

ACCU-CHEK® Aviva Expert



BLOOD GLUCOSE METER

Standard Owner's Booklet
for Single Patient Use Only



Before You Start Testing

About the meter and test strips

- Carefully read and follow the instructions in the Getting Started Guide, the Standard Owner's Booklet, the Advanced Owner's Booklet, and Package Inserts for the test strips and control solutions. Not following the instructions may lead to a wrong result or improper treatment, causing you health problems.
- Set the time and date on your meter before you begin testing.
- Inspect the test strip container before using the test strips for the first time. If you see any damage to the container cap or if anything prevents the cap from closing properly, do not use the test strips. Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. Damaged test strips can cause inaccurate results, which could lead to improper treatment.
- Carefully dispose of used test strips and lancets.
- Home use of the ACCU-CHEK Aviva Expert system is limited to capillary whole blood testing.

NOTE

The terms “blood sugar” and “blood glucose” have the same meaning. In this manual we will use the term “blood glucose” when referring to “blood sugar.”

WARNING

- The meter and lancing device are for single patient use only. Do not share them with anyone, including other family members, due to the risk of infection from bloodborne pathogens.^{1,2} Do not use them on multiple patients!
- All parts of the kit are considered biohazardous and can potentially transmit infectious diseases, even after you have performed cleaning and disinfection.

^{1,2} See Appendix E

About Your New Meter

- The meter is designed and can be used for testing fresh capillary whole blood samples (for example, blood from a fingertip).
- Only use ACCU-CHEK Aviva Plus test strips. Other test strips will give inaccurate results.
- Although you always apply whole blood to the test strip, the system has been calibrated to deliver plasma-like values for easier comparison to lab results.
- The meter, test strips, and control solution are only for use outside the body (in vitro). Do not eat the test strips. Do not swallow or inject the control solution, or use the control solution for any purpose other than testing the ACCU-CHEK Aviva Expert system.

About Bolus Advice

- Bolus advice is only available if you set up bolus advice on the ACCU-CHEK Aviva Expert meter. For information on how to set up bolus advice, see section 5.6 Setting Time Blocks, Health Events, Advice Options: Bolus Advice Set Up.
- If you deliver a bolus without using bolus advice, you should enter the bolus advice into your diary. It is important that you enter all bolus insulin doses and the time they were administered, so the Bolus Advisor is assessing the total amount of insulin in your body. This step can help to reduce insulin stacking (the over-delivery of insulin) which causes hypoglycemia. It is also important that you enter the associated carbohydrate information into the diary in order to obtain accurate bolus advice recommendations. For information on how to enter information into the diary, see Section 4.3, Adding New Data.

WARNING

- Bolus advice should be used only if you are using U100, rapid-acting insulin for bolus dosing.
- Do not use bolus advice with Neutral Protamine Hagedorn (NPH) or any other intermediate-acting insulin.
- Do not use bolus advice if basal insulin dose is unstable.
- Long-acting insulin should not be used as a meal bolus or as a correction bolus.

About Testing Yourself or Others

- If you are very dehydrated or urinating frequently, you may get an inaccurate test result. If you think you are dehydrated, call your healthcare professional right away.
- Some people with diabetes do not experience symptoms of low blood glucose (hypoglycemia). Others, such as children or people who are unconscious or have certain disabilities, may not be able to communicate their symptoms to caregivers. For these reasons, do not change any treatment without first talking to a healthcare professional.
- Run a control test when you open a new box of test strips or if you think that your test result is incorrect. Running a control test lets you know that the meter and test strips are working properly.
- If peripheral circulation is impaired, collection of fresh capillary whole blood from the approved sample sites is not advised as the results might not be a true reflection of the physiological blood glucose level. This may apply in the following circumstances: severe dehydration as a result of diabetic ketoacidosis or due to hyperglycemic hyperosmolar non-ketotic syndrome, hypotension, shock, decompensated heart failure NYHA Class IV, or peripheral arterial occlusive disease.
- Not to be used for patients who are critically ill.
- Refer to the Test Strip and Control Solution Package Inserts for additional health-related information.
- Failure to test could cause a delay in treatment decisions and lead to a serious medical condition. Contact your healthcare professional if you are unable to test.

DO NOT CHANGE YOUR TREATMENT BASED ON A SINGLE RESULT THAT DOES NOT MATCH HOW YOU FEEL OR IF YOU BELIEVE THAT YOUR TEST RESULT COULD BE INCORRECT.

If your blood glucose result doesn't match how you feel and you have followed the instructions in your owner's booklets, follow your healthcare professional's instructions or call your healthcare professional.

Special Information to Consider When Using This Meter

- Do not use this device to measure blood glucose if you or a person to whom you are providing care is experiencing cardiovascular collapse (severe shock) or decreased peripheral blood flow.
- Consult your healthcare professional to determine if it is appropriate for your child to be taught how to use the meter system or any other medical products.

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Introduction

Whether the ACCU-CHEK Aviva Expert meter is your first blood glucose meter or you have used a meter for some time, please take the time to read the Getting Started Guide, the Standard Owner's Booklet, and the Advanced Owner's Booklet carefully before you use your new meter. To use it correctly and dependably, you need to understand its operation, screen displays, and all individual features.

Your new meter includes three booklets:

- **Getting Started Guide:**
Use this booklet to set up the meter.
- **Standard Owner's Booklet:**
Use this booklet for instructions on how to operate the standard features of the meter.
- **Advanced Owner's Booklet:**
Use this booklet for instructions on how to operate the advanced features of the meter.

Should you have any questions, please contact one of our customer support and service centers. A listing is at the back of this booklet.

This booklet includes information about:

- Understanding your new ACCU-CHEK Aviva Expert system
- Testing your blood glucose
- Control testing
- Managing your data
- Changing the meter settings
- Understanding the icons, reminders, warnings, and errors
- Cleaning and disinfecting the meter and lancing device
- Maintenance
- Troubleshooting
- Technical information

If you have questions, we are here to help. Just call ACCU-CHEK Customer Care Service Center at 1-800-688-4578. You can also visit www.accu-check.com for diabetes management tools.

The ACCU-CHEK Aviva Expert System

The ACCU-CHEK Aviva Expert meter is for quantitative blood glucose testing using ACCU-CHEK Aviva Plus test strips. The meter has many features including:

- Bolus advice calculation
- Daily time blocks that can be adjusted to fit your lifestyle
- Data management
- Data transfer
- Date reminders
- bG test reminders: Alarm clock reminders, Target bG levels, and Health events
- An electronic diary that allows you to enter meal time, carbs, health, and bolus information with your blood glucose test results

For detailed information about the features of the meter, see Chapter 1, Understanding Your New System.

NOTE

Blood glucose and bG are interchangeable and mean the same thing.

Intended Use

The ACCU-CHEK Aviva Expert System is indicated as an aid in the treatment of insulin-requiring diabetes. The ACCU-CHEK Aviva Expert System consists of the ACCU-CHEK Aviva Expert Meter, ACCU-CHEK Aviva Plus test strips, ACCU-CHEK Aviva control solutions, and ACCU-CHEK Bolus Advisor. The ACCU-CHEK Aviva Expert system is intended to facilitate the optimization of glycemic control in patients who are trained in multiple daily insulin injection therapy and are under the supervision of healthcare professionals experienced in managing insulin treated patients.

The ACCU-CHEK Aviva Expert blood glucose monitoring system is intended to be used for the quantitative measurement of glucose in fresh capillary whole blood samples drawn from the fingertips. The ACCU-CHEK Aviva Expert blood glucose monitoring system is intended for self-testing outside the body (in vitro diagnostic use) by people with diabetes. The ACCU-CHEK Aviva Expert blood glucose monitoring system is intended to be used by a single person and should not be shared. The ACCU-CHEK Aviva Expert blood glucose monitoring system should not be used for the diagnosis or screening of diabetes or for neonatal use. Alternative site testing should NOT be used with the ACCU-CHEK Aviva Expert blood glucose monitoring system. The ACCU-CHEK Aviva Expert System is intended for prescription home use only.

The ACCU-CHEK Aviva Expert meter is also indicated for the calculation of an insulin dose or carbohydrate intake based on user-entered data. The ACCU-CHEK Bolus Advisor, as a component of the Accu-Chek Aviva Expert meter, is intended for use in providing insulin dose recommendations in response to blood glucose, health events, and carbohydrate input. The ACCU-CHEK Bolus Advisor is intended to provide direction for insulin adjustment within the scope of a pre-planned treatment program from a healthcare professional. Before its use, a physician or healthcare professional must prescribe the ACCU-CHEK Aviva Expert System and provide the patient-specific target blood glucose, insulin-to-carbohydrate ratio, and insulin sensitivity parameters to be programmed into the ACCU-CHEK Bolus Advisor. Once programmed, a patient must consult with his/her physician or healthcare professional before making any changes to these ACCU-CHEK Bolus Advisor settings.

The system includes:

- **ACCU-CHEK Aviva Expert meter with three AAA batteries and pre-inserted black code key**
- **ACCU-CHEK Aviva Plus test strips and black code key***
- **ACCU-CHEK Aviva control solution***

*May be sold separately

WARNING

- Any object coming into contact with human blood is a potential source of infection.
- Choking hazard. Small parts. Keep away from children under the age of 3 years.

Why Regular Blood Glucose Testing Is Important

Testing your blood glucose regularly can make a big difference in how you manage your diabetes every day. Discussing your results with your healthcare professionals and following their advice about medicine, exercise, and food plans can help you better control your diabetes.

Important Information About Your New Meter

- The meter is designed for testing fresh whole blood samples (for example, blood from your fingertip). The meter is for outside the body (in vitro) use. It should not be used to diagnose diabetes.
- This meter requires ACCU-CHEK Aviva Plus test strips. Other test strips will give inaccurate results.
- The meter comes with the time and date preset. You may need to change the time to your time zone.
- If you have followed the steps in this booklet but still have symptoms that do not seem to match your test results, or if you have questions, talk to your healthcare professional.
- The ACCU-CHEK Aviva Expert system is intended for single patient use only and should not be shared.

1

Understanding Your New System

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1.1 Overview

Your new meter has several features to assist you in managing your diabetes. It is important you understand the features and how to operate the meter correctly.

NOTE

- This booklet shows sample screens. The screens in this booklet may look slightly different from the screens on the meter. If you have any questions about the meter screens, the ACCU-CHEK Customer Care Service Center is open 24 hours a day, offering help in many languages. Call 1-800-688-4578.
- Blood glucose and bG are interchangeable and mean the same thing.

1.2 The ACCU-CHEK Aviva Expert Meter at a Glance

Display

Shows menus, results, messages, and data stored in the diary.

Buttons

Press to enter menus or the diary, adjust settings, and scroll through results.

Left/Right Soft Keys

Press to select the menu or option above the key.

Power On/Off Button

Press to turn the meter on or off.

Test Strip Slot

Insert golden end of test strip here.



Infrared (IR) Window

Transfers data from the meter to a computer.

Code Key Slot

Black code key is pre-inserted here.

Battery Door

Remove the battery door by pushing the tab and pulling up the door.



Batteries

Insert batteries according to the + and - symbols in the battery compartment.



Test Strip

Yellow Window -
Touch blood drop or
control solution here.

Golden End -
Insert this end of the test
strip into the meter.



Control Solution Bottle

(for example)



Test Strip Container

(for example)



Top View

Infrared (IR) Window



Code Key

(for example)



Side View

Pre-inserted black code key

NOTE

The meter is already coded and comes with a pre-inserted **black** code key that you never need to change. Even if you use test strips from test strip boxes that contain another code key that is a different color or has different code numbers, you never need to change the **black** code key again.

The meter has seven buttons and two soft keys.



NOTE

- You hear a sound every time an active button/soft key is pressed unless you turned off the key sound.
- Press ① or insert a test strip to turn on the meter. If the meter displays the Time/Date screen, make the necessary changes and select Save.

Table of Buttons and Soft Keys

| Button | Name | Function |
|---|----------------|--|
|  | Left Arrow | ► Move or scroll to the left in a screen. |
|  | Right Arrow | ► Move or scroll to the right in a screen. |
|  | Up Arrow | ► Move or scroll up in a screen. |
|  | Down Arrow | ► Move or scroll down in a screen. |
|  | Left Soft Key | ► Select the option above the key on the display. |
|  | Right Soft Key | ► Select the option above the key on the display. |
|  | Enter | ► Select a menu or option. ► Save changes and exit the entry field. |
|  | Backlight | ► Adjust the backlight level (low, medium, high). |
|  | Power On/Off | ► Turn the meter on and off. |

Table of Button Combinations

| Button Combination | Name | Function |
|--|-------------|------------------------|
| When the buttons are locked, press and hold  and  until the Main Menu appears. | Unlock Keys | ▶ Unlocks the buttons. |

1.3 Summary of Features

Display

The meter has a full-color graphic LCD (Liquid Crystal Display) that displays current and historical information.

Backlight

- The backlight helps you read the information on the meter display under different lighting conditions.
- When the meter is turned on, the backlight is set to the medium level.
- Adjust the backlight level by pressing and releasing the backlight button.
- The backlight adjusts from low, to medium, to high, and back to low again.
- If set to the medium or high level and the buttons are not pressed for about 15 seconds, the backlight returns to the low level to save power.
- When the meter returns to the low level, pressing any button restores the previous backlight level.
- For more information about backlight settings, see Chapter 5, Changing Meter Settings.
- For more about power-saving tips, see Chapter 8, Maintenance.

Key Lock

- The key lock feature allows you to lock all of the buttons on the meter, except for the power on/off button.
- The key lock serves as a safety measure against unintentional activation of meter functions.
- For more information, see Chapter 5, Changing Meter Settings.

Signal Settings

- The meter communicates reminders, warnings, and errors using sounds and vibrations.
- For more information, see Chapter 6, Icons, Reminders, Warnings, and Errors.

Blood Glucose Test

Your new meter allows you to enter detailed information for each blood glucose test to include:

- Meal time (Pre meal, Post meal, Bedtime, or Other)
- Carbs (the amount of carbohydrates you are intending to eat)
- Health events (Exercise 1, Exercise 2, Stress, Illness, Premenstrual, or Fasting)

Bolus Advice (Optional)

- The term “bolus” refers to the delivery of insulin all at once rather than slowly throughout the day, usually used to compensate for meals or high blood glucose.
- Bolus advice calculates a bolus for you that is adapted to the time of day and your changing situations.
- This function is activated only if you set up bolus advice on the meter.
- For instructions on how to set up bolus advice, see Chapter 5, Changing Meter Settings.

WARNING

Before setting up bolus advice, it is very important to read all of the safety information in the Advanced Owner’s Booklet and talk to your healthcare professional.

My Data

- Your new meter stores 1,000 records in the diary.
- You can view, modify, or add information to your diary.
- You can view blood glucose test averages, trends, standard day, standard week, and target tables and graphs of the data in the diary.
- You can view the data in graph or table format for the last 7, 14, 30, 60, or 90 days.
- For more information, see Chapter 4, Managing Your Data.

Data Transfer

- You can transfer your data stored on the meter to a computer.
- For more information, see Chapter 4, Managing Your Data.

Warning Limits for Hyper and Hypo Blood Glucose Levels

- You can select hyper (high) and hypo (low) blood glucose limits that best fit your needs. Whenever a blood glucose test result is above or below this range, the meter displays a warning.
- In addition, Trend Graph screens indicate the hypo warning limit when displaying your blood glucose test results. For more information, see Chapter 4, Managing Your Data.
- The meter has default warning limits that can be adjusted. For more information, see Chapter 5, Changing Meter Settings.

Time Blocks

- Time blocks allow you to divide a day into different time periods.
- Setting time blocks to fit your own schedule helps you and your healthcare professional see how patterns in your blood glucose are affected by your daily activities and lifestyle.
- Time blocks can be set up with or without bolus advice.
- Talk to your healthcare professional about the best way to set up your time blocks to assist you in managing your diabetes.
- The meter has 5 default time blocks.
- You may set up to 8 time blocks.
- For more information, see Chapter 5, Changing Meter Settings.

Without bolus advice, you need to consider the following when setting up time blocks:

- Determine the appropriate time range by reviewing the end time for each time block.
- Review the acceptable blood glucose target range (low and high) for each time block.

With bolus advice, you need to consider the following when setting up time blocks:

- Determine the appropriate time range by reviewing the end time for each time block.
- Review the acceptable blood glucose target range (low and high) for each time block.
- Determine your carb ratio (the amount of insulin needed to cover a given amount of carbohydrates) for each time block.
- Determine your insulin sensitivity (the amount of insulin needed to lower your blood glucose by a given amount) for each time block.

Health Events

Health events can be selected to indicate how you are feeling or what you are doing that might affect your diabetes. The meter allows you the option of setting a percentage for each health event, except for Fasting, if you set up bolus advice. Fasting does not scale bolus advice calculations and is not adjustable.

Health events available on the meter are:

- Exercise 1
- Exercise 2
- Stress
- Illness
- Premenstrual
- Fasting

Discuss the appropriate percentage for each health event with your healthcare professional. For instructions on how to set up bolus advice, see Chapter 5, Changing Meter Settings.

Blood Glucose Test Reminders (Optional)

The meter can be set up to remind you to retest your blood glucose after a high blood glucose test result, after a low blood glucose test result, or after a meal.

An after high blood glucose test reminder example:

- The meter is set up with a high bG threshold level of 240 mg/dL and with a reminder time of 60 minutes.
- You have a blood glucose test result higher than 240 mg/dL, perhaps 270 mg/dL.
- In 60 minutes, the meter reminds you to perform another blood glucose test.

The after meal bG test reminder is set up with a carb value and occurs when the carb value exceeds the snack size. Any of these blood glucose test reminders can be turned on or off individually, as needed. For more information, see Chapter 5, Changing Meter Settings.

Alarm Clock Reminders

- The meter has alarm clock reminders which can be used as a helpful way to remind you when to test throughout the day.
- In addition to “bG Test” and “Injection,” you can set reminders for “Other” for any other daily reminder.
- You can set up to 8 reminders per day.
- For more information, see Chapter 5, Changing Meter Settings.

Date Reminders

- The meter can be set up to remind you of upcoming appointments or dates, such as a “Dr. Visit” or a “Lab Test.”
- For more information, see Chapter 5, Changing Meter Settings.

1.4 Screen Content and Navigation

This section provides an explanation of how to understand and navigate the screens on the meter.



Each time the meter is turned on, this splash screen (ACCU-CHEK logo screen) is displayed for a short period of time.

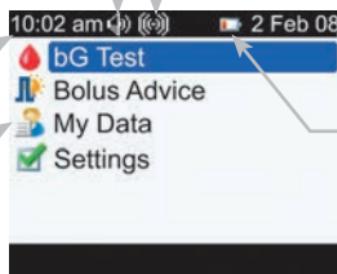
Features on the Main Menu:

Sound Icon

Appears when the beeper is turned on

Time

Menu Options



Vibrate Icon

Appears when vibrate is turned on

Date

Low Battery Icon

Appears when the meter batteries are low

NOTE

To select an item on a menu, press ▲ or ▼ to highlight (blue) the menu item and then press

Features on a screen:

Title Bar

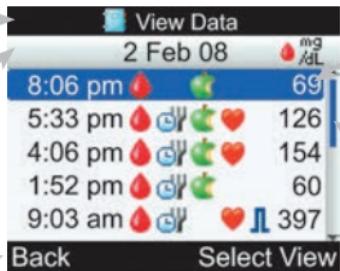
Primary menu title is displayed here.

Secondary Title Bar

When necessary, a secondary title bar appears. Secondary menu text is displayed here.

Left Soft Key Option

Press  to select the option above the button on the screen.



Highlighted Option

When a menu choice or item is selected, it is highlighted in blue.

Scroll Bar

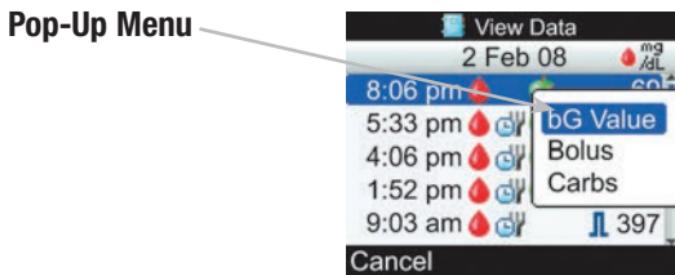
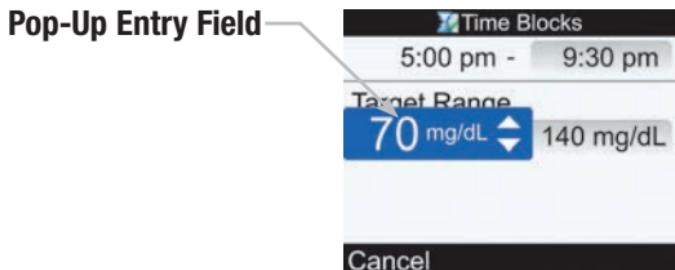
If there is more information available than fits on the screen, a vertical scroll bar appears on the right side of the screen.

Right Soft Key Option

Press  to select the option above the button on the screen.

Information can be entered on some screens. Numerical entry fields appear as pop-up entry fields. When an option must be selected, it appears as a pop-up menu.

