, basal insulin or bolus insulin). If you want to edit or delete a data entry, please click first on the data entry and then on the button *Edit* or *Delete*.
By clicking on *Add* you can add a new medication for the selected category. To enter new pills or basis insulin the name of the medication is enough. For the entry of bolus insulin SiDiary wants you to enter the time range of the medication effect. This information is necessary to calculate the A1C value (see also chapter 9 "A1c-Calculation"). The average acting duration for regular short-acting insulin is about 5 hours, for rapid-acting insulin (for example Humalog®, NovoRapid® and Apidra®) the medication effect is about 2 hours.

The dropdown list *Carbs/insulin ratio/Correction rules* contain input boxes for carb ratios and correction rules.



These details are only necessary for certain diabetes therapy forms and can be ignored if you do not know these ratios or use them in your therapy. In therapy forms such as ICT/FIT or pump therapy you can enter the reduced basic data for breakfast, lunch and dinner or you can *Edit* the extended carb-ratios and correction rules:



In this screen you can enter separate carb-ratios and correction rules for every hour of a day. SiDiary uses these data entries for the bolus calculator – apart from that they have only protocolary use.

The carb/insulin ratio indicates how many grams of carbs are covered by one unit insulin. If you have for example a carb/insulin-ratio of 4,8 in the morning that means you must inject 10 units insulin for 48 grams of carbs for breakfast.

Please enter the information regarding the correction rules for high blood glucose values as your doctor advised you. In the displayed example the correction rule in the morning is 30 – i.e. you have to inject 1 unit bolus insulin per 30 mg/dL at a high-level blood glucose value.
For example: When your blood glucose value reading is 190 mg/dL with these parameters – you must inject 3 units bolus insulin at a target of 100 mg/dL. See the following formula for a demonstration:

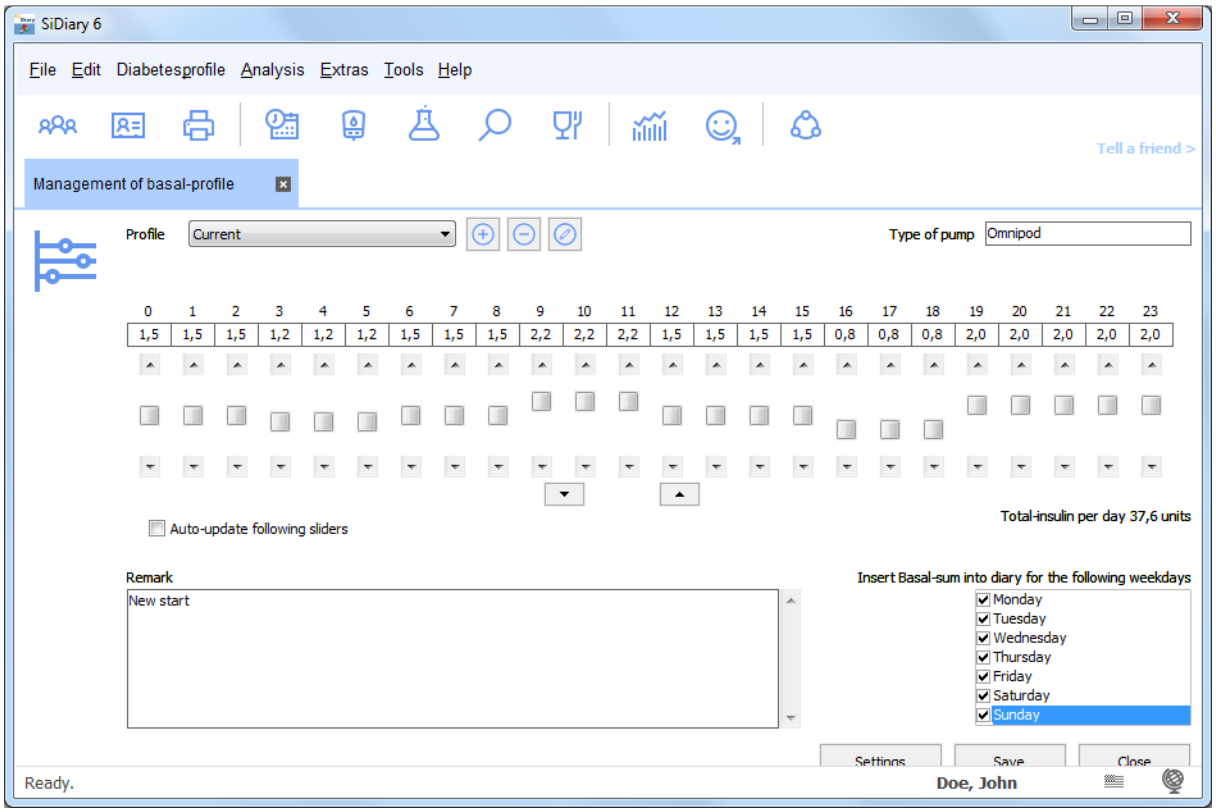
Units' bolus insulin = (BG value minus BG target value) divided by correction rule

Units' bolus insulin = (190 minus 100) divided by 30

⟶ Units bolus insulin = 90 / 30 = 3

8.5.2 Management of basal-profile (Shift +F3)

When you select ***Diabetesprofile*** → ***Management of basal-profile*** the following screen opens where you can setup your basal-profiles.



You can set up as many basal-profiles as you want and link them to the appropriate weekdays. If you add a new profile, you can copy the settings from an already existing profile and edit your specific changes, instead of setting up the complete profile.
With the three little buttons besides the *Profile* dropdown list you can add, delete or edit a profile name.

Hint	*To have an overview of which date you used in a Basal profile you could name the profile with its start date. If you change this profile later, you can also change the name and add the end date.*

You can add the name of your insulin pump in *Type of pump*.

You can enter the appropriate basal rate for every hour of the day. You can enter the value in the input box under the selected hour or you can use the sliders for this hour.

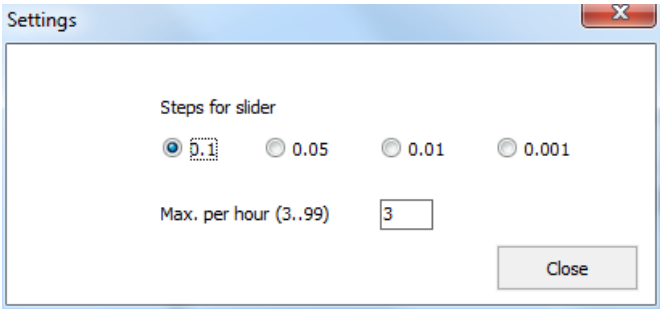
When the checkbox *Auto-Update following sliders* is activated the following sliders will be automatically set to the value which you have specified for the actual changed slider. The two buttons below the slides will increase or lower all basal rates of the day one tick but keep the graph.

You can enter a notice in the input box *Remark* for every basal profile – e.g. when and why you had setup or edit the profile.

You can activate the weekdays with the checkboxes that belong to the selected profile.

The calculated total sum for the day of the basal profile will be entered automatically in the daily report and the graph itself will be transferred into the logbook. If you make temporary changes in the basal profile during the day, the actual graph will be saved for the day.

When you click on the button *Settings* the screen for settings opens (see screenshot below). You can adjust in this screen the increment of the sliders / dosage disposal and up to what maximum the hourly insulin disposal can be. You are also able to enter the basal rate with "thinned" insulin correctly, which means a weaker concentration, often used in the therapy for kids and teenagers.



You can save every modification permanently by clicking on the button “*Close”.*

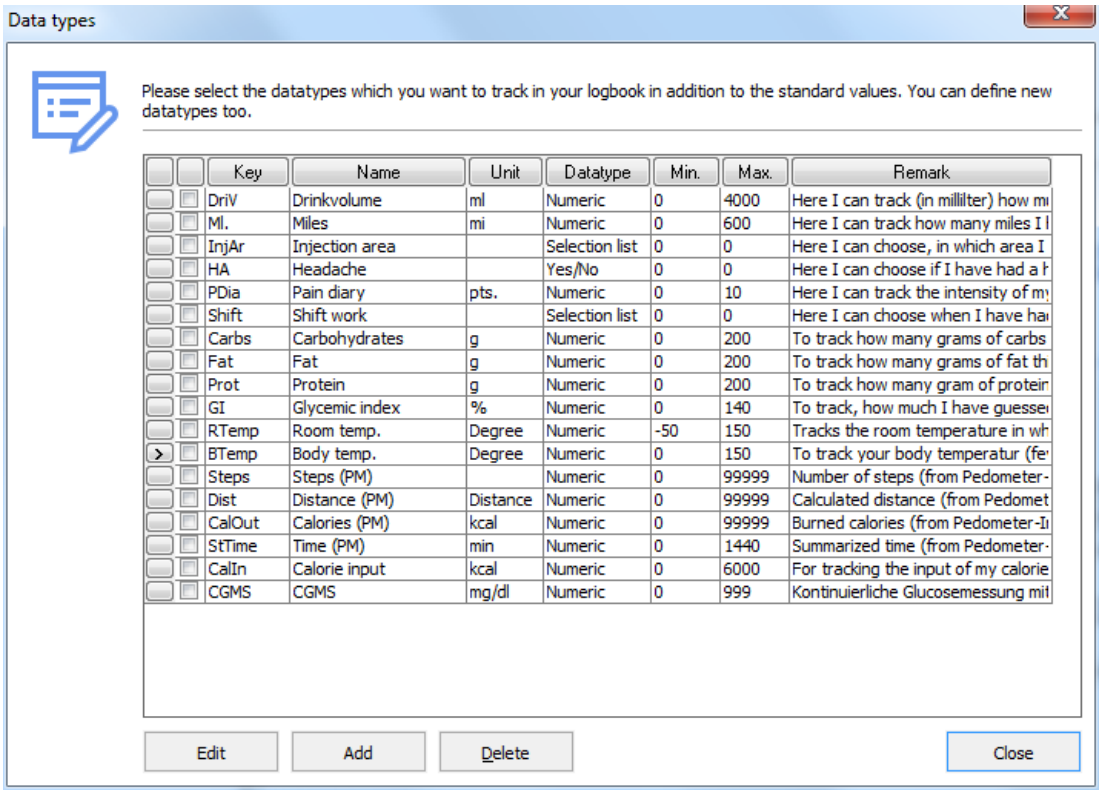
8.5.3 Data types

With the function *Data types* you can create your own additional categories that you want to track in SiDiary. You have the free choice whether you want to enter a numeric value, a selective list, etc.
This gives you the flexibility to track several data or completely different information (for example the distances in your bike training) - besides the standard diabetes parameters - that might be relevant for your therapy.

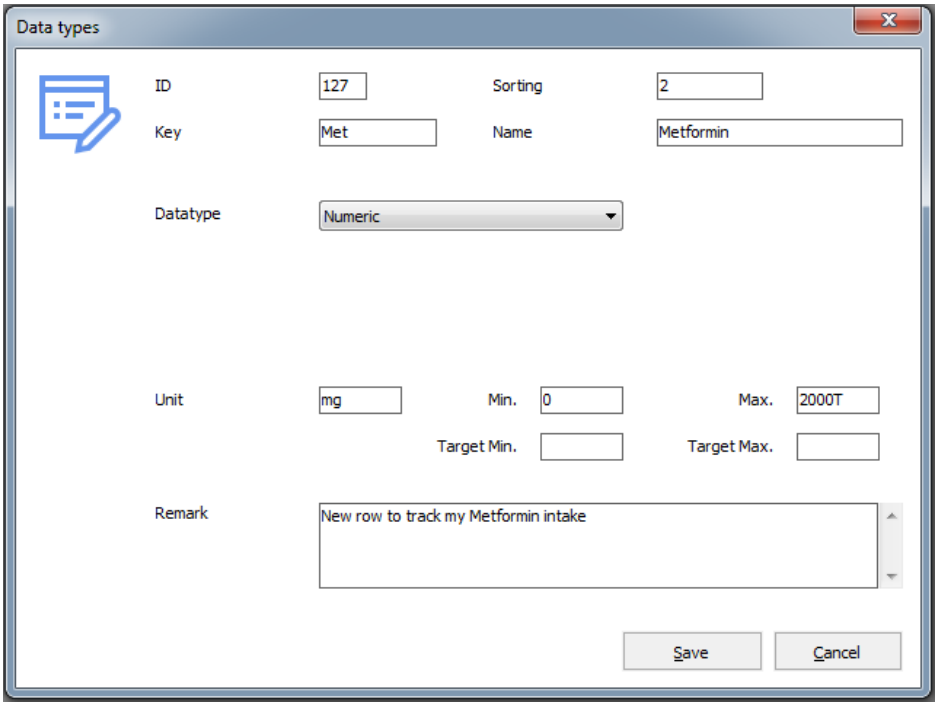
For numeric data types you can also enter minimum and maximum values, so SiDiary is able to help you proof the correctness of the values.
In the logbook SiDiary can also create a day sum for the numerical data types, which is then displayed in brackets after the name of the data type on the left side:

Exercise		Tennis;210;+	
Marcumar			
Walking (75)		45	30
BG [mg/dL]	100		
FGM [mg/dl]	51	67	76

For all defined data types, you can generate statistical graphs.



To add a new data (e.g. for the pill ‘Metformin’) type just click on *Add* to open the following screen (see screenshot).



You will not be able to enter a number in the field *ID,* because this number is generated automatically by the SiDiary program.

Under *Sorting*, you can enter a number according to which the data types are then arranged in the logbook. Here "2" was entered, so now it is displayed in the second place of *own data types.*

Key is an internal program term and can for example be an abbreviation. This is used in the apps instead of the name, because there is usually less space available for a long name.

Name will be displayed later in the logbook if required.

	09:15	10:30	13:00
Event	T1		
BE (26)	6	2	2
Bolus (22)	10		
Basal (21)	9		
Bpress.			
Exercise		Tennis;210;	
Marcumar (1)	1		
Metformin (850)		850	
Walking			
BG [mg/dL]	100		
FGM [mg/dl]	51	67	76

In the dropdown list *Datatype,* you can select how you want to enter your data:

8.5.3.1 Numeric

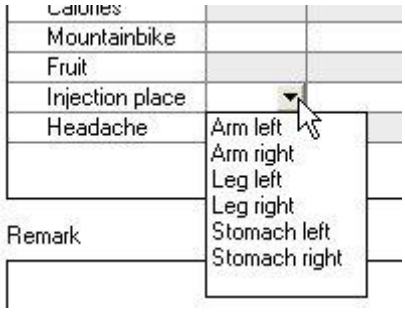
Here you can only enter numbers – for example km/miles from your bike training or steps from your walking training.

8.5.3.2 Free text input

Here you can record everything – alphabetical characters or numbers. For example: You want to enter which fruits you were eating. The entry "2 apples" is possible.

8.5.3.3 Selection list

If the data type allows a few valid entries only, you can edit a list of these entries which will be displayed as a selection list in the grid cell after clicking on the arrow down button of that cell. For example: You want to record where you made the insulin injection.

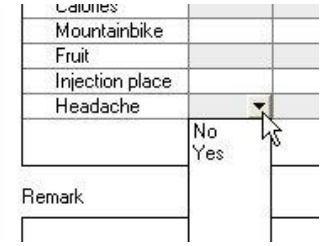


After selecting a data type from the *Selection list,* you can record the values you want to include in the list in the associated field right to the selection list.

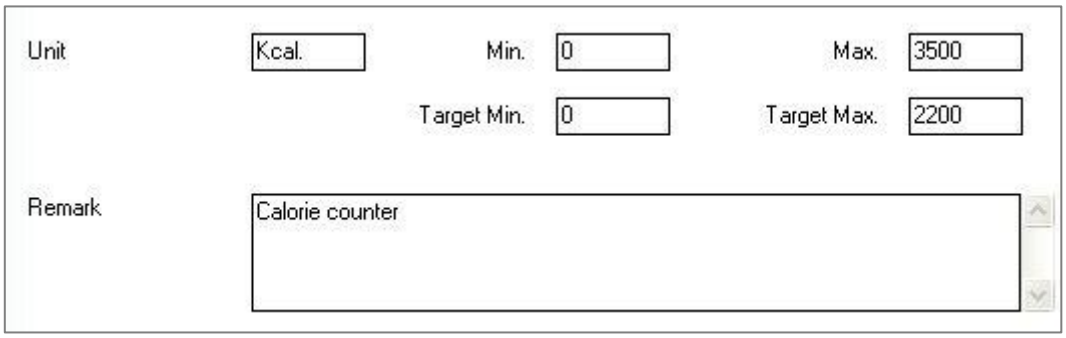
As you can see in the screenshot above the order of the entries are not relevant, because the entries will always be displayed in alphabetical order.

8.5.3.4 Yes / No

With *Yes* and *No* you can define fields with Boolean data types (for non-IT-experts: **True/Yes = 1** and **False/No =0**). For example: You want to protocol, if you had a headache or not.



The *Unit* for the data types as well as *Min.* and *Max.* values are only used with the numeric data type. If you do not enter a value, the entry will be automatically null/zero.



You can define low-level values (*Min.)* and high-level values (*Max.).* This is sort of a safety function for typing errors. If you want to protocol for example how much you are drinking during a day a maximum value of 10 (liter) can make sense, so you cannot enter 25 (liter) instead of 2,5 (liter) accidentally.

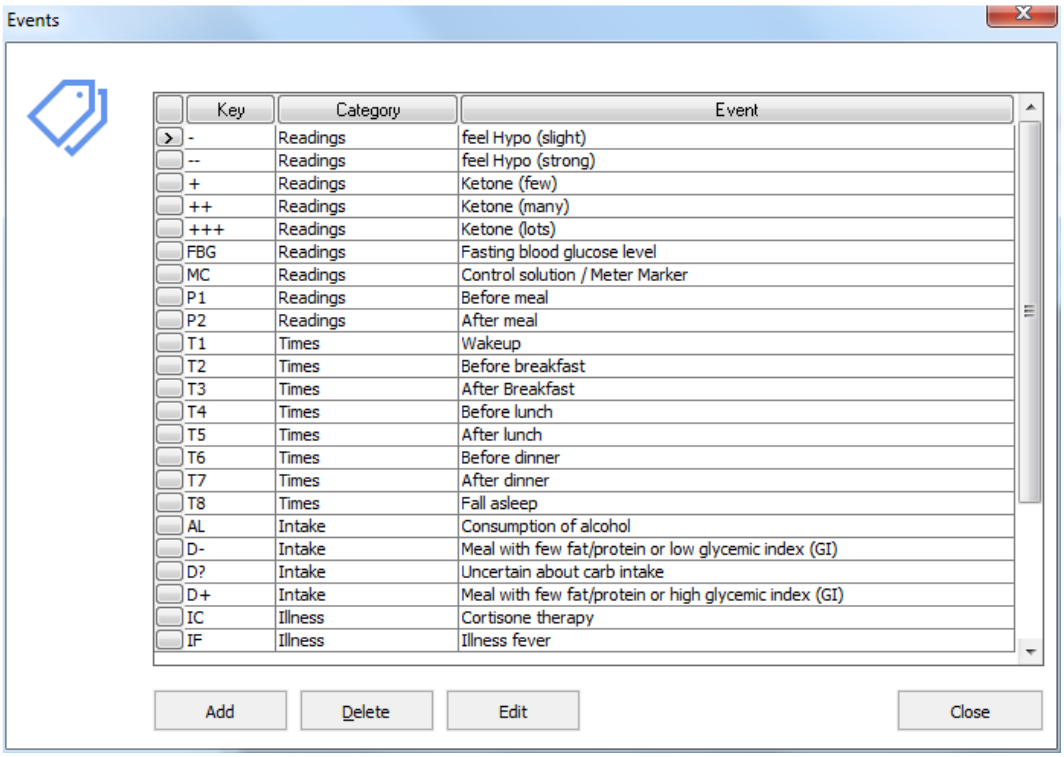
If you enter values in *Target Min.* and *Target Max.* there will be red lines for these values in the statistical graphs, so you can see immediately when your values step over or under your target range.

In the field *Remark* you can make a note why you edited this data type.
Then you can save the new data type and by marking the check box near it you can specify to make it visible in the detailed logbook as a new row.

		Key	Name	Unit	Datatype	Min.
>	☐	DriV	Drinkvolume	ml	Numeric	0
☐	☐	MI.	Miles	mi	Numeric	0
☐	☐	InjAr	Injection area		Selection list	0
☐	☐	HA	Headache		Yes/No	0
☐	☐	PDia	Pain diary	pts.	Numeric	0
☐	☐	Shift	Shift work		Selection list	0
☐	☐	Carbs	Carbohydrates	g	Numeric	0
☐	☐	Fat	Fat	g	Numeric	0
☐	☐	Prot	Protein	g	Numeric	0
☐	☐	GI	Glycemic index	%	Numeric	0
☐	☐	RTemp	Room temp.	Degree	Numeric	-50
☐	☐	BTemp	Body temp.	Degree	Numeric	0
☐	☐	Steps	Steps (PM)		Numeric	0
☐	☐	Dist	Distance (PM)	Distance	Numeric	0
☐	☐	CalOut	Calories (PM)	kcal	Numeric	0
☐	☐	StTime	Time (PM)	min	Numeric	0
☐	☐	CalIn	Calorie input	kcal	Numeric	0
☐	☑	Met	Metformin	mg	Numeric	0

8.5.4 Events

In the screen *Events* you can edit events and relate them to data records that you already entered in your logbook. SiDiary provides several standard events that you can adjust as you like. You can also edit the categories.

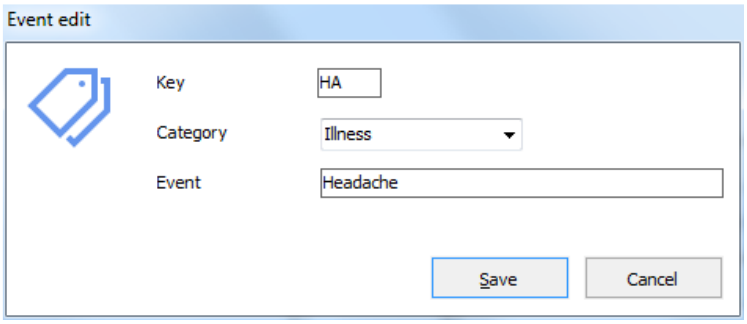


The advantage of working with events is that you can select them as filter options in the graphical statistics.
If your work shifts for example and therefore have a rather unsteady daily routine, you probably will have problems making an analysis with the hourly time settings. When you work with the *Events* you can mark a value as "Before lunch" or "After Breakfast" independent of the accurate time of day and analyze it later.

There is no limit to your imagination: You can define your own events for illness, holidays/vacation or other events to mark days or single values and analyze your selection later.

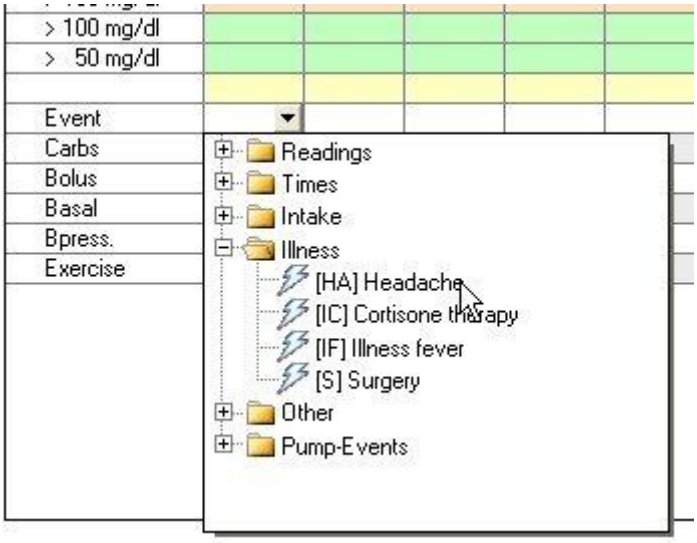
When you mark an entry as "headache" then you can select in the *Statistics* filter options "Show me all entries with headache". Or for example "Show me all entries with headache on Saturdays after breakfast".

To add a new Event, please click on the button “*Add”* and the following screen opens:

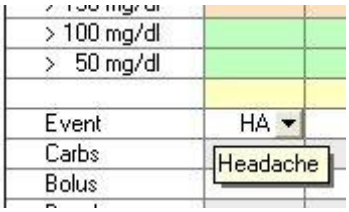


Please enter an abbreviation for your new event in the field *Key.* In the detail-logbook you can select your events right to the „Event“ field by clicking on the downwards arrow (see screenshot).