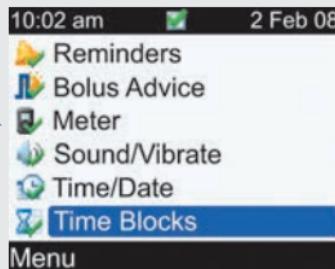
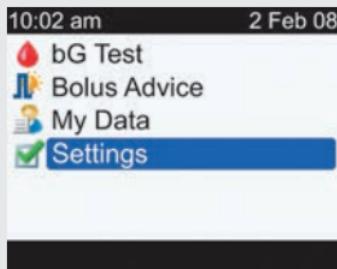
- To open a pop-up menu or entry field, press .
- Press  or  to select the appropriate pop-up menu option or until the correct numerical entry is present, and then press .
- Press and hold  or  to scroll faster.



General Navigation Steps

To change the settings or enter information into the meter:

1.

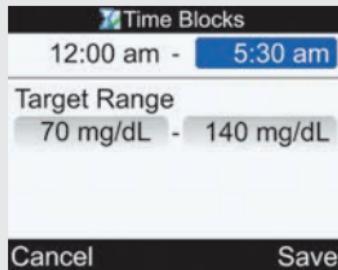


| Time Blocks | |
|-------------|----------|
| Start | End |
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |

Back

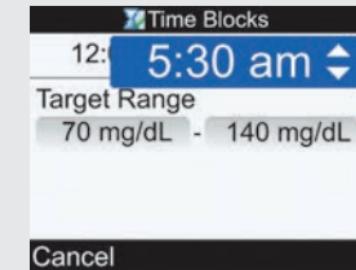
- ▶ Press ▲ or ▼ to select a menu option and press ⏪.
- ▶ Repeat the previous step as necessary.

2.



- ▶ Press ▲ or ▼ or ◀ or ▶ to select an option or a desired entry field and press ⌂.

3.



- ▶ Press ▲ or ▼ to select the desired entry and press ⌂.
- ▶ Repeat Steps 2 and 3, as necessary.

4.

- ▶ Select Save by pressing ⌂ to save changes and return to the previous screen.

2 Testing Your Blood Glucose

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2.1 Overview

It is important to understand how to perform a blood glucose test properly. You can perform a blood glucose test from your fingertip.

NOTE

Blood glucose and bG are interchangeable and mean the same thing.

2.2 Using the ACCU-CHEK Aviva Expert System

Before You Start Testing

Using ACCU-CHEK Aviva Plus Test Strips

- Only use ACCU-CHEK Aviva Plus test strips.
- Store the unused test strips in their original container. Do not remove test strips from the test strip container and put them into another container, such as a plastic bag, pocket, purse, wallet, etc.
- Immediately after you take out a test strip, securely close the container. This helps keep the test strips dry.
- Use the test strip immediately after you take it out of the container.
- Be sure to check the “Use by” date on the test strip container. Do not use the test strips after that date.
- If the “Use by” date is missing or cannot be read, do not use the test strips.
- Store the test strip container at room temperature between 36–86 °F. Do not freeze. Do not store the test strip container in rooms where the air is humid such as the kitchen, laundry room, or the bathroom. Temperatures outside the required range, as well as moisture and humidity, can damage your test strips and lead to inaccurate results.
- Refer to the test strip package insert for system operating conditions.
- Do not apply blood or control solution to the test strip before you insert it into the meter. If the meter gives you a result before applying blood or control solution, do not act on that result.
- Do not reuse test strips. Once you have put control solution or blood on a test strip, throw it away. If you need to retest, use a new test strip.

WARNING

Not following the precautions below can lead to inaccurate results:

- Do not store test strips in extreme temperatures or moisture areas (bathroom, kitchen, laundry room, car, or garage). Heat and moisture can damage your test strips.
- Do not bend, cut, or alter the test strips.
- Do not get dirt, food, or other material on the test strips.

2.3 Performing a Blood Glucose Test

Before you perform your first blood test, ensure the meter is set up correctly and that you perform a control test. You need a meter with a pre-inserted black code key, a test strip, a lancing device, and a lancet.

WARNING

- During normal testing any blood glucose meter or lancing device may come in contact with blood. All parts of the kit are considered biohazardous and can potentially transmit infectious diseases from bloodborne pathogens, even after you have performed cleaning and disinfection.^{1,2}
- Cleaning and disinfecting the meter and lancing device destroys most, but not necessarily all, bloodborne pathogens.³
- The meter and lancing device should never be used by more than one person. Do not share the meter and lancing device with anyone, including family members, due to the risk of infection from bloodborne pathogens.^{1,2}
- If the meter is being operated by a second person who is providing testing assistance to the user, the meter and lancing device should be cleaned and disinfected prior to use by the second person.
- It is important to keep the meter and lancing device clean and disinfected. For instructions on how to clean and disinfect the meter and lancing device, see Chapter 7, Cleaning and Disinfecting the Meter and Lancing Device.
- Wash hands thoroughly before and after handling the meter, lancing device, or test strips.

^{1,2,3} See Appendix E

WARNING

- Do not change your treatment because of one blood glucose test result.
- NEVER ignore symptoms of high or low blood glucose.

NOTE

If you need to perform a control test, only use ACCU-CHEK Aviva control solutions. See Chapter 3, Control Testing for more information about control testing.

Performing a Fingertip Blood Glucose Test

Prepare > Check the use By Date > Insert Test Strip > Test Blood Sample > bG Test Result

1.



- ▶ Wash and dry your hands. Dirty hands could affect results.
- ▶ Prepare the lancing device for a fingertip test.
- ▶ Always use a new lancet with each test.

2.



- ▶ Check the Use By date on the test strip container. Do not use test strips past the Use By date.

3.



- ▶ Insert the golden end of a test strip into the meter in the direction of the arrow. The meter turns on.

4.



The Apply Sample screen appears. The test strip is ready for testing.

5.



Fingerstick:

- ▶ Perform a fingerstick with the lancing device.

6.



Fingerstick:

- ▶ Gently squeeze your finger to assist the flow of blood. This helps you get a blood drop.

7.



- ▶ Touch the blood drop to the **front edge** of the yellow window of the test strip. Do not put blood on top of the test strip.

8.

bG Test
Analyzing



When the test strip has enough blood, the Analyzing screen appears.

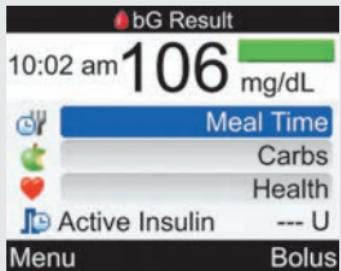
9.

bG Result
10:02 am 2 Feb 08

106 mg/dL

The result appears on the display.

10.



Approximately 3 seconds later,
the detailed bG Result screen
appears.

- ▶ Remove and discard the used test strip.

NOTE

- If the blood drop is too small, reapply pressure to get a sufficient blood drop.
- For more information regarding blood glucose test results, see Section 2.5, Understanding Blood Glucose Test Results.
- To add detailed information to the blood glucose test (meal time, carbs, and health events) see Section 2.4, Detailed Blood Glucose Test Results.
- If a test strip error occurs, remove and discard the used test strip and repeat the test with a new test strip.
- Be careful not to put any fluids into the test strip slot.
- The meter cannot be turned off when the following screens are displayed:
 - Match Code to Vial
 - Apply Sample
 - Analyzing
 - bG Result
- When a test strip is in the meter, the buttons are inactive. The buttons become active when you remove the test strip or when the test is complete.
- The meter turns off automatically in approximately 2 minutes if no buttons are pressed.

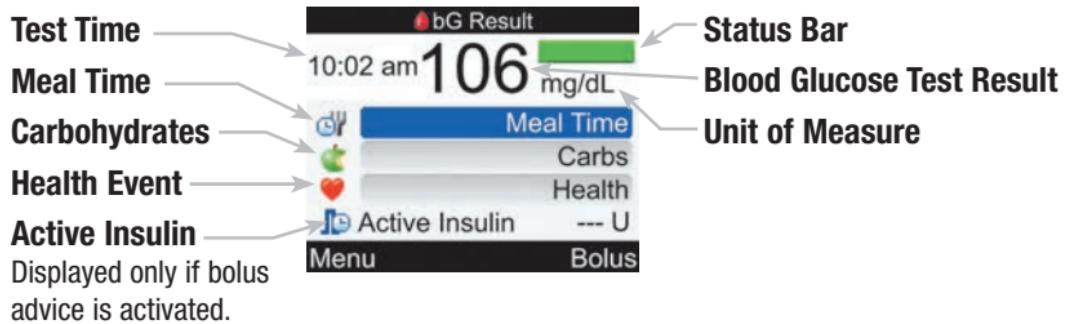
NOTE

Other ways to start a blood glucose test:

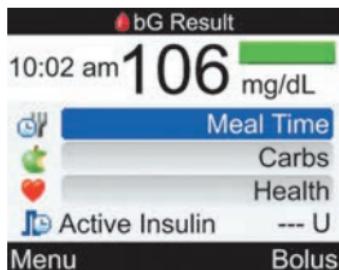
- From the Main Menu, select bG Test and press . Insert a test strip into the meter.
- When a reminder notification or the key lock icon is displayed, insert a test strip into the meter.
- From the Main Menu, select Bolus Advice and press . If “bG Test” is displayed instead of an actual blood glucose value, then you can start a blood glucose test by selecting bG Test. If an actual blood glucose value is displayed, then you cannot start a blood glucose test using this process.

2.4 Detailed Blood Glucose Test Results

The detailed bG Result screen displays the following information:



Detailed bG Results > Change Meal Time/Carbs/Health Events (Optional)



The detailed bG Result screen allows you to view and to add information to a blood glucose test result.

How to Add Information to a Blood Glucose Test Result

To Change Meal Time:

- ▶ Select the Meal Time entry field and press .
- ▶ Select either Pre Meal, Post Meal, Bedtime, or Other and press .

To Change Carbs:

- ▶ Select the Carbs entry field and press .
- ▶ Set the number of carbs and press .

To Change Health Events:

- ▶ Select the Health entry field and press .
- ▶ Select either Exercise 1, Exercise 2, Stress, Illness, Premenstrual, or Fasting and press .

Active Insulin Display:

The meter displays the calculated amount of Active Insulin.

To save the changes and exit the detailed bG Result screen:

- ▶ To return to the Main Menu, select Menu.
- ▶ To proceed to the Bolus Advice screen, select Bolus.

Bolus Advice is not available if:

- ▶ The blood glucose test result is below the hypo warning limit.
- ▶ The detailed bG Result screen has been displayed for more than 5 minutes. The warning message “Bolus Advice Timeout” is displayed. Select OK to return to the detailed bG Result screen.

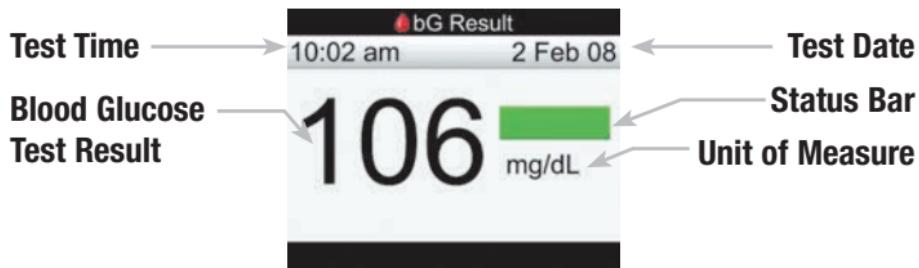
For more information about bolus advice, see the Advanced Owner’s Booklet.

NOTE

- You can add information on the detailed bG Result screen for meal time, carbs, and health events.
- Review and, if necessary, update information for meal time, carbs, and health events to receive an accurate bolus recommendation.

2.5 Understanding Blood Glucose Test Results

The bG Result screen displays the following information:

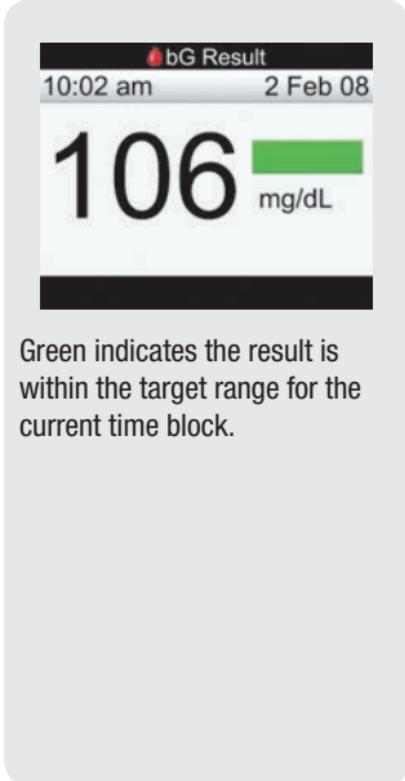


NOTE

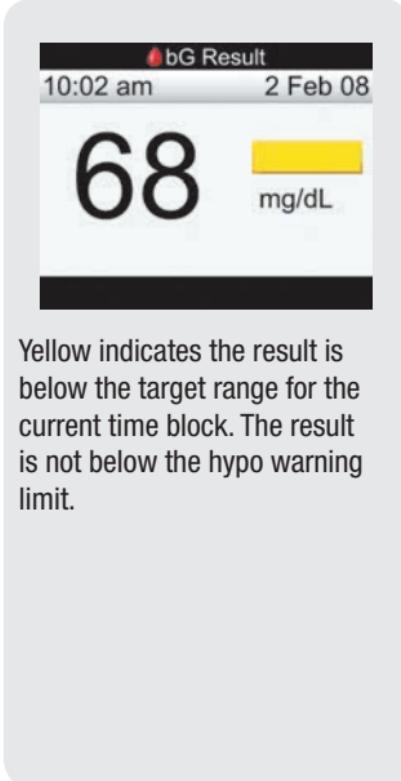
- If the dosed test strip is removed from the meter before results or errors are displayed, a blood glucose test result will not appear.
- After approximately 3 seconds, the meter displays the detailed bG Result screen (see Section 2.4, Detailed Blood Glucose Test Results).

Status Bar

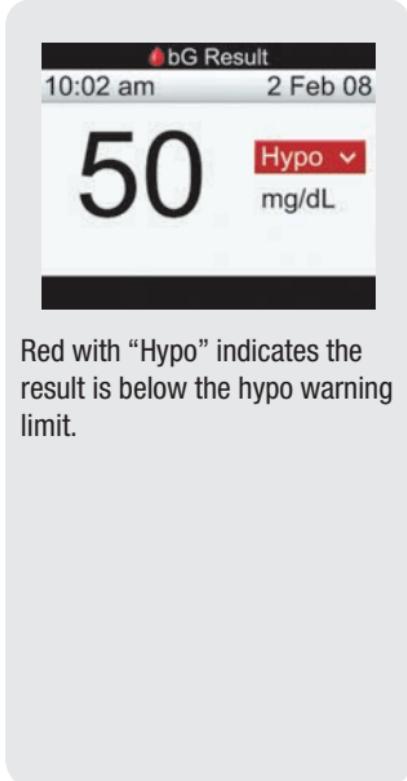
The status bar on the bG Result screen indicates how the result compares to the target blood glucose range for the current time block. The following are status bar descriptions with sample displays:



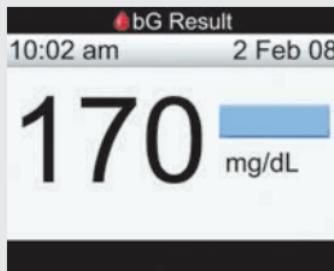
Green indicates the result is within the target range for the current time block.



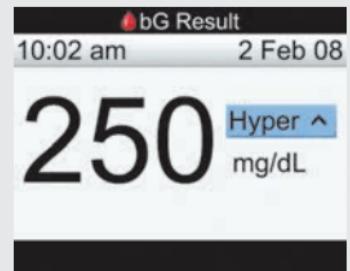
Yellow indicates the result is below the target range for the current time block. The result is not below the hypo warning limit.



Red with "Hypo" indicates the result is below the hypo warning limit.



Light blue indicates the result is above the target range for the current time block. The result is not above the hyper warning limit.



Light blue with "Hyper" indicates the result is above the hyper warning limit.

LO or HI Display

bG Result
10:02 am 2 Feb 08

LO

If "LO" is displayed, the test result may be below the measurement range.

- ▶ Contact your healthcare professional.

bG Result
10:02 am 2 Feb 08

HI

If "HI" is displayed, the test result may be above the measurement range.

- ▶ Contact your healthcare professional.

NOTE

Blood Glucose Warnings

If the blood glucose test results are outside the hyper or hypo warning limits, or outside the measurement range of the meter, then a warning is displayed after the bG Test Result screen. Select OK to acknowledge a warning and continue.

2.6 Unusual Blood Glucose Test Results

If your blood glucose test result does not match the way you feel, follow these steps:

| Troubleshooting Checks | Actions |
|--|---|
| 1. Are the test strips expired? | Discard the test strips if they are past the use by date. Repeat the blood glucose test with an unexpired test strip. |
| 2. Has the cap on the test strip container always been closed tightly? | Replace the test strips if you think the test strip container was uncapped for some time and repeat the blood glucose test. |
| 3. Was the test strip used immediately after it was removed from the test strip container? | Repeat the blood glucose test with a new test strip. |
| 4. Were the test strips stored in a cool, dry place? | Repeat the blood glucose test with a properly stored test strip. |
| 5. Did you follow the directions? | Read Chapter 2, Testing Your Blood Glucose, and test again. If you still have problems, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |
| 6. Are the meter and test strips working properly? | Perform a control test. See Chapter 3, Control Testing. |

| Troubleshooting Checks | Actions |
|---|---|
| 7. Are you still unsure of the problem? | Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |

After performing a control test and repeating a blood glucose test, if your blood glucose test results still do not reflect the way you feel, contact your healthcare professional immediately.

2.7 Symptoms of High or Low Blood Glucose

Being aware of the symptoms of high or low blood glucose can help you understand your test results and decide what to do if they seem unusual. Hyperglycemia and hypoglycemia may include, but are not limited to the following symptoms:

- High blood glucose (hyperglycemia): increased thirst, frequent urination, blurred vision, drowsiness, and/or unexplained weight loss.
- Low blood glucose (hypoglycemia): anxiety, shakiness, sweating, headache, increased hunger, dizziness, pale skin color, sudden change in mood or irritability, fatigue, difficulty concentrating, clumsiness, palpitations, and/or confusion.

WARNING

- If you are experiencing any of these symptoms, test your blood glucose. If your blood glucose test result is displayed as LO or HI, contact your healthcare professional immediately.
- **The meter is designed to display blood glucose results from 20 to 600 mg/dL. If a result below 20 mg/dL or over 600 mg/dL appears on the display, call ACCU-CHEK Customer Care Service Center at 1-800-688-4578.**

Comparing Your Meter Result to a Lab Result

A common question is how the blood glucose results on your meter compare to the lab results. Your blood glucose can change quickly, especially after eating, taking medication, or physical activity. If you test yourself in the morning and then go to the healthcare professional's office for a blood glucose test, your results will probably not match, even if you are fasting. This is typically not a problem with your meter, it just means that time has elapsed and your blood glucose has changed.

If you want to compare your meter result to the lab result, you must be fasting. Take your meter to the healthcare professional's office, and test yourself by fingerstick within five minutes of having blood drawn from your arm by a healthcare professional. Keep in mind that the lab uses different technology than the meter, and that blood glucose meters for self testing generally read somewhat lower than the lab result.

If you are fasting and you do a fingerstick test within five minutes of having your blood drawn, here are the general guidelines to compare your meter result to the lab result:

- If your blood glucose is below 75 mg/dL, your results generally should fall within ± 15 mg/dL of the lab result.
- If your blood glucose is equal to or over 75 mg/dL, your results generally should fall within $\pm 20\%$ of the lab result.

3 Control Testing

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| 3.4 Performing a Control Test | 63 |
| 3.5 Understanding Control Test Results | 69 |

3.1 Overview

This chapter describes how and when to perform a control test to ensure the accuracy of your blood glucose meter. It is recommended you complete a control test prior to performing a blood glucose test for the first time.

NOTE

Blood glucose and bG are interchangeable and mean the same thing.

3.2 Why Perform Control Tests

Performing a control test lets you know the meter and test strips are working properly to give reliable blood glucose test results. You should perform a control test when:

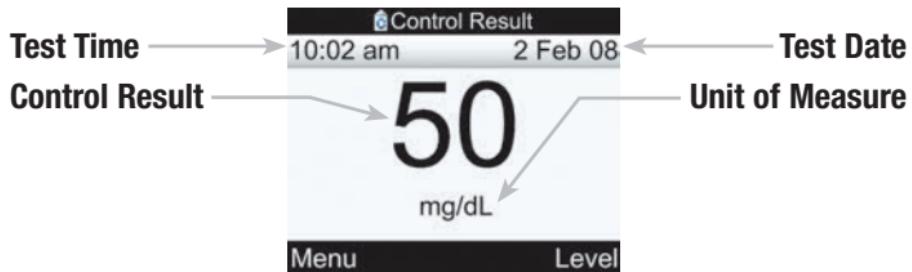
- You open a new test strip box.
- You left the test strip container open.
- You want to check the meter and test strips.
- Your test strips were stored in extreme temperatures, humidity, or both.
- You dropped the meter.
- Your test result does not match how you feel.
- You want to check if you are performing the test correctly.

3.3 About the Control Solutions

- Only use ACCU-CHEK Aviva control solutions.
- The meter automatically recognizes the control solution.
- The control test results are not displayed in the diary.
- Write the date you opened the control solution bottle on the bottle label. The solution is good for 3 months from that date or until the “Use by” date on the bottle label, whichever comes first.
- Do not use control solution that is past the “Use by” date.
- The solution can stain clothing. If you spill it, wash your clothes with soap and water.
- Close the bottle tightly after use.