In the next step you can select the category and open the category by clicking on the plus icon (+) in front of it:



After clicking on the required event, the abbreviation for that event is displayed in the field event. A tooltip opens when you hold the cursor a bit longer on the abbreviation (tooltip = small box with explanatory text).

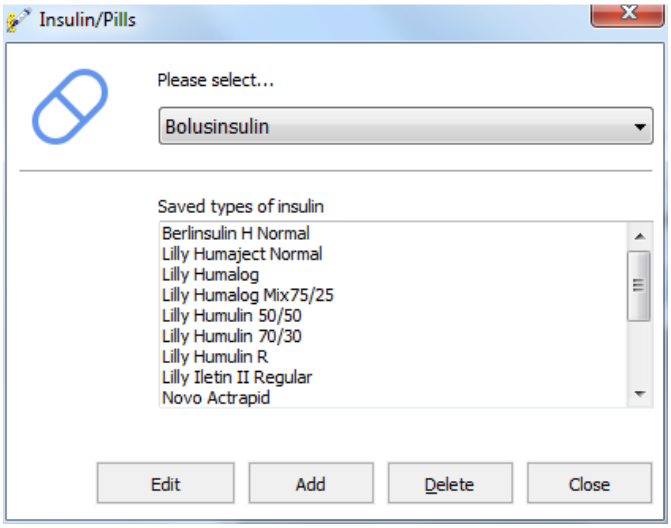


The item *Category* is used for better visibility. You can select a category from the list or add a new one, if the required category does not exist yet. When you make your next entry, you can also select the new category from the list.
In the field *Event* you can enter the meaning of the abbreviation.

If you want to edit or delete an event, please click on the event on the list and then click on *Edit* or *Delete*.

8.5.5 Pills / edit insulin types

By selecting the menu item "*Pills / edit insulin types"* the following screen (see screenshot) opens, where you can edit pill types and insulin types. With this option you can be sure that you can also protocol new medications with SiDiary, even if these medications came on the market after you got SiDiary.

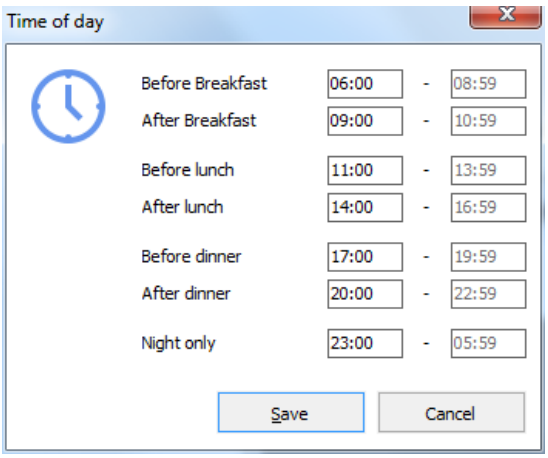


You can add pills and insulin types, edit the names or delete entries (unless they are not selected in your profile so far). You can add for the bolus insulin (= short-acting or

rapid-acting insulin) entries also an acting duration (which can be useful if the pre-settings of the acting durations do not match your individual acting duration).
See also chapter 8.5.1 „Therapy details and goals (F3)

8.5.6 Control times

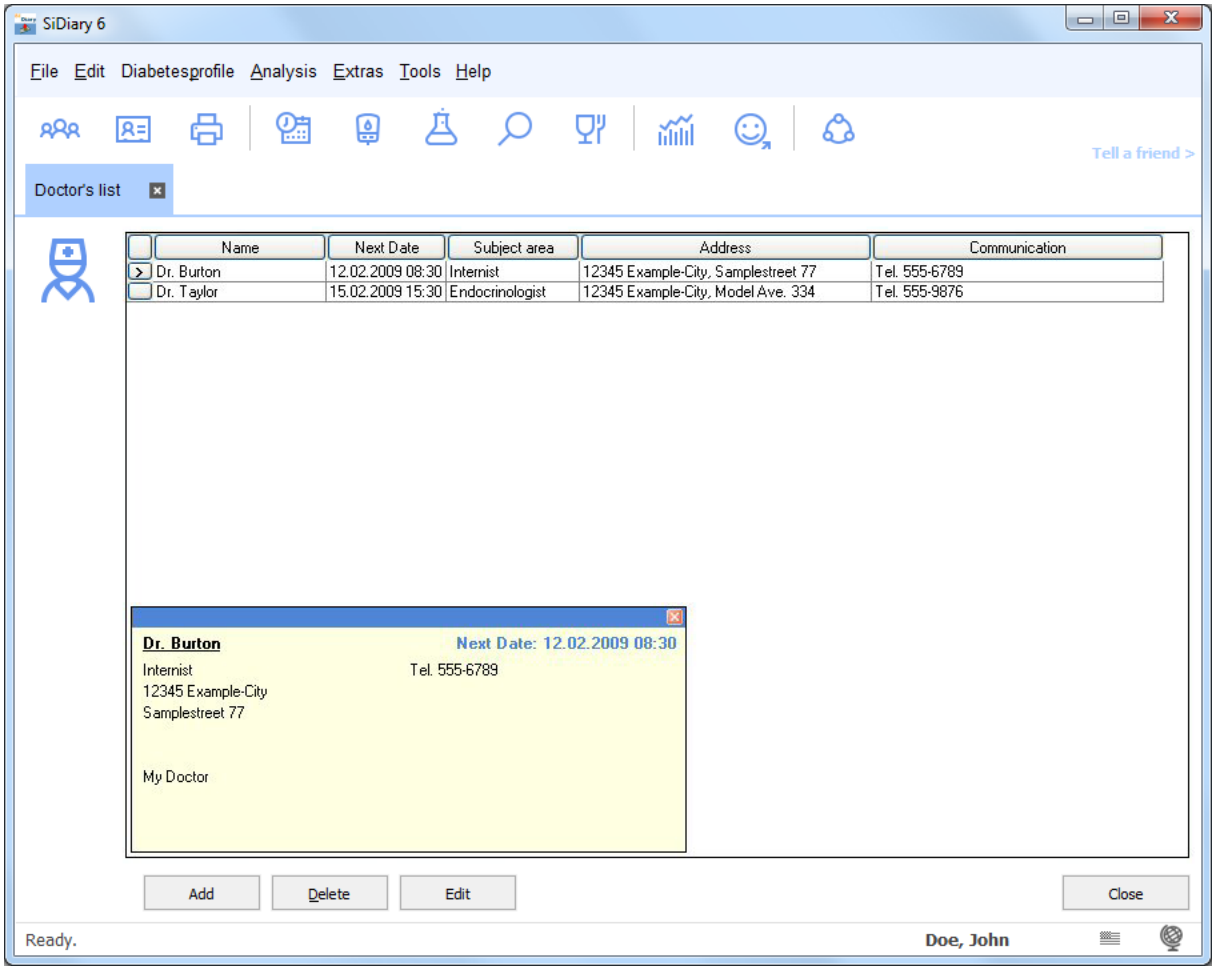
In the screen *Control times* you can administrate the timeframes, which are used for the statistics. You can select for example the timeframe "Before Breakfast", if you want to analyze only this time-frame in the statistics. The end time of one time-frame results from the starting time of the next timeframe and cannot be changed.



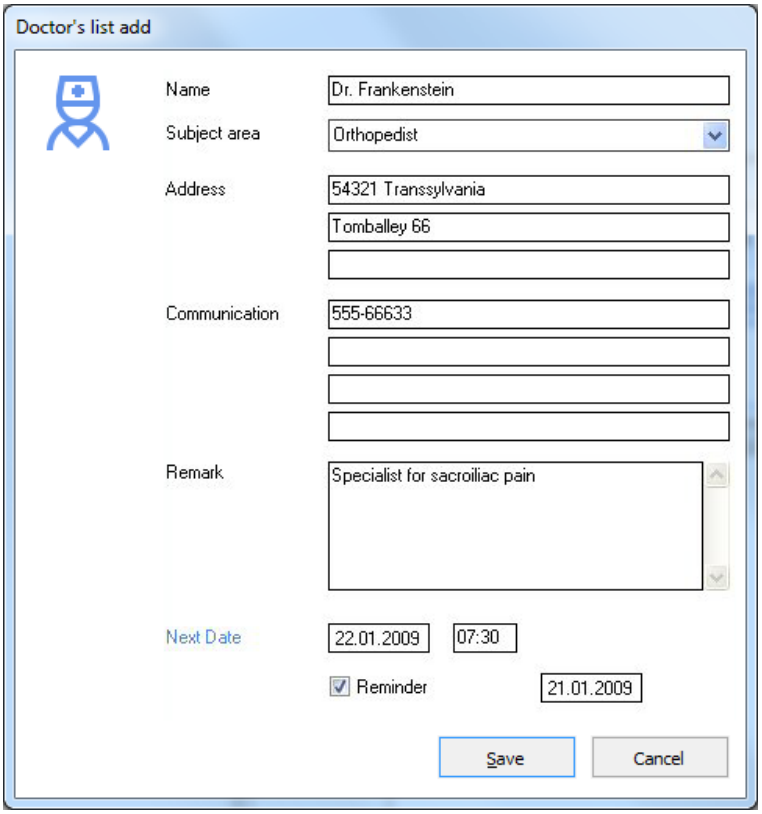
These control times are only useful when you have a constant daily routine. For SiDiary is a blood glucose value at 10:45 (see screenshot above) always an "After Breakfast" value. If your daily routine is not that constant and you want to filter values that are really measured after Breakfast, you should select an event in addition. Then you can filter the event instead of the control time.

8.5.7 Doctors List (Ctrl+M)

In this list you have the possibility to enter all your doctors, your next doctor's appointments, additional notes (such as the reason for an appointment), the doctor's contact details (for example the phone number) and his/her specialization.



When you click on the button *Add*, the following screen will open (this screen is identical to the screen that opens, when you click on *Edit*).
You can enter everything you want on this screen, for example a date on which SiDiary should open a reminder. You can choose the day for the reminder free, so you can set the reminder to a few days before your doctor's appointment.
Please note: The reminder will be only displayed when SiDiary is running.

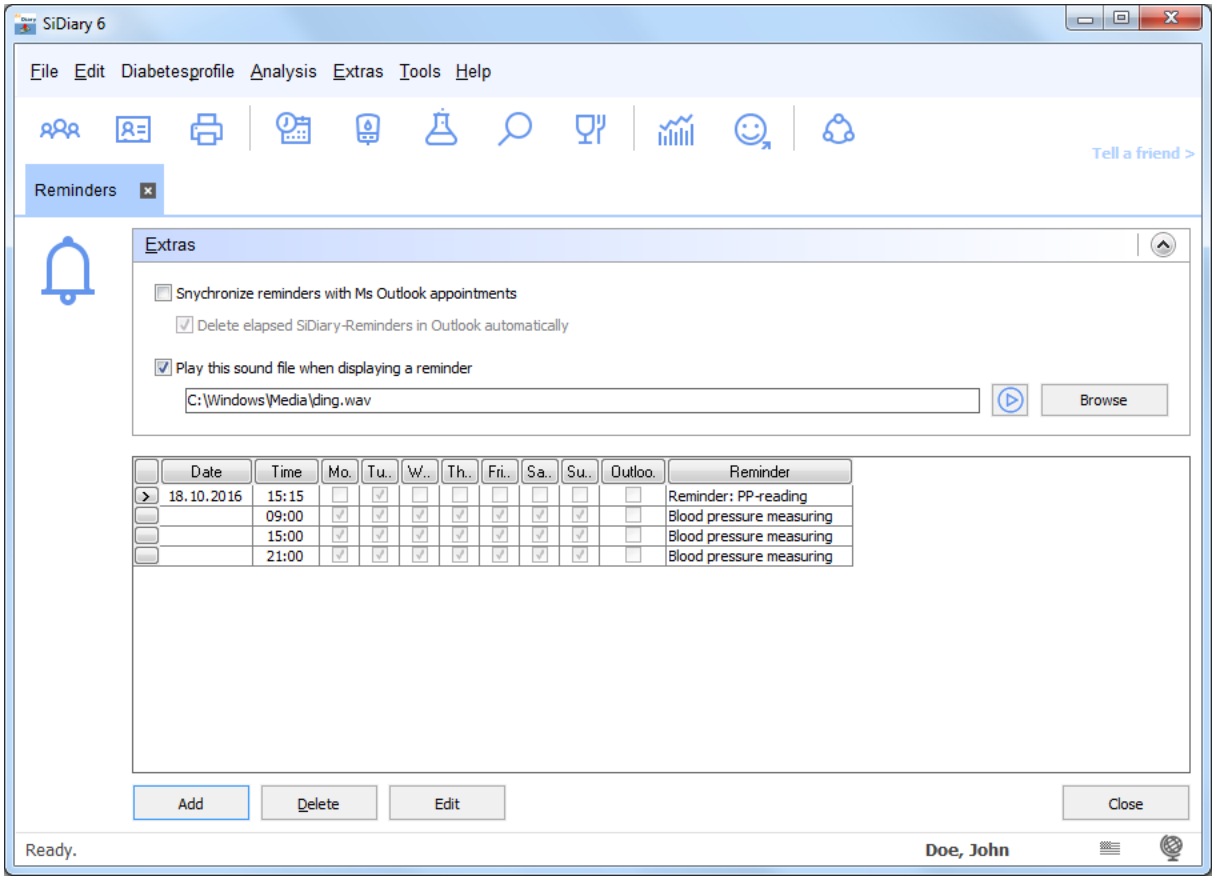


8.5.8 Reminders (Ctrl+R)

With this menu item you can open a screen to add and edit your *Reminders*.
SiDiary can save several reminders for you. For example, a reminder for a PP-measuring (PP = postprandial = after a meal), a reminder for the change of your catheter or similar reminders.

You are also able to synchronize the reminders which you have recorded in SiDiary with Microsoft Outlook. This synchronization works both ways. If you enter *SiDiary* in the remark box of a Microsoft Outlook appointment, SiDiary adopts this appointment automatically at the next synchronization.

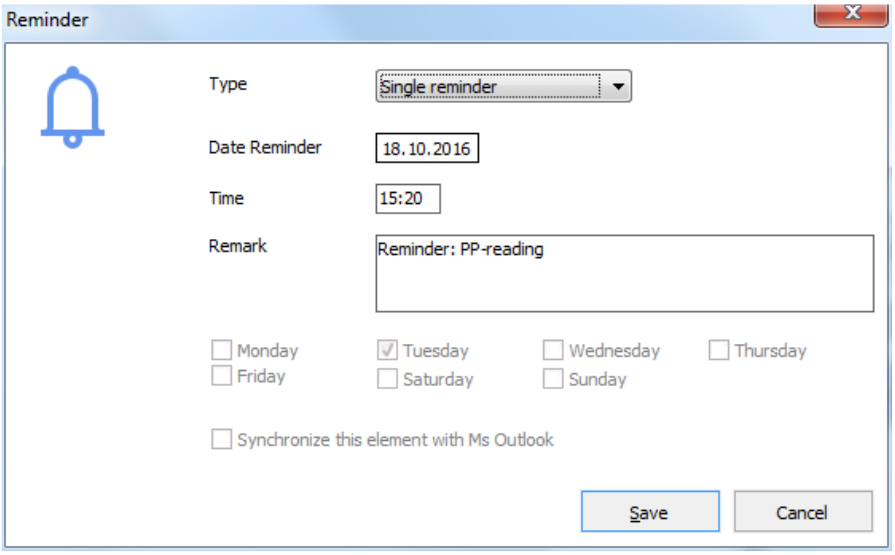
This function is also suitable to manage your doctor's appointments.



In the dropdown list *Extras,* you can select if your recorded reminders should be synchronized with Microsoft Outlook or not. If you select the synchronization, you can also choose if expired dates should be removed after the next synchronization with Outlook.

In the option below you can select if you want to hear a sound file with your reminder. If yes, you can choose which one you want to hear (for example with the data format *.wav or *.mp3).

By clicking *Add* you can add a new reminder. Then the following screen opens:



You can choose from the following types:

8.5.8.1 Single reminder

The single reminder will remind you only once. Because this reminder is mostly used for PP-reading (after a meal) the text is already pre-set in the remark and the time of day will be set automatically at 90 minutes in the future. Of course, you can change both afterwards.

8.5.8.2 Basal profile test

These tests are a sequence of blood glucose readings in a certain period. If you choose this type, SiDiary sets automatically six reminders. For the first reminder you choose a time of day, and the next ones will follow every 90 minutes later.

8.5.8.3 Sequence reminder

A Sequence reminder will remind you on certain days of the week and always at the same time (for example "daily" to remind you of taking your medication).

If you choose the sequence reminder you can also enter (in the input box below) for which day of week this reminder should be activated.

You can enter the *Date* directly or open the calendar control element by double-clicking the input box *Date Reminder*. You can enter the time of day for your reminder directly in the input box. You do not have to enter a colon at the time of day. (SiDiary recognizes for example 2215 as 22:15 o'clock)

In the input box *Remark* you can enter the text that should be displayed in the window of the reminder. Afterwards you activate the reminder by clicking the button *"Save"*.

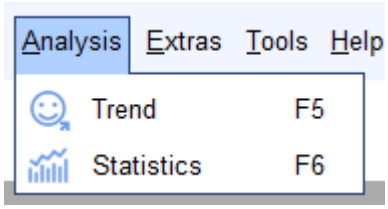
Please note that SiDiary can only remind you when the program is running (even when it is running in the background).

To edit or to delete an entry from the list of reminders, please click on the entry you wish to edit or delete and then click the appropriate button *Edit* or *Delete*.

8.5.9 Profile Wizard

With this entry you can start the profile wizard tool again, that has already helped you with the first setup of the program.
See Step 8.1 ‚Profile Wizard'

8.6 Menu „Analysis“



In the menu *Analysis* you can analyze the tracked data statistically or view the trend of your therapy in the *Trend-Analysis.*

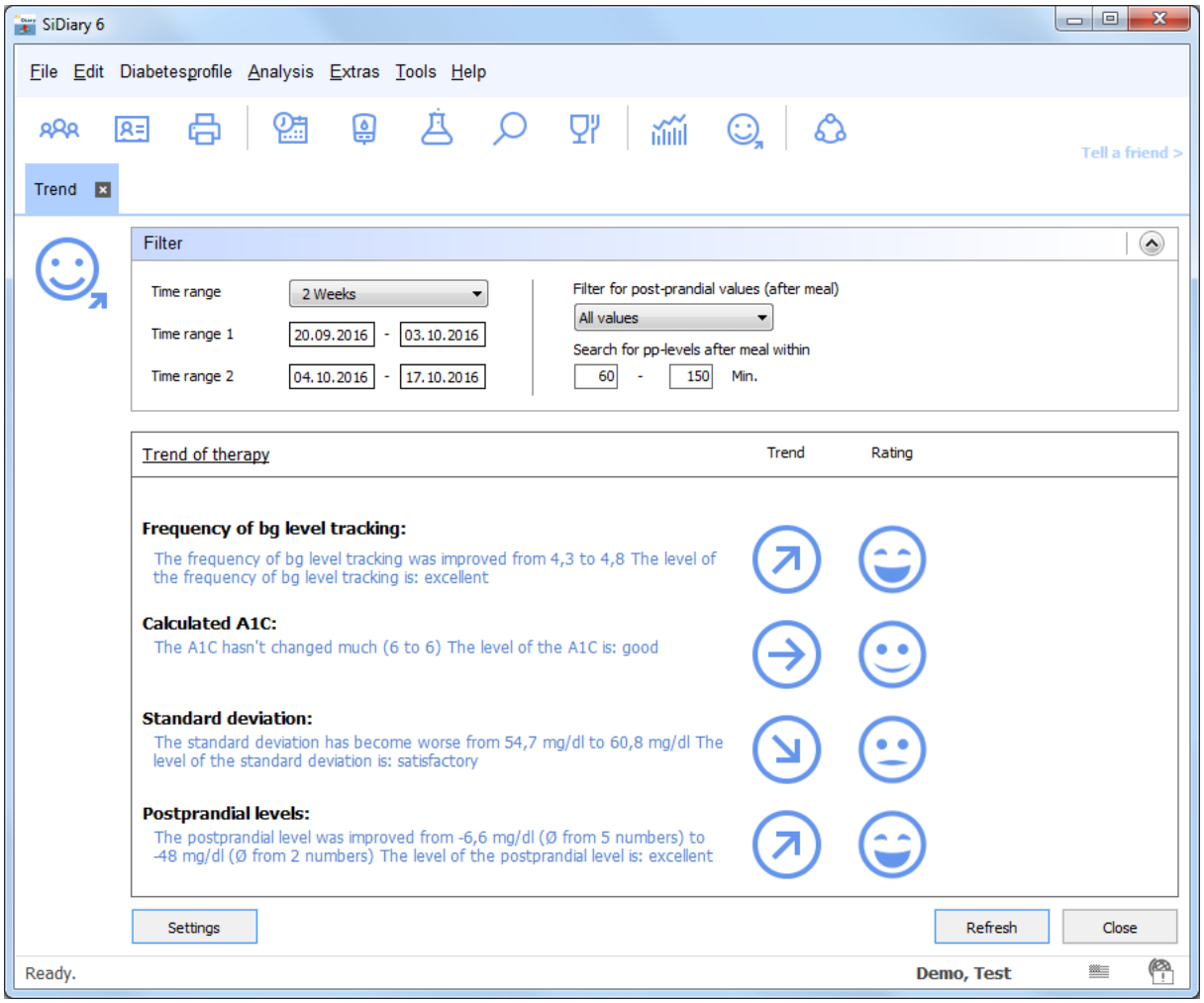
8.6.1 Trend (F5)

With the trend function of SiDiary you can analyze your tracked values and review them with common smiley buttons. In this process the two-time ranges will be compared to each other. So, you can see very clearly where you have improved so far and where more improvement is needed.

The icons indicate the change of the values as well in both time ranges (trend-cursor) and a rating with the smiley's (“Emoticons”) of the category.

The three most important categories, a person with diabetic needs to take care of, are: the categorical blood sugar adjustment should be kept on a low level, which you can see in the “A1C” information. Also, the values shouldn't be in a high variability, which can be seen in the standard deviation. The 3rd factor is the postprandial situation of the values, which means the blood glucose level peaks after carb intake. These short peaks should be avoided, too (because of the negative effect on the blood vessels).

In addition to these 3 categories the frequency of blood glucose measuring is important. The frequency should be accurate – so the analysis of the other categories can achieve realistic and useful results at all.



In the dropdown list *Filter,* you can define rules for the analysis. You can select a free time range or predefined time ranges. If you select the predefined time range, you see below the information for time range 1 and time range 2. Please consider that both time ranges have always the same number of days.
Important: If you select a time range which is not filled completely with data, SiDiary is not able to find enough value for a valid assessment! For example: if you have collected data from the last two weeks you can't select '2 weeks' as a time range, because this would compare the last 2 weeks (with you collected data) with the 2 weeks before (which doesn't contain any data – so this won't work).

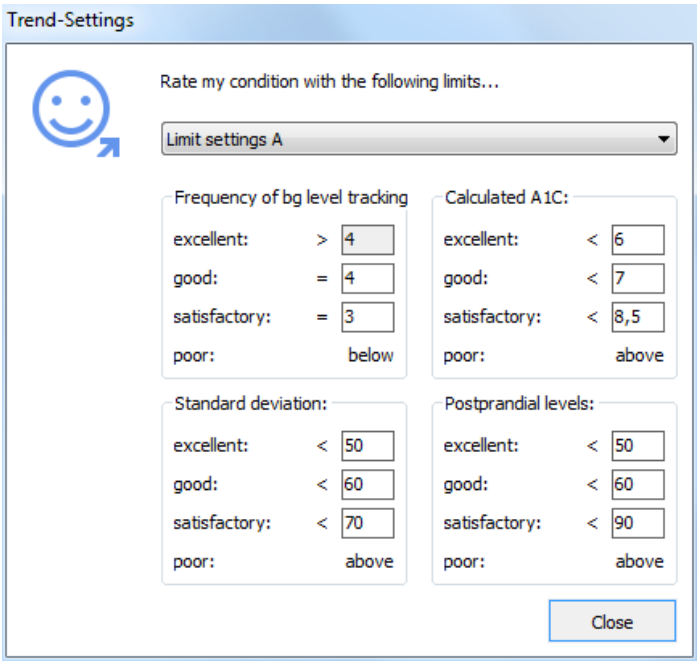
The Filter for pp-levels (pp = postprandial / after meal) allows you a fine adjustment.

Hint *You can "filter" the diagnosis for the postprandial situation. For example: When you are interested in the postprandial situation of the morning, noon or*

evening. Usually, the filter is not set for a time of day, so all located postprandial values can be analyzed.

You can also define when a blood glucose value should stand for a pp-measuring (in minutes after the entry of the bolus insulin). The division into the categories "*excellent", "good", "satisfactory"* and *"poor"* based on therapeutic targets, which you have defined with your doctor or your diabetologist.

You can set up the definition of the targets or the limit values, which decide about the rating of the categories, in the same settings screen with the same button:



You can pre-set the limit values, by selecting *Limit settings A, B* or *C,* so you set the limit values on predefined values. But of course, you can adjust each value to match your personal needs or the suggestions of your doctor.

The analysis function identifies the values for the rating of the pp-situation automatically. SiDiary searches first for a fasting blood glucose reading, which is tracked together with a carb intake and a bolus injection (or pill). If this initial value is over 200 mg/dL it won't be used for the pp-analysis, because there could be too high influence of the correction quota of the blood-glucose-lowering pill or insulin.
If it's below 200 mg/dL, then the program is searching for a blood glucose level, which is in a range of X-Y minutes (depending on your settings) after the fasting situation. The difference between the searched values shows the "before-and-after-variation"

Postprandial variation doesn't always need to be positive. Sometimes it can happen that you have estimated a wrong carb intake, or the carb ratio is not yet defined correct, and you will have a blood glucose decrease. SiDiary will show such a decrease with a negative number.

By clicking *postprandial situation,* you can view a list of the days and times for which SiDiary found pp-situations. SiDiary automatically includes the pp-situations with the average value of all found values in the statistics.

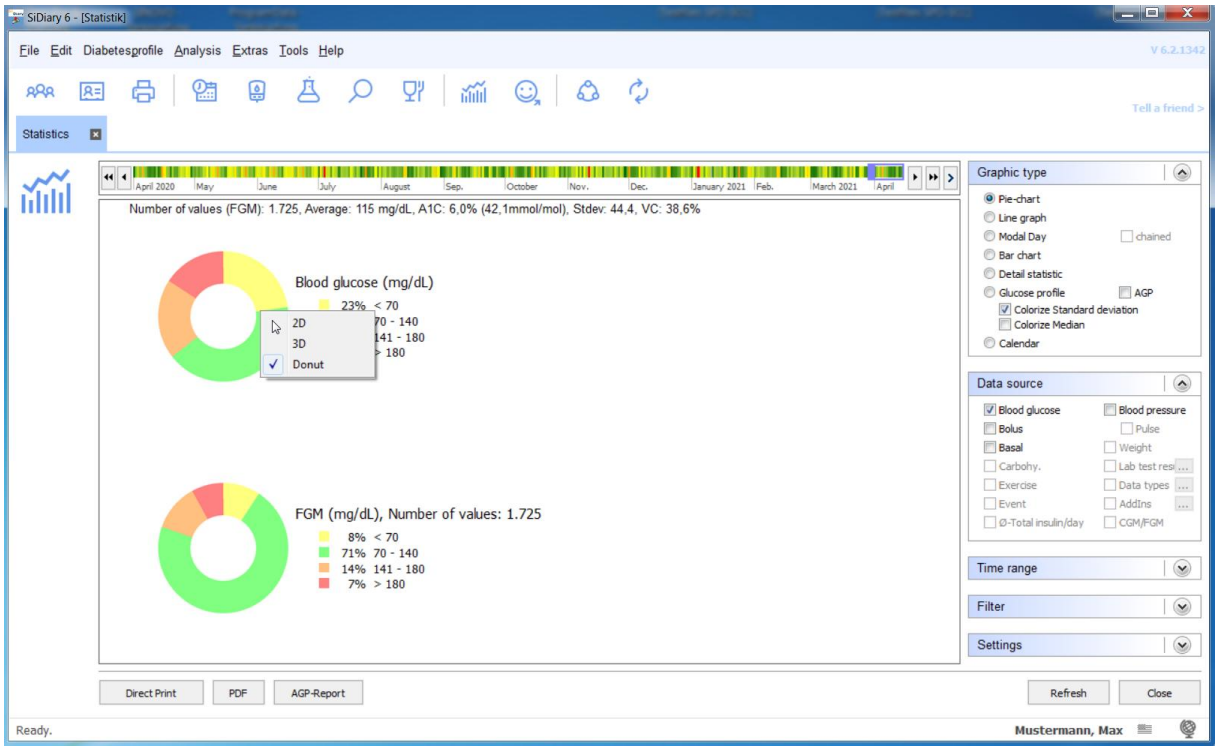
Among the various parameters you can find a text with a detailed analysis. The arrows indicate the trend of the development:

- Arrow upwards = time range 2 is better than time range 1
- Arrow to the right = the results of both time ranges are about the same
- Arrow downwards = time range 2 is worse than time range 1

The smiley’s always rate the current state in time range 2.

8.6.2 Statistics (F6)

In the statistics you can analyze your tracked data (including your own data types and lab values) and display the data in graphs. It is possible to use your recorded events as a filter.



In addition to the displayed graphic type above (pie chart) you can also choose between a line graph, a dot graph, a bar chart, a detailed statistic in text form and a Glucose profile (see examples below).
You can right-click on the pie chart and then choose whether you prefer it to be displayed in 2D, 3D or as a donut (as shown here in the image).

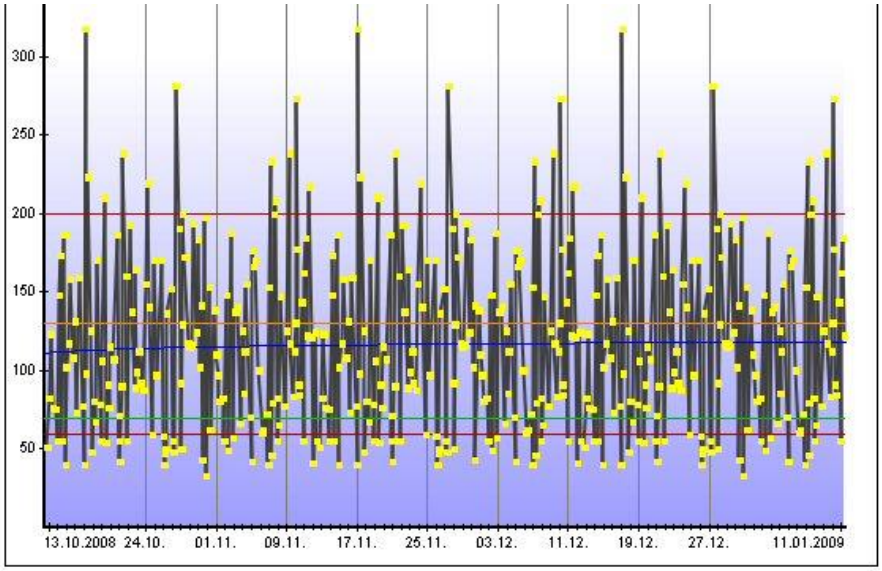
With a click at *Direct print,* you can print the graphic shown directly with your standard printer, a click at *PDF* will let you store it as a PDF file.

Hint

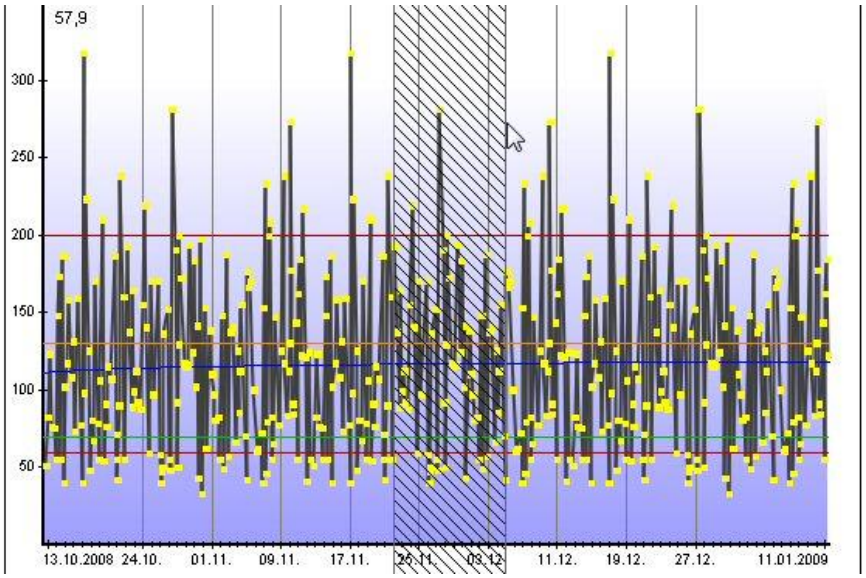
In the line graph and dot graph you can get for each measuring point, time and date the exact measured value as a tooltip-display, when you move the mouse across the graphic. If you click on an exact dot the logbook opens the exact day with this value. So you are able to check how this value occurred.

Zoom function

The integrated zoom function of the statistics is helpful if you want to look at a graph with a lot of data. At first view a graph with a lot of data can be very unclear:

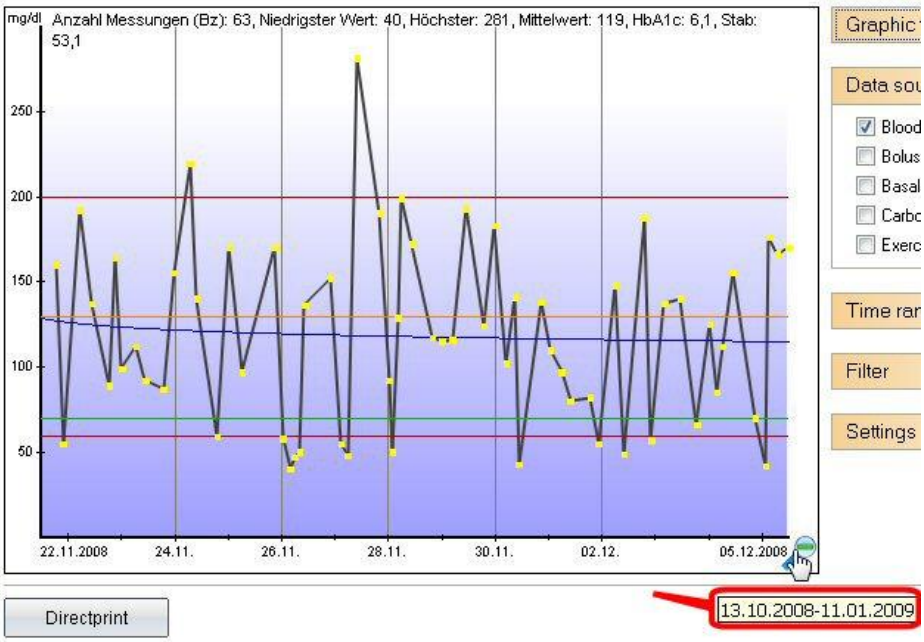


Just click with your cursor arrow in the area you want to see and drag it larger with the left mouse button pressed.



This area will now be displayed larger (zoomed), so you are able to see the details better. Of course, you are also able to zoom in an already-zoomed area.

You can see at the bottom of the picture a lens icon with a (-) minus symbol. By clicking on this icon, the graph will be displayed in the last shown size again. The time range to get back will be displayed additionally as a tooltip (see also the red mark).

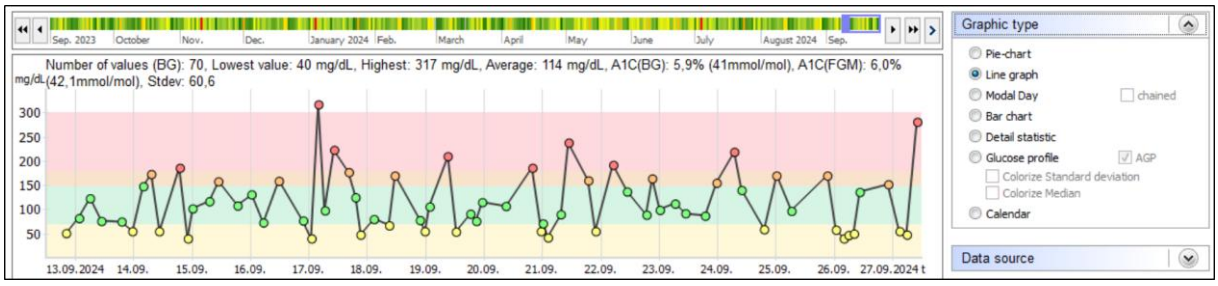


Graphic Types

8.6.2.1 Pie Chart

With the pie chart you can see the exact percentage of the tracked values. The bigger the green area with the blood glucose values as data source, the more often your values were in the target range.

8.6.2.2 Line Graph



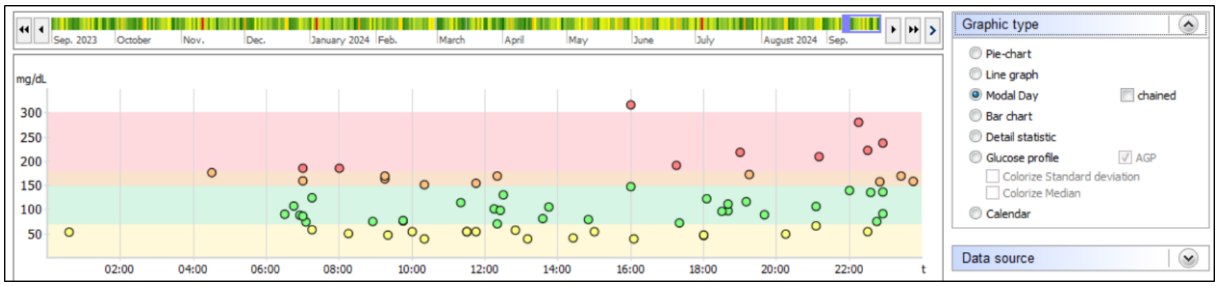
The trend of your blood glucose values is graphically displayed with the line graph. Each dot represents a tracked value. If you keep the cursor over a dot you can see the appropriate details. When you click on a dot SiDiary opens the exact day (so you can analyse very quickly a trend, without looking at each day). You can also add information about bread unit or bolus, when you select them as the *data source*.

You can see in this example the upper marker (red line) is 200 mg/dL, and the lower marker is 60 mg/dL. You can adjust these limits in the menu ***Diabetesprofile*** → ***Therapy details and goals (F3)*** → *Low and High blood sugar limit.*
The orange line is the individual upper limit of the target range; the lower green line is the lower limit. These limits are adjustable in your therapy details, which you can open with the F3-button, or you click on ***Diabetesprofile*** → ***Therapy details and goals.***

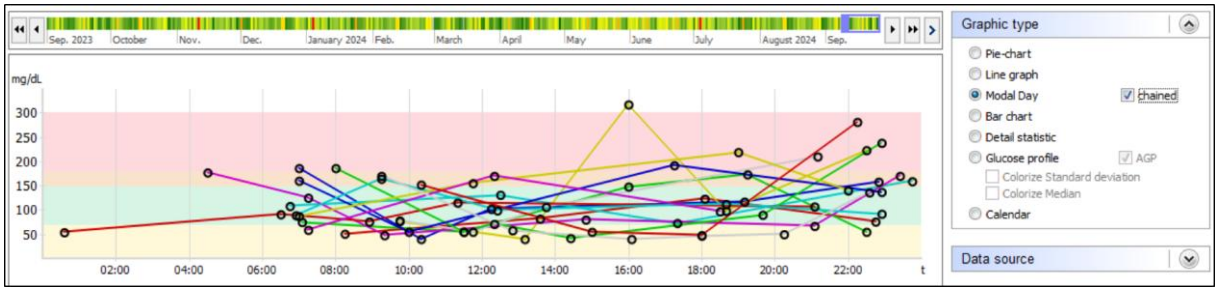
The fat blue line, which passes in our example above diagonally through the graphic shows you the trend of your blood glucose level. In this example it's a decreasing trend.

The Y-axis (level of the blood glucose) is dynamic, which means it is adjusted to the present values of this time range (see also *Settings* below).

8.6.2.3 Dot Graph (Modal Day)

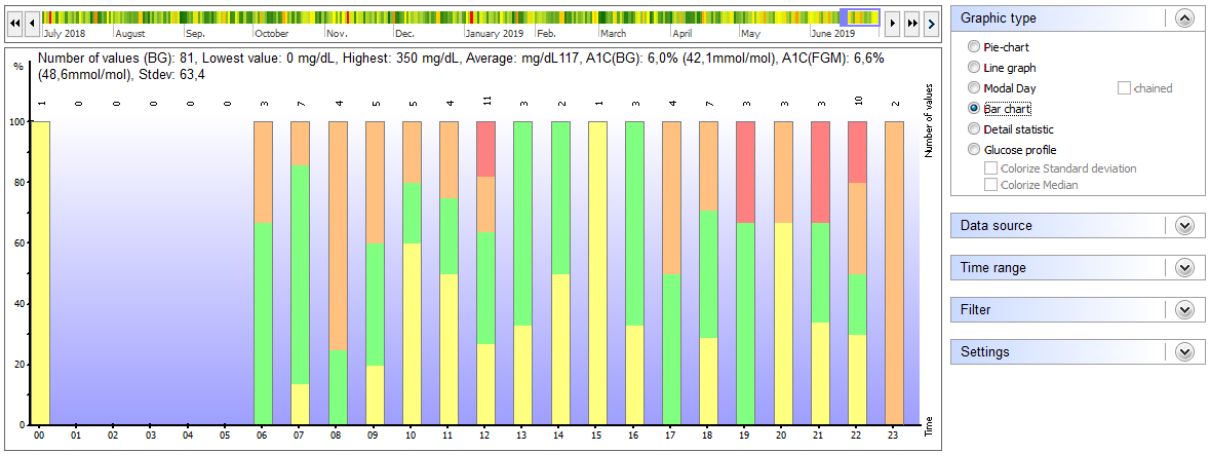


In the function *Modal Day* is no date available. All tracked values of the selected time range can only be entered based on their value and time of day. So, you can see at a glance the times it comes to certain accumulations. In the example graphic you see an accumulation of values from over 140 mg/dL to 200 mg/dL in the evening. In the morning between 08:00am and 10:00pm you can find an accumulation of the green values, which means you are exactly in the target range.
In the modal day you could also use the option ‘chained’



This means that all values of a specific day will be chained by a colored line.

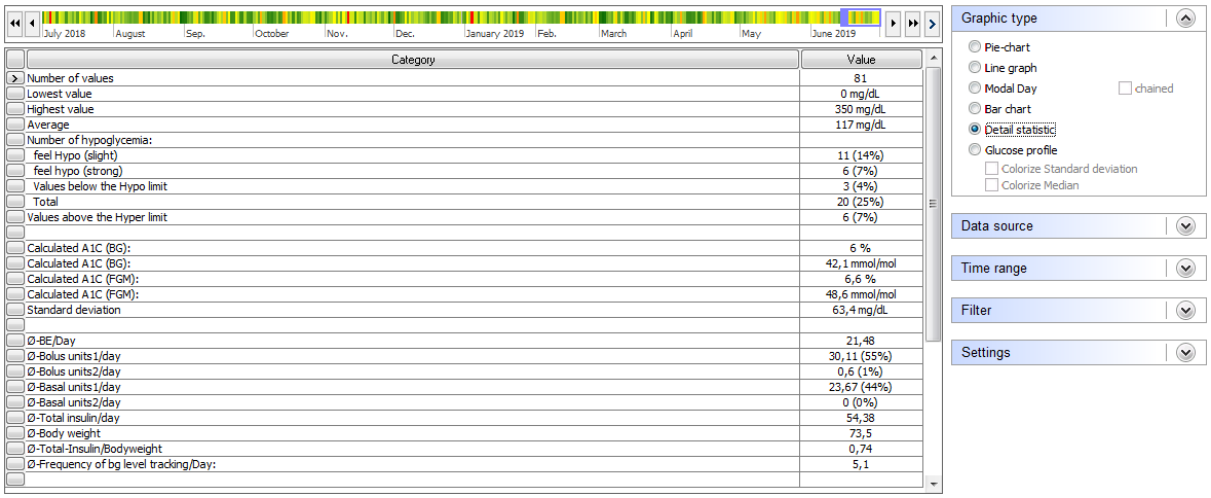
8.6.2.4 Bar Chart



In the function *Bar chart,* a date is also not available. You will see all the tracked values of the selected time range as bars. Above each bar you can see the number of tracked values for this time range.

In the graphic above no tracked value is found for the time between 00:00 and 05:00 at night. In the morning at 09:00 the tracked values were often above the target range up to the 200 mg/dL limit. A continuing green bar shows that all found values were in the target range – for example the bar number 12 (bar 12 contains all values that were tracked between 12:00 and 12:59).

8.6.2.5 Detail statistics



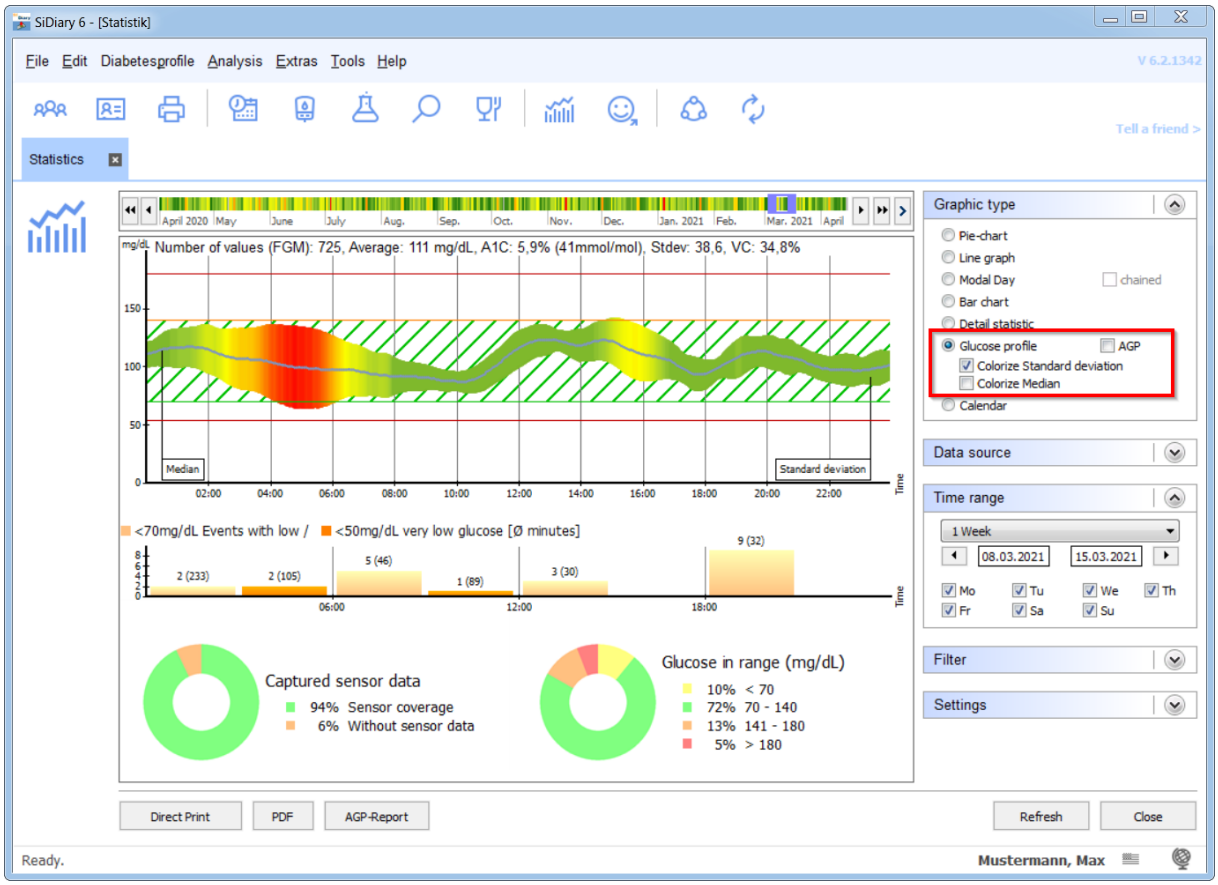
Category	Value
Number of values	81
Lowest value	0 mg/dL
Highest value	350 mg/dL
Average	117 mg/dL
Number of hypoglycemia:	
feel Hypo (slight)	11 (14%)
feel hypo (strong)	6 (7%)
Values below the Hypo limit	3 (4%)
Total	20 (25%)
Values above the Hyper limit	6 (7%)
Calculated A1C (BG):	6 %
Calculated A1C (BG):	42,1 mmol/mol
Calculated A1C (FGM):	6,6 %
Calculated A1C (FGM):	48,6 mmol/mol
Standard deviation	63,4 mg/dL
Ø-BE/Day	21,48
Ø-Bolus units1/day	30,11 (55%)
Ø-Bolus units2/day	0,6 (1%)
Ø-Basal units1/day	23,67 (44%)
Ø-Basal units2/day	0 (0%)
Ø-Total insulin/day	54,38
Ø-Body weight	73,5
Ø-Total-Insulin/Bodyweight	0,74
Ø-Frequency of bg level tracking/Day:	5,1

In the detailed statistic the selected time range will be analyzed and the found data will be displayed as a text analysis. The interpretation for the example above tells you that 81 measurements have been tracked in this time range. The lowest value was 0 mg/dL (apparently incorrect entry) and the highest value was 350 mg/dL. The average value

(sum-up of all single measurements and divided by the number) is 117 mg/dL. 11 values were marked with mild hypoglycemia symptoms (= slight low blood sugar), 6 serious hypoglycemia symptoms, and 3 measurements were under the hypoglycemia limit and were not marked with a hypo sign (= unnoticed hypos. If they appear more than a few times you should talk with your diabetes team).
The calculated A1C value (see also chapter 7 “A1c-Calculation”) for this time range is 6%, that means if the blood glucose value always stays within this limit (even in times without measurements), you have to expect an A1C value in the range of 6%.
The standard deviation was 63,4 mg/dL (a good value). That means the blood glucose value varied about plus/minus 63,4 mg/dL around the average value of 117 mg/dL, which is a stable metabolic adjustment.
Below you can see the average values for certain parameters of this time range. The value ‘Total insulin/bodyweight’ stands for total insulin per kilogram of body weight. The value should be under 1,0 for people with diabetes, who cannot produce insulin anymore, otherwise it indicates an insulin resistance.
The tracked events are counted in the same way, and you can see how many of a special event you have tracked in the chosen time range.