3.4 Performing a Control Test

The Control Result screen displays the following information:



You need a meter with a pre-inserted black code key, a test strip, and control solution Level 1, Level 2, or both.

Check the Use By Date > Insert Test Strip > Test Control Solution > Control Result

1.



- ▶ Check the Use By date on the test strip container. Do not use test strips past the Use By date.

2.



- ▶ Insert the golden end of a test strip into the meter in the direction of the arrow. The meter turns on.

3.



The Apply Sample screen appears. The test strip is ready for testing.

4.

- ▶ Select the control solution to test. You will enter the level later in the test.

5.

- ▶ Place the meter on a flat surface, like a table.

6.

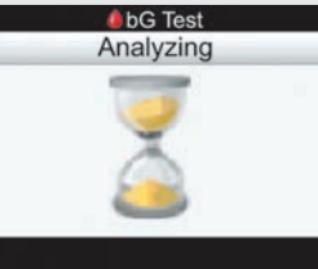
- ▶ Remove the control bottle cap. Wipe the tip of the bottle with a tissue.

7.



- ▶ Squeeze the bottle until a tiny drop forms at the tip.
- ▶ Touch the drop to the **front edge** of the yellow window of the test strip. Do not put control solution on top of the test strip.

8.



When the test strip has enough control solution, the Analyzing screen appears.

- ▶ Wipe the tip of the bottle with a tissue and then cap the bottle tightly.

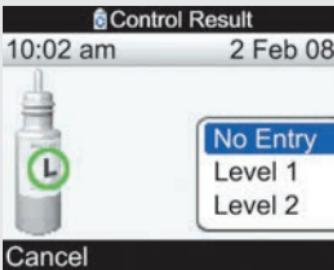
9.



The control result appears on the display.

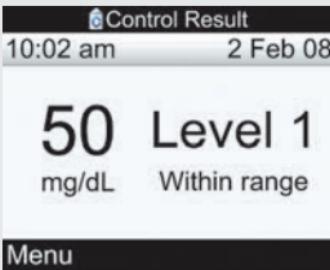
- ▶ Select Level to display the control solution level pop-up menu.

10.



- ▶ Select the control solution level and press .

11.



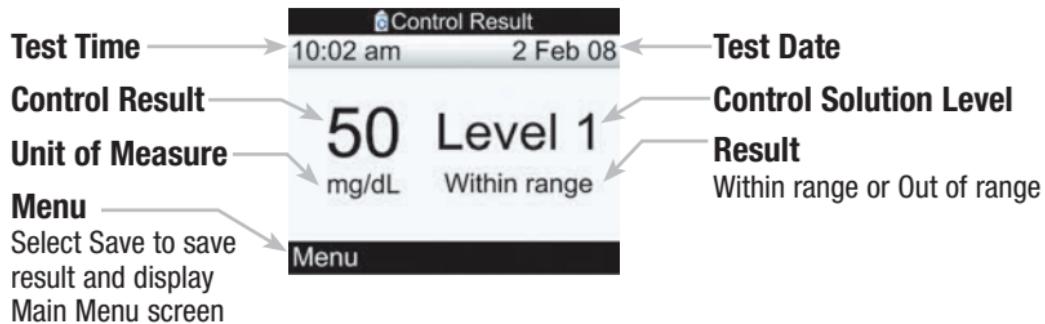
- ▶ Remove and discard the test strip.
- ▶ For information on understanding control test results, proceed to the next section, or select Menu to save this result and display the Main Menu screen.

NOTE

- If a test strip error occurs, remove and discard the used test strip and repeat the test with a new test strip.
- Be careful not to put any fluids into the test strip slot.
- When the Control Level screen is displayed and you select Cancel without selecting a control solution level, then No Entry is chosen. The meter stores the control test result along with No Entry and then the Detailed Control Result screen is displayed.
- When the Control Level screen is displayed and you turn off the meter, or if the meter auto-powers off, without selecting a control solution level, then No Entry is chosen. The meter stores the control test result along with No Entry.
- **Other ways to start a control test:**
 - From the Main Menu, select bG Test. Insert a test strip into the meter.
 - When a reminder notification or the key lock icon is displayed, insert a test strip into the meter.

3.5 Understanding Control Test Results

The detailed Control Result screen displays the following information:

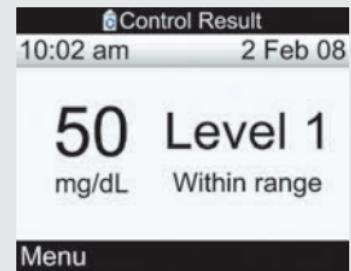




- ▶ The label on your test strip container shows the acceptable ranges for both the Level 1 and the Level 2 control solutions. The test result you get should be inside this range. Ensure you select and compare the test result to the correct level of control. For the level selected, the meter displays whether the result is within or outside of the acceptable range.

- ▶ When the control test result is inside the range on the test strip container, the test strips and the meter are working properly.

Example Control Results



If the control test result is within the acceptable range, “Within range” appears on the detailed Control Result screen.

Control Result
10:02 am 2 Feb 08

72 Level 1
mg/dL Out of range

Menu

If the control test result is outside of the acceptable range, “Out of range” appears on the detailed Control Result screen.

Control Result
10:02 am 2 Feb 08

HI Level 1

Menu

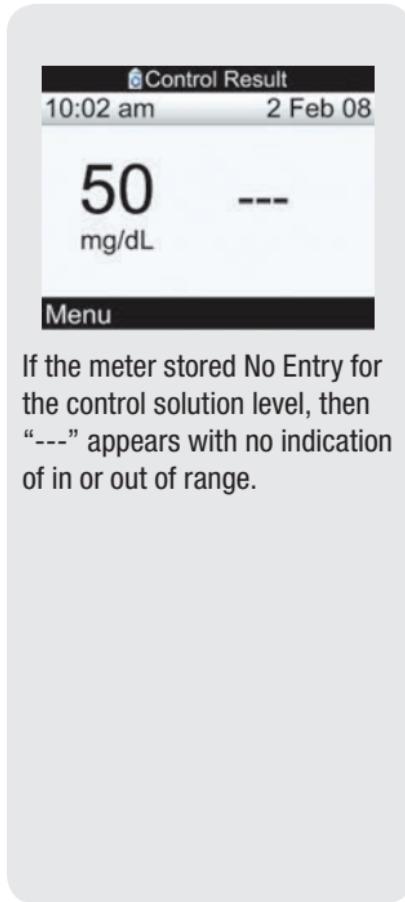
If “HI” is displayed, the control test result may be above the measurement range.

Control Result
10:02 am 2 Feb 08

LO Level 1

Menu

If “LO” is displayed, the control test result may be below the measurement range.



If the meter stored No Entry for the control solution level, then “---” appears with no indication of in or out of range.

Out-of-Range Control Test Results

If your control test result is out of range, check this list to help to solve the problem:

| Troubleshooting Checks | Actions |
|---|--|
| 1. Were either the test strips or control solutions expired? | Discard the test strips or control solutions if either is past the Use By date. If the control solution was opened more than 3 months ago, discard it. Repeat the control test with an unexpired test strip and an unexpired control solution. |
| 2. Did you wipe the tip of the control solution bottle before use? | Wipe the tip of the bottle with a tissue. Repeat the control test with a new test strip and a fresh drop of control solution. |
| 3. Were the caps on the test strip container and the control solution bottle always closed tightly? | Replace the test strips or control solutions if you think either was uncapped for some time and repeat the control test. |
| 4. Was the test strip used immediately after it was removed from the test strip container? | Repeat the control test with a new test strip and a fresh drop of control solution. |
| 5. Were the test strips and control solutions stored in a cool, dry place? | Repeat the control test with a properly stored test strip and control solution. |

| Troubleshooting Checks | Actions |
|--|--|
| 6. Did you follow the directions? | Read Chapter 3, Control Testing, and repeat the control test. Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578 if you still have problems. |
| 7. Did you chose the correct control solution level, either 1 or 2, when you performed the control test? | If you chose the wrong control solution level, you can still compare the control result to the range printed on the test strip container. |
| 8. Are you still unsure of the problem? | Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |

4 Managing Your Data

| | |
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4.1 Overview

Analyzing your blood glucose test results stored in the meter is an effective way for you and your healthcare professional to determine how well you are controlling your diabetes. This analysis is a valuable tool for making improvements to your diabetes management. The reports the meter displays help you get the most from your ACCU-CHEK Aviva Expert meter.

From the diary records stored in the meter, you are able to view a specific blood glucose test record with its attributes (e.g., meal time, carbs, health event, bolus. and basal insulin). In addition, for a specific diary record, you are able to change or add to its attributes.

The meter generates reports, such as blood glucose averages with standard deviations for the time period you select (e.g., the past 7 days or the past 30 days). Graphs can be a good way to view your blood glucose test results. The meter can display a line graph to depict blood glucose record trends, a graph showing result ranges for a standard day or a standard week, and a pie chart with different colors to illustrate the amount of test results within, above, or below your blood glucose target range.

NOTE

- You must be the only user of the meter, because the diary data will be incorrect if the meter is shared.
- Blood glucose and bG are interchangeable and mean the same thing.

Storing Test Results

The meter automatically stores up to 1,000 diary records with the time and date. You can review up to 250 diary records on the meter or up to 1,000 diary records using a computer with compatible software. Diary records are stored from the newest to the oldest. It is very important to have the correct time and date set. Having the correct time and date setting helps ensure accurate interpretation of blood glucose test results by you and your healthcare professional.

Each diary record can contain:

- Date and time
- Blood glucose test result
- Meal time (events)
- Carbs
- Health event
- Bolus Insulin
- Basal Insulin

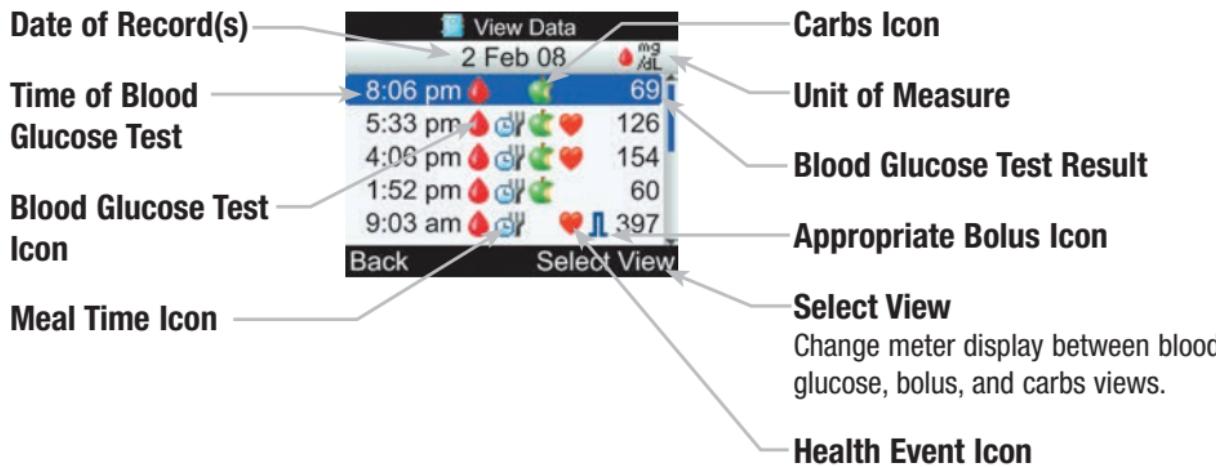
You can display filtered diary data in graphical or table format.

NOTE

- **Do not change your therapy based on one individual record or test result in the diary.**
- This chapter shows sample screens. The screens may look slightly different from the screens on the meter. If you have any questions about the meter screens, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- The information in the diary is saved when you replace the batteries. You need to check the time and date after you replace the batteries. For more information on changing the batteries, see Chapter 8, Maintenance.
- Once 1,000 records are in the diary memory, adding a new record causes the oldest diary record to be deleted.
- The control results are stored in memory, but cannot be reviewed on the meter.
- Before reviewing diary records or control results with software, the stored diary records must first be downloaded to a compatible software application. For product availability, please contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- Control results are not used in any report or graph.

4.2 Viewing or Modifying Your Data

The View Data screen displays the following information:



NOTE

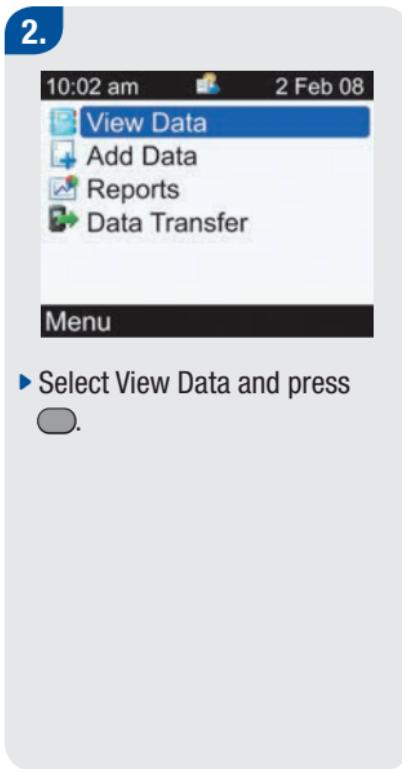
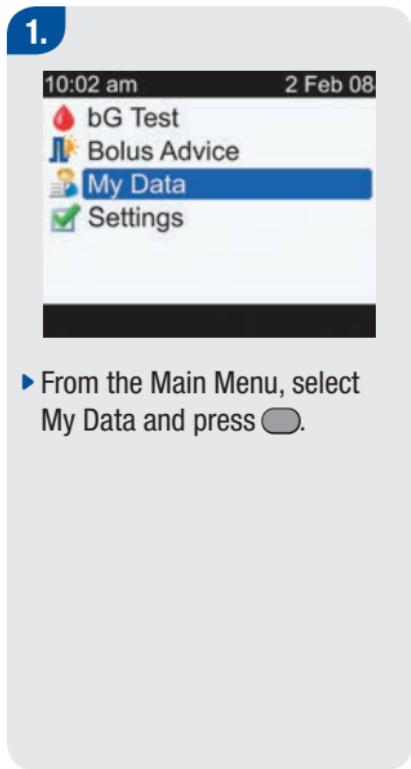
- If data are not available, the No Data Available screen is displayed.
- The View Data screen displays the records in the order in which they occurred with the most recent record shown on top.
- For the blood glucose test result:
 - “HI” is displayed if the test result is above the measurement range.
 - “LO” is displayed if the test result is below the measurement range.
 - The blood glucose test result is blank if a blood glucose test value does not exist.

Icon descriptions:

| Icon | Icon Name | Description |
|------|---------------|---|
| | Basal Insulin | Basal insulin entered into the diary record. |
| | bG Test | Icon is displayed when information exists for this diary record regarding a blood glucose test. |
| | Meal Time | Icon is displayed when information exists for this diary record regarding meal time. |
| | Carbs | Icon is displayed when information exists for this diary record regarding carbs. |
| | Health Event | Icon is displayed when information exists for this diary record regarding health events. |
| | Bolus Insulin | Bolus insulin entered into the diary record. |

You can view a diary record with its attributes (blood glucose value, meal time, carbs, health event, bolus, and basal).

Main Menu > My Data > View Data



- ▶ From the Main Menu, select My Data and press .

- ▶ Select View Data and press .

3.

Blood Glucose View:

| | View Data |
|----------|-----------|
| 2 Feb 08 | mg/dL |
| 8:06 pm | 69 |
| 5:33 pm | 126 |
| 4:06 pm | 154 |
| 1:52 pm | 60 |
| 9:03 am | 397 |

Back

Select View

Bolus View:

| | View Data |
|----------|-----------|
| 2 Feb 08 | LU |
| 8:06 pm | |
| 5:33 pm | |
| 4:06 pm | |
| 1:52 pm | |
| 9:03 am | 5 |

Back

Select View

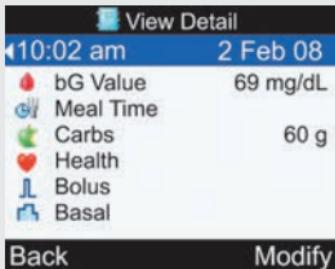
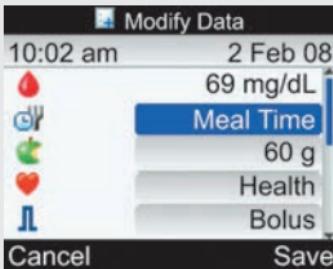
Carbs View:

| | View Data |
|----------|-----------|
| 2 Feb 08 | g |
| 8:06 pm | 60 |
| 5:33 pm | 60 |
| 4:06 pm | 20 |
| 1:52 pm | 60 |
| 9:03 am | 5 |

Back

Select View

- ▶ Shown above are View Data screens that display values for blood glucose, bolus, or carbs. To choose another view, press (a pop-up menu appears). Select the view you want and press .
- ▶ Press or to view other records (the screen scrolls if there are additional records).
- ▶ To view or modify a record's details, select the record and press .

4.**5.**

NOTE

- To cancel changes or return to the View Detail screen, select Cancel.
- Scroll down to select the basal entry field.

- ▶ Press **◀** to view the previous record or press **▶** to view the next (newer) record.

To return to the previous screen, select Back.

or

To modify a diary record, select Modify and continue to the next step.

- ▶ Select the entry field to modify and press **○**.
- ▶ Make the change in the entry field and press **○**.
- ▶ Modify other fields, as needed.

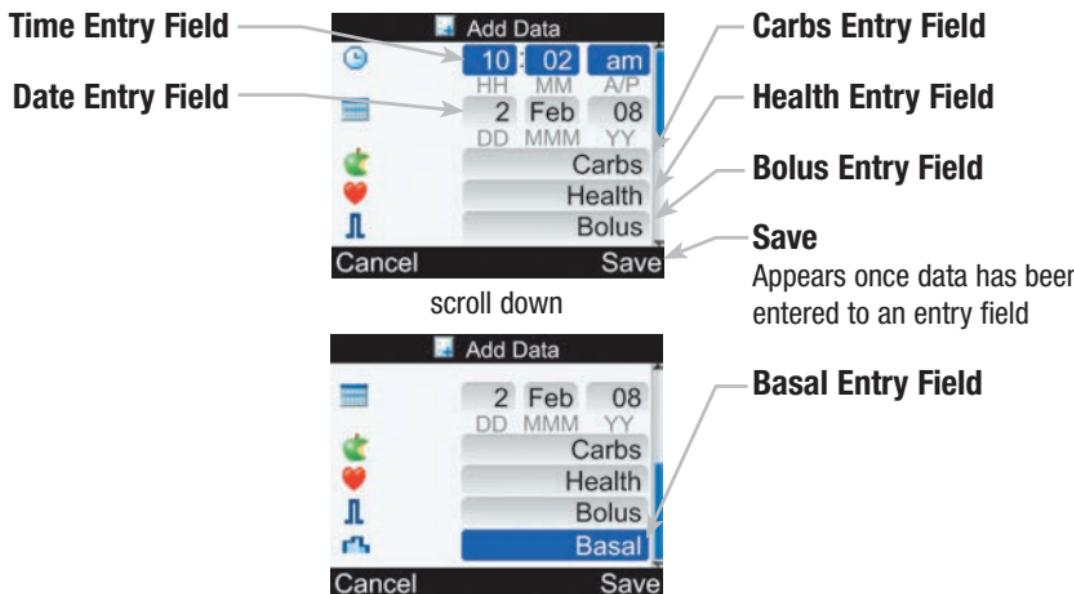
To save the changes and return to the View Detail screen, select Save.

The following fields cannot be modified with the specified condition:

| Fields | Cannot be modified if the ... |
|--|--|
| Bolus | Blood glucose test result was below the hypo warning limit |
| Meal Time | Record has no blood glucose value |
| Meal Time, Carbs, Health Event, Bolus, and Basal | Record has been used for bolus advice |

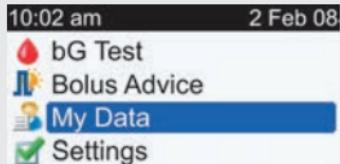
4.3 Adding New Data

You can add data to a diary record for carbs, health, bolus, and basal. The Add Data screen displays the following information:



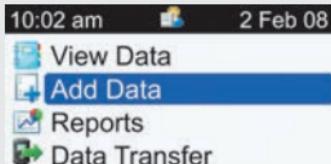
Main Menu > My Data > Add Data

1.



- ▶ From the Main Menu, select My Data and press .

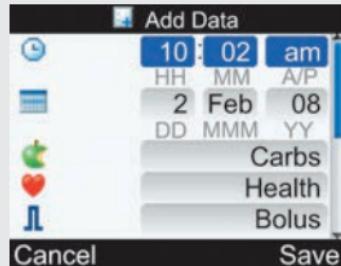
2.



Menu

- ▶ Select Add Data and press .

3.



- ▶ Select an entry field and press .
- ▶ Make addition in the entry field and press .

- ▶ Make additions to other entry fields, as needed.

To save the changes and return to the My Data screen, select Save.

NOTE

- The meter initially displays the current date and the current time. You can change the date and time when adding a diary record, although the date and time cannot be set in the future.
- Before a diary record can be saved, data must be entered (not including date and time). “Save” is not displayed above  until data has been entered.
- To cancel changes and return to the My Data screen, select Cancel.