8.6.2.6 Glucose profile

SiDiary provides also the graphics type 'Glucose Profile' in the statistics section, which shows the median of the glucose values as well as the standard deviation.
With this new option it is not only possible to see the magnitude of the glucose values over the time of the day, but also how strong these values are waving or how stable the glucose development is.
You can see it in the statistic selection of the PC version, if you select the entry 'Glucose Profile' as graphic type.



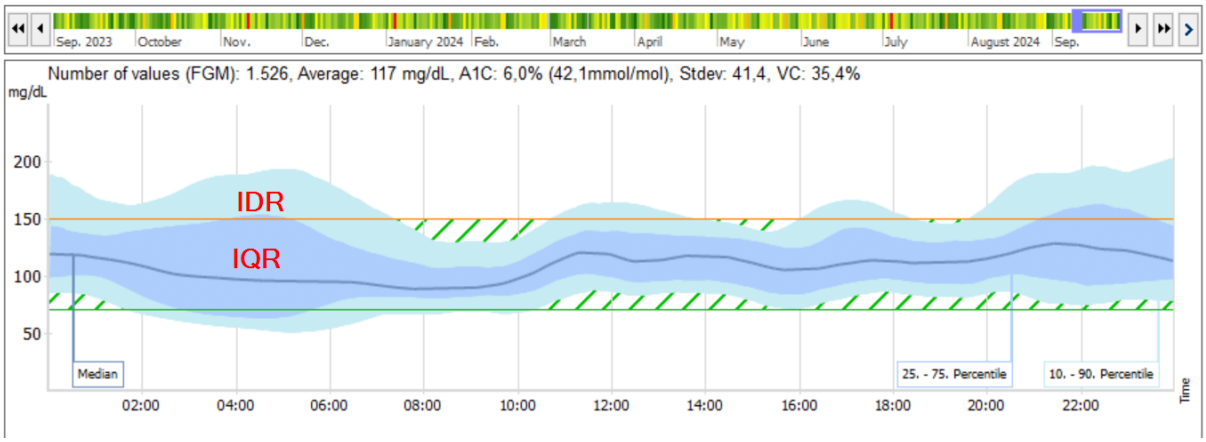
In the example shown here, the standard deviation is additionally colored, so that you can see at the very first glance: the greener, the more stable the glucose development is during this period while a deep red indicates that at this time of day (in the example here between 4 and 6 a.m.) the greatest variance occurs.

To calculate this graph all blood glucose and CGMS data of the selected period is projected into a 24-hour graph. To see changes and improvements of your glucose profile, you might select one week as an example and then see how the median and standard deviation develop by shifting the period by using the arrow buttons.

To quickly assess the status of diabetes therapy, this view is optimal: it shows not only the average height (median), but also how strongly the BG fluctuates. And both are also related to the time of day.

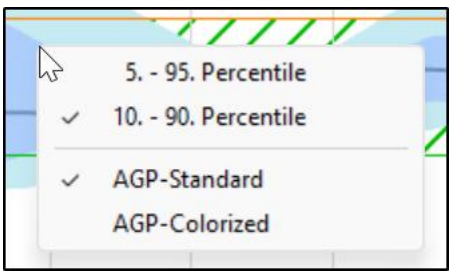
The median is a statistical value which, unlike the mean value (adding all individual values and dividing this sum by the number of individual values), is not strongly influenced by individual "slips". With the median, all individual values are sorted by size and the value that then stands in the middle is the median (also called the central value).
Example: from the single values 2, 2, 3, 5, 7, 8, 130 a mean value of 22.4 would result. However, the median here is 5 (the value that is in the middle of all the individual values).
For a blood sugar profile this means that a bad value does not make the whole therapy process look bad.

As an alternative to the glucose profile shown above, you can select the AGP display, which also shows you the median and additionally the interquartile range (IQR) and interdecile range (IDR) as a data cloud, The IQR is displayed in a darker blue, the IDR in a lighter blue:

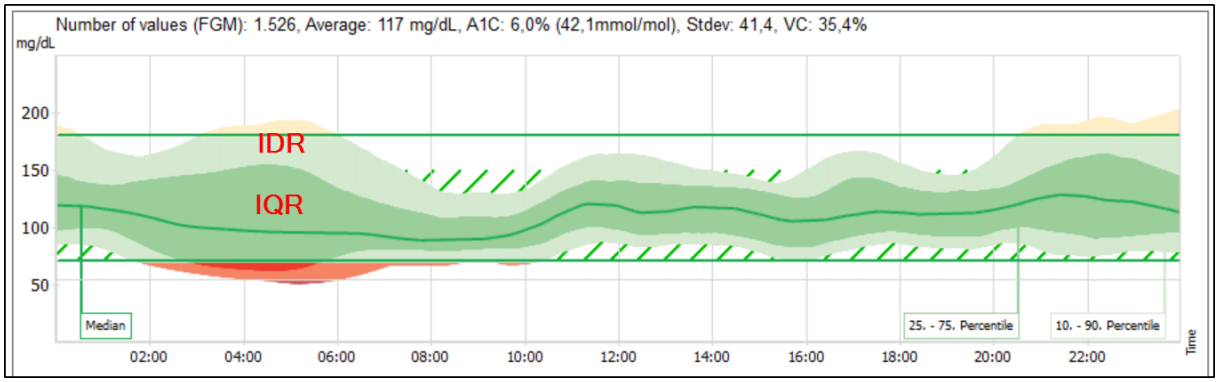


From the width of these two clouds, you can see where the deviation from the near-normal range probably came from.
In IQR, they are more likely to be therapy-related, i.e., for example, due to incorrect insulin dosing, (basal, carb/insulin ration and correction factors are not correct) or constantly changing times/day patterns).
In IDR, on the other hand, they are more likely to be behavioral, for example, due to incorrect injection-eating intervals, forgetting boluses at meals, exercise, or alcohol consumption.

By right-clicking on the AGP graph, you can choose between 10th to 90th percentile (AGP V3) and 5th to 95th percentile (AGP V4):

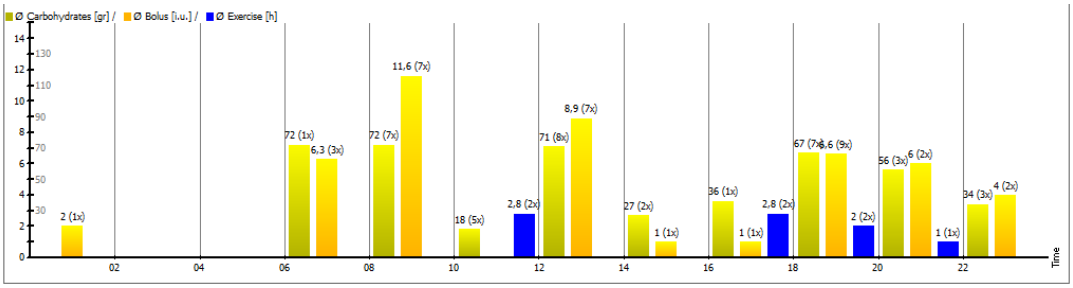


You can also choose here whether you want to see the AGP graphics in standard colors (blue tones) or in color, which then looks like this:

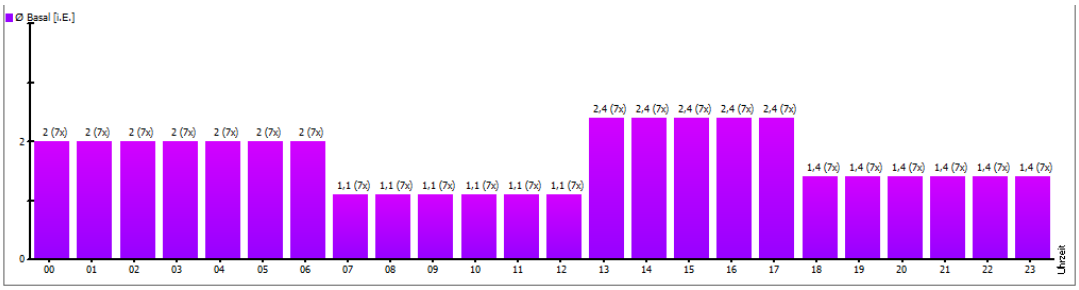


Deviations into the hypo range can be better perceived by some people.
We added further data sources to the graphic type "glucose profile", which can be displayed together with the glucose profile. These are:

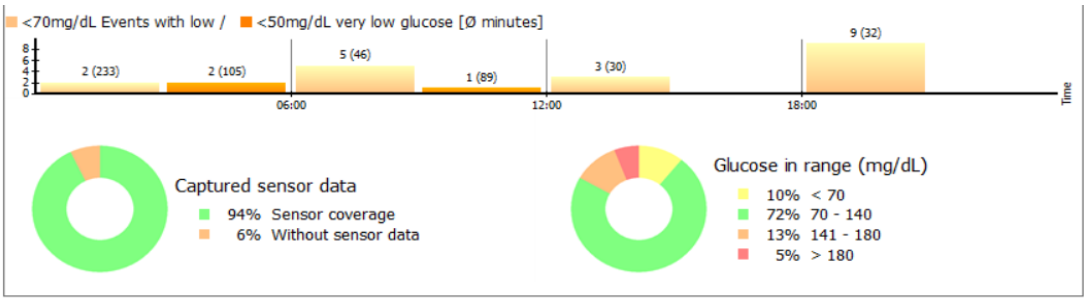
Carbohydrates, Bolus and Exercises (together in one chart)



Basal

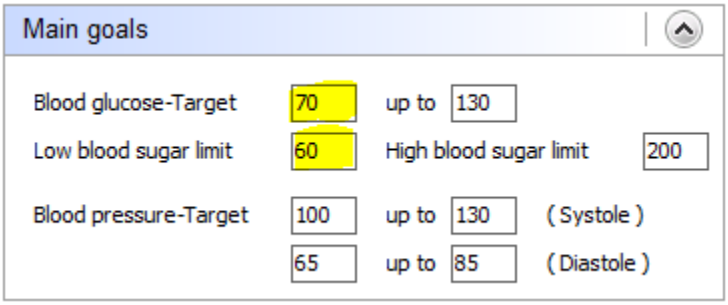


CGMS/FGM



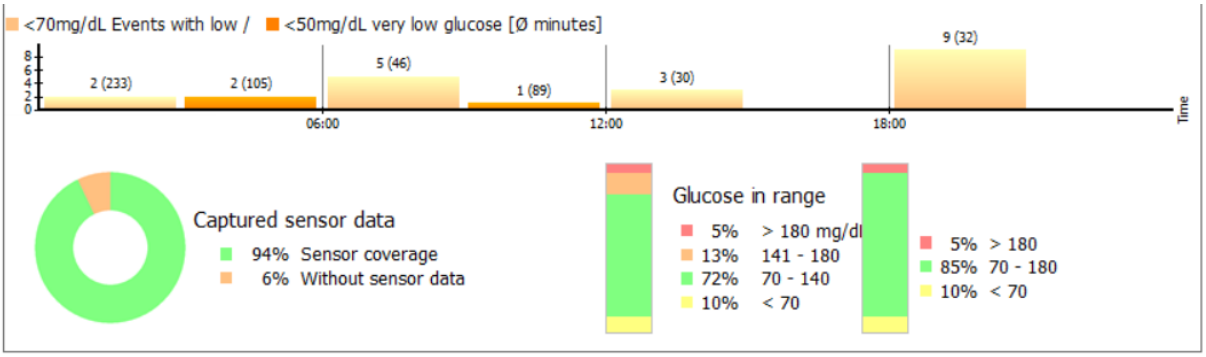
With the data source CGMS/FGM you can get a quick overview of the days with your sensor:

- At which times of the day and how often low measured values occurred (You can define which limit value for low/very low is to be used as the basis in your profile. Simply open it with the F3 key on your keyboard and change the values for the lower limit of the blood glucose target range ("low glucose events") or the lower blood glucose limit ("very low glucose events") as required.)
-



- How long did you have the sensor activated. (Captured sensor data)
- The apportionment of the measured values in the different glucose ranges.

For the graph "Glucose in target range" (Time-in-range; TIR), you can also choose whether you prefer the graph type "Donut" (see above) or "Bar chart" by right-clicking on it:



When choosing the bar chart, you will always see two columns: on the left, the column refers to your set target ranges (in your profile), and to the right, the column is displaying the standard range of values from 70 to 180 mg/dL (3.9 to 10.0 mmol/L)

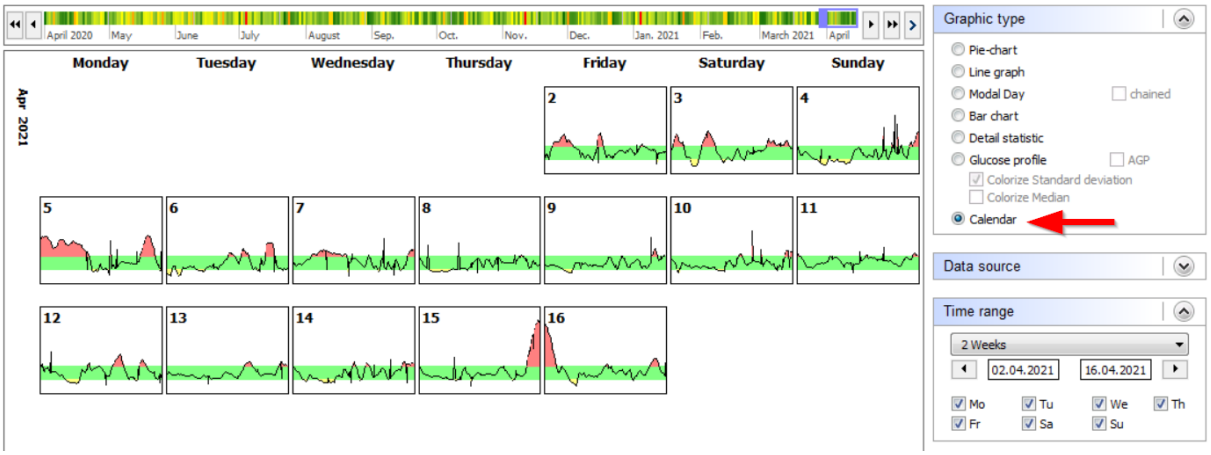
To be able to see or change your target area, you just need to click on the graphics shown above.

That's how the overall view looks – in which you can also print out directly with the button below or save as a PDF file:

At the bottom of the statistics, you will also find the option to generate an AGP report as a PDF file. This report contains information about you, your therapy, the AGP graph, the evaluation of low glucose values, recorded sensor data and your time in the target range. This report is completed by a calendar graphic.

8.6.2.7 Calendar graph

The graphic type "Calendar" should make it possible to show the evaluation period of 2-4 weeks briefly:



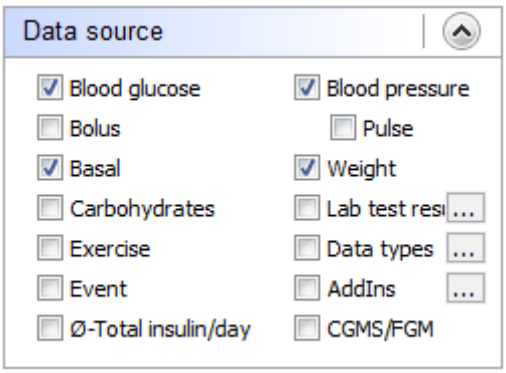
Here you can see the individual daily curves from the set period with the "green area" (your self-selected target area), as well as areas with high glucose values in red and low glucose values in yellow.

Hint

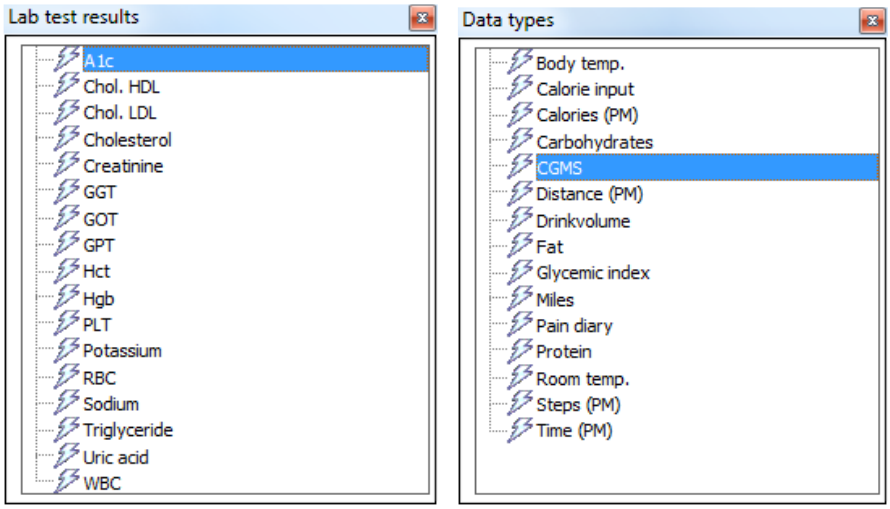
If you click on one of the days shown here, the respective day opens directly in the logbook view, so that you can analyze the course there even more precisely, e.g. why there were glucose peaks on this day.

8.6.2.8 Data source

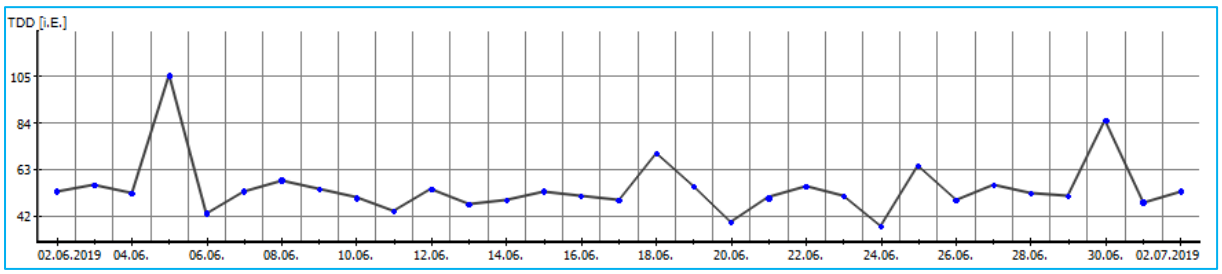
You can select the data source for your statistics in the dropdown list *Data source.* Please note that not all sources are available for every graphic type. Depending on the selected graphic type it can be possible that some sources are not selectable.



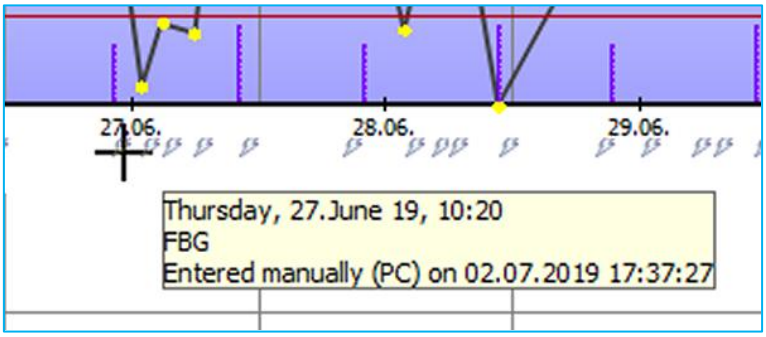
If you want to analyze one of your lab values or data types graphically, please select the checkbox and then click on the button with the three points. The following screen will open:



You can make your selection there and close the screen afterwards by clicking on the small cross on the top right. If necessary, you must click on the button “*Refresh”.*
You can also select the data source "Ø-total insulin/day" in the history graphic. This refers to the total daily dose (sum of basal and bolus insulin), abbreviated as "TDD":



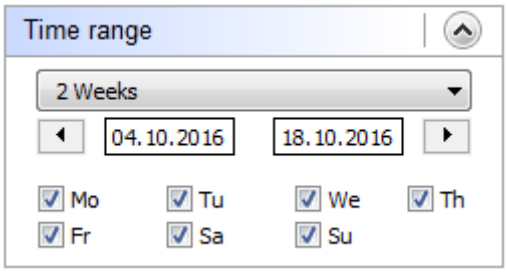
A continuous increase can indicate an incipient development of resistance (receptor down regulation), or in the reverse case a receptor up regulation, i.e. an improvement in insulin sensitivity.
Events appear below the BG curve as a flash icon. If you move the mouse pointer over it, you will see the underlying entry as a tooltip including its data source, i.e. how it got this entry into the program.



In this case the event “FBG” (Fasting Blood Glucose) was added manually at the PC on the 02.07.2019 at 17:37 for the 27.06.2019 at 10:20.

8.6.2.9 Time range

In the dropdown list *Time range,* you can select the exact time range for your statistics.



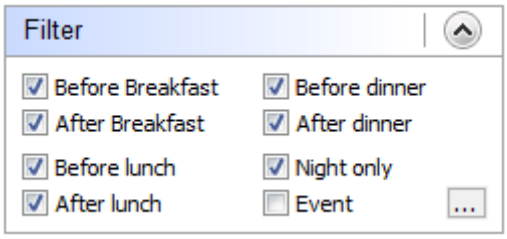
You can select a time range from the list box (in this list you can always select the current day as the period) or enter the start and end date manually. If you do not want to enter the dates manual you are also able to double click in the date input box and select the exact date with the calendar control element.

With the arrow button on the left and the right side you can jump back and forth in the selected time range. In the example above it is a week – so you can jump a week back and forth.

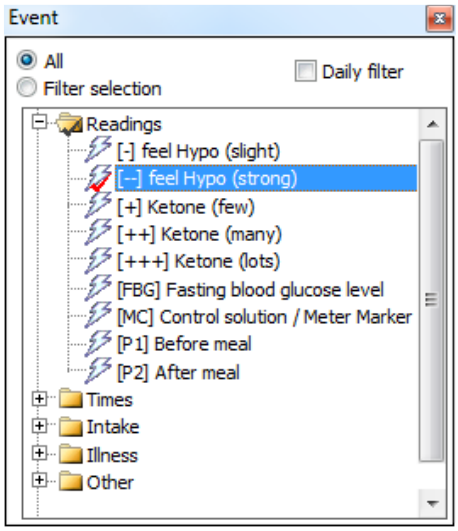
With the checkboxes for the weekdays you can select which days of the week you want to select for your statistics (in our example all days are selected). So you are able to analyze for example only the weekend values.

8.6.2.10 Filter

With the function *Filter* you can select which events should be considered for your statistics:



In our example, all times of the day have been included. Please notice, that the checkboxes are only relevant for the time of day – not the events you have chosen. They only apply to the time of day (which you can define here: ***Diabetesprofile*** → ***Control times***). If you want to display the values which you have marked with an event, you have to activate the checkbox *Event* and select the event, which you want to filter:

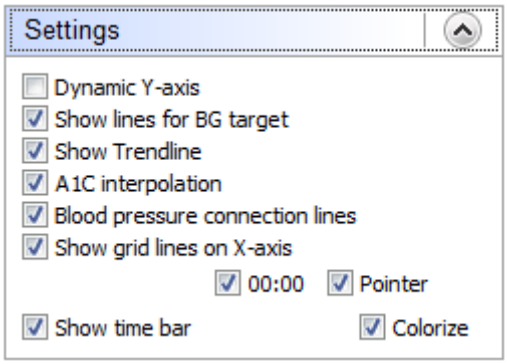


In the example above you would only see data, that has been marked with the event “feel hypo (strong)" (= strong signs of low sugar).

You can define for example the following filter rule: Please generate an analysis of all tracked data, recorded on Tuesday mornings after breakfast, which have been marked as "feel hypo (strong)".

8.6.2.11 Settings

In the menu *Settings* you can select how the graphic of the statistic should be displayed:



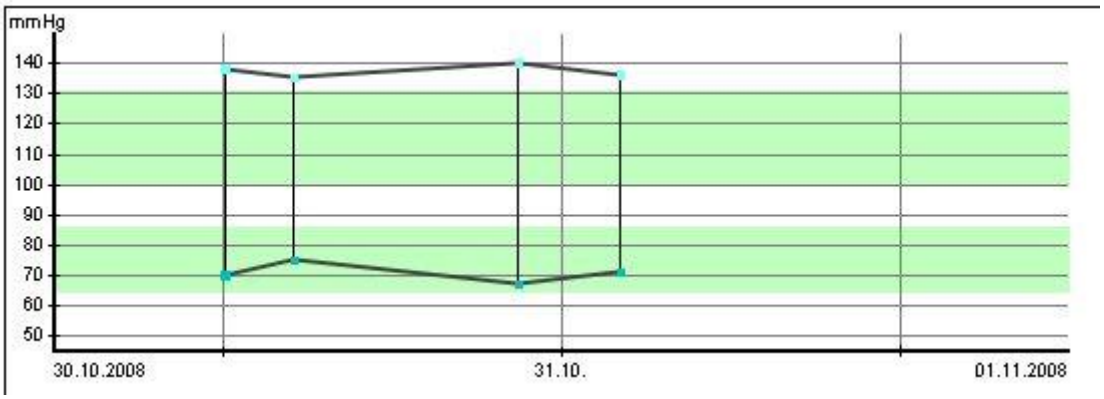
Dynamic Y-axis (for the level of the blood glucose values): SiDiary defines the division dynamically (in steps of 50) up to highest tracked blood glucose value of the selected time range. Otherwise, the chart goes up to 400 mg/dL fix (or 22 mmol/L fix).

The colored lines for the target area are adjusted in the personal settings in your therapy data (see the green and orange line).

The trend line is the thick blue line in the line graph and shows the trend of the blood glucose level in the selected period.

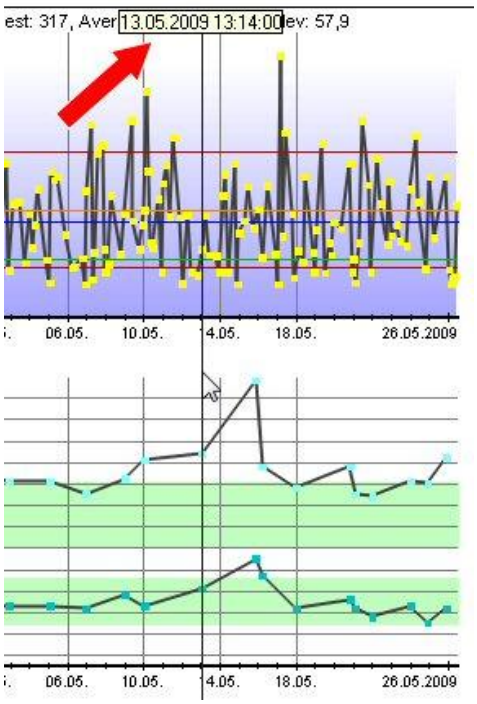
With the option *A1C interpolation* the effect of your bolus insulin for the correction of too high blood glucose values is considered, which makes the indication of the calculated A1C value more accurate.
(for further information see also chapter **A1c calculation)**

If you select *Blood pressure connection lines,* the upper value (systole) of the line graph for blood pressure will be connected by a line with the lower value (diastole):



This type of display is also used e.g. in intensive care units, because it makes a quick rating of the amplitude trend possible (amplitude = the area between systole and diastole).

Pointer will give you a vertical line next to your mouse cursor position to make it easier to see the exact position regarding date and time:

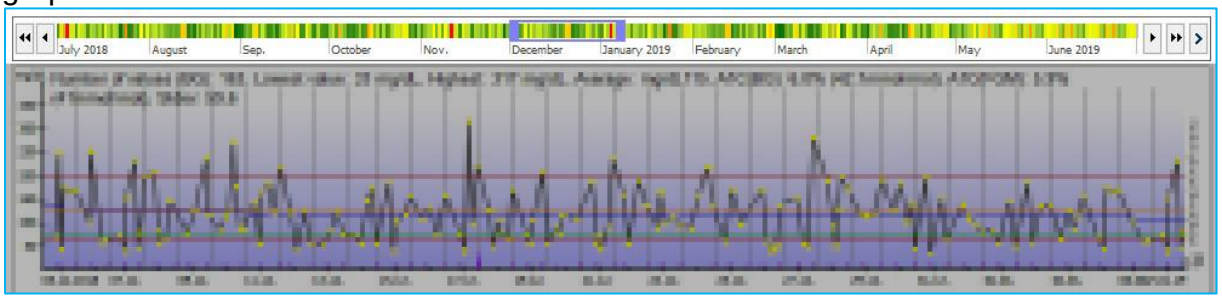


With the checkbox "00:00", you can specify whether the vertical date line should mark the day at midnight (with activated option) or at 12:00 noon.

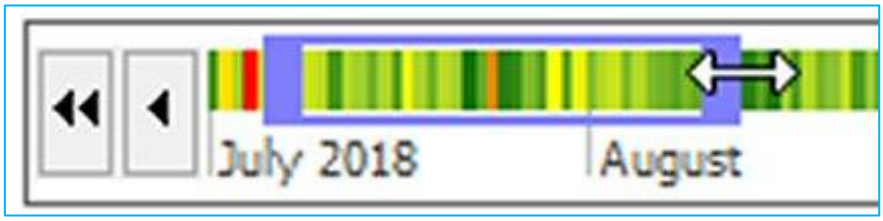
With Display and colorize time bar, you can influence the time bar selection (see below).

8.6.2.11.1 Time bar selection

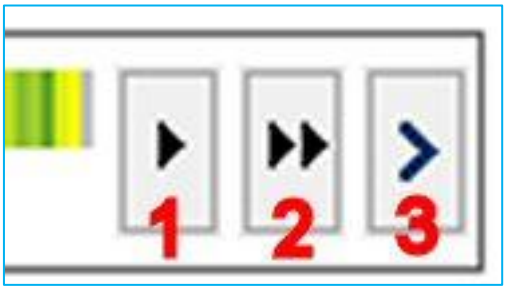
You can see the time bar selection in the statistics as a (colored) bar above the graphics:



With it you can easily adjust the time span of the displayed statistics graphics with the mouse. You can see the currently displayed period in the time bar by means of a colored selection rectangle. You can freely move this rectangle by holding down the left mouse button, but you can also enlarge/reduce it by "touching" the rectangle at the edge with the mouse:



In addition, there are arrow buttons to the left and right of the timeline that allow you to move through the selection even more precisely:



1 = moves the selection one day forward in time

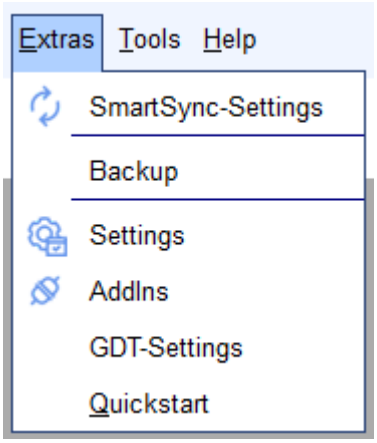
2 = moves the selection one week forward in time

3 = starts an animation that moves the selection forward until you press the button again (this button is only available on the right side of the timeline selection; the other two buttons are also available on the left side (to move the selection one day/one week into the past))

The timeline selection can be optionally colored to get a "preview" of the glucose events for that period.

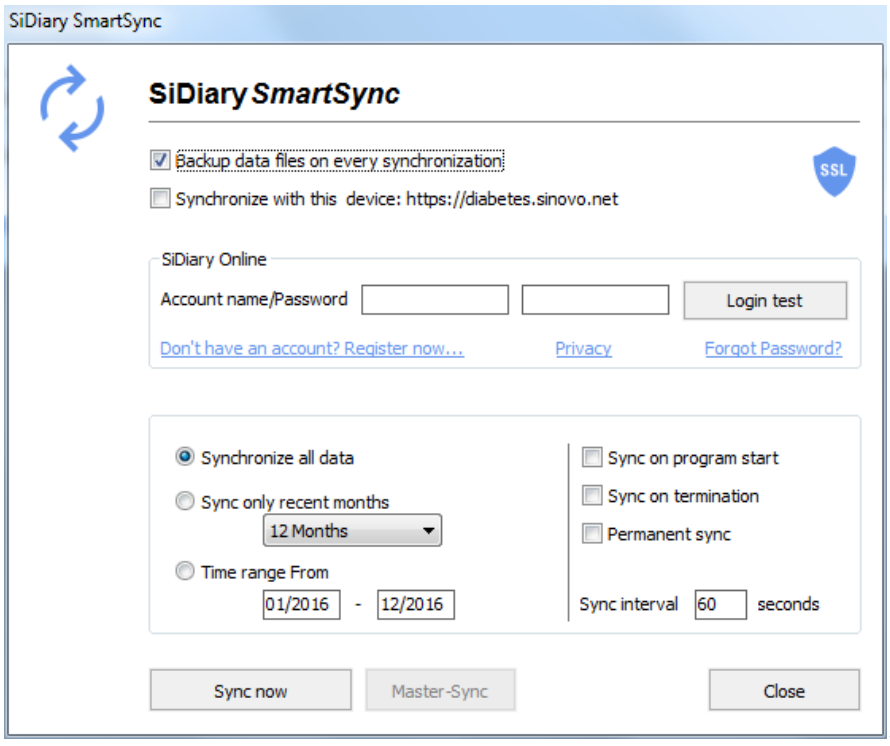
Under the time bar selection, you will always find a summary of the values shown: number of measurements, mean value, calculated HbA1c, etc.
By clicking on it, you can copy this data to your clipboard and paste it into any text document using the Ctrl+V key combination.

8.7 Menu “Extras”



In the menu *Extras* you have the possibility to adjust the operation mode and the appearance of SiDiary.

8.7.1 SmartSync-Settings



S

If you have a SiDiary-Online account (https://diabetes.sinovo.net/) and you want to synchronize your data, you can do the necessary entries here.

With the checkbox '*Backup data files on every synchronization'* SiDiary will save your current data before every synchronization.

At the same time a restore point is set, so you can reset to the state before the synchronization by clicking **Edit** → **Undo**.

The checkbox *Synchronize with this device* must be activated; otherwise SiDiary is not able to synchronize.

In the SiDiary-Online Login box you can make the specifications that SiDiary needs to synchronize with your SiDiary-Online account.

You must enter your account name and password exactly as you have defined it at your login at SiDiary-Online. As your account name you can also use the email address you have used to register at SiDiary Online.

With the button '*Login test*' you can check if SiDiary Online would accept your entries or if you have probably made a mistyping error.

If you are not already registered at SiDiary-Online, you can do this by clicking on "*Don't have an account? Register now"*. If you have forgotten your password, you have the option to send you a new password by clicking on "*Forgot password?*". Both links open the appropriate page on the Internet where you can enter your data

Below you can make more adjustments for the data synchronization. You can select if all data should be synchronized or only the data of a certain time range. Even if something changed in older data, SiDiary will not include that. So, you can speed up the data synchronization.

On the right side you will find three options for automatic synchronization (=Sync). Either at the start-up, when you quit the program or while the program is running. If you do not have activated any of the checkboxes, SiDiary will synchronize only manually. Therefor you have only to click on the '*Sync now*'-button.

With *Sync Interval* you can define after how many seconds the next automatic synchronization is going to start.

On the right below you will see the MasterSync button.

MasterSync means, that on the marked device (in this example ‘SiDiary-Online-Server’) all SiDiary-Data will be erased and then filled with the content from SiDiary on your PC.
So, you should use this function very carefully and first make a backup!

8.7.1.1.1 The advantage of SiDiary-Online?

First, you can share your data with other SiDiary-Online users. They can view your data after your authorization and help you with the analysis.
Data security on our server:

1. The transfer of your data is encoded.
2. Your data can only be seen by people that YOU authorized.
3. You can give this authorization only to other SiDiary-Online users that are also familiar with SiDiary-Online.
4. If your doctor uses SiDiary Professional and you release your data to him, it can then be automatically transferred to his computer in practice. Printouts on paper are then no longer necessary.

With the function "Ask a question" you can send a question to a person that you gave an authorization to by selecting this person in your contact list. The selected contact person will receive an E-Mail about your question.

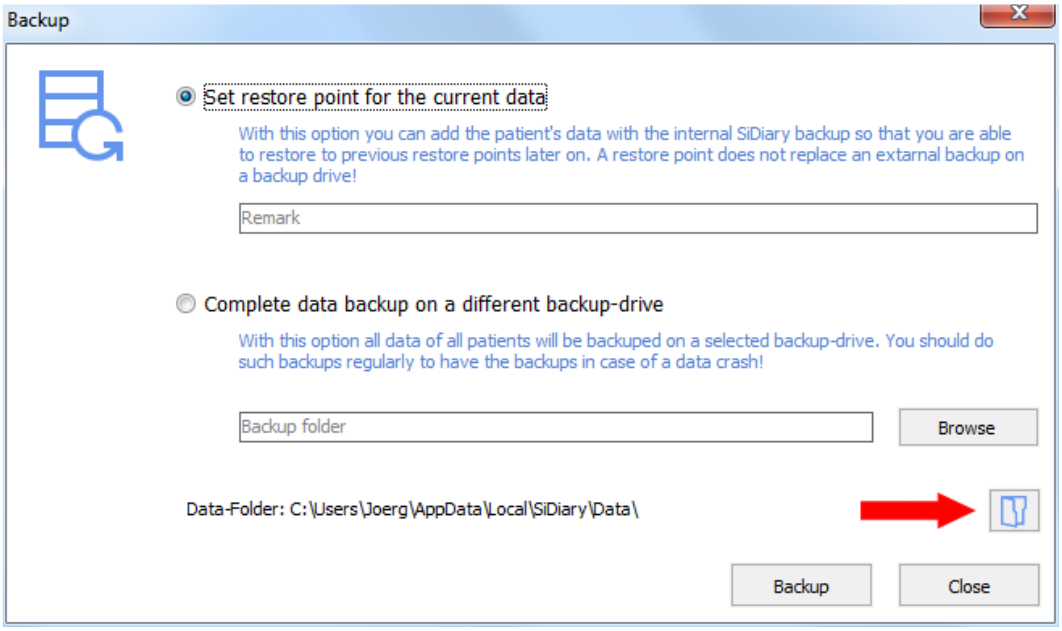
Finally: With SiDiary-Online you can save your data, even when your PC at home has a complete crash / is stolen or burst into flames.

You only must install SiDiary new on your PC and can download your data from SiDiary-Online again on your PC.
You can easily start this via the profile assistant, which is automatically displayed after a new installation when you start the program for the first time. (You can also start it at any time from the program menu item "Diabetesprofile →Profile Wizard").

Just click on the button "Restore" and then enter your login data for SiDiary-Online:

8.7.2 Backup

In the backup screen you can either set a restore point manual – or - make a complete backup of all data on any device / in any folder.



Hint *Below the screen you can see your current data directory. So, you can always see where to copy your saved data if necessary. With a click at the folder button (red arrow) you can open the data folder directly.*

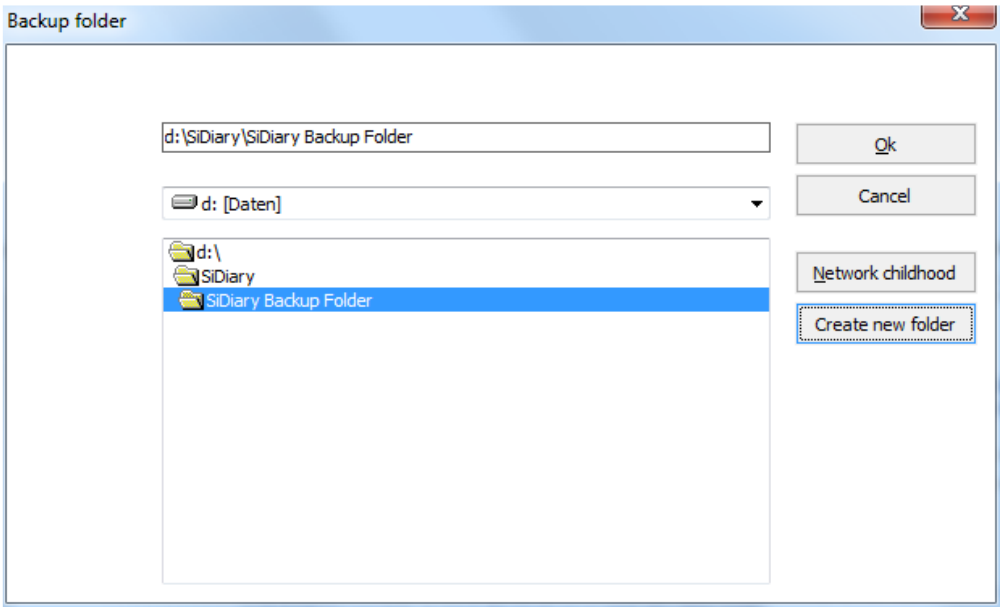
8.7.2.1 Restore point

A restore point is kind of a snapshot of the status and affects only the data of the current patient. The option ***Edit*** → ***Undo*** allows you to restore the last saved status.

Please consider: This is not an alternative to a complete data backup. Although it is fast – it only restores the current state. To back up your data permanently (for example on a network, a backup drive or a removable disc), please use the full backup functionality. Restore points are set patient related! That means, if you have set a restore point for patient A, you are not able to use the function *Undo*, if currently patient B is selected. You can see in the status bar of the program, which patient is actually selected.

8.7.2.2 Complete data backup

To backup all tracked data (of all patients), please use the option *Complete data backup on a different backup drive*. Click on the button *Browse* to open the following screen:

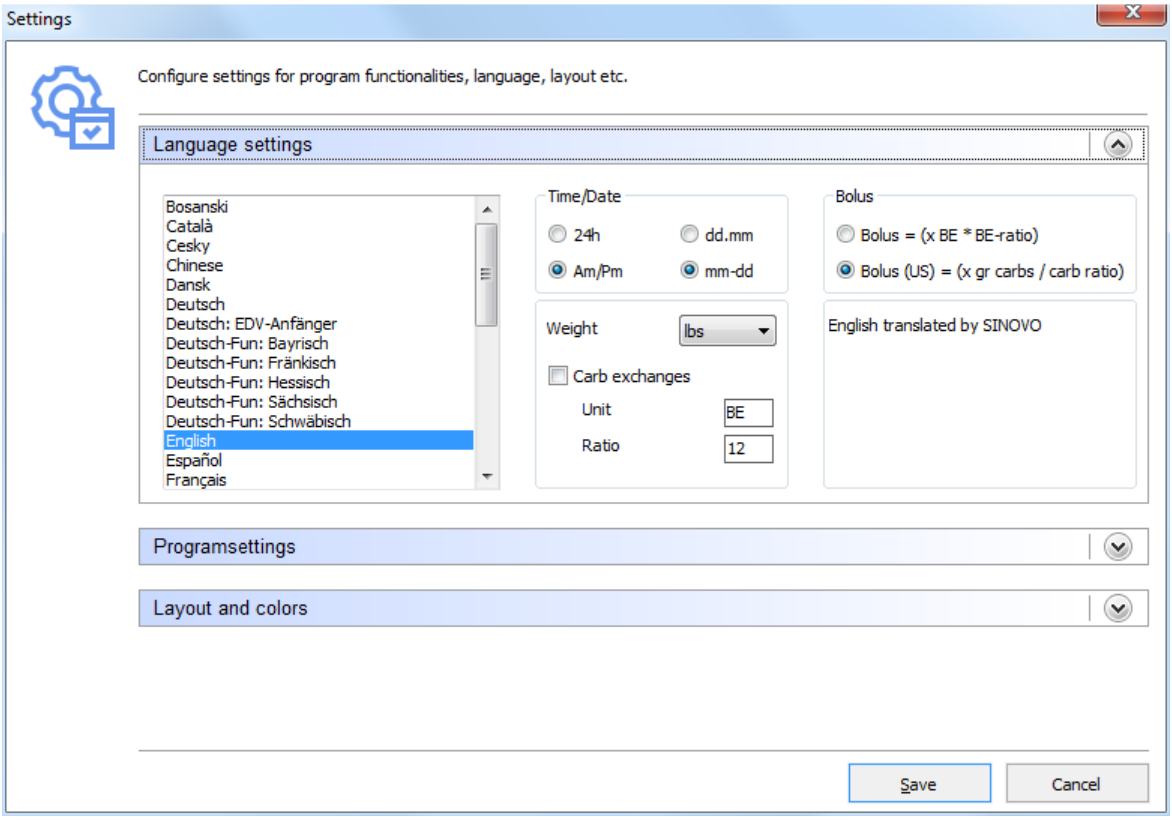


In the list box you can select another drive or device for your backup. In the window below you can navigate within the currently selected drive/device.
If you want to do a backup on a network device, please use the button *Network childhood.* If you want to create a new folder at the target location, please click on the button *Create new folder*.
When you have selected a folder in which you want to store the backup data, click on *OK* and then on the button *Backup* in the original screen.
To restore the backed-up data, please copy the data manually into the data folder of SiDiary. The data folder of the currently installed version of SiDiary can be easily opened by clicking the button with the folder icon in the menu 'Extras -> Backup'.