4.4 Reporting Your Data

The screenshot shows a summary table for blood glucose data over the last 7 days. The table includes columns for Overall average (163 mg/dL), Pre Meal average (136 mg/dL), Post Meal average (202 mg/dL), Bedtime average (55 mg/dL), Other average (175 mg/dL), and the number of tests (37, 13, 5, 1, 2 respectively). A 'Back' button is at the bottom.

| Last 7 days | | | |
|-------------|--------|-----|-------|
| | mg /dL | SD | tests |
| Overall | 163 | 82 | 37 |
| Pre Meal | 136 | 67 | 13 |
| Post Meal | 202 | 125 | 5 |
| Bedtime | 55 | | 1 |
| Other | 175 | 50 | 2 |
| Back | | | |

Time Range

Meal Times

Blood Glucose Standard Deviation

Calculated for the time range

Number of Tests

Used to calculate the averages and standard deviations

Blood Glucose Average

Calculated for the time range

NOTE

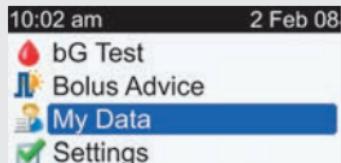
- If data are not available to calculate averages, the No Data Available screen is displayed.
- Standard deviation measures how much the blood glucose test results are scattered around the blood glucose average. A low standard deviation means the blood glucose test results are tightly clustered around the blood glucose average; a high standard deviation means the blood glucose test results are widely scattered around the blood glucose average.
- Calculations do not include control results, HI values, or LO values.

Reporting Your Blood Glucose Averages

The meter displays your blood glucose averages and standard deviations for the time range you choose (7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > bG Averages

1.



2.



3.



- ▶ From the Main Menu, select My Data and press .

- ▶ Select Reports and press .

- ▶ Select bG Averages and press .

4.

| Last 7 days | | | |
|-------------|--------|-----|-------|
| | mg /dL | SD | Tests |
| Overall | 163 | 82 | 37 |
| Pre Meal | 136 | 67 | 13 |
| Post Meal | 202 | 125 | 5 |
| Bedtime | 55 | 1 | |
| Other | 175 | 50 | 2 |

Back

The blood glucose averages are displayed.

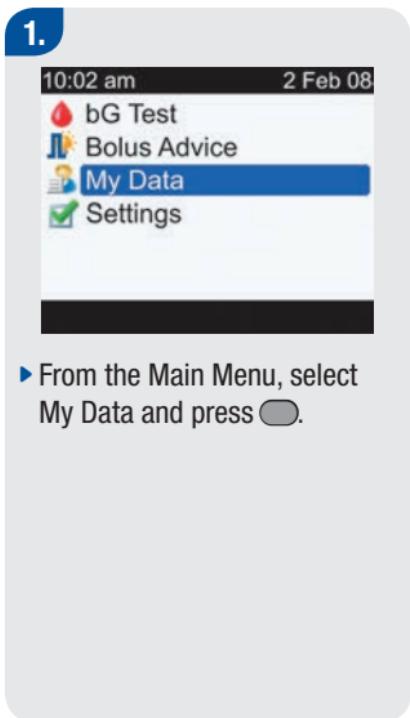
- ▶ To display blood glucose averages for another time range (last 7, 14, 30, 60, or 90 days), press either ◀ or ▶ to scroll the screen until you reach the time range you need.

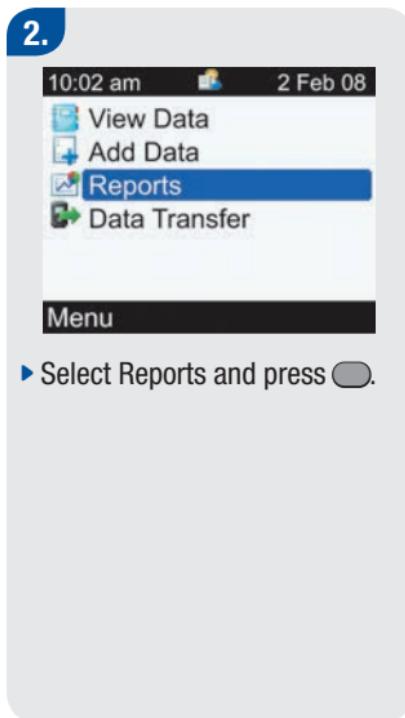
To return to the Reports screen, select Back.

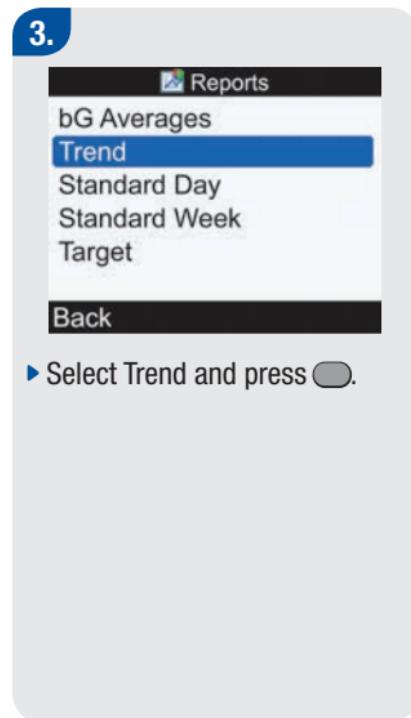
Reporting Your Data Trends

The meter displays your blood glucose record trends for the time range you choose (last 8 hours, 24 hours, 48 hours, or 7 days).

Main Menu > My Data > Reports > Trend

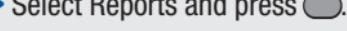
- 1.**


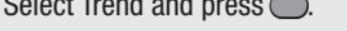
10:02 am 2 Feb 08
bG Test
Bolus Advice
My Data
Settings
- 2.**


10:02 am 2 Feb 08
View Data
Add Data
Reports
Data Transfer
- 3.**


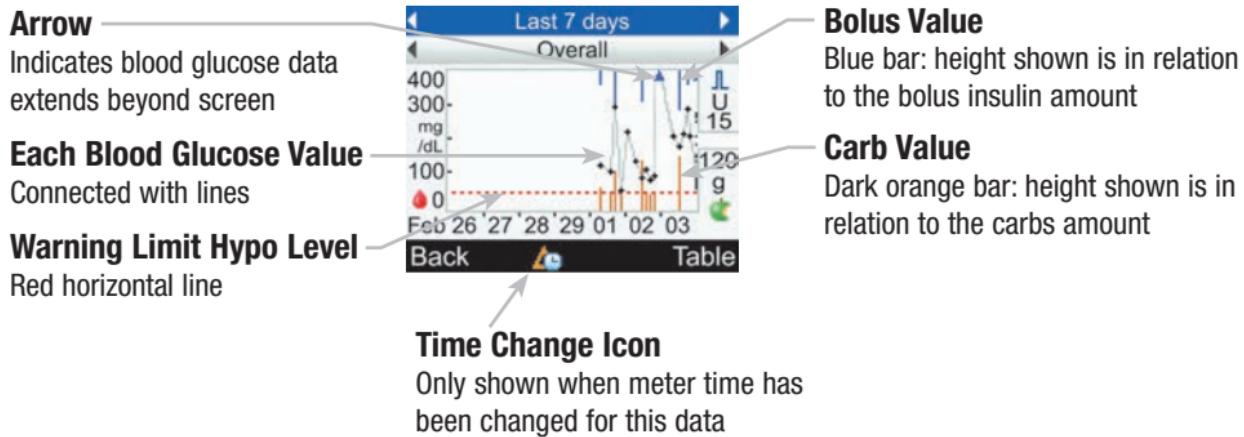
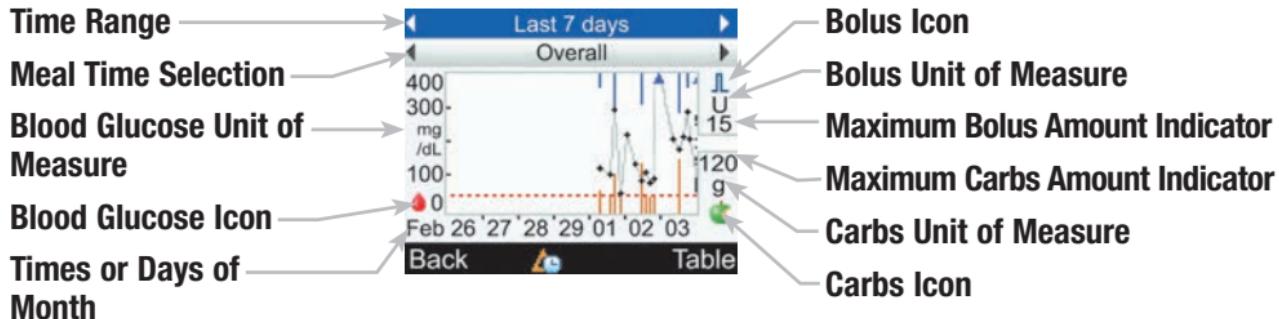
Reports
bG Averages
Trend
Standard Day
Standard Week
Target

▶ From the Main Menu, select My Data and press .

▶ Select Reports and press .

▶ Select Trend and press .

Trend Graph Screen



NOTE

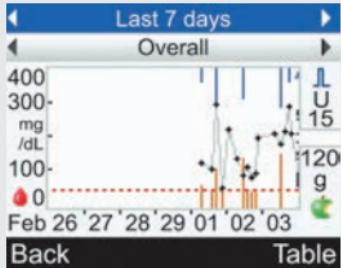
- If data are not available to display the trend graph, the No Data Available screen is displayed.
- Trend graphs do not include control results.
- If  (time change icon) is shown at the bottom of the Trend Graph screen, the time and date of one or more data points in the trend graph may not match the time stamp in My Data because the meter clock has been changed. All times in the trend graph show the data relative to the current meter time.

For example:

1. You take a bG test and the value is stored in the meter at 9:00 am.
 2. The meter time is changed ahead 1 hour.
 3. The bG data on the trend graph is shown at 10:00 am.
- Trend graph data is cleared if bolus advice data is cleared.
 - On the right side of the graph, the Maximum Bolus Amount Indicator is a horizontal line with the corresponding value shown above it. The purpose of this indicator is to scale the top portion of the graph for the Bolus Value blue bars. The Maximum Bolus Amount Indicator values available on the meter are 1, 5, 15, 30, and 60 U. The indicator displayed is based on the single largest bolus insulin amount delivered for the time range chosen. For example, if the largest bolus delivered during the chosen time range is 8 U, then the meter will scale the upper graph to be between 0 and 15 U.
 - On the right side of the graph, the Maximum Carbs Amount Indicator is a horizontal line with the corresponding value shown below it. The purpose of this indicator is to scale the bottom portion of the graph for the Carb Value dark orange bars. The Maximum Carbs Amount Indicator values available on the meter are 30, 60, 120, 180, and 240 g, or the equivalent scale for BE, KE, or CC. The indicator displayed is based on the single largest carbs amount for the time range chosen. For example, if the largest carbs amount for the chosen time range is 86 g, then the meter will scale the lower graph to be between 0 and 120 g.
 - Select Table to change the display to the Table View. The time range remains the same.
 - The displayed insulin only includes bolus values.

Trend Graph

1.



- To display a trend graph for another time range (last 8 hours, 24 hours, 48 hours, or 7 days), press ▲ to highlight the time range selection field (top of screen). Press either ◀ or ▶ until you reach the time range you need.

2.

- To display a trend graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ◀ or ▶ until you reach the meal time selection you need.

3.

- Press ▶ to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

NOTE

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Trend Table Screen

Time Range

| Last 8 hours | | | |
|--------------|-------|----|---|
| Overall | | | |
| 2 Feb 08 | mg/dL | g | U |
| 8:06 pm | 69 | 66 | |
| 5:33 pm | 126 | 60 | |
| 4:06 pm | 154 | 20 | |
| 1:52 pm | 60 | 60 | |

Carbs Icon with Carbs Unit of Measure

Meal Time Selection

Bolus Icon with the Bolus Unit of Measure

Date of Records

Blood Glucose Icon with Blood Glucose Unit of Measure

Time Change Icon

Only shown when meter time has been changed for this data

Back  Graph

NOTE

- If data are not available to display the trend table, the No Data Available screen is displayed.
- Trend tables do not include control results.
- If  (time change icon) is shown at the bottom of the Trend Table screen, the time and date of one or more data points in the trend table may not match the time stamp in My Data because the meter clock has been changed. All times in the trend table show the data relative to the current meter time.

For example:

1. You take a bG test and the value is stored in the meter at 9:00 am.
 2. The meter time is changed ahead 1 hour.
 3. The bG data on the trend table is shown at 10:00 am.
- Trend table data is cleared if bolus advice data is cleared.
 - For a given record, if the blood glucose value, carb value, or bolus value is empty, the corresponding field is blank.
 - The most recent record is displayed first.

Trend Table

1.

The screenshot shows a trend table for the last 8 hours. At the top, it says "Last 8 hours" and "Overall". Below that, the date is listed as "2 Feb 08". The table has four columns: time, blood glucose level (mg/dL), insulin dose (U), and carbohydrate intake (g). The data is as follows:

| Time | BG (mg/dL) | Insulin (U) | Carbs (g) |
|---------|------------|-------------|-----------|
| 8:06 pm | 69 | 66 | |
| 5:33 pm | 126 | 60 | |
| 4:06 pm | 154 | 20 | |
| 1:52 pm | 60 | 60 | |

At the bottom of the screen, there are buttons for "Back" and "Graph".

- When there are multiple records, press ▲ or ▼ to view other records.

2.

To display a trend table for another time range (last 8 hours, 24 hours, 48 hours, or 7 days), press ▲ to highlight the time range selection field (top of screen). Press either ▲ or ▼ until you reach the time range you need.

3.

To display a trend table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ▲ or ▼ until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

NOTE

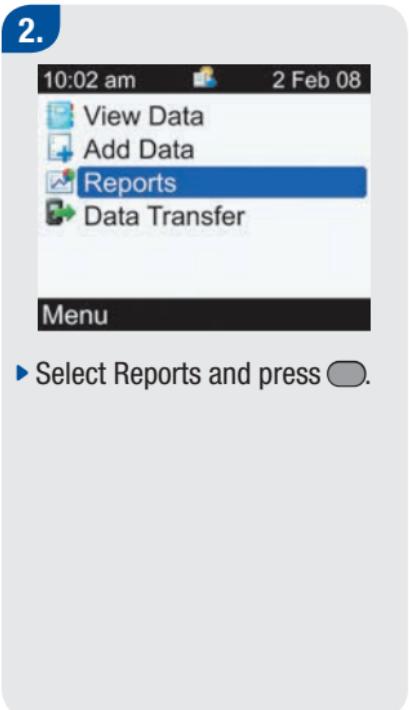
The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

Reporting Your Standard Day

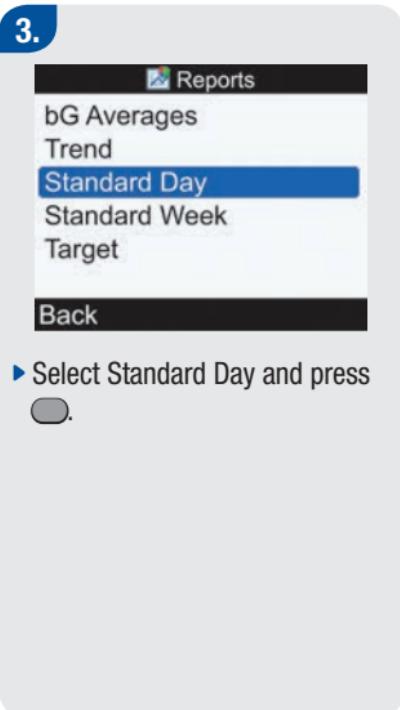
The meter displays (for a standard day) your blood glucose averages, number of tests, and standard deviations within predetermined time blocks for the time range you choose (last 7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > Standard Day

- 1.**


10:02 am 2 Feb 08
bG Test
Bolus Advice
My Data
Settings
- 2.**


10:02 am 2 Feb 08
View Data
Add Data
Reports
Data Transfer

Menu
- 3.**


Reports
bG Averages
Trend
Standard Day
Standard Week
Target

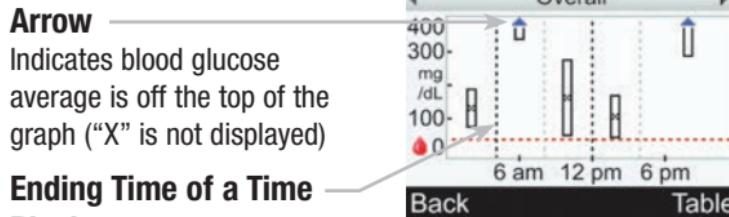
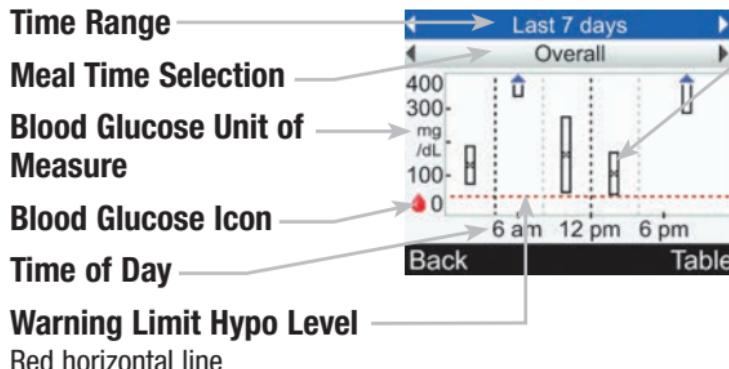
Back

▶ From the Main Menu, select My Data and press .

▶ Select Reports and press .

▶ Select Standard Day and press .

Standard Day Graph Screen



Box for Each Time Block

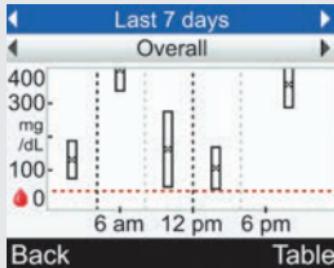
- "X" in center of box indicates the average of all blood glucose test results for the selected criteria.
- The top of the box indicates 1 standard deviation above the average and the bottom of the box indicates 1 standard deviation below the average. The box is not displayed if there are not enough data to determine standard deviation.
- The top of box is open if the standard deviation is off the top of the graph.
- Box and "X" are not displayed for a time block if no data are found.

NOTE

- If data are not available to display the standard day graph, the No Data Available screen is displayed.
- The standard day graph does not include control results, HI values, or LO values.

Standard Day Graph

1.



- To display a standard day graph for another time range (last 7, 14, 30, 60, or 90 days), press ▲ to highlight the time range selection field (top of screen). Press either ◀ or ▶ until you reach the time range you need.

2.

- To display a standard day graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ◀ or ▶ until you reach the meal time selection you need.

3.

- Press ▶ to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

NOTE

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Standard Day Table Screen

| Last 7 days | | | | |
|--------------|-----------|-----|-------|--|
| Overall | | | | |
| | mg /dL | SD | Tests | |
| 12:00 - 4:00 | 156 | 67 | 3 | |
| 4:00 - 8:00 | 144 | 48 | 4 | |
| 8:00 - 12:00 | 199 | 144 | 4 | |
| 12:00 - 4:00 | 134 | 74 | 9 | |

Back Graph

Time Range

Meal Time Selection

Time Block

Blood Glucose Average

Standard Deviation (SD)

Number of Tests

NOTE

- If data are not available to display the standard day table, the No Data Available screen is displayed.
- Standard day table calculations do not include control results, HI values, or LO values.
- For a standard deviation to be displayed for a given time block, there must have been two or more tests recorded during the time block.

Standard Day Table

1.

| Last 7 days | | | |
|--------------|--------|-----|-------|
| Overall | | | |
| | mg /dL | SD | Tests |
| 12:00 - 4:00 | 156 | 67 | 3 |
| 4:00 - 8:00 | 144 | 48 | 4 |
| 8:00 - 12:00 | 199 | 144 | 4 |
| 12:00 - 4:00 | 134 | 74 | 9 |

Back

Graph

- ▶ Press ▲ or ▼ to scroll screen.

2.

▶ To display a standard day table for another time range (last 7, 14, 30, 60, or 90 days), press ▲ to highlight the time range selection field (top of screen). Press either ◀ or ▶ until you reach the time range you need.

3.

▶ To display a standard day table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ◀ or ▶ until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

NOTE

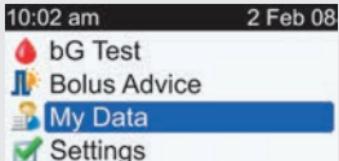
The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

Reporting Your Standard Week

The meter displays (for a standard week) your blood glucose averages, number of tests, and standard deviations for each day of the week for the time range you choose (last 7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > Standard Week

1.



3.



2.



- ▶ From the Main Menu, select My Data and press .

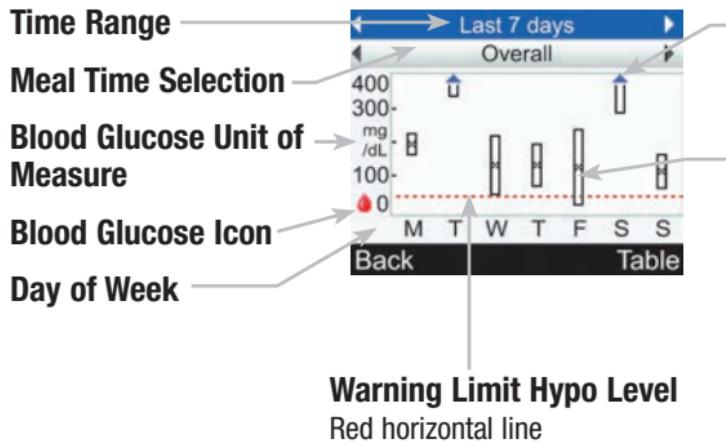
Menu

- ▶ Select Reports and press .