8.7.3 Settings

In the Settings screen you can adjust the appearance and operating function of the program. The setting possibilities vary just a little in the versions (and consider the appropriate characteristics of the hardware equipment, e.g. cell phones).
You do not have to save every single setting by clicking on the *Save* button, if you for example want to open a dropdown list. After you made all your settings, please click on *Save*. The settings screen closes and the adjustments will be saved the next time when you open this part of the program. (For example: When your detail logbook is

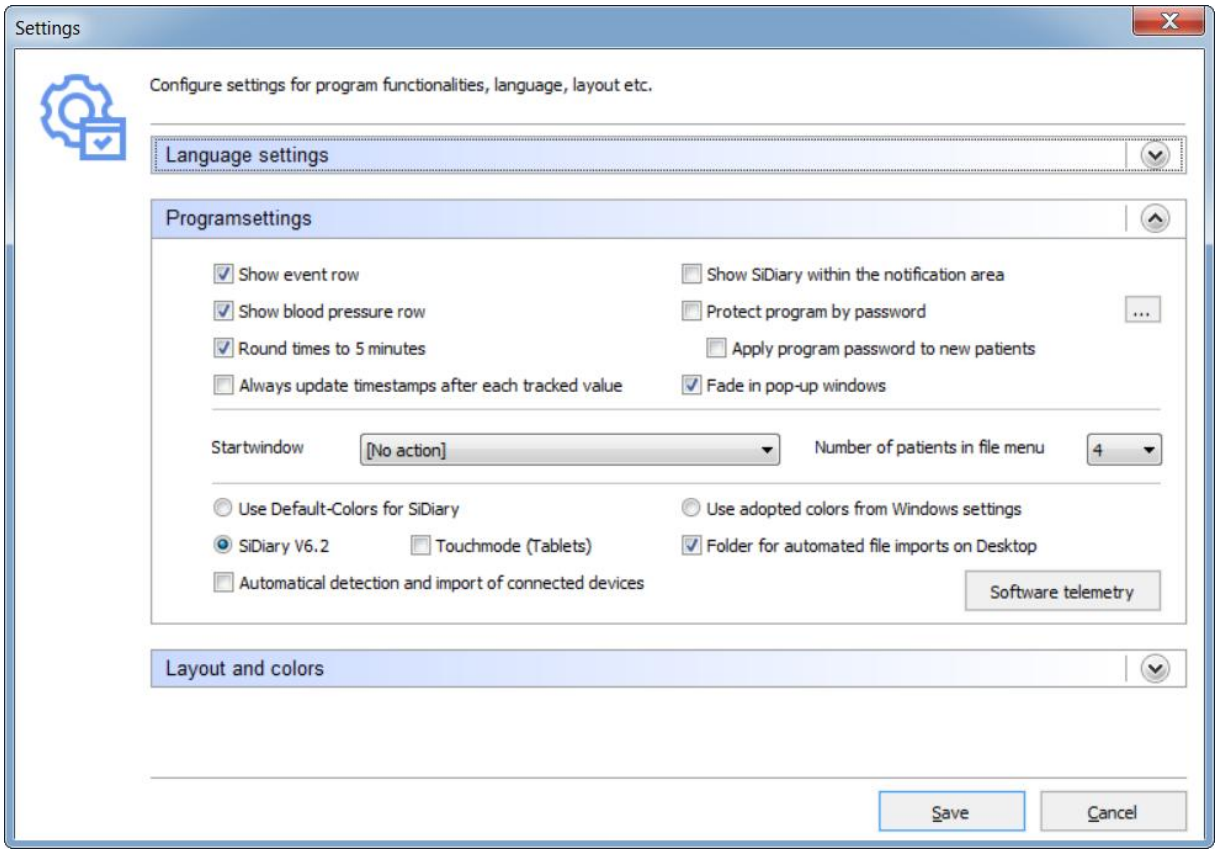
opened and you adjust the color settings, you must close the detail logbook and open it again, to activate the new settings).



8.7.3.1 Language Settings

In the *Language Settings* you can select your required SiDiary program language. You can also adjust the *Time* format (in Europe the standard is 24h – for displays like '17:15' instead of the '05:15pm' notation) and the *Weight* in kilogram (kg) or pounds (lbs.).
SiDiary protocols your carbohydrates internal in gr/carbs (gram carbohydrates). If you prefer to track your data in BE-ratio (bread units), please activate the checkbox *Carb exchanges* and enter the unit's name (for example BE for bread unit or carb for carb ratio). The "Ex." in the delivery status stands for "exchange unit" and should be adjusted according to your requirements.
In the settings screen the abbreviation that you chose will be displayed then.
Please enter the exchange ratio in the input field *Ratio* (for example 12 for BE).
In the select box *Bolus* you can select how the Bolus should be calculated. Either in BE multiplied by BE-ratio – or - in gram carbohydrates divided by carb ratio.

8.7.3.2 Programsettings



Here you can set up the program performance. When you activate *Show event row* and *Show blood pressure row* the appropriate rows in the detail logbook are shown (or hidden if you deselect the checkboxes).
When you activate the checkbox *Round times to 5 minutes* the actual time will be rounded to full 5 minutes (12:00 – 12:05 – 12:10 etc.) if you have selected to update the timestamps below.
If you prefer the exact times (5 minutes are usually accurate enough) like for example 12:33, please deselect the checkbox.

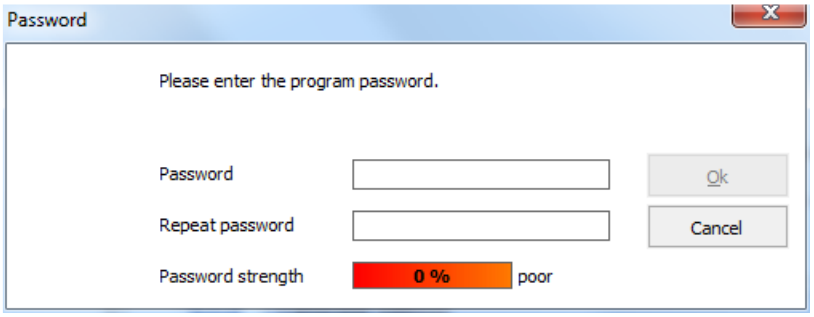
Times of day will only be set, if a value is entered in a column. If there is no value, the time of day stays blank. With *Always update timestamps after each tracked BG reading* you can adjust how the already existing times should be handled.

In this option the times of day that are already tracked, will be adjusted to the current time of day. For example: If the time of day is 09:15 o'clock and you enter in the evening at 18:30 o'clock a value, this column will be changed to 18:30 o'clock

Important: All automatic adjustments of times always refer to the current day. If you change a value from the day before – the already tracked times of that day will remain the same.

If you select *Show SiDiary within the notification area* the program will not close completely but downsizes it to an icon in the Systray (see screenshot below):

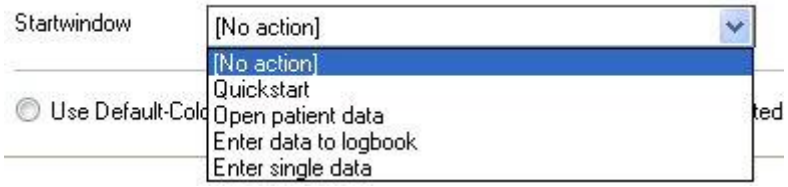
You can use the option *Protect program by password*, if you want to generate a password to open the program (in case your PC is used by different persons, and you do not want others to have access to your program). To enter a password, please click on the button with the three points and the following screen will open:



You must enter your password twice to avoid typing errors. By clicking OK your password will be saved. Please note that your entered password will not be shown as characters but as stars (so nobody can see your password on the screen, while you are typing). With the option *Apply program password to new patients* all your new patients and their data are protected by the password too.

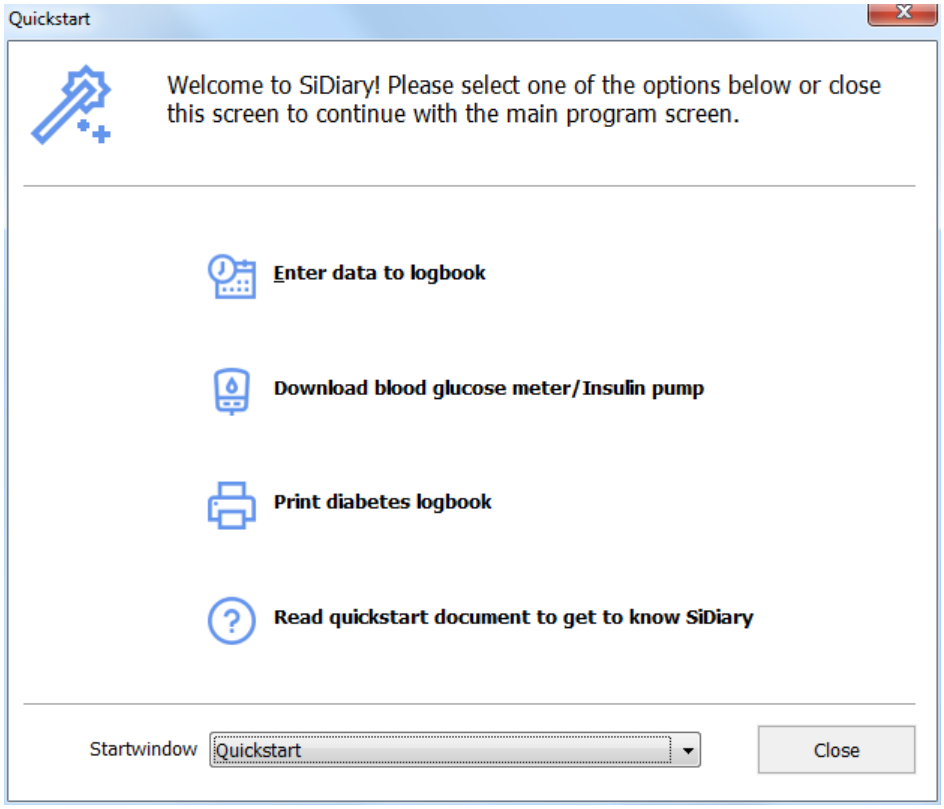
Please note: It is not enough to uninstall SiDiary in case you have forgotten your password; the password protection will not be disabled then. Please contact our support in such cases, we can help you to reset the password properly.

Start window – In this list box you can select what SiDiary opens first when starting the program:

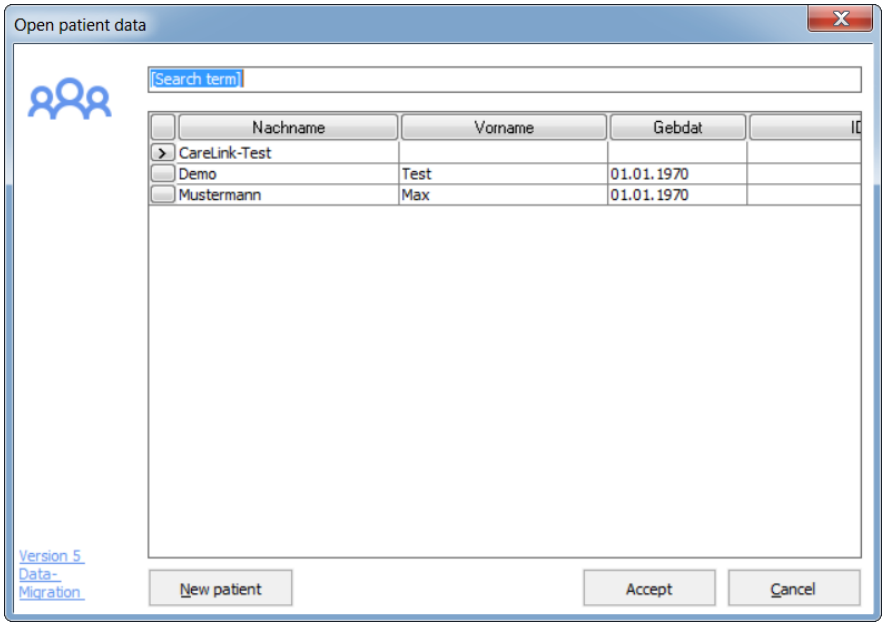


- *[No action]:* SiDiary starts without opening another screen

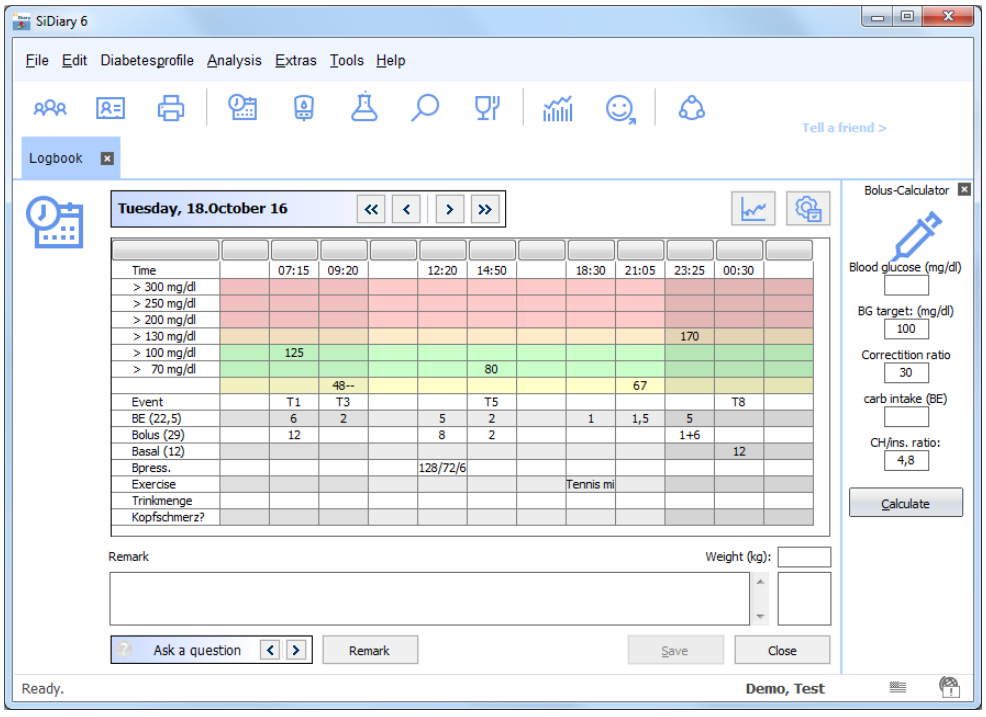
- *Quickstart*: SiDiary opens the quick start screen in which you can choose your next move.



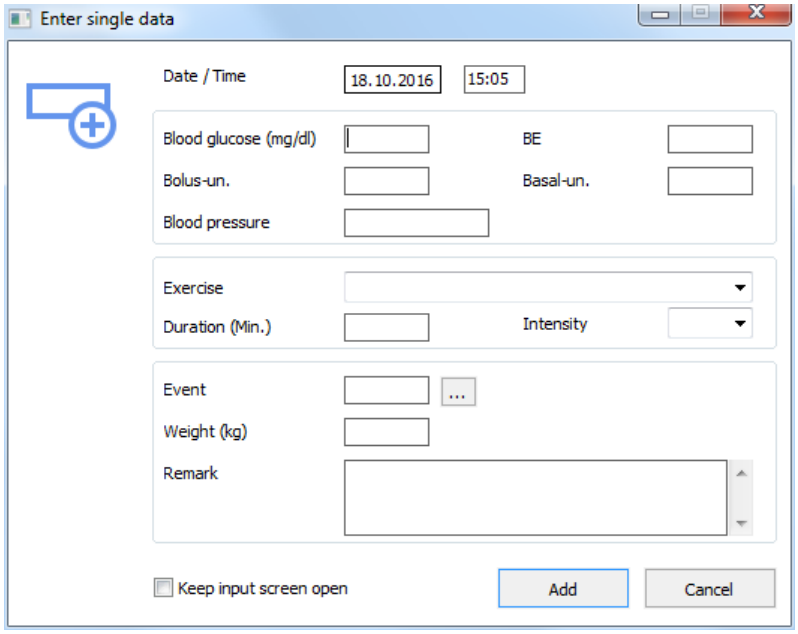
- *Open patient data:* SiDiary shows you at the start the patient selection, in which you can choose a patient to see or edit the data of this patient:



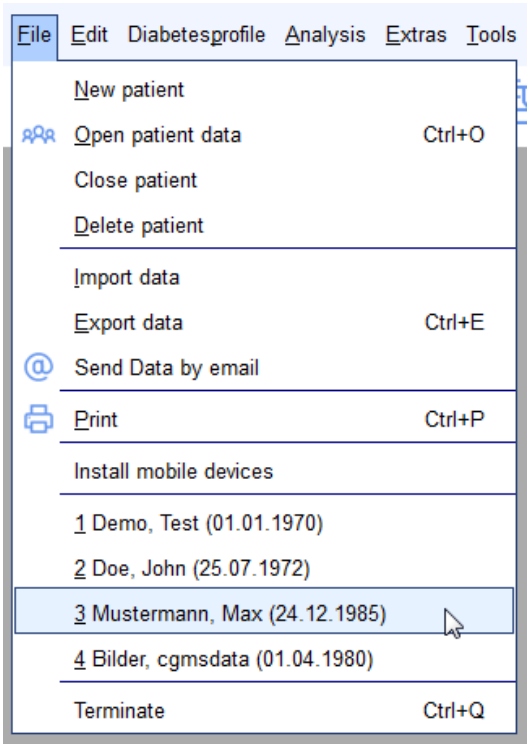
- *Enter data to logbook:* SiDiary starts the logbook from the patient that you have used the last time:



- *Enter single data:* SiDiary opens the following screen where you can enter single values, so you can start directly with entering your data:



Number of patients in file menu: Here you can select how many patients from your program should be displayed in the menu:



In our example above 4 patients are displayed. You can easily switch from one patient to the other by clicking on the name. You do not to have to close the current program screen – it will update automatically.

With the option *Use default colors for SiDiary* or *Use adopted colors from windows settings* you can select, if SiDiary is using its own colors or if you want to adapt your accustomed color settings.

The option SiDiary version 6.1 changes the layout to version 6.1 and also makes it possible to use the special features for the use of CGMS/FGM data (see chapter 6.4.1.5). If this option is not activated, the special CGMS features are not available.

The SiDiary display is slightly enlarged with the checkbox "Touchmode" (Tablets), to facilitate the operation with the finger instead of a mouse arrow.
In addition to this mode, a specially adapted screen keyboard can also be displayed.

The “Folder for automated file imports on Desktop” checkbox controls whether you want to see the link to the Auto-Import folder on your desktop.

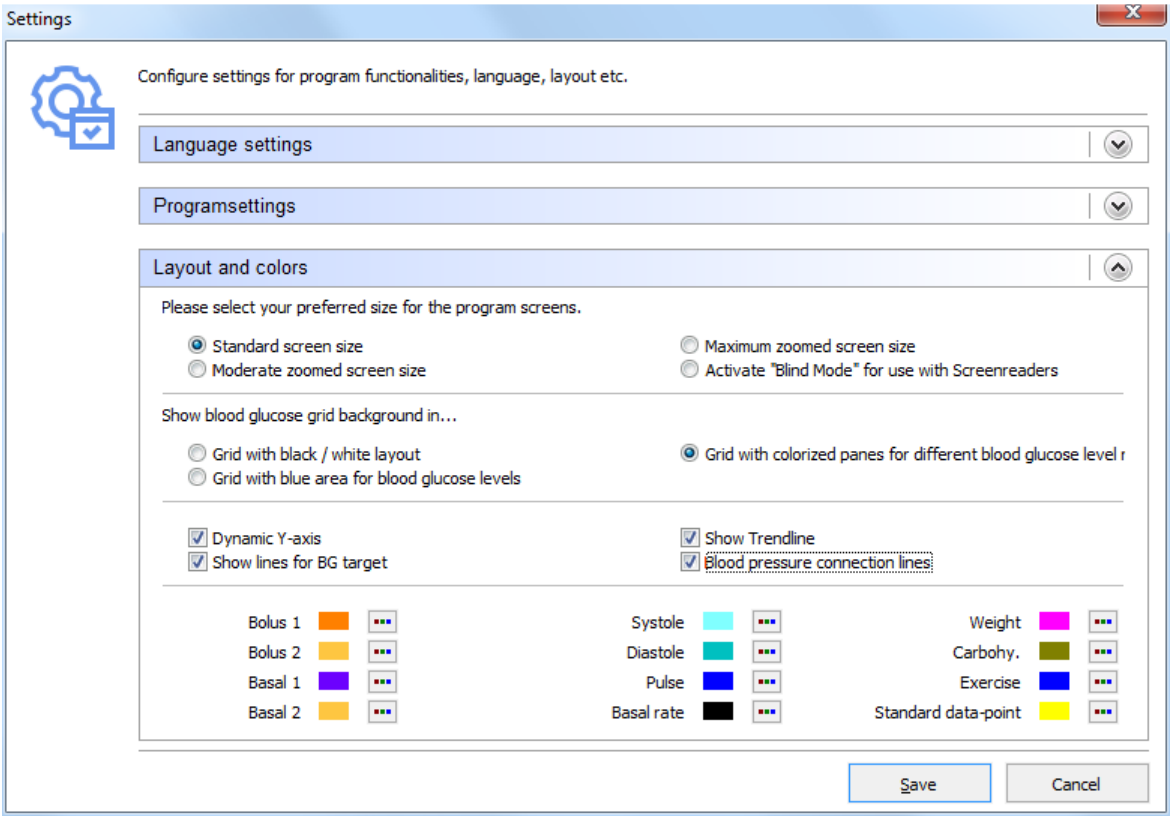
The link to the Auto-Import folder looks like this:

SiDiary can also try to read connected measuring devices automatically, so you don't have to select them via the list of import drivers/import filters first. This is done by the checkbox “Automatical detection and import of connected devices”. You still have the choice whether you want to transfer the read-out values to your logbook or not.

By clicking the 'Software telemetry' button, you can give us your consent to analyze your use of the program (of course completely anonymized, without transferring any data that would allow conclusions about your person). We can use this data to analyze which program functions are used more frequently by SiDiary, thus optimizing the further development of the program.

8.7.3.3 Layout and colors

In this area you can adjust the appearance of SiDiary:

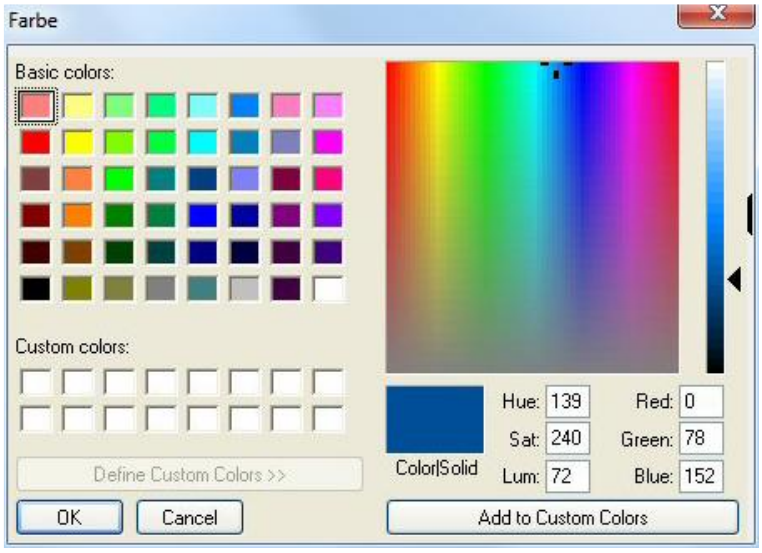


You can enlarge program elements like buttons and program text in two steps (moderate zoomed and maximum zoomed). Please note that the zoom does not affect the displayed size of the detailed logbook.
For blind persons you can select the *Blind mode for use with Screenreaders,* which will optimize the display for Screen-Readers.

Show blood glucose grid background in: The overview in the detail-logbook can be displayed in different colors. Besides a design in black/white or blue you can display the different target ranges (under the target range, in the target range, a bit over the target range and high values) each in different colors. Your own adjusted target range will always be displayed green.

Below you can make your settings for the graphical display in the statistics. You can find the description of the line settings in chapter 6.6.2.9 „Settings“

You can also adjust the colors of the display of additional information in graphics of the statistics. To change color, please click on the button with the three points and the following screen will open:



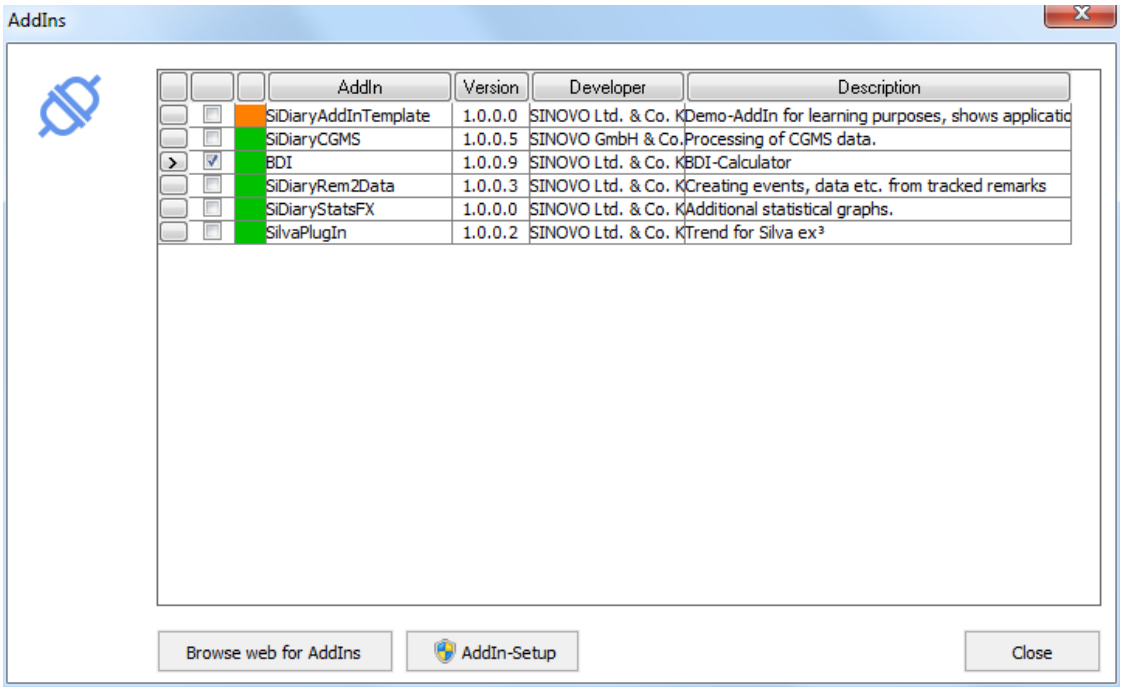
Here you can adjust every color that you like.