Back

- ▶ Select Standard Week and press .

Standard Week Graph Screen



Arrow

Indicates blood glucose average is off the top of the graph ("X" is not displayed)

Box for Each Time Block

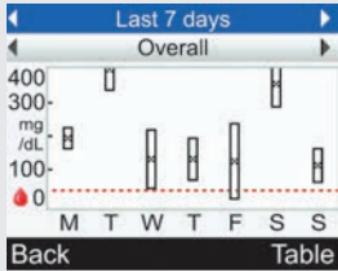
- "X" in center of box indicates the average of all blood glucose test results for the selected criteria.
- The top of the box indicates 1 standard deviation above the average and the bottom of the box indicates 1 standard deviation below the average. The box is not displayed if there are not enough data to determine standard deviation.
- The top of box is open if the standard deviation is off the top of the graph.
- Box and "X" are not displayed for a day if no data are found.

NOTE

- If data are not available to display the standard week graph, the No Data Available screen is displayed.
- The standard week graph does not include control results, HI values, or LO values.

Standard Week Graph

1.



- To display a standard week graph for another time range (last 7, 14, 30, 60, or 90 days), press ▲ to highlight the time range selection field (top of screen). Press either ◀ or ▶ until you reach the time range you need.

2.

- To display a standard week graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ◀ or ▶ until you reach the meal time selection you need.

3.

- Press ▶ to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

NOTE

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Standard Week Table Screen

The screenshot shows a mobile application interface for tracking blood glucose levels. At the top, there's a header with a back arrow and the text 'Last 7 days'. Below it is a section titled 'Overall' with a blood drop icon and 'mg/dL' units. The main area displays a table for the 'Last 7 days' with four rows: Monday, Tuesday, Wednesday, and Thursday. Each row contains four columns: Blood Glucose Average (223, 180, 156, 159), Standard Deviation (SD) (39, 71, 99, 73), and Number of Tests (5, 5, 5, 5). At the bottom of the table are two buttons: 'Back' and 'Graph'.

| | mg /dL | SD | Tests |
|-----------|-----------|----|-------|
| Monday | 223 | 39 | 5 |
| Tuesday | 180 | 71 | 5 |
| Wednesday | 156 | 99 | 5 |
| Thursday | 159 | 73 | 5 |

NOTE

- If data are not available to display the standard week table, the No Data Available screen is displayed.
- Standard week table calculations do not include control results, HI values, or LO values.
- For a standard deviation to be displayed for a given day of the week, there must have been two or more tests recorded during the day.

Standard Week Table

1.

| Last 7 days | | | |
|-------------|--------|----|-------|
| Overall | mg /dL | SD | Tests |
| Monday | 223 | 39 | 5 |
| Tuesday | 180 | 71 | 5 |
| Wednesday | 156 | 99 | 5 |
| Thursday | 159 | 73 | 5 |

Back Graph

- ▶ Press ▲ or ▼ to scroll screen.

2.

▶ To display a standard week table for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either ◀ or ▶ until you reach the time range you need.

3.

▶ To display a standard week graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ◀ or ▶ until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

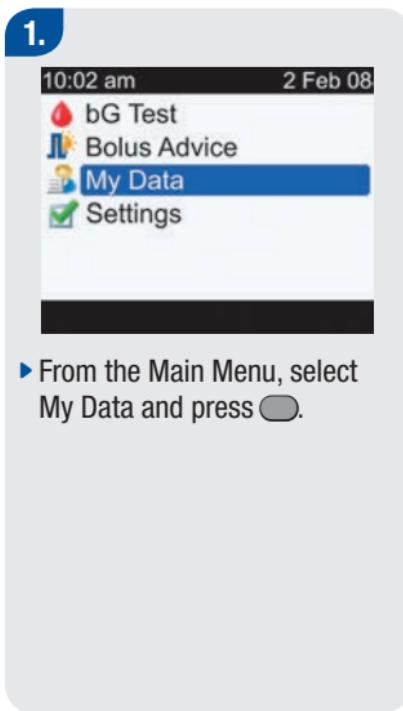
NOTE

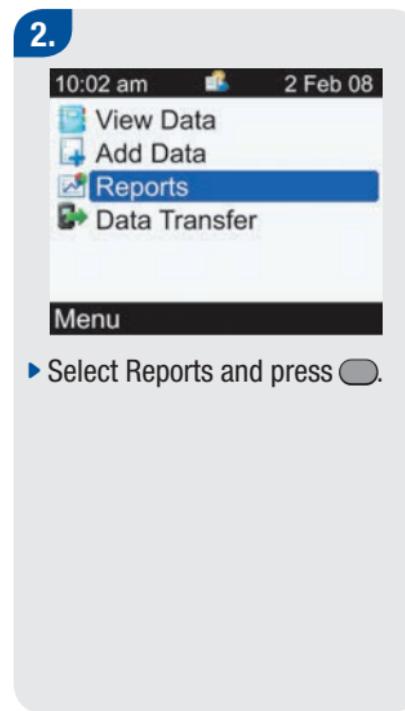
The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

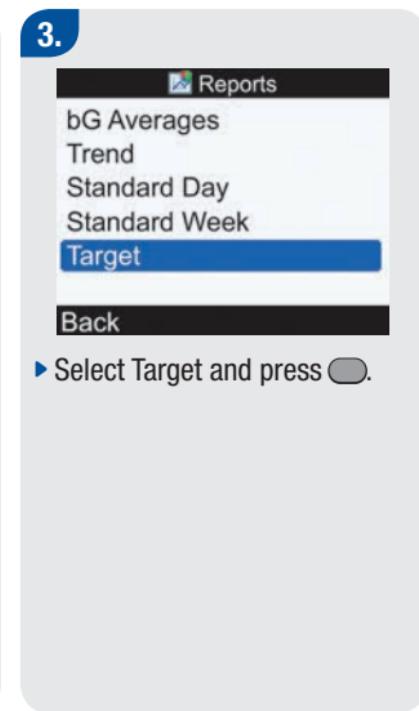
Reporting Your Target

The meter displays a pie chart illustrating your blood glucose records as “Above,” “Within,” “Below,” and “Hypo” for the time range you choose (last 7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > Target

- 1.**


10:02 am 2 Feb 08
bG Test
Bolus Advice
My Data
Settings
- 2.**


10:02 am 2 Feb 08
View Data
Add Data
Reports
Data Transfer
- 3.**


Reports
bG Averages
Trend
Standard Day
Standard Week
Target

▶ From the Main Menu, select My Data and press .

▶ Select Reports and press .

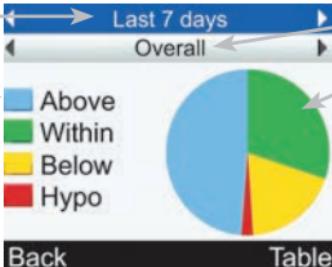
▶ Select Target and press .

Target Graph Screen

Time Range

Legend

Blood glucose test result categories



Meal Time Selection

Pie Chart

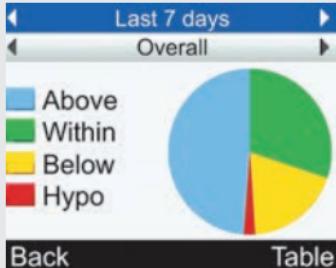
Represents the percentages for the blood glucose test result categories

NOTE

- If data are not available to display the target graph, the No Data Available screen is displayed.
- The target graph does not include control results, HI values, or LO values.

Target Graph

1.



- To display a target graph for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either **◀** or **▶** until you reach the time range you need.

2.

- To display a target graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either **▲** or **▼** to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either **◀** or **▶** until you reach the meal time selection you need.

3.

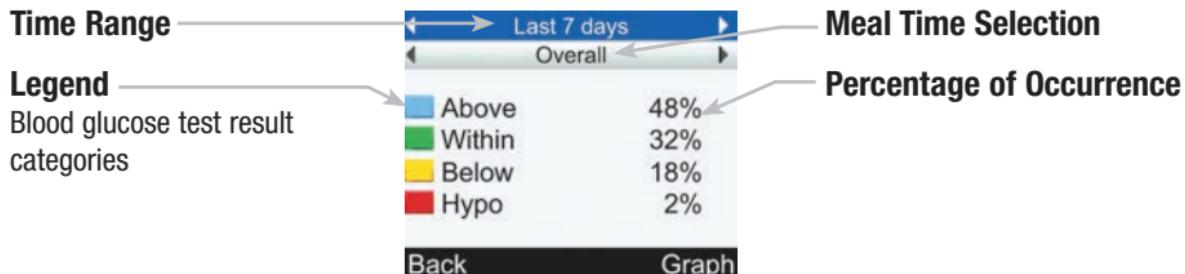
- Press **➡** to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back .

NOTE

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Target Table Screen



NOTE

- If results or data are not available for the selected time period and meal time, the No Data Available screen is displayed.
- The target table does not include control results, HI values, or LO values.

Target Table

1.



- To display a target table for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either \blacktriangleleft or \triangleright until you reach the time range you need.

2.

- To display a target table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either \blacktriangleup or \blacktriangledown to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either \blacktriangleleft or \triangleright until you reach the meal time selection you need.

3.

- Press \square to display the Target Graph (see previous section for more information).

To return to the Reports screen, select Back.

NOTE

The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

4.5 Downloading Your Data to a Computer

We offer a variety of software to help you transfer your stored results to a computer to track, identify patterns, and print. For information on ACCU-CHEK software, contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

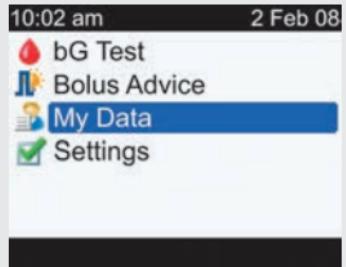
1.

- ▶ Install the software according to the instructions.
- ▶ To transfer the results to a computer, connect the infrared device to the computer according to the software instructions.

2.

- ▶ Run the software program and follow the instructions to download information. Make sure the software is ready to accept data from the meter.

3.



- ▶ From the Main Menu, select My Data and press .

4.

- ▶ Select Data Transfer and press

5.

Infrared (IR) Window



- ▶ Locate the infrared (IR) window on the top of the meter.
- ▶ Locate the IR window on the computer's infrared cable.
- ▶ Point the two IR windows toward each other. They should be 1 to 4 inches apart.

6.

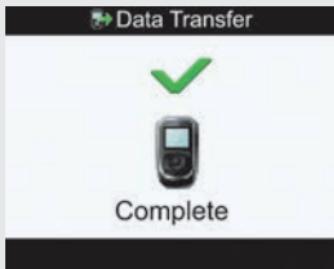
Data Transfer



Transferring Data

- ▶ Follow the prompts on your computer software to start the data transfer.

7.



NOTE

If the data did not transfer successfully, turn off the meter, turn the meter back on, and try again. If you still have problems, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

- Once the data transfer is complete, the Data Transfer Complete screen is displayed for 3 seconds and then the meter turns off.

5 Changing Meter Settings

| | |
|---|-----|
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5.1 Overview

You have the flexibility to change the ACCU-CHEK Aviva Expert meter settings that you initially selected during the Setup Wizard process. You can make adjustments to the meter settings in order to meet changing conditions. Consult with your healthcare professional to ensure the appropriate settings are selected.

Settings: Important Information

- When editing a setting, any unsaved changes are discarded if the meter turns off or if a test strip is inserted into the meter.
- It is important to ensure that the time and date are correctly set in order to create accurate diary records.

NOTE

Blood glucose and bG are interchangeable and mean the same thing.

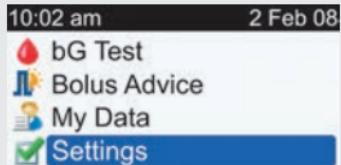
5.2 Setting bG Test Reminders: After High bG, After Low bG, After Meal

bG Test Reminders: Important Information

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
 - Dismiss the reminder by pressing .
 - Reschedule (snooze) the reminder by pressing . The snooze time for After High bG is 15 minutes. The snooze time for After Low bG and After Meal is 5 minutes.
 - If not dismissed or snoozed, the reminder is displayed a total of four times at intervals of 2 minutes, after which the meter dismisses the reminder.
- When you perform a blood glucose test, the meter dismisses any bG test reminders which are pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.
- For more information, see Chapter 6, Icons, Reminders, Warnings, and Errors.

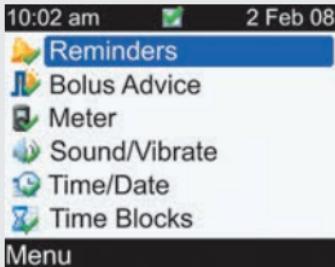
Main Menu > Settings > Reminders > bG Test Reminders

1.



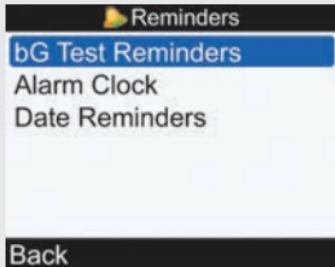
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Reminders and press .

3.



- ▶ Select bG Test Reminders and press .

4.

| bG Test Reminders | |
|-------------------|-----|
| After High bG | Off |
| After Low bG | Off |
| After Meal | Off |

Back

- ▶ Select either After High bG, After Low bG, or After Meal and press .
- ▶ Proceed to either After High bG, After Low bG, or After Meal in this step.

| After High bG | |
|---------------|---------------|
| Reminder | Off |
| bG Threshold | 140 mg/dL |
| Remind After | 2:00 HH MM |

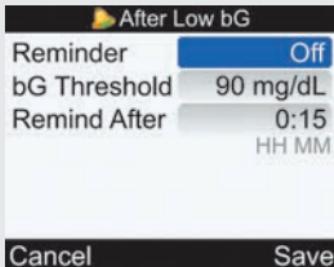
Cancel **Save**

- To Turn the After High bG Reminder On or Off:**
- ▶ Select the Reminder entry field and press .
 - ▶ Select On or Off and press .
- To Change the bG Threshold:**
- ▶ Select the bG Threshold entry field and press .
 - ▶ Set the bG Threshold level and press .

To Change the Remind After Time:

- ▶ Select the Remind After entry field and press .
- ▶ Set the amount of time after a high blood glucose test result you want to be reminded to retest your blood glucose and press .

To save the changes and return to the bG Test Reminders screen, select Save.



To Turn the After Low bG Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Change the bG Threshold:

- ▶ Select the bG Threshold entry field and press .
- ▶ Set the bG Threshold level and press .

To Change the Remind After Time:

- ▶ Select the Remind After entry field and press .
- ▶ Set the amount of time after a low blood glucose test result you want to be reminded to retest your blood glucose and press .

To save the changes and return to the bG Test Reminders screen, select Save.



To Turn the After Meal Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Change the Snack Size:

- ▶ Select the Snack Size entry field and press .
- ▶ Set the Snack Size amount and press .

To Change the Remind After Time:

- ▶ Select the Remind After entry field and press .

- ▶ Set the amount of time after a meal (carb entry larger than the snack size) you want to be reminded to retest your blood glucose and press .

To save the changes, select Save.

If you did not change the Snack Size, the meter returns to the bG Test Reminders screen.



If you changed the Snack Size, the After Meal screen is displayed.

- ▶ Select OK to return to the bG Test Reminders screen.

NOTE

- Remind After is displayed as “HH:MM” (e.g., 1:30) where “H” is hour and “M” is minute.
- When the meter is displaying the Remind After Meal screen for the first time, if bolus advice has not been set up, the default for Snack Size is no entry (“---g”). If bolus advice has been set up, the default value is the value set for the Snack Size on the Advice Options screen.
- To cancel changes or to return to the previous screen, select Cancel.

5.3 Setting Alarm Clock Reminders: bG Test, Injection, Other

Alarm clock reminders are a helpful way to remind you to test your blood glucose, or for any other daily appointment. You can set up to eight reminders per day.

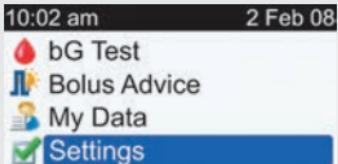
Alarm Clock Reminders: Important Information

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled (and no blood glucose test was performed for an Alarm Clock bG Test Reminder, or no basal insulin data was entered for an Alarm Clock Injection Reminder), the reminder is displayed when the meter powers down.
 - Dismiss the reminder by pressing . Reschedule (snooze) the reminder for 15 minutes by pressing .
 - Alarm Clock Injection Reminder: Dismiss the reminder by entering basal insulin data.
 - If not dismissed or snoozed, the reminder is displayed a total of four times at intervals of 2 minutes, after which the meter dismisses the reminder.

- When you perform a blood glucose test, the meter dismisses Alarm Clock bG Test reminders which are pending within the next 30 minutes.
- When you enter basal insulin data, the meter dismisses Alarm Clock Injection Reminders which are pending within the next 30 minutes.
- For more information, see Chapter 6, Icons, Reminders, Warnings, and Errors.

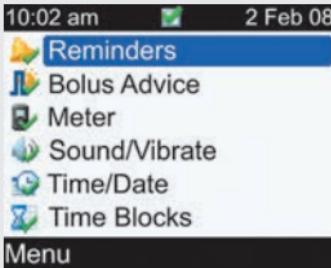
Main Menu > Settings > Reminders > Alarm Clock

1.



- ▶ From the Main Menu, select Settings and press .

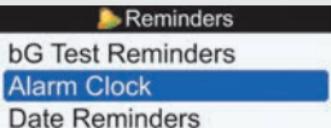
2.



Menu

- ▶ Select Reminders and press .

3.



Back

- ▶ Select Alarm Clock and press .

4.



To Turn On or Change a Reminder:

- ▶ Select the time entry field for a Reminder and press .
- ▶ Set the time to schedule the Reminder and press .
- ▶ Press . Select the type of Reminder (i.e., bG Test, Injection or Other) and press .
- ▶ Repeat the above steps to set additional reminders.

To Turn Off a Reminder:

- ▶ Select the type of Reminder entry field (i.e., bG Test, Injection or Other) and press .
- ▶ Select Off and press .
- ▶ Repeat the above steps to turn off additional reminders.

To save the changes and return to the Reminders screen, select Save.

NOTE

- To cancel changes or return to the Reminders screen, select Cancel.
- Time for the Alarm Clock reminders can be set in 15-minute increments, where “HH” is hour, “MM” is minutes, and with “am” or “pm” for the 12-hour format.
- If you tested within 30 minutes of a bG Test Reminder, the reminder does not occur.
- If you entered basal insulin data within 30 minutes of an Injection reminder, the reminder does not occur.
- Exposure to extreme cold conditions may disable Alarm Clock reminders until the meter is turned on.

5.4 Setting Date Reminders: Dr. Visit, Lab Test

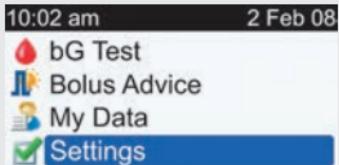
Date reminders are a helpful way to remind you of an upcoming Dr. visit or lab test.

Date Reminders: Important Information

- Displayed when you turn on the meter and a test strip has not been inserted.
- Dismiss the reminder either by pressing  or by inserting a test strip.
- For more information, see Chapter 6, Icons, Reminders, Warnings, and Errors.

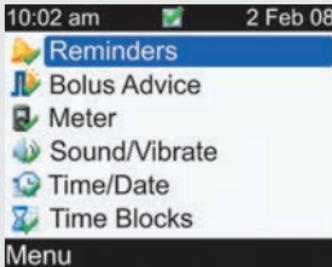
Main Menu > Settings > Reminders > Date Reminders

1.



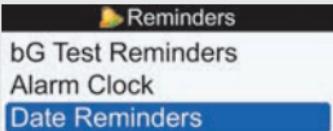
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Reminders and press .

3.



Back

- ▶ Select Date Reminders and press .

4.

 Date Reminders

| | |
|-----------|-----|
| Dr. Visit | Off |
| Lab Test | Off |

Back

- ▶ Select either Dr. Visit or Lab Test and press .
- ▶ Proceed to either Dr. Visit or Lab Test in this step.

 Dr. Visit

| | |
|-----------------------|-----------------------|
| Reminder | Off |
| Appointment Date/Time | |
| Date | 2 Feb 08 DD MMM YY |
| Time (Optional) | 10:00 am HH MM A/P |

Cancel **Save**

- To Turn the Dr. Visit Reminder On or Off:**
- ▶ Select the Reminder entry field and press .
 - ▶ Select On or Off and press .

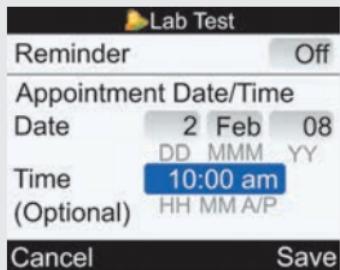
To Set the Date:

- ▶ Select the Date entry field and press .
- ▶ Set the Day and press .
- ▶ Set the Month and press .
- ▶ Set the Year and press .

To Set the Time (Optional):

- ▶ Select the Time entry field and press .
- ▶ Set the Time and press .

To save the changes and return to the Date Reminders screen, select Save.



To Turn the Lab Test

Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Set the Date:

- ▶ Select the Date entry field and press .
- ▶ Set the Day and press .
- ▶ Set the Month and press .
- ▶ Set the Year and press .

To Set the Time (Optional):

- ▶ Select the Time entry field and press .
- ▶ Set the Time and press .

To save the changes and return to the Date Reminders screen, select Save.

NOTE

- Setting a time for a Date Reminder is optional. If you choose not to set a time, ensure the Time entry field value is “--:--” (no entry).
- To cancel changes or to return to the Date Reminders screen, select Cancel.
- Time for the Dr. Visit Reminder and the Lab Test Reminder can be set in 15-minute increments, where “HH” is hour, “MM” is minutes, and with “am” or “pm” for the 12-hour format.
- Date Reminders do not automatically turn on the meter and display the Reminder. Date Reminders only occur when you power on the meter on the appropriate date.

5.5 Setting Bolus Advice for the First Time

Set Up Bolus Advice

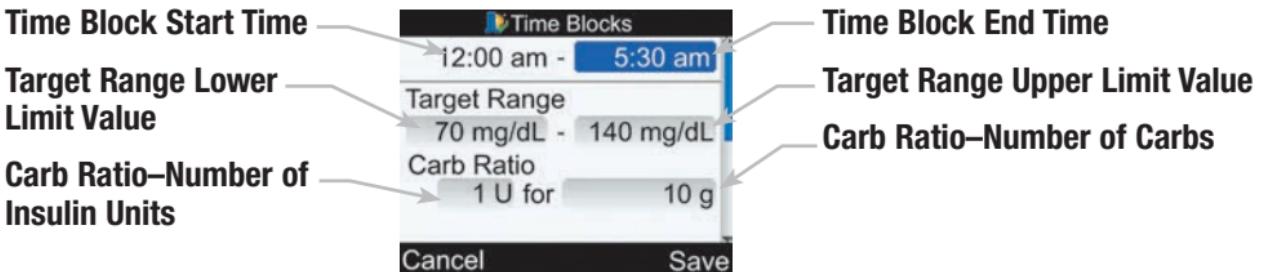
If you did not set up bolus advice when you went through the Setup Wizard and have now decided to utilize bolus advice, proceed with this section. Once you do set up bolus advice, you cannot turn it off.

It is suggested that you review the information in the Getting Started Guide before continuing. Prior to setting up time blocks for bolus advice, it is recommended that you decide how many time blocks you need and also determine the start/end times. Talk to your healthcare professional about arranging your time blocks to help best manage your diabetes. For each time block, you can set up different blood glucose target ranges, carb ratios, and insulin sensitivities to accommodate your differing insulin needs throughout the day.

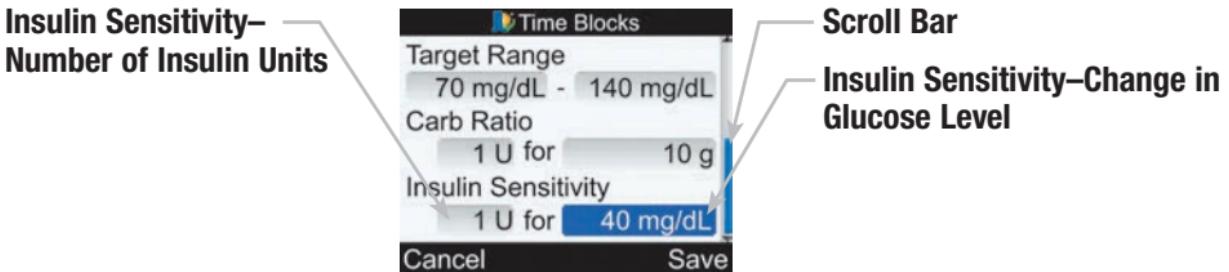
WARNING

- Bolus advice should be used only if you are using U100, rapid-acting insulin for bolus dosing.
- Do not use bolus advice with Neutral Protamine Hagedorn (NPH) or any other intermediate-acting insulin.
- Do not use bolus advice if basal insulin dose is unstable.
- Long-acting insulin should not be used as a meal bolus or as a correction bolus.

Time Blocks–Bolus Advice Screen

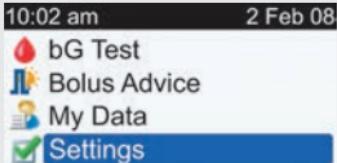


scroll down



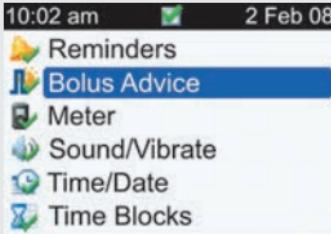
Main Menu > Settings > Bolus Advice

1.



- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Bolus Advice and press .

3.

Setup

Would you like to receive bolus advice from your Meter?

No

Yes

- ▶ If you do **NOT** want to set up bolus advice, select No to return to the Settings screen.
- ▶ To set up bolus advice, select Yes and continue to the next step.

4.**Setup**

Edit at least one time block by selecting a time block and pressing enter

Back**Next**

- ▶ To continue, select Next.

5.**Time Blocks**

| Start | End |
|----------|----------|
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |

Back**To Change Time Blocks:**

- ▶ Select a time block to edit and press .

Time Blocks

12:00 am - 5:30 am

Target Range

70 mg/dL - 140 mg/dL

Carb Ratio

1 U for 10 g

Cancel**Save**

scroll down

Time Blocks**Target Range**

70 mg/dL - 140 mg/dL

Carb Ratio

1 U for 10 g

Insulin Sensitivity

1 U for 40 mg/dL

Cancel**Save****To Change the End Time:**

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

To Change the Carb Ratio:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the amount of Carbs and press .
- ▶ Set the amount of Carbs covered by the number of Insulin Units and press .

To Change the Insulin Sensitivity:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the Insulin Sensitivity level and press .
- ▶ Set the Insulin Sensitivity level and press .
- ▶ Select Save.

6.

Time Blocks

Settings copied to all Time Blocks. Adjust as necessary.

OK

The carb ratio and insulin sensitivity are copied to all time blocks. You may edit the target range, carb ratio, and insulin sensitivity for any other time block, if necessary.

- ▶ Select OK.

7.

| Start | End |
|----------|----------|
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |

Back Next

- ▶ Return to Step 5 to change another Time Block.
- ▶ Continue in order to add or remove Time Blocks, otherwise select Next and proceed to Step 8.

To Add a Time Block:

- ▶ Select the **last** time block and press .

Time Blocks

| Start | End |
|---------|----------|
| 9:30 pm | 12:00 am |
| | |
| | |
| | |
| | |

Target Range
70 mg/dL - 140 mg/dL
Carb Ratio
1 U for 10 g

Cancel Save

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time of the selected time block and press . This will be the start time of the added time block.
- ▶ To save the changes and return to the Time Blocks screen, select Save.
- ▶ Add another Time Block, or proceed to Step 8.

To Remove a Time Block:

- ▶ Select the Time Block you want to remove and press .

Time Blocks

| | |
|---------------------|-----------|
| 12:00 am - | 5:30 am |
| Target Range | |
| 70 mg/dL - | 140 mg/dL |
| Carb Ratio | |
| 1 U for | 10 g |

Cancel **Save**

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time to match the start time of the Time Block and press .
- ▶ To save the changes and return to the Time Blocks screen, select Save.
- ▶ Remove another Time Block, or proceed to Step 8.

8.

Health Events

| | |
|--------------|------|
| Exercise 1 | -10% |
| Exercise 2 | -20% |
| Stress | 0% |
| Illness | 20% |
| Premenstrual | 0% |

Back **Next**

- To Change the Health Events:**
- ▶ Select the entry field of the Health Event to be changed and press .
 - ▶ Set the percentage and press .
 - ▶ Repeat the previous steps to change another Health Event.
 - ▶ To continue, select Next.

9.

Advice Options

| | |
|-------------|-----------|
| Meal Rise | 100 mg/dL |
| Snack Size | 24 g |
| Acting Time | 4:00 |
| Offset Time | 1:00 |
| | HH MM |

Cancel **Save**

- To Change the Meal Rise:**
- ▶ Select the Meal Rise entry field and press .
 - ▶ Set the Meal Rise limit and press .
- To Change the Snack Size:**
- ▶ Select the Snack Size entry field and press .
 - ▶ Set the Snack Size amount and press .
- To Change the Acting Time:**
- ▶ Select the Acting Time entry field and press .

- ▶ Set the Acting Time duration and press .

To Change the Offset Time:

- ▶ Select the Offset Time entry field and press .
- ▶ Set the Offset Time duration and press .

To save the changes and exit, select Save.

10.

Advice Options

New Snack Size has
also been applied to
After Meal Reminder

OK

- ▶ Select OK.

11.

Bolus Advice

Time Blocks

Health Events

Advice Options

Back

- ▶ To return to the Settings screen, select Back.

Bolus Advice Options

Meal Rise, Snack Size, Acting Time, and Offset Time are Bolus Advice Options. Below are detailed descriptions of each of these settings.

Meal Rise

During or after meals, an increase in blood glucose levels is considered normal, or “allowed,” within a certain range, even though a meal bolus has been delivered. Enter the maximum increase in your blood glucose test result that is to be tolerated without an additional correction bolus.

Snack Size

The snack size is the amount of carbohydrates that is not to be counted as a regular meal with the expected meal rise. In this case (in contrast to regular meals), an increase in your blood glucose test result is not tolerated since the meal rise factor is not triggered for bolus advice calculations.

Acting Time

The acting time is the period of time from the start of the meal rise or the delivery of a correction bolus until your blood glucose level is expected to return to the target level. You can adjust the length of the acting time to your individual needs, within a specified time interval (1½ hours to 8 hours).

Offset Time

Offset time takes into account the expected delay for the blood glucose level to actually fall during the acting time of insulin in the body.

5.6 Setting Time Blocks, Health Events, Advice Options: Bolus Advice Set Up

If bolus advice has been set up, use this section for:

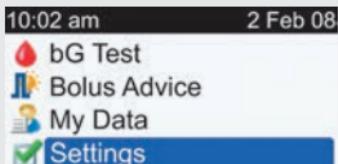
- Adding or removing time blocks
- Changing the time of day when time blocks occur
- Changing the values for target range, carb ratio, and insulin sensitivity for any time block
- Changing health event percentages
- Changing advice options (meal rise, snack size, acting time, offset time)

Before continuing, it is recommended that you review the Getting Started Guide, determine how many time blocks you need, and determine the start/end times for each time block. To help best manage your diabetes, talk to your healthcare professional about arranging your time blocks, including setting up different blood glucose target ranges, carb ratios, and insulin sensitivities for each time block.

Setting Time Blocks—Bolus Advice is Set Up

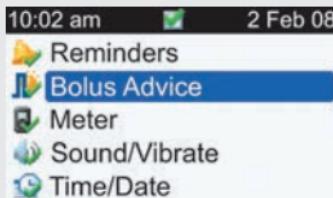
Main Menu > Settings > Bolus Advice > Time Blocks

1.



- ▶ From the Main Menu, select Settings and press .

2.



Menu

- ▶ Select Bolus Advice and press .

3.



Back

- ▶ Select Time Blocks and press .

4.

| Start | End |
|-------------|----------|
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |
| Back | |

To Add or Remove Time Blocks:

If you do not need to add or remove time blocks, then proceed to **To Change the Time Blocks**.

To Add a Time Block:

- ▶ Select the **last** time block and press .

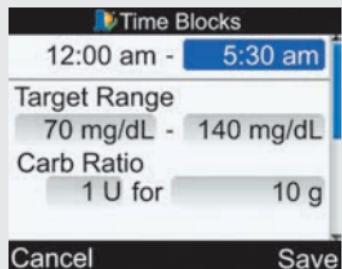


- ▶ Select the End Time entry field and press .
- ▶ Set the End Time of the selected Time Block and press . This will be the start time of the added time block.
- ▶ To save the changes and return to the Time Blocks screen, select Save.

- ▶ Proceed to **To Change the Time Blocks**.

To Remove a Time Block:

- ▶ Select the Time Block you want to remove and press .



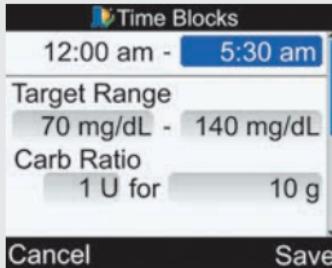
- ▶ Select the End Time entry field and press .
- ▶ Set the End Time to match the start time of the Time Block and press .

- ▶ To save the changes and return to the Time Blocks screen. Select Save.
- ▶ Proceed to **To Change the Time Blocks.**

To Change the Time Blocks:

- ▶ Select a Time Block to edit and press .

5.



To Change the End Time:

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

To Change the Carb Ratio:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the amount of Carbs and press .
- ▶ Set the amount of Carbs covered by the selected units of insulin and press .

To Change the Insulin Sensitivity:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the Insulin Sensitivity level and press .

6.

| Time Blocks | |
|-------------|----------|
| Start | End |
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |

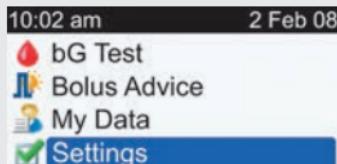
Back

- ▶ To change another time block, select the time block and press . Return to Step 5.
- ▶ To return to the Bolus Advice screen, select Back.

Setting Health Events–Bolus Advice is Set Up

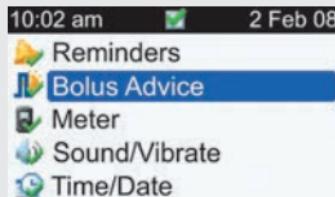
Main Menu > Settings > Bolus Advice > Health Events

1.



- ▶ From the Main Menu, select Settings and press .

2.



Menu

- ▶ Select Bolus Advice and press .

3.



Back

- ▶ Select Health Events and press .

4.

Health Events

| | |
|--------------|------|
| Exercise 1 | -10% |
| Exercise 2 | -20% |
| Stress | 0% |
| Illness | +20% |
| Premenstrual | 0% |

Cancel **Save**

To Change the Health Events:

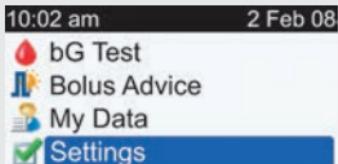
- ▶ Select the entry field of the Health Event to be changed and press .
- ▶ Set the percentage and press .
- ▶ Repeat the previous steps to change other Health Events.

To save the changes and return to the Bolus Advice screen, select Save.

Setting Bolus Advice Options—Bolus Advice is Set Up

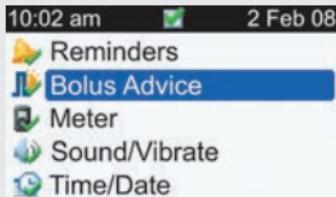
Main Menu > Settings > Bolus Advice > Advice Options

1.



- ▶ From the Main Menu, select Settings and press .

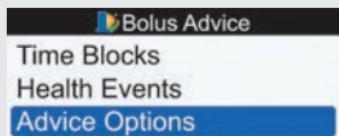
2.



Menu

- ▶ Select Bolus Advice and press .

3.



Back

- ▶ Select Advice Options and press .

4.

| Advice Options | |
|----------------|---------------|
| Meal Rise | 100 mg/dL |
| Snack Size | 24 g |
| Acting Time | 4:00 |
| Offset Time | 1:00 HH MM |

Cancel **Save**

To Change the Meal Rise:

- ▶ Select the Meal Rise entry field and press .
- ▶ Set the Meal Rise limit and press .

To Change the Snack Size:

- ▶ Select the Snack Size entry field and press .
- ▶ Set the Snack Size amount and press .

To Change the Acting Time:

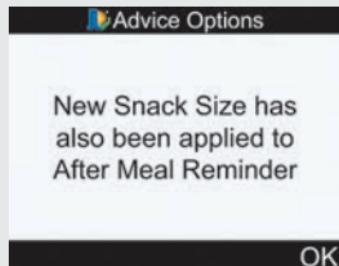
- ▶ Select Acting Time entry field and press .
- ▶ Set the Acting Time duration and press .

To Change the Offset Time:

- ▶ Select the Offset Time entry field and press .
- ▶ Set the Offset Time duration and press .

To save the changes, select Save.

If you did not change the Snack Size, the meter returns to the Bolus Advice screen.



If you changed the Snack Size, the meter displays the Advice Options screen.

- ▶ Select OK to return to the Bolus Advice screen.

5.7 Setting Warning Limits: Hyper, Hypo

You can set blood glucose warning limits for hyperglycemia (Hyper) or hypoglycemia (Hypo) conditions. Once these blood glucose limit values have been set, if your test result is above the hyper warning limit, the meter displays the Above Hyper Warning Limit message: "Consider checking for ketones, bG and insulin regularly." If your test result is below the hypo warning limit, the meter displays the Below Hypo Warning Limit message: "Eat fast carbs of at least (number of carbs)¹ Retest bG."

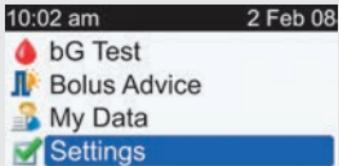
¹The meter displays a recommended amount of fast carbohydrates.

WARNING

This function is no substitute for hyperglycemia or hypoglycemia training by your healthcare professional.

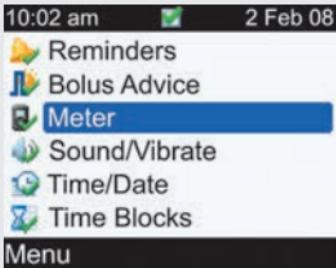
Main Menu > Settings > Meter > Warning Limits

1.



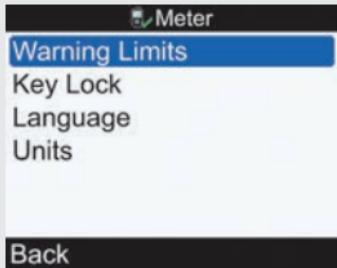
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Meter and press .

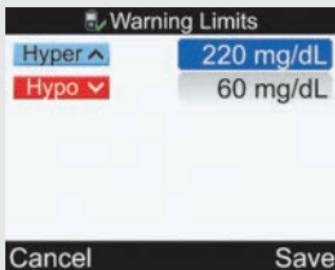
3.



Back

- ▶ Select Warning Limits and press .

4.



To Change the Hyper Blood Glucose Level:

- ▶ Select the Hyper entry field and press .
- ▶ Set the Hyper (upper) blood glucose level and press .

To Change the Hypo Blood Glucose Level:

- ▶ Select the Hypo entry field and press .
- ▶ Set the Hypo (lower) blood glucose level and press .

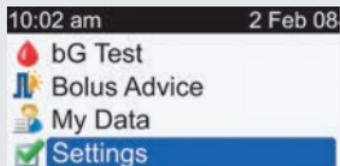
To save the changes and return to the Meter Menu screen, select Save.

5.8 Turning Key Lock On or Off

The key lock feature allows you to lock all of the buttons on the meter, except for the power on/off button. This serves as a safety measure against unintentional activation of meter functions.

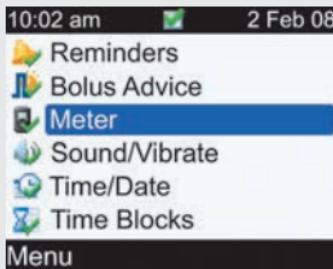
Main Menu > Settings > Meter > Key Lock

1.



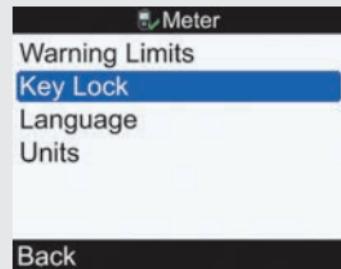
- ▶ From the Main Menu, select Settings and press .

2.



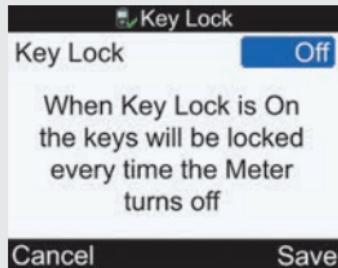
- ▶ Select Meter and press .

3.



- ▶ Select Key Lock and press .

4.



- ▶ Press to display the Key Lock pop-up menu.
- ▶ Select On or Off.

To save the change and return to the Meter Menu screen, select Save.



- If the buttons are locked when you turn on the meter, the Key Lock screen is displayed.
- ▶ To unlock the buttons, press and hold and at the same time until the Main Menu is displayed.

The buttons remain unlocked for the current session. When the meter is turned on again, the buttons are locked.

Key Lock: Important Information

- ▶ When the buttons are locked, you can still turn the meter on and off. You can also adjust the backlight.
- ▶ The buttons are unlocked when a test strip is inserted into the meter.

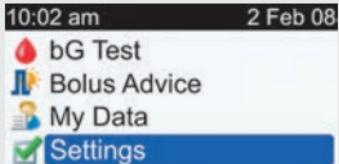
For these occurrences, the buttons remain unlocked for the current session. When the meter is turned on again, the buttons are locked.

5.9 Setting the Language

You can select a language from the predefined list.

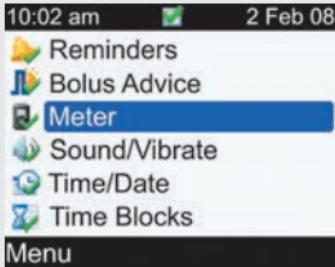
Main Menu > Settings > Meter > Language

1.