8.7.4 AddIns

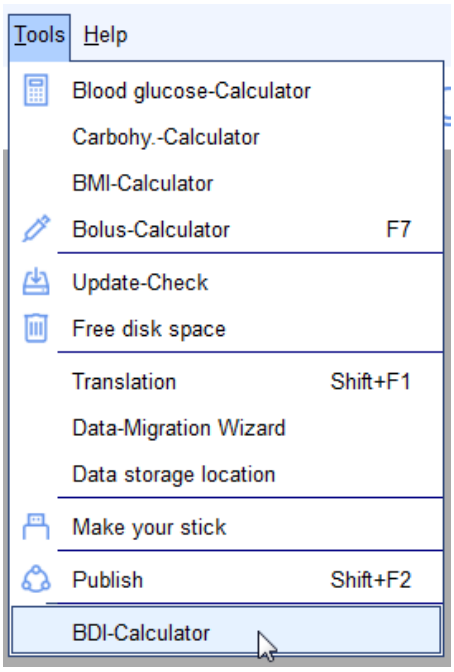
With *AddIns* (= small program extensions) you can enlarge the program functionality of SiDiary. There are developed AddIns by SINOVO, but also by other developers available. If you would like to develop (and add) an AddIn yourself, please see the following instructions.

If you want to add a complete AddIn to your SiDiary, please copy the unpacked AddIn in the file: C:\programs\SINOVO\SiDiary6\AddIns.

With the next program start of SiDiary you can activate your AddIn in the menu ***Extras → AddIns***:



In our example above the AddIn "BDI" was activated by clicking in the checkbox (and can now be used).
Please read the attached *Description of* how to use an AddIn.
In our example above a special calculator will be added to the menu, 'Tools' and can also be opened there.



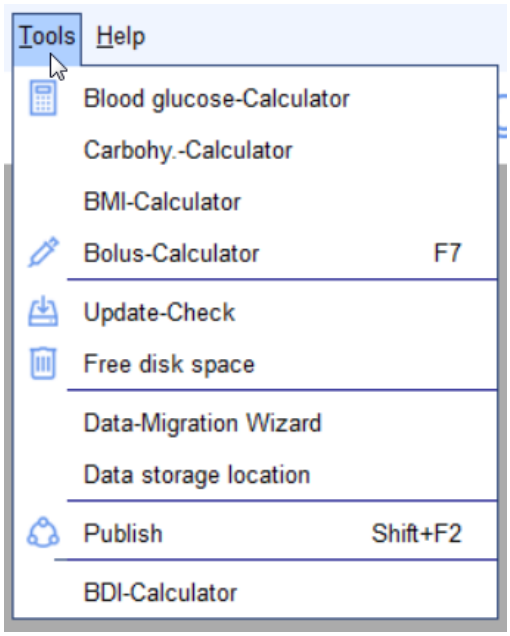
Because the possibilities for AddIns are almost unlimited, it can happen to add new menu items, new buttons or new functions within screens.

For our internal quality management, we will certify the AddIns. The certification is a kind of a testing seal. You can see the status of an AddIn at the color in front of the AddIn:

- Green – the certificate is active/valid.
- Orange – the certificate has expired.
- Red – this AddIn has not been certified by SINOVO yet.

By clicking in the colored area, you can see details about the certificate.

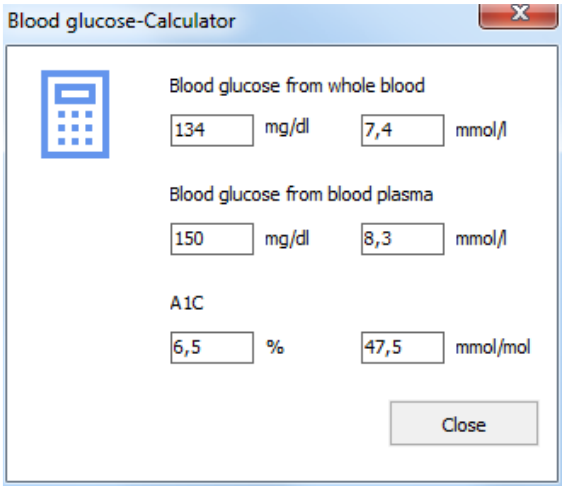
8.8 Menu „Tools “



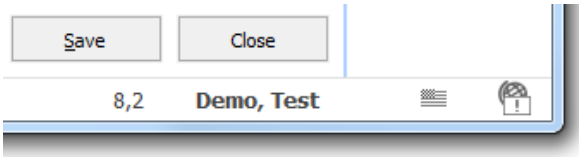
Tools are small additives that you will not need very often but which can assist you in special cases.

8.8.1 Blood glucose calculator

With this calculator you can convert your blood glucose value:



For blood glucose values different measuring units exist:
mg/dL (milligram per deciliter) – or – mmol/L (millimole per liter).
SiDiary already converts the values in your logbook by clicking on a value and displays the result then in the status bar:



If you have adjusted (like in our example above) mg/dL and you click on a value in your logbook → the same value will be displayed in mmol/L in the status bar (and vice versa).
This can be helpful when you talk to another person with diabetes that is using the other measuring unit.
In the blood glucose calculator, you see 6 input fields. You only must enter one value in one of the input fields. The entries of the other 5 input fields are made automatically by SiDiary.

8.8.1.1 Blood glucose from whole blood

You can enter a blood glucose value in *Blood glucose value from whole blood*, when you use a blood glucose meter that is adjusted in whole blood.
Blood glucose meters can be adjusted in whole blood or blood plasma. Whole blood means that all components of the blood (the hematocrit / packed cell volume) and the fluid components of the blood (= plasma) are still included. To put it simple: in whole blood is 12% less glucose contained – than in plasma. Blood glucose meters that are adjusted in whole blood show a blood glucose value that is about 12% under a blood

glucose meter that is adjusted in plasma. To see how your blood glucose meter is adjusted, please read the instruction manual of your meter.

8.8.1.2 Blood glucose from blood plasma

It is called plasma, when from a blood sample all blood components such as hematocrit, red blood cells (erythrocytes) and white blood cells (leukocytes) as well as the blood plates (thrombocytes) were removed. In the medical lab this is done by centrifugation. When a medical lab is testing the blood glucose value with high-precision meters, they do this only with blood plasma. If you have a blood glucose meter that is adjusted in plasma you can compare the results directly to the results of your medical lab.
If you have a blood glucose meter that is adjusted in whole blood you must convert the values to compare them to the results from the medical lab (plus 12%).

Hint

If you want to prove the accuracy of your blood glucose meter and your doctor works together with a medical lab, take your own meter to the next blood withdrawal. Please consider that you cannot compare the taking of venous blood samples from the crook of the arm to a capillary blood sample from the finger or earlap, because venous blood has in general a lower concentration of blood glucose. So if they take a capillary blood sample at your doctor's office, make also a measuring (or better 2 or 3 measurements) with your own meter. These measurements can be compared to the lab results in order to find out how accurate your meter is.

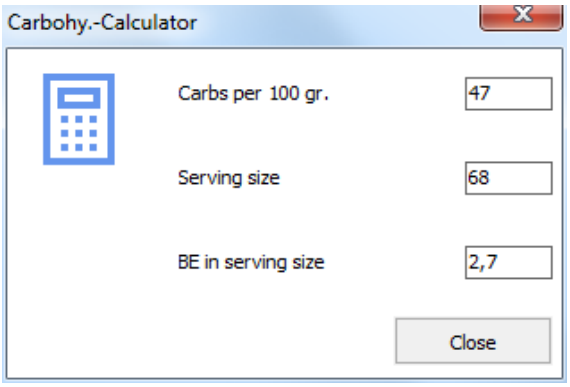
8.8.1.3 A1C

You can enter here the A1C value of the medical lab and get an approximate conversion in mg/dL or mmol/L.

When you enter a blood glucose value, the A1C field shows you what your A1C value would be when your average blood glucose level was in the last 6-8 weeks as high as this record.
SiDiary supports both A1C units: percent and mmol/mol

8.8.2 Carbohydrate calculator

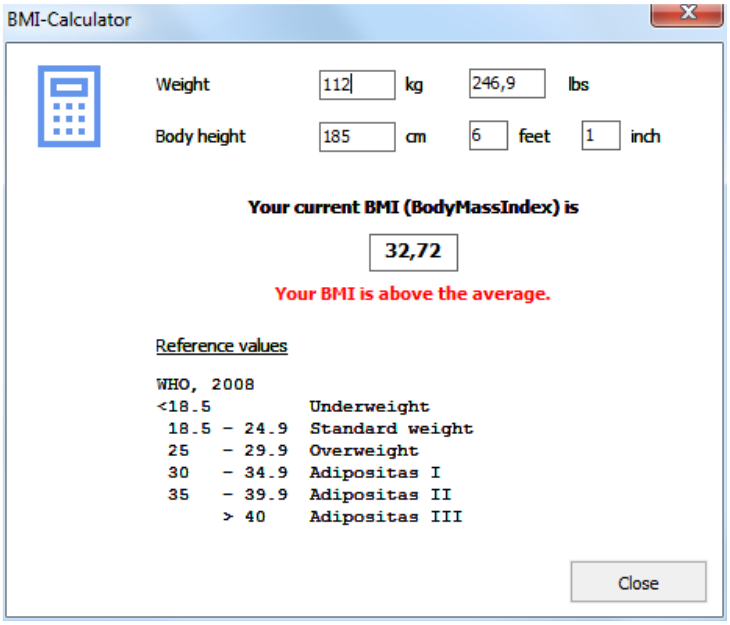
If you know that your food contains 47 grams carbohydrates per 100 grams and you have eaten 65 grams of that, you are able to find out with the *Carbohydrate-Calculator*, how much carbs you had in total:



Please consider that you must enter your exchanges and the correct conversion factor (12 for bread unit and 10 for carbohydrates) in ***Extras*** → ***Settings*** → ***Language settings*** for an exact result.

8.8.3 BMI-Calculator

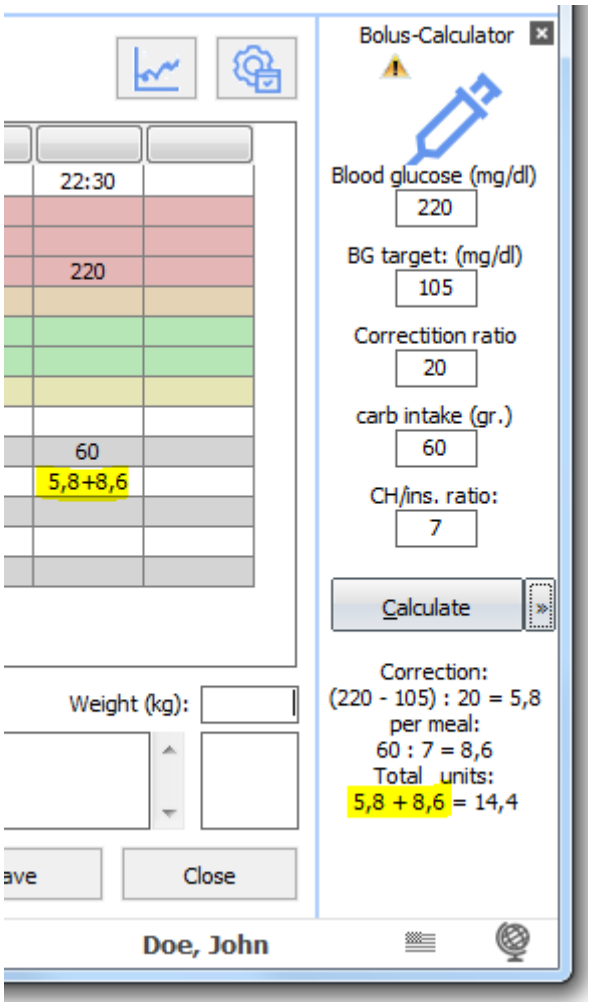
With the *BMI-Calculator* you can calculate your BMI (= Body-Mass-Index):



Please enter your weight and your size. Then your BMI will be displayed.

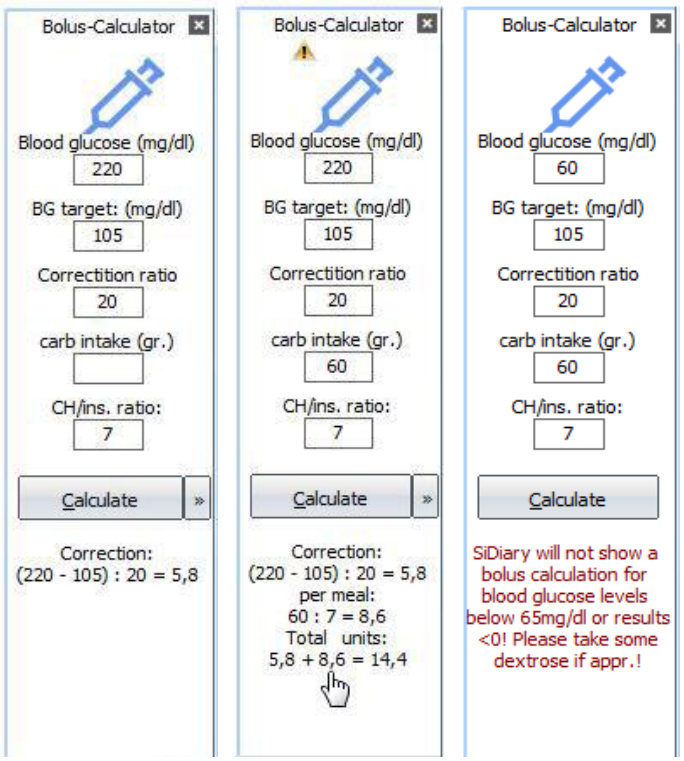
8.8.4 Bolus-Calculator (F7)

In the menu **Tools** → **Bolus calculator** or with the **F7**-button you can open the *Bolus-Calculator* of SiDiary:



The bolus calculator will be permanently displayed on the right side of the logbook. The target value (the average value of your target range – in our example it is 105 - because the target range is between 70 and 140), the correction ratio and the carb ratio will be entered automatically by SiDiary, depending on what you have predefined in your therapy data. Please consider that this automatic process is only available in the detailed logbook. In the CT-logbook you can enter all your information manually. You can also overwrite these entries manual in the detail logbook.

The usage is very simple. You only must enter your data – for example your blood glucose and carbohydrates – and then click on *Calculate*. The bolus calculator will always adopt the blood glucose and the carbohydrates active column.
The result is displayed under the *Calculate*-Button:



You can see in our example that not only is the result displayed, but also the calculation method. In certain situations, the bolus calculator will not display a suggestion. As you can see in the right picture, the blood glucose value is below the limit of 65 mg/dL. This is a safety function of SiDiary, which cannot be switched off (and that we will not change).

There won't be a suggestion also, if you did not enter a current blood glucose value, because your blood glucose value could be too low and a correction by an additional carb unit and/or reduction of insulin could be necessary.

Important

The results of the bolus calculator can only be as accurate as your entered values. They are only a calculating help – **not a therapy suggestion**!
You should always recalculate/control the results and also consider situations that can influence carbohydrates and the insulin effect such as:

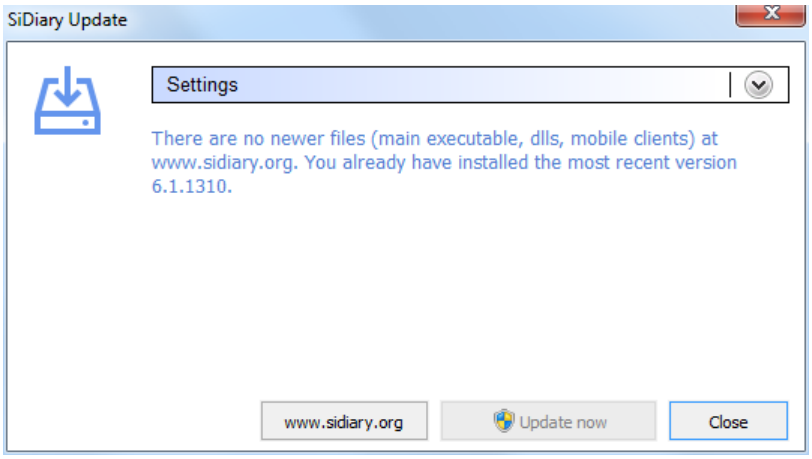
- previous insulin intakes (the remaining effect)
- previous physical activity (the insulin effect is stronger)
- sickness / diseases (can change the effect of insulin)
- diarrhea (can minimize the complete absorption of the carbs)
- other medicine/medications (can change the effect of insulin)

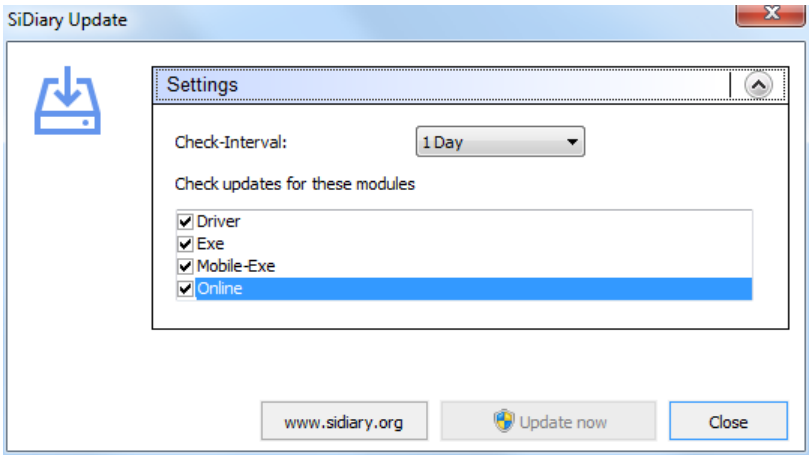
Please discuss further procedure in these cases with your diabetologist or your diabetes team!

If you do not know your carb ratio / correction rules you should not use this calculator! You should also **not** use this calculator if your diabetes team supplied you with a chart that advises you how much insulin to inject at which blood glucose level.

8.8.5 Update-Check

If you click on the button *Update-Check* the following screen will open. With this function you can check if there are already newer program versions or components of SiDiary available. So, you are always able to work with the most recent version and be sure you do not miss any adjustments that were made meanwhile.



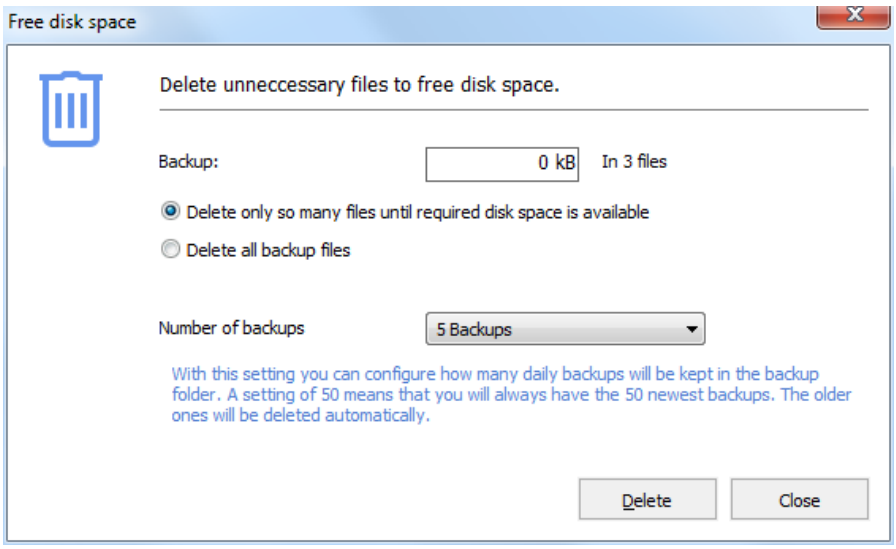


With the *Check-Interval* you can select how often SiDiary should look for program updates in the background of the running program. This allows you to keep your program fully automated up to date.
In addition, you can select which program parts SiDiary should look for updates.

With a click on the button www.sidiary.org/languages our web page opens, and you can have a look at the changelog. With a click on *Start update* you can download the update file directly (you need a running internet connection for that). We suggest clicking directly on *Run* (and not to save the file first). To change the necessary program files, SiDiary will be closed automatically. After the update you have the most recent SiDiary version and can start the program as usual.

8.8.6 Free disc space

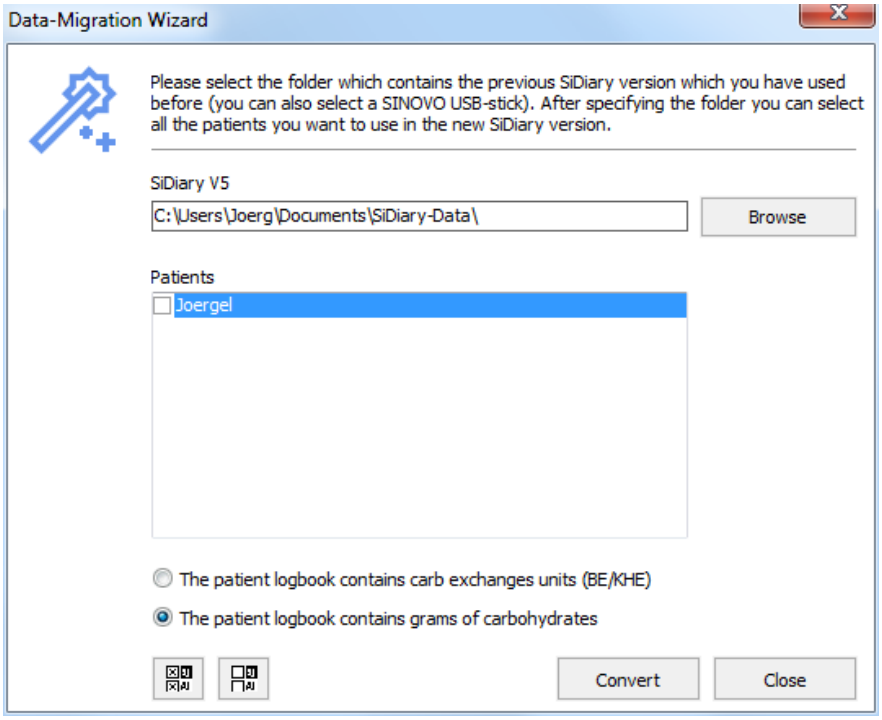
In *Free disk space* you can delete files that you do not need any more (for example old backups) to get more disk space.



You can see here how much space your backup files need right now. Now you can select how the backup files should be deleted. Either *Only so many files until required disc space is available* (interesting for users of the SiDiary USB-Stick) or *Delete all backup files*.
You can also select the number of backups that you want to keep. In our example above all backups will be deleted except for the 5 newest.

8.8.7 Data-Migration Wizard

With SiDiary version 6 the data format has changed (compared to the previous SiDiary versions). To use your previous data also in SiDiary version 6 you must convert your data into the new data format. The Data-Migration Wizard will help you do this (usually you will need this function only once).



Usually the *Data-Migration Wizard* will find your previous data on your computer automatically. In singular cases (e.g. you have used formerly an older SiDiary USB-Stick) it could happen, that you must enter the storage location manually. To find the storage location the *Browse* button will help.
When you have found the right directory, all patient data found will be listed (if you used the multi-patient modus in SiDiary version 5). You can select which patient data you want to convert in SiDiary version 6.
You do not have to select every single checkbox (in front of the patient's name). On the bottom left you find two buttons. The left button will select all patients, and the right button will delete the selection of all patients.

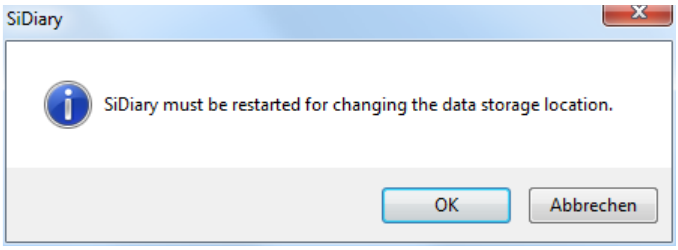
After selecting the required patients, please click on the button *Convert*. (If you **have not** used the multi patient mode this list will be empty – then you do not have to select – just click on the button *Convert*).