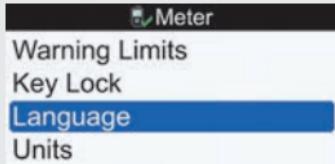
- ▶ From the Main Menu, select Settings and press .

2.



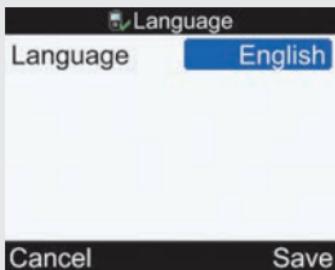
- ▶ Select Meter and press .

3.



Back

- ▶ Select Language and press .

4.

- ▶ Press  to display the Language options.
- ▶ Select the desired Language and press .

To save the change and return to the Meter Menu screen, select Save.

5.10 Setting Units: Carbs, Insulin Increment, Max Bolus

You can set up the meter for different carbohydrate (carbs) units (Grams, BE, KE, or CC).

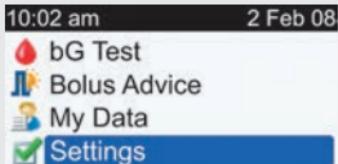
The insulin increment can be set to either 0.5 or 1U. You can set the max bolus for any whole number between 0 and 50. Once the Carbs Units are set and the bolus advice is activated, the Carbs Units cannot be changed.

NOTE

You should ask the advice of your healthcare provider (HCP) for delivering large doses of insulin.

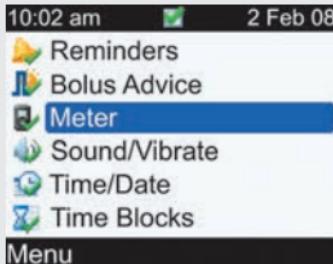
Main Menu > Settings > Meter > Units

1.



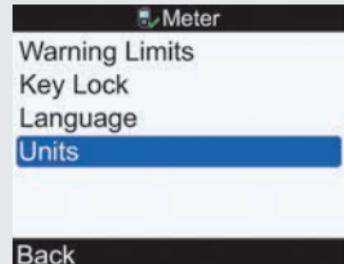
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Meter and press .

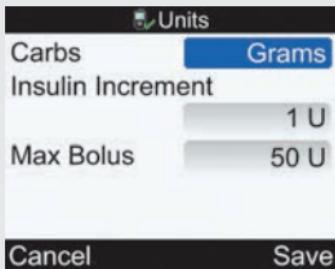
3.



Back

- ▶ Select Units and press .

4.



NOTE

For more information on the units for carbohydrates and carbohydrate equivalents, see Appendix B, Carb Units.

To Change the Max Bolus:

- ▶ Select the Max Bolus entry field and press .
- ▶ Set the Max Bolus level and press .

To save the change and return to the Meter Menu screen, select Save.

- ▶ Press to display the list of units for carbs.
- ▶ Select the units (Grams, BE, KE, or CC) and press .

To Change the Insulin Increment :

- ▶ Select the Insulin Increment entry field and press .
- ▶ Select 0.5 U or 1 U Insulin Increment and press .

NOTE

Once this is set and bolus advice is activated, this unit cannot be changed. If this unit needs to be changed, contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

5.11 Setting the Beeper, Vibrate, Key Sound

You can set up the meter for sound mode and/or vibrate mode. The meter features different sound (beeper) tones. Sounds may occur for:

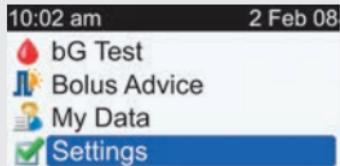
- Button presses
- Errors
- Warnings
- Reminders

NOTE

- Beeper and vibrate cannot both be turned off at the same time.
- When Key Sound is on, the meter beeps each time a button is pressed.
- Even when the beeper is turned off, the meter still beeps when an error message occurs.
- When in the low battery condition, the meter uses the medium beeper level (if the beeper level is set to high) and disables vibrate. In the low battery condition, the main menu screen will continue to display the icons for vibrate and beeper, unless you have set them to Off. After the batteries are replaced with new ones, the meter returns to the beeper/vibrate settings you have set.

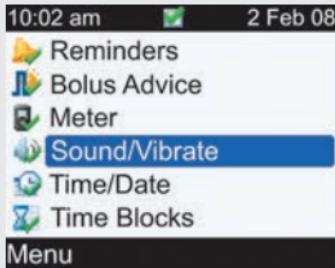
Main Menu > Settings > Sound/Vibrate

1.



- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Sound/Vibrate and press .

3.



To Change the Beeper Sound Level:

- ▶ Select the Beeper entry field and press .
- ▶ Select the Beeper sound level (Off, Low, Medium, or High) and press .

To Turn the Vibrate On or Off:

- ▶ Select the Vibrate entry field and press .
- ▶ Select the Vibrate mode (On or Off) and press .

To Change the Key Sound:

- ▶ Select the Key Sound entry field and press .
- ▶ Select the Key Sound mode (On or Off) and press .

To save the changes and return to the Settings Menu screen, select Save.

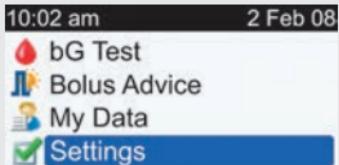
5.12 Setting the Time Format, Time, Date

NOTE

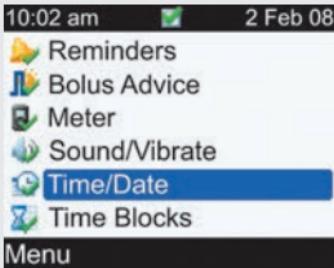
- Changing the date and time will impact the Trend Graph and the Trend Table (see Reporting Your Data Trends in Section 4.4, Reporting Your Data).
- For 12-hour time format, time is displayed as “HH:MM A/P” (example: 3:53 pm) and for 24-hour time format, time is displayed as “HH:MM” (example: 15:53) where “H” is hour and “M” is minute.
- The date format is displayed as “DD MMM YY” (example: 02 Feb 08) where “D” is day, “M” is month, and “Y” is year.

Main Menu > Settings > Time/Date

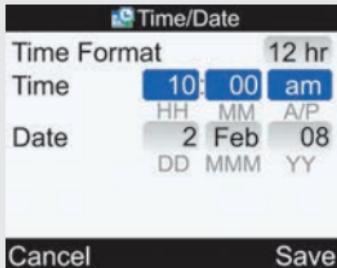
1.



2.



3.



- ▶ From the Main Menu, select Settings and press .

- ▶ Select Time/Date and press .

To Change the Time Format:

- ▶ Select the Time Format entry field and press .
- ▶ Select 12-hr or 24-hr Time Format and press .

To Change the Time:

- ▶ Select the Time entry field and press .
- ▶ Set the Hour and press .
- ▶ Set the Minutes and press .
- ▶ If Time Format is 12 hr, select am or pm and press .

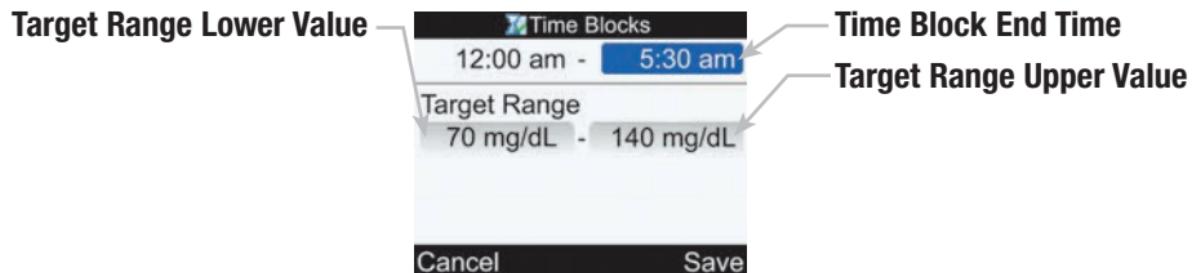
To Change the Date:

- ▶ Select the Date entry field and press .
- ▶ Set the Day and press .
- ▶ Set the Month and press .
- ▶ Set the Year and press .

To save the changes and return to the Settings Menu screen, select Save.

5.13 Setting Time Blocks: Bolus Advice Not Set Up

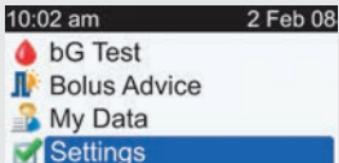
This section is for changing, adding, and removing time blocks only if bolus advice has not been set up. For each time block, you can set up different blood glucose target ranges. It is suggested that you review the Getting Started Guide before continuing. Prior to setting up time blocks, it is recommended that you determine how many time blocks you need and also determine the start/end times. Talk to your healthcare professional about arranging your time blocks in order to help best manage your diabetes.



Change End Time, Target Range Lower Value, and/or Target Range Upper Value

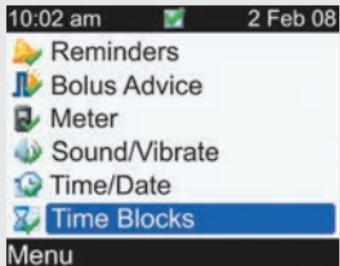
Main Menu > Settings > Time Blocks

1.



- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Time Blocks does not appear if bolus advice has been set up.
- ▶ Select Time Blocks and press .

3.

| Time Blocks | |
|-------------|----------|
| Start | End |
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |
| Back | |

- ▶ Select the Time Block to edit and press .

4.



To Change the End Time:

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

To save the changes and return to the Time Blocks screen, select Save.

5.

| Start | End |
|----------|----------|
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |

Back

- ▶ Repeat Steps 3 and 4 to change another time block. Otherwise, select Back to return to the Settings screen.

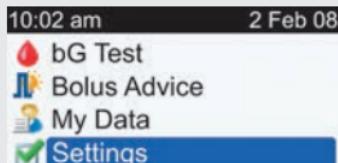
NOTE

- When you set the end time, the meter sets this end time as the start time for the next time block.
- The end time can be set in 30-minute increments.
- To cancel changes press .

Add a Time Block

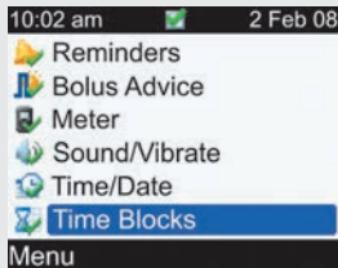
Main Menu > Settings > Time Blocks

1.



- ▶ From the Main Menu, select Settings and press .

2.



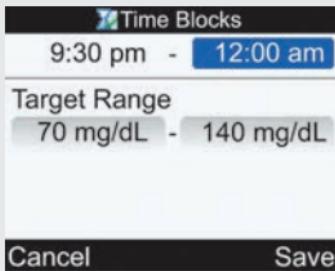
- Time Blocks does not appear if bolus advice has been set up.
- ▶ Select Time Blocks and press .

3.

| Time Blocks | |
|-------------|----------|
| Start | End |
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |
| Back | |

- ▶ Select the last Time Block and press .

4.



- ▶ Select the End Time entry field and press .

- ▶ Set the End Time of the selected Time Block and press . This will be the start time of the added time block.

To save the changes and return to the Time Blocks screen, select Save.

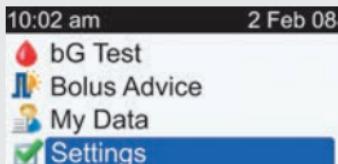
5.

- ▶ Update the End Times and Target Ranges for all time blocks, as needed. See **Change End Time, Target Range Lower Value, and/or Target Range Upper Value** in this section.

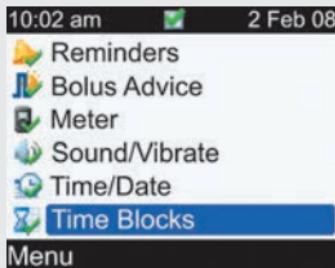
Remove a Time Block

Main Menu > Settings > Time Blocks

1.



2.



3.

| Time Blocks | |
|-------------|----------|
| Start | End |
| 12:00 am | 5:30 am |
| 5:30 am | 11:00 am |
| 11:00 am | 5:00 pm |
| 5:00 pm | 9:30 pm |
| 9:30 pm | 12:00 am |
| Back | |

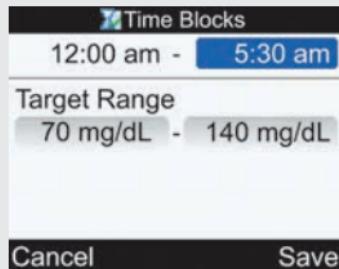
- ▶ From the Main Menu, select Settings and press .

Time Blocks does not appear if bolus advice has been set up.

- ▶ Select Time Blocks and press .

- ▶ Select the Time Block you want to remove and press .

4.



- ▶ Select the End Time entry field and press .
- ▶ Set the End Time to match the start time of the Time Block and press .

To save the changes and return to the Time Blocks screen, select Save.

5.

- ▶ Update the End Times and Target Ranges for the remaining time blocks, as needed. See **Change End Time**, **Target Range Lower Value**, and/or **Target Range Upper Value** in this section.

5.14 Backlight Settings

The backlight on your ACCU-CHEK Aviva Expert meter helps you read the information on the meter display under different lighting conditions. You can adjust the backlight level by pressing the backlight button on the front of the meter. The backlight adjusts from low, to medium, to high, and back to low again.



Backlight Button

Press to adjust the backlight level.

NOTE

- When the meter is turned on, the backlight is set to medium.
- When the backlight is set to high or medium and no button activity has occurred for approximately 15 seconds, the meter goes to low backlight (to conserve battery life). The meter restores the original backlight setting when you press a button, insert a test strip, or when the meter displays the bG Results screen.
- When in the low battery condition, the meter uses the medium backlight level (if the backlight level is set to high). After the batteries are replaced with new ones, the meter again allows the high backlight setting.
- The backlight button is disabled during a blood glucose test, a control test, and when the meter is transferring data.

6 Icons, Reminders, Warnings, and Errors

| | |
|--|-----|
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6.1 Overview

This chapter provides you with detailed listings of all the icons, reminders, warnings, and errors included in the meter.

NOTE

Blood glucose and bG are interchangeable and mean the same thing.

6.2 List of Icons

The icons and icon names in the meter are:

| Icon Name | Icon |
|-------------------------|------|
| Add Data | |
| Analyzing | |
| Basal Insulin | |
| Beeper | |
| Blood Glucose Averages | |
| Blood Glucose Test | |
| Bolus Advice | |
| Bolus Advice (Settings) | |
| Bolus Insulin | |
| Carbs | |

| Icon Name | Icon |
|--------------------------|------|
| Control Test | |
| Date | |
| Download (Data Transfer) | |
| Error | |
| Health | |
| Low Battery | |
| Meal Time | |
| Meter | |
| Meter (Settings) | |
| My Data | |

| Icon Name | Icon |
|--------------------------|------|
| Reminder | |
| Reminders (Settings) | |
| Reports | |
| Settings | |
| Sound/Vibrate (Settings) | |
| Time | |

| Icon Name | Icon |
|-----------------------|------|
| Time Block (Settings) | |
| Time Change | |
| Time/Date (Settings) | |
| Vibrate | |
| View Data | |
| Warning | |

6.3 Confirming a Reminder, Warning, or Error

To confirm (or dismiss) most reminders or warnings, press . Some error messages require a different confirmation, such as “Retest with new Strip” or “Replace batteries now.” To place some reminders in the snooze mode, press . See the following sections for more details on a specific reminder, warning, or error.

6.4 List of Reminders

Reminder Screen Example



NOTE

- The meter beeps when it displays any reminder if the beeper setting is on.
- The meter vibrates when it displays any of the following reminders if the vibrate setting is on: After Meal Retest, bG Test, High bG Retest, Injection, Low bG Retest, and Other.

For instructions on how to set up meter reminders, see Chapter 5, Changing Meter Settings. The reminders available on the meter are:

| Reminder Title | Reminder Message | Left Soft Key | Right Soft Key | Snooze Time |
|-------------------|--|---------------|----------------|-------------|
| After Meal Retest | Carbs entry higher than Snack Size setting. Retest. | Snooze | Dismiss | 5 minutes |
| Basal Injection | It is time for your scheduled basal injection | Snooze | Dismiss | 15 minutes |
| bG Test | It is time for your scheduled bG test | Snooze | Dismiss | 15 minutes |
| Dr. Visit Today | If the Dr. Visit time has been set: You have a Dr. Appointment today at (Settings Dr. Visit Time) ¹ Or, if the Dr. Visit time has not been set: You have a Dr. Appointment today | | Dismiss | |

| Reminder Title | Reminder Message | Left Soft Key | Right Soft Key | Snooze Time |
|--------------------|--|---------------|----------------|-------------|
| Dr. Visit Tomorrow | <p>If the Dr. Visit time has been set: You have a Dr. Appointment tomorrow at (Settings Dr. Visit Time)¹</p> <p>Or, if the Dr. Visit time has not been set: You have a Dr. Appointment tomorrow</p> | | Dismiss | |
| High bG Retest | High bG Result on last test. Retest. | Snooze | Dismiss | 15 minutes |
| Lab Test Today | <p>If the lab test time has been set: You have a Lab Test today at (Settings Lab Test Time)¹</p> <p>Or, if the lab test time has not been set: You have a Lab Test today</p> | | Dismiss | |

| Reminder Title | Reminder Message | Left Soft Key | Right Soft Key | Snooze Time |
|-------------------|---|---------------|----------------|-------------|
| Lab Test Tomorrow | <p>If the lab test time has been set: You have a Lab Test tomorrow at (Settings Lab Test Time)¹</p> <p>Or, if the lab test time has not been set: You have a Lab Test tomorrow</p> | | Dismiss | |
| Low bG Retest | Low bG Result on last test. Retest. | Snooze | Dismiss | 5 minutes |
| Other | It is time for your Other activity | Snooze | Dismiss | 15 minutes |

¹If set, the time of the Dr. Visit or the Lab Test is displayed on the screen.

Reminders: Important Information

- When two or more event reminders occur at the same time, the meter displays the event reminder with the highest priority first:
 1. bG Test Reminders (After High bG, After Low bG, and After Meal)
 2. Alarm Clock Reminders (bG Test, Injection and Other)
 3. Date Reminders (Dr. Visit and Lab Test)

The following occur when the particular reminder is enabled and scheduled:

Dr. Visit Today, Dr. Visit Tomorrow, Lab Test Today, and Lab Test Tomorrow Reminders

- Displayed when you turn on the meter and a test strip has not been inserted.
- Dismiss the reminder either by pressing  or by inserting a test strip.

Low bG Retest Reminder

- When your blood glucose test result is less than the low blood glucose threshold setting you have set up (see Chapter 5, Changing Meter Settings), then the meter schedules a Low bG Retest reminder for the time duration you have set up. The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 5 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any Low bG Retest reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

High bG Retest Reminder

- When your blood glucose test result is greater than the high blood glucose threshold setting you have set up (see Chapter 5, Changing Meter Settings), then the meter schedules a High bG Retest reminder for the time duration you have set up. The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 15 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any High bG Retest reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

After Meal Reminder

- When you enter carbohydrates into the diary through one of the following screens and the carbohydrates entered are greater than the Snack Size setting, then the meter schedules an After Meal reminder for the time duration you have set up (see Chapter 5, Changing Meter Settings). The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
 - Add Data screen (see Chapter 4, Managing Your Data)
 - Modify Data screen (see Chapter 4, Managing Your Data)
 - Detailed bG Result screen (see Chapter 2, Testing Your Blood Glucose)
 - Bolus Advice screen (see the Advanced Owner's Booklet)
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 5 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any After Meal reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

Alarm Clock Reminders for bG Test, Injection and Other

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- When the meter displays an Alarm Clock reminder and you do not press any meter buttons, after 30 seconds the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.

• bG Test Alarm Clock Reminder

- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- Dismiss all active bG Test reminders by pressing .
- Snooze the reminder for 15 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any bG Test reminders that have been snoozed or that are pending within the next 30 minutes.

- **Injection Alarm Clock Reminder**

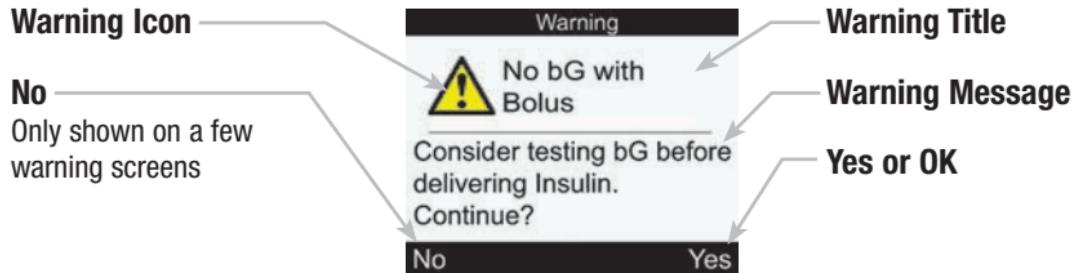
- If the meter is already on when the reminder is scheduled and no basal insulin data was entered, the reminder is displayed when the meter powers down.
- Dismiss all active Injection reminders by pressing .
- Snooze the reminder for 15 minutes either by pressing  or by inserting a test strip.
- When you enter basal insulin data, the meter dismisses any Injection reminders that have been snoozed or that are pending within the next 30 minutes.