All previous data that you tracked in SiDiary version 5 will be converted and integrated into SiDiary version 6.

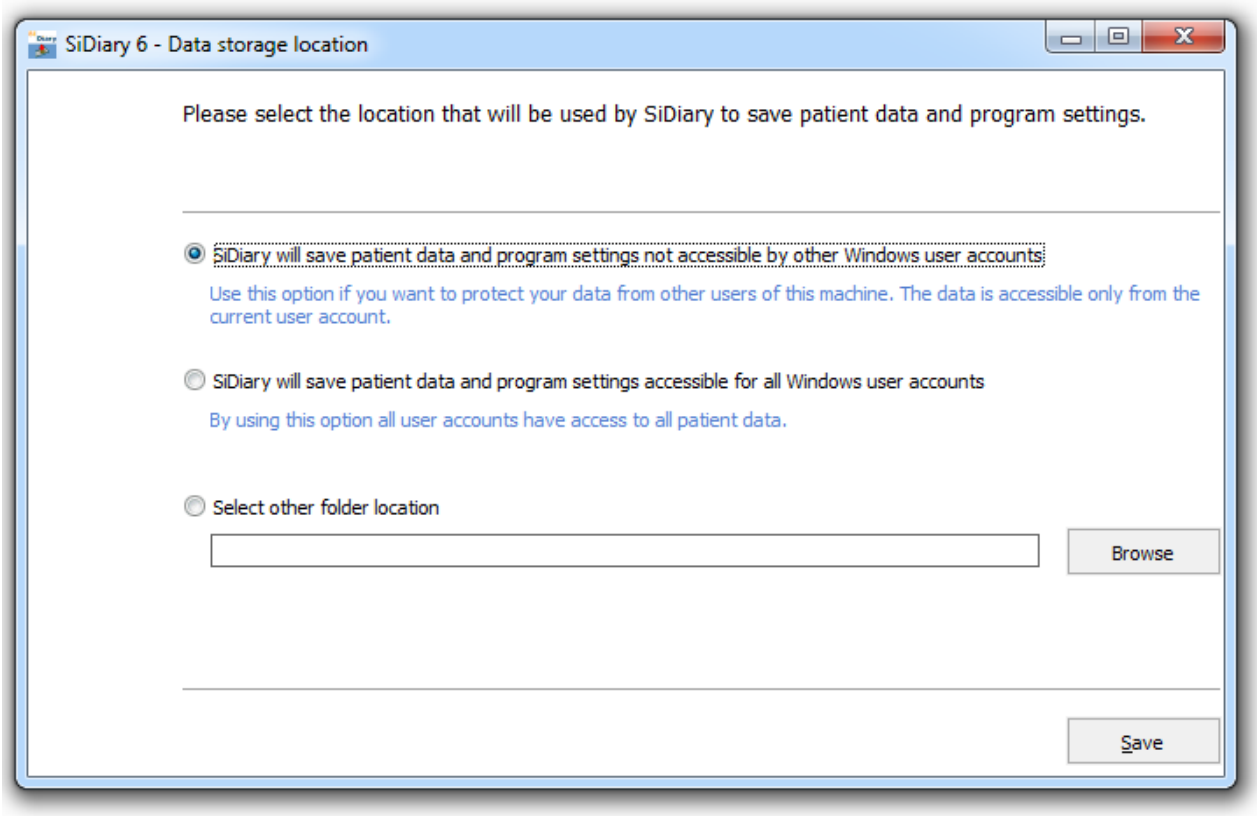
In SiDiary 6 there will be first name and last name instead of only the name. Because of this modification it can happen that the name will not be displayed correctly. You can adjust the name easy in the menu ***Diabetesprofile → Therapy details and goals → General***.

8.8.8 Data storage location

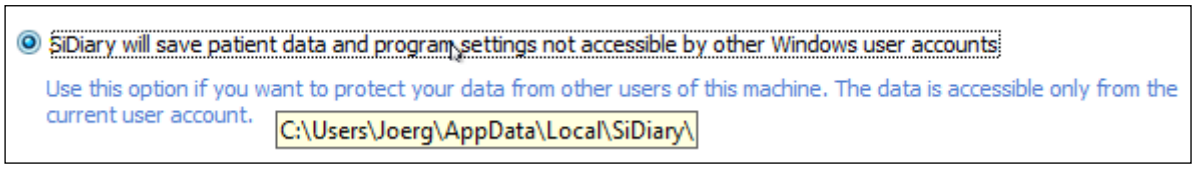
In the *Data storage location,* you can define where SiDiary stores your data. After clicking on *Data storage location,* you will see this notice:



When you click on *OK* SiDiary will be closed automatically and you see the following screen:



Here you can choose between three options. You can find an explanation below every option. When you hold the cursor on an option a tooltip will tell you the exact data storage location for this option.



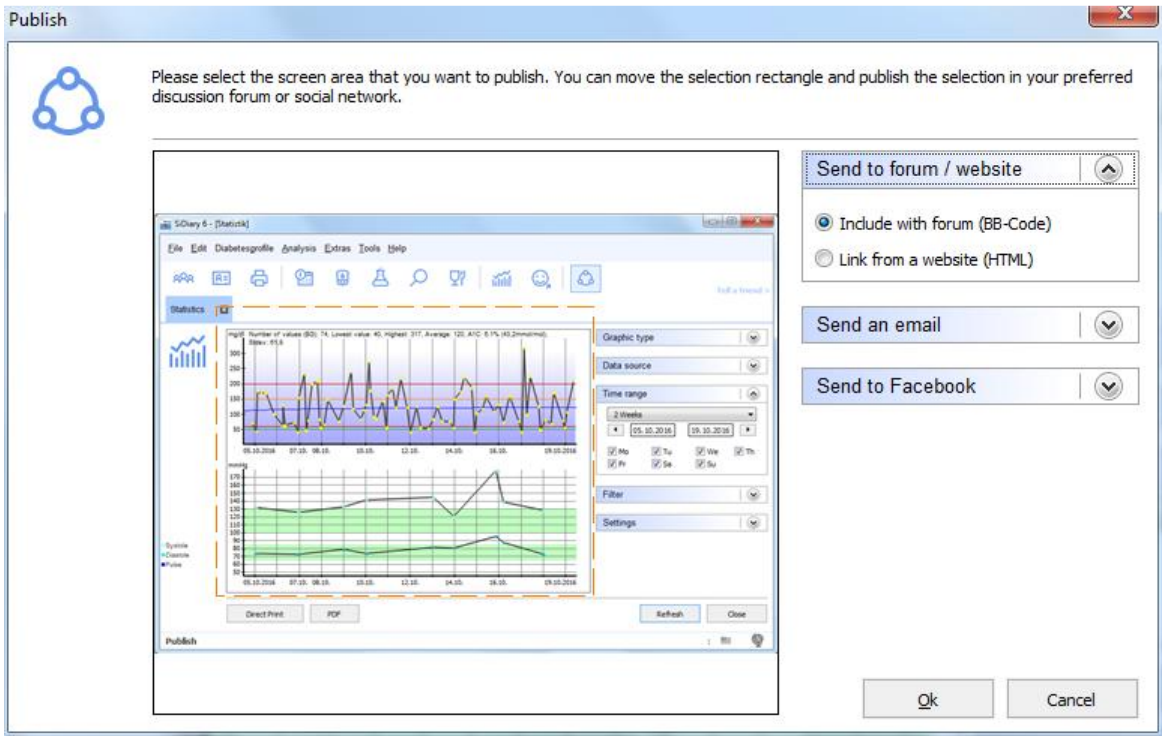
If you want SiDiary to store your data in a specific folder, please select the third option and click on the browse button to find the folder that you want to select.

Users of the pro license will have as a third option the possibility to select a network folder to store the data. So, every client on your network will have access to the same databases.

After clicking on *Save* SiDiary starts again with your selected options.

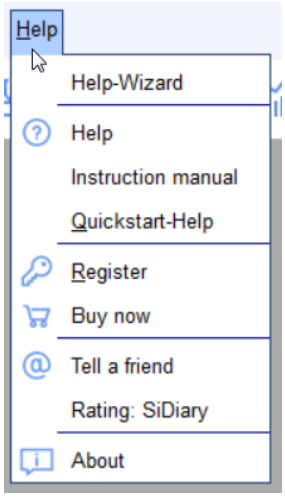
8.8.9 Publish

With this tool you can publish screenshots from the program very easily: on your forum, on Facebook or send them by email. You can use this function also with the shortcut **Shift + F2**, so that it is also available on windows without direct access to the menu.



It can be used to show your friends a specific day from your logbook or a specific function of SiDiary itself.

8.9 Menu „Help “



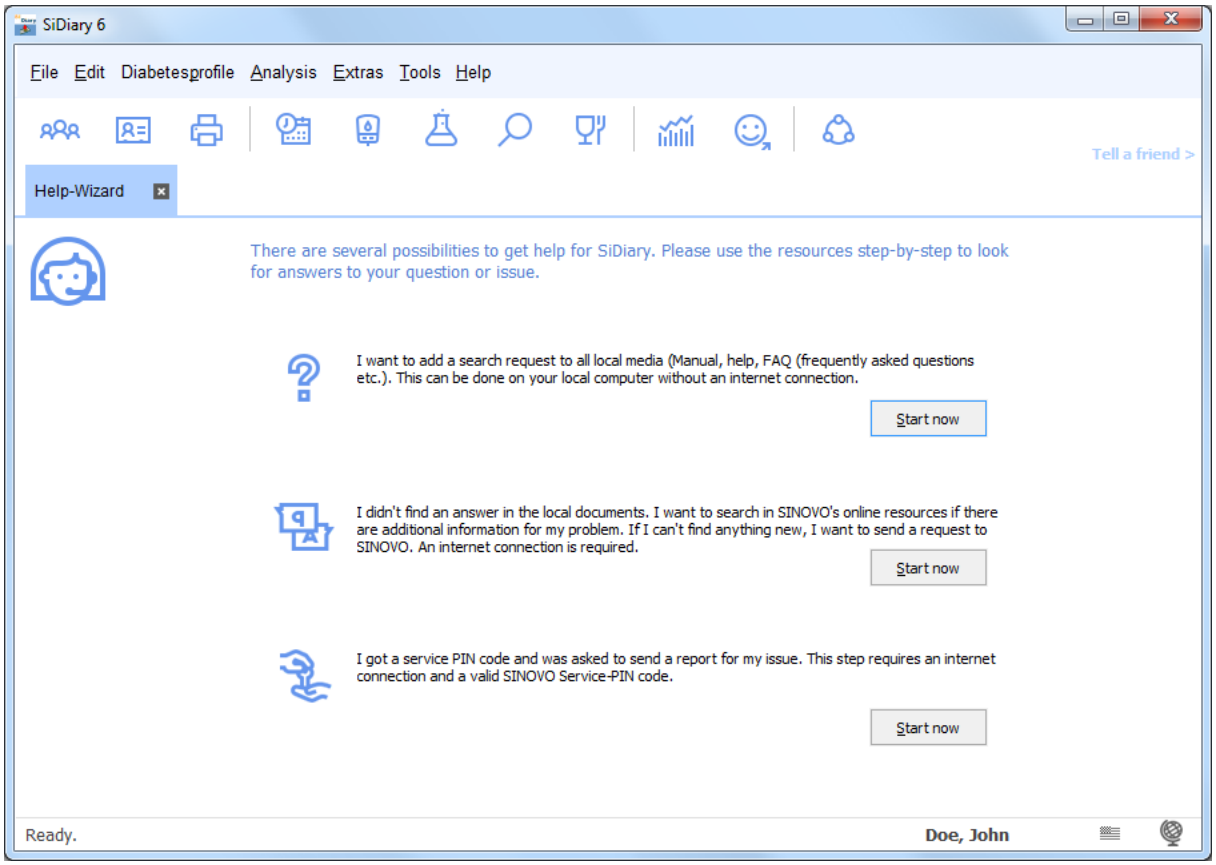
In this menu you can find the program help function, the possibility to buy and register the program and the information which program version you are currently using. With the number of the version, you are always able to check on our website at *'Download Software → Updates'* if you are using the most recent version of SiDiary.

Hint

Sometimes it can happen that a SiDiary data file on your computer is damaged and the program is not running properly anymore. In this case it can help to get an update, even if the number of the update and the number of your SiDiary version is the same (because while running the update damaged data files will possibly be replaced by new files).

8.9.1 Help Wizard

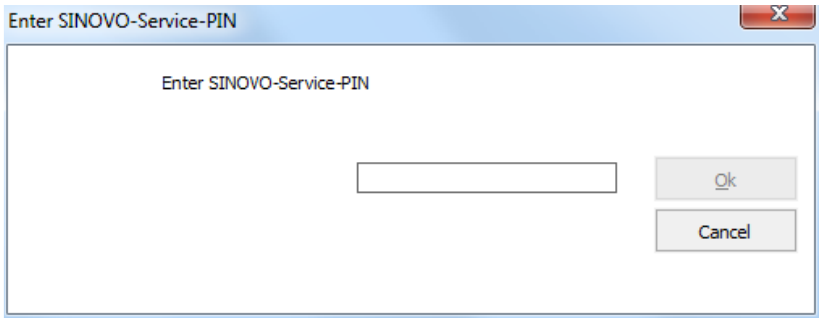
If you have questions regarding SiDiary or need help – you can use this assistant. The assistant provides you with three options that you should use until your problem is solved.



The first option opens the search function in the SiDiary online help area. Just enter a search term and click on *List topics*. You will see then a listing of all sources of information that were found. With a double click on the found information the help function will route you to the appropriate text.

If you are not able to find the necessary information this way, you can visit our web page with a click on *Start now* in the second option (or directly at www.sidiary.org). Now you can search on our web page for the most recent notes and information. You can also search in our FAQ list (frequently asked questions), in our SiDiary forum or you can write an E-Mail to our technical support (info@sinovo.de – you will get help her within a short time).

The third option is necessary in case we need more detailed information about the hardware you use to analyze the problem. In this case you will receive a Service PIN that you can enter after a click on *Start now* at the third option on the following screen. SiDiary will send a detailed error list to the SINOVO support to check on the problem.



8.9.2 Instruction manual

You can download the SiDiary manual as a PDF file and save it on your PC in a folder of your choice.

8.9.3 Help

By clicking on *Help* you open the help function of SiDiary. This function equals this manual, but due to the integrated search function it may be easier to handle in some situations.

8.9.4 Quickstart

Quickstart is starting the quick start manual that you can also find in chapter 7.

8.9.5 Register

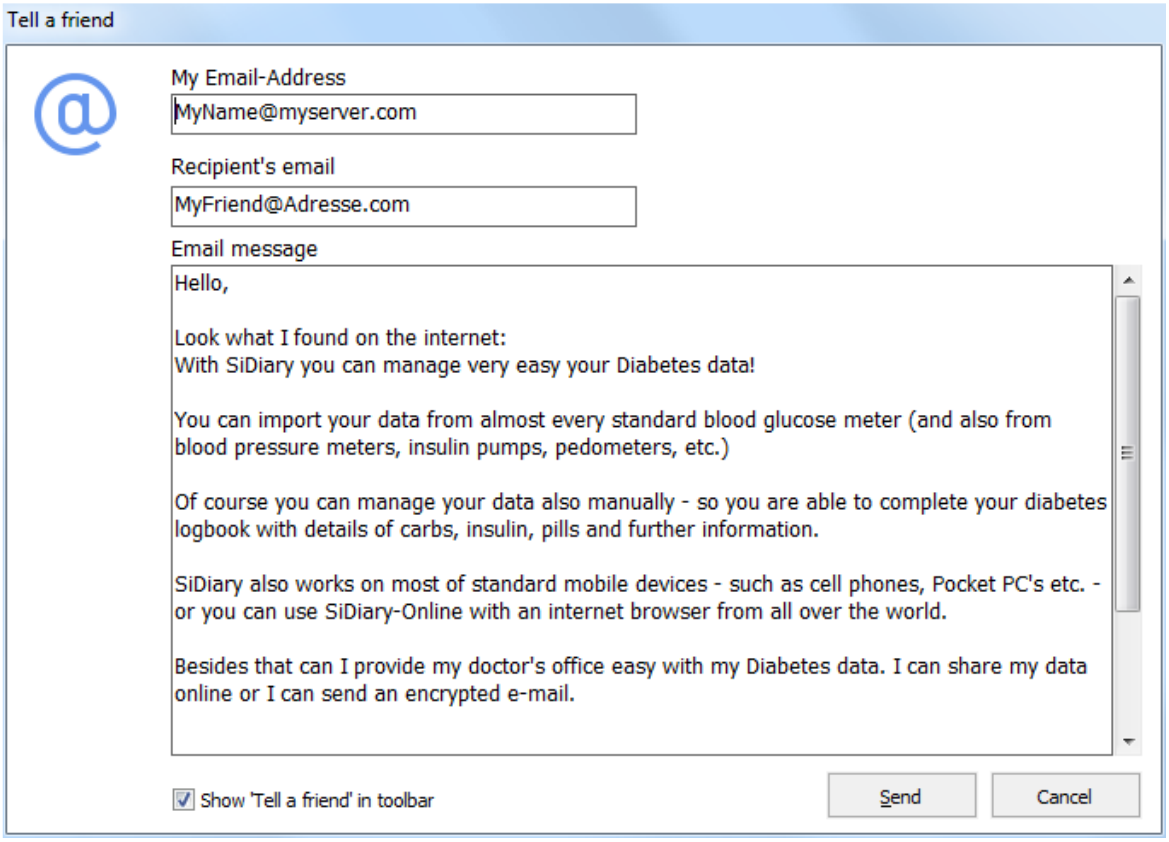
See also chapter 6 "*Registration of the full version*".

8.9.6 Buy now

By clicking on *Buy now* you will be forwarded to our online shop, where you can buy a SiDiary license after the 30 days of testing.

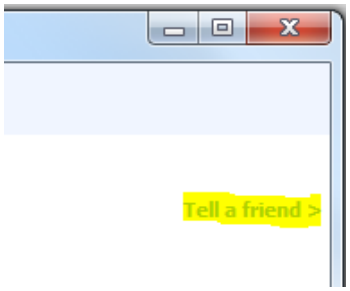
8.9.7 Tell a friend

With this function you can recommend SiDiary to your family and friends. When you open this menu item, the following screen opens:



In this screen you can see a text sample. Of course, you can edit or complete the text as you like. Then you only must enter the address of your friend and your own address and click on the button *Send*

With the checkbox *Show 'Tell a friend'* in the Toolbar you can adjust, if you want a link to this function in the toolbar of your program – or not



8.9.8 Rating SiDiary

Of course, we would also like to know how you like the program or what experience you have made with our support. You can easily tell us about the rating function. The more stars you assign, the more satisfied you are with the program or the support.

8.9.9 About ©

This screen gives information about SiDiary, the Copyright advice of the program and the contact details of our company SINOVO health solutions GmbH. In addition, you can get information about how to activate/register the program by clicking on the '**?**' button.

9 A1c calculation

All applications will give you graphical feedback on the statistics tab. Currently you can choose from 4 types of graphs: The first one is a pie chart with 4 categories of your blood glucose levels, which are categorized into “low”, “target”, “high” and “very high”. The second graph shows your blood glucose level based on a time axis. In this graph you will see each value as a dot.

In addition to the graphical analysis you can select some statistic parameters, i.e. the lowest and highest blood glucose level within the selected date and period and your blood glucose the average level. From this average SiDiary calculates your A1C parameter with the following formula:

$$A1C = (BG\ [mg/dL] + 100) / 36$$

If the option „A1C extra calculation“ is selected your blood glucose level average will be calculated not only as the sum of all values divided by the number of readings, but also with the acting duration of your selected bolus insulin, which means that each correction of a high blood glucose level with rapid acting insulin will give you a “bonus”: SiDiary will interpolate between the values by adding the lowering effect of the used insulin.

For example: At 2:00pm you have monitored a blood glucose level of 200 mg/dL. You’ve injected a dose of insulin calculated from your correction rule. Next time you take a reading at 6:00 p.m. you get a blood glucose level of 100, so your correction was pretty good!

If you calculate the average of these 2 values, you will get 150mg/dL i.e. [(200+100) / 2], but this is not realistic: Because your correction was really good, we can assume that from the point where your insulin has no more lowering effect, let’s say 3 hours after injection, we than know that you were on target with 100 at this point. SiDiary takes this into consideration and calculates by interpolating between the 2 monitored blood glucose levels and will give you an average of 140 mg/dL for the example above!

SiDiary does not check if the dose for the correction was well calculated, it’s much simpler: It must have been fine, since you’ve monitored 100 mg/dL as the first blood glucose level after correction! If you had monitored a higher level, we would then know that your correction calculation wasn’t very well done. Therefore, the next value after correction shows the quality of your correction and gives you the bonus for the average…

This interpolated calculation assumes that your basal dose is just fine, which means, if you do not eat or drink anything containing carbs, don't inject additional insulin, have no extra exercise or no emotional strain etc. your blood glucose level would be at the same level!

The values from which SiDiary gets the A1C are identical to the values for the displayed graph. If you've filtered for a date range or control types which are not close to the A1C period (should be the last 6-8 weeks), you can't compare the calculated parameter with the one you get from your laboratory. You can filter the data for periods (2, 6, 8 weeks up to 3 months or a completely different range, by entering a "from" date and a "to" date) and additionally for control types (Before breakfast, after lunch etc.).

What you can get out of the calculated A1C (approximate value)

The calculated A1C value should give you an approximate value only! Since you cannot compare each lab A1C with one from another lab, you also can't compare the calculated parameter directly with your lab. The reason is very simple: The program calculates the A1C based on your entered data, your lab parameter is an analysis of your blood.

But what you can get out of the calculated A1C are trends: You should compare the program parameter with your lab value on your next visit to your doctor. Then you'll be able to compare to see if the calculated one is potentially higher or lower than your lab value.

Please keep in mind that the lab value is based on the last 6-8 weeks! So, you have to compare it with SiDiary's calculation for this time period too and you must not filter the data for single control types (i.e., before breakfast)!

If you filter the data with a control type, the displayed A1C figure simply means that if all your values of the last 6-8 weeks were like the filtered values, you would have this A1C.

What if the calculated A1C is different from your lab value? Trends…

If the lab parameter is better (i.e., lower) than the calculated one, you'll know that if the displayed program A1C is also pretty good (e. g. 6,1%) everything is fine. Vice versa, if the program value is consistently lower than your lab value and the program gives you an A1C of 8% i.e., you know you should become more active on improving your blood glucose level.

10 History of SiDiary

SiDiary developed, like many meaningful inventions, tools from a concrete emergency and/or for the tendency to simplify a process.
The program was already developed in 2003 by Alf Windhorst for private use.

The major purpose was to avoid this annoying paper diary and port it, for the ICT, on an electronic device and profit from the statistic possibilities. In this period the strong spreading of mobile pocket computers began, that were smaller than a laptop and more portable and so outstanding for „the logging on the way “.

The program was first used just by him and a handful party of people with diabetes around a circle of friends and the enthusiasm for the fast-improving values led to the idea for making the program available for other people, too.

This was the beginning of the internet web site www.sidiary.org in 2004, which is still the approach place for the community of the software. The program was made available completely free of charge by version 1.0 to 4.0.

The popularity became larger and larger, the user number, at least with help of the honorary translators, that translated the program into nearly 20 languages.

It became way too much work, like support and answering user questions and in 2005 SINOVO Ltd. & Co. KG - which has since been renamed "SINOVO health solutions GmbH - was established. Mr. Alf Windhorst is still responsible for SiDiary, the requirements remain to the project to offer people with diabetic an optimal support with self-controlling their diabetes. Of course, the users won’t be alone with their questions, and with the strong community of SiDiary’s users, it should always answer your questions.

The price strategy pursues the original beginning of the project, which cannot be offered now any longer completely free of charge. But the small charges for the service with the continuous upgrading of the functions should make it affordable for everyone.

11 Registered Trademark

SiDiary and SINOVO are registered trademarks. All trademarks and brands used in this document are the property of their respective owners.

Note:
If you wish, we will be happy to send you a hard copy of these operating instructions immediately and free of charge. In this case, please send us an email with your postal address to support.sidiary@sinovo.de.

CE 0123

SINOVO health solution GmbH
Willy-Brandt-Str. 4
61118 Bad Vilbel
info@sinovo.de
www.sinovo.de