- **Other Alarm Clock Reminder**

- If the meter is already on when the reminder is scheduled, the reminder is displayed when the meter powers down.
- Dismiss this reminder either by pressing  or by inserting a test strip.
- Snooze the reminder for 15 minutes by pressing .

6.5 List of Warnings

Warning Screen Example



NOTE

The meter beeps when it displays a warning if the beeper setting is on.

The warnings the meter may display are:

| Warning Title | Warning Message | Left Soft Key | Right Soft Key |
|---------------------------|--|----------------------|-----------------------|
| Above Hyper Warning Limit | Consider checking for ketones, bG and insulin regularly | | OK |
| Beep/Vibrate Off | Beep and Vibrate settings cannot both be turned off at same time | | OK |
| Below Hypo Warning Limit | Eat fast carbs of at least (number of carbs) ¹ Retest bG | | OK |
| bG Test Missed | Perform bG test as soon as possible | | OK |
| Bolus Advice Not Setup | Advice not provided unless setup through Bolus Advice in Settings | | OK |
| Bolus Advice Timeout | Bolus Advice no longer possible for this bG result | | OK |
| Bolus Too High | Bolus above allowed amount. Bolus set to maximum. | | OK |

| Warning Title | Warning Message | Left Soft Key | Right Soft Key |
|-----------------------------|--|----------------------|-----------------------|
| Bolus Too Low | Bolus below allowed amount. Bolus set to minimum. | | OK |
| Calculation Out of Range | No Bolus Advice available | | OK |
| Carbohydrate Ratio | Carb Ratio seems unusual. Check entries. | | OK |
| Code Key Missing | Turn off Meter and insert valid Code Key | | OK |
| Corrupt Language | Choose another language | | OK |
| Diary Entry Used For Advice | Diary entry used for Advice, modifications not allowed | | OK |
| Diary Results Expired | New data cannot be saved with this record | | OK |

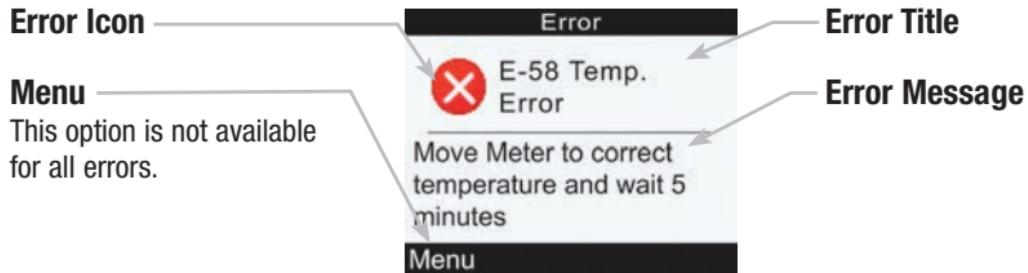
| Warning Title | Warning Message | Left Soft Key | Right Soft Key |
|----------------------------|---|----------------------|-----------------------|
| HI bG Warning | Consider checking bG, ketones and insulin | | OK |
| Insulin Sensitivity | Insulin Sensitivity seems unusual. Check entries. | | OK |
| Invalid Bolus Advice Times | Acting time must be greater than or equal to offset time | | OK |
| Invalid Date | Reenter valid date | | OK |
| Invalid Hyper Values | Hyper value must be greater than Time Block target ranges | | OK |
| Invalid Hypo Values | Hypo value must be less than Time Block target ranges | | OK |
| Invalid Record Time/Date | Record time/date must be older than the current meter time/date | | OK |

| Warning Title | Warning Message | Left Soft Key | Right Soft Key |
|----------------------|--|----------------------|-----------------------|
| Invalid Target Range | Lower target range value above upper target range value | | OK |
| Invalid Target Range | Range selected conflicts with Hyper and/or Hypo Warning Limit settings | | OK |
| LO bG Warning | Retest bG. Contact your doctor. | | OK |
| Meter Battery Low | Replace soon. | | OK |
| No bG with Bolus | Consider testing bG before delivering Insulin. Continue? | No | Yes |
| Test Strips Expiring | Change Code Key and Strips soon | | OK |

¹The meter displays a recommended amount of fast carbohydrates.

6.6 List of Errors

Error Screen Example



NOTE

The meter beeps when it displays an error, even if the beeper setting is turned off.

The errors the meter may display are:

| Error Title | Error Message | Left Soft Key | Right Soft Key |
|------------------------------|--|-------------------|-----------------|
| E-51 Bad Strip Error | Reinsert or replace with new Strip | | |
| E-52 Code Key Error | Turn Meter off, reinsert or replace Code Key | Menu ¹ | OK ² |
| E-53 Bad Test Error | Retest with new Strip | | |
| E-54 Not Enough Sample | Retest with new Strip | | |
| E-55 Code Key Expired | Turn Meter off, replace Code Key and Strips | Menu ¹ | OK ² |
| E-56 Sample Applied Early | Retest with new Strip | | |
| E-57 Electronic Error | Remove batteries, wait 20 seconds, replace batteries | | |
| E-58 Temp. Error | Move Meter to correct temperature and wait 5 minutes | Menu ³ | OK ³ |

| Error Title | Error Message | Left Soft Key | Right Soft Key |
|-------------------------|--------------------------------|---------------|----------------|
| E-59 Battery Empty | Replace batteries now | | |
| E-60 Time/Date Error | Correct time/date if necessary | Menu | |

¹ “Menu” is only displayed when the meter is in a bG test screen.

² “OK” is only displayed after the splash screen (ACCU-CHEK logo screen).

³ If the meter is powering up, then “OK” is displayed above the right soft key and “Menu” is not displayed above the left soft key.

7

Cleaning and Disinfecting the Meter and Lancing Device

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7.1 Overview

WARNING

- During normal testing any blood glucose meter or lancing device may come in contact with blood. All parts of the kit are considered biohazardous and can potentially transmit infectious diseases from bloodborne pathogens, even after you have performed cleaning and disinfection.^{1,2}
- Cleaning and disinfecting the meter and lancing device destroys most, but not necessarily all, bloodborne pathogens.³
- The meter and lancing device should never be used by more than one person. Do not share the meter and lancing device with anyone, including family members, due to the risk of infection from bloodborne pathogens.^{1,2}
- If the meter is being operated by a second person who is providing testing assistance to the user, the meter and lancing device should be cleaned and disinfected prior to use by the second person.
- It is important to keep the meter and lancing device clean and disinfected.
- Wash hands thoroughly before and after handling the meter, lancing device, or test strips.

^{1,2,3} See Appendix E

What is the difference between cleaning and disinfecting?

Cleaning is the removal of dirt from the meter or lancing device.³

Disinfecting is the removal of most, but not all, disease-causing and other types of microorganisms (bloodborne pathogens) from the meter or lancing device.³

³ See Appendix E

When should the meter and lancing device be cleaned and disinfected?

Clean and disinfect the meter and lancing device:

- Once per week
- When blood gets on the meter or lancing device
- Before allowing anyone else to handle the meter or lancing device

NOTE

For technical assistance or questions on cleaning and disinfecting, please contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

7.2 Cleaning and Disinfecting the Meter

To clean and disinfect without damaging the meter, follow these procedures carefully.

When to Clean and Disinfect the Meter

- Clean the meter prior to disinfecting.
- Clean and disinfect the meter at least once per week, or when blood is present on the surface of the meter.
- **Do not allow anyone else to use the meter on themselves for testing purposes.**

Approved Cleaning and Disinfecting Products

- Super Sani-Cloth (EPA* reg. no. 9480-4)

*Environmental Protection Agency

The above product has been approved for use and can be purchased from the following sources:

- Amazon.com
- Officedepot.com
- Walmart.com

NOTE

Using cleaning and disinfecting products could result in damage to the meter. If you notice any of the following signs of deterioration after cleaning and disinfecting your meter, stop using your meter and contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578: residue around buttons, clouding of display, button malfunction, out of range controls results.

What to Clean and Disinfect

The following parts of the meter should be cleaned and disinfected:

- The area **around** slots and openings (do not get any moisture in slots or openings)
- The meter display
- The entire meter surface

How to Clean and Disinfect the Meter

WARNING



- ▶ **DO NOT** clean or disinfect the meter while performing a blood glucose or control test.
- ▶ **DO NOT** get any moisture in slots or openings.



- ▶ **DO NOT** spray anything onto the meter.



- ▶ **DO NOT** immerse the meter in liquid.

Failure to follow these instructions may damage the meter and stop it from working properly.

1.



- ▶ Wash hands thoroughly with warm soapy water.

2.



- ▶ Turn off the meter and place it on a flat surface, such as a table.

3.



- ▶ Wipe the entire meter surface with the approved cleaning and disinfecting product. Always use the same product for both cleaning and disinfecting.

WARNING

The effect of using more than one product interchangeably to clean and disinfect the meter has not been tested. Always use the same product to clean and disinfect the meter.

4.



- ▶ Carefully wipe **around** the test strip slot and other openings. Make sure that no liquid enters any opening.

5.

- ▶ A separate Super Sani-Cloth should be used for cleaning and disinfection. For disinfecting the meter, get a new cloth and repeat steps 3 and 4, making sure that the surface stays wet for 2 minutes.

6



- ▶ Wash hands thoroughly with soap and water.

NOTE

Roche has tested the approved product for a total of 208 cleaning and disinfecting cycles. This supports cleaning and disinfecting the meter once per week for a 3 year time period and allows for 52 extra cleaning and disinfecting cycles that might occur (due to blood contamination, for example) over the lifetime of the meter. This equates to approximately 1 additional cleaning and disinfecting cycle per month over the 3 year use life of the meter.

7.3 Cleaning and Disinfecting the Lancing Device

NOTE

- Do not throw away the lancing device cap after each use. Use approved cleaning and disinfecting products on it.
- Always remove the lancet drum before cleaning or disinfecting the lancing device.

To clean and disinfect without damaging the lancing device, follow these procedures carefully.

When to Clean and Disinfect the Lancing Device

- Clean the lancing device prior to disinfecting.
- Clean and disinfect the lancing device at least once per week, or when blood is present on the surface of the lancing device.
- **Do not allow anyone else to use the lancing device.**

Approved Cleaning and Disinfecting Products

- Super Sani-Cloth (EPA* reg. no. 9480-4)

*Environmental Protection Agency

The above product has been approved for use and can be purchased from the following sources:

- Amazon.com
- Officedepot.com
- Walmart.com

NOTE

Using cleaning and disinfecting products could result in damage to the lancing device. If you notice any of the following signs of deterioration after cleaning and disinfecting your lancing device, stop using your lancing device and contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578: residue around buttons, difficulty in priming the device, difficulty in inserting the lancet drum.

What to Clean and Disinfect

The following parts of the lancing device may be cleaned and disinfected:

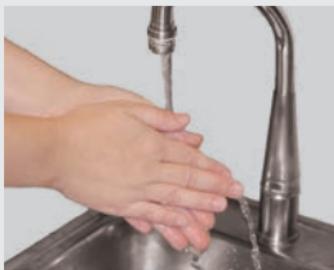
- The entire lancing device surface
- The cap

How to Clean and Disinfect the Lancing Device

WARNING

- DO NOT get any moisture into opening around button.
- Failure to follow these instructions may damage the lancing device and stop it from working properly.

1.



- ▶ Wash hands thoroughly with soap and water.

2.



- ▶ Wipe the entire surface of the lancing device and the inside of the lancing device cap with the approved cleaning and disinfecting product. Always use the same product for both cleaning and disinfecting.

3.

- ▶ A separate Super Sani-Cloth should be used for cleaning and disinfection. For disinfecting the lancing device, get a new cloth and repeat step 2, making sure that the surface stays wet for 2 minutes.

4.

- ▶ Wash hands thoroughly with soap and water.

WARNING

The effect of using more than one product interchangeably to clean and disinfect the lancing device has not been tested. Always use Super Sani-Cloth (EPA reg. no. 9480-4) to clean and disinfect the lancing device. Do not use any other cleaning or disinfecting solutions. Using solutions other than the Super Sani-Cloth could result in damage to the lancing device.

NOTE

Roche has tested the approved product for a total of 260 cleaning and disinfecting cycles. This supports cleaning and disinfecting the lancing device once per week for a 5 year time period. However, if the lancing device is cleaned and disinfected more than once per week (due to blood contamination, for example), please discontinue lancing device use once a total of 260 cleaning and disinfecting cycles has been reached.

8 Maintenance

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8.1 Overview

It is important to properly care for and maintain your ACCU-CHEK Aviva Expert meter. If you have any questions about the care and maintenance of your meter, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

8.2 Changing the Batteries

1.



- ▶ Remove the battery door from the back of the meter by pushing the tab in the direction of the arrow and pulling up the door.

2.



- ▶ Remove the old batteries from the meter.
- ▶ Insert three AAA batteries with the + and - ends matching the marks in the battery compartment.

3.



- ▶ Put the battery door back in place and snap it closed.

WARNING

- Using batteries other than those supplied or recommended for use with the meter may significantly reduce the life of the batteries. Batteries other than those recommended may leak and corrode the battery contacts within the meter. Using batteries not supplied or recommended may void the warranty.
- Replace all batteries of a set at the same time. Newly purchased batteries should not be mixed with partially exhausted ones. Batteries of different electrochemical systems, grades, or brands should not be mixed. Failure to observe these precautions may result in some batteries in a set being driven beyond their normal exhaustion point and thus increase the probability of leakage.
- Once new batteries are inserted in the meter as directed, do not remove them until they need to be replaced. Removing and reinserting good batteries may cause issues with the internal operations of the meter.

NOTE

- Alkaline batteries are recommended for use with the meter.
- After you change the batteries, the meter prompts you to confirm the time and date settings.
- It is a good idea to have spare, packaged batteries available.
- All test results, diary information, and settings are saved in the meter memory when the batteries are replaced.
- Rechargeable batteries may be used in the meter. However, rechargeable batteries may not maintain the same battery life as non-rechargeable batteries.
- When the Low Battery warning appears:
 - If vibrate is set to On, it is disabled until the batteries are replaced.
 - If the backlight level is set to high, the medium backlight level is used until the batteries are replaced.
 - If the beeper level is set to high, the medium beeper level is used until the batteries are replaced.

8.3 Power-Saving Tips

To conserve battery life:

- use the low beeper setting.
- only turn on the vibrate feature when it is needed.
- turn off the meter when you are finished rather than utilizing the auto power off feature.

8.4 Maintenance and Testing

- The meter needs little or no maintenance with normal use. It automatically tests its own systems every time you turn it on and lets you know if something is wrong. For detailed information on troubleshooting the meter, see Chapter 9, Troubleshooting.
- To test the meter display, turn off the meter, and then press and hold the  button. The display cycles through colors (red, blue, green, and white). If any part of the display does not change colors, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- If you drop the meter or think it is not giving accurate results, ensure your test strips and control solution have not expired, and then perform a control test.
- Perform a control test with each new vial of test strips.
- If the meter is not working properly, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

9 Troubleshooting

| | |
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9.1 Overview

For most problems, the meter displays a message with a short description of the symptom and, along with it, a proposed solution. This chapter goes into more detail by describing the symptom, the possible cause, and the possible solution. If the possible solutions do not fix the problem, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

WARNING

Never make treatment decisions based on a warning or error message. If you have any concerns, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

NOTE

- If you drop the meter or think it is not giving accurate results, make sure your test strips and control solution have not expired, and then perform a control test. For further assistance, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- Blood glucose and bG are interchangeable and mean the same thing.

9.2 Troubleshooting the ACCU-CHEK Aviva Expert Meter

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|---|--|---|
| The display is blank or the meter will not turn on. | <ul style="list-style-type: none"> ▶ Batteries are dead. ▶ Display is damaged. ▶ Meter is defective. ▶ Extreme temperature – the temperature is outside the meter operating range. | <ul style="list-style-type: none"> ▶ Install new batteries. See Chapter 8, Maintenance. ▶ Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. ▶ Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. ▶ Move the meter to an area with proper temperature. Wait five minutes before turning on the meter. Do not artificially heat or cool the meter. |
| Above Hyper Warning Limit | <ul style="list-style-type: none"> ▶ Your test result is above the hyper warning limit set in the meter. | <ul style="list-style-type: none"> ▶ Treat your high blood glucose as recommended by your healthcare professional. ▶ Consider checking bG, ketones, and insulin. |
| Beep/Vibrate Off | <ul style="list-style-type: none"> ▶ Beep and Vibrate settings cannot be turned off at the same time. | <ul style="list-style-type: none"> ▶ Ensure that either the Beep or Vibrate setting is turned on. See Chapter 5, Changing Meter Settings. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|--------------------------|---|--|
| Below Hypo Warning Limit | <ul style="list-style-type: none"> ▶ Your test result is below the hypo warning limit set in the meter. | <ul style="list-style-type: none"> ▶ Treat your low blood glucose as recommended by your healthcare professional. ▶ The meter displays a recommended number of carbohydrates for you to eat, and then retest your blood glucose. |
| Bolus Advice Not Setup | <ul style="list-style-type: none"> ▶ Advice is not provided unless it is set up through Bolus Advice in Settings Menu. | <ul style="list-style-type: none"> ▶ You can continue to use the meter without bolus advice or see Chapter 5, Changing Meter Settings for instructions on how to set up bolus advice. |
| Bolus Advice Timeout | <ul style="list-style-type: none"> ▶ Bolus advice is no longer available for this bG result. | <ul style="list-style-type: none"> ▶ Review data that was saved in My Data. Then, decide to modify data, add data, or begin a new bolus advice session. |
| Carbohydrate Ratio | <ul style="list-style-type: none"> ▶ Carbohydrate ratio is outside of the acceptable meter range. | <ul style="list-style-type: none"> ▶ Check your entries and contact your healthcare professional to determine the appropriate settings. |
| Code Key Missing | <ul style="list-style-type: none"> ▶ The black code key is not inserted. | <ul style="list-style-type: none"> ▶ Turn off the meter and insert the black code key. If you need a black code key, please contact ACCU-CHEK Customer Care Service Center at 1-1800-688-4578. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|--------------------------------|--|--|
| Diary Entry Used For Advice | ► The diary entry selected has been used for bolus advice and modifications are not allowed. | ► Carefully confirm all information involving bolus advice. You cannot modify bolus advice related entries on the meter. |
| Diary Results Expired | ► Bolus advice is no longer available for this result. | ► Review data that was saved in My Data. Then, decide to modify data, add data, or begin a new bolus advice session. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|----------------------|---|--|
| E-51 Bad Strip Error | <ul style="list-style-type: none"> ▶ Your blood glucose may be extremely low. | <p>If you see this error message after you applied blood to the test strip:</p> <ul style="list-style-type: none"> ▶ If you are experiencing any of the common symptoms of low blood sugar, contact your healthcare professional immediately. ▶ Treat your low blood sugar as recommended by your healthcare professional. ▶ If this does not match how you feel, repeat the blood glucose test and see Chapter 2, Testing Your Blood Glucose. |
| | <ul style="list-style-type: none"> ▶ The test strip is damaged. ▶ The test strip is not properly inserted into the meter. | <p>If you see this error message before you applied blood to the test strip:</p> <ul style="list-style-type: none"> ▶ Remove the test strip and reinsert it, or replace it if damaged. Check the Use By date on the test strip container. Do not use test strips past the Use by date. If the message reappears call the ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |
| E-52 Code Key Error | <ul style="list-style-type: none"> ▶ The code key is incorrect. | <ul style="list-style-type: none"> ▶ Please contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|---------------------|---|--|
| E-53 Bad Test Error | <ul style="list-style-type: none">▶ A meter or test strip error has occurred.▶ Your blood glucose may be extremely high. | <ul style="list-style-type: none">▶ Discard the test strip and repeat the test.▶ If this matches how you feel, contact your healthcare professional immediately. If it does not match how you feel, repeat the blood glucose test and see Chapter 2, Testing Your Blood Glucose. If this still does not match the way you feel, run a control test with your control solution and a new test strip. If the control result is within the acceptable range, review the proper testing procedure and repeat your blood glucose test with a new test strip. If the E-53 error still appears for your blood glucose test, your blood glucose test result may be extremely high and above the system's reading range. Contact your healthcare professional immediately. If the control test result is not within the acceptable range, see Chapter 3, Control Testing. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|---------------------------|---|---|
| E-54 Not Enough Sample | <ul style="list-style-type: none"> ▶ Not enough blood or control solution was drawn into the test strip for measurement or was applied after the test has started. | <ul style="list-style-type: none"> ▶ Discard the test strip and repeat the test. |
| E-55 Code Key Expired | <ul style="list-style-type: none"> ▶ The white code key is from an expired lot of test strips. | <ul style="list-style-type: none"> ▶ This message may appear when using a white code key in the meter. It means the test strips expire at the end of the current month. At the end of the month, discard the white code key and any remaining test strips. Insert a black code key. Make sure the time and date in the meter are correct. If you need a black code key, please contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |
| E-56 Sample Applied Early | <ul style="list-style-type: none"> ▶ Blood or control solution was applied to the test strip before the Apply Sample screen appeared on the display. | <ul style="list-style-type: none"> ▶ Discard the test strip and repeat the test with a new test strip. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|-----------------------|---|---|
| E-57 Electronic Error | <ul style="list-style-type: none"> ▶ An electronic error has occurred or, in rare cases, a used test strip was removed and reinserted. | <ul style="list-style-type: none"> ▶ Turn off the meter and remove the batteries. Wait at least 20 seconds prior to reinserting the batteries. Turn on the meter and perform a blood glucose or control test. If the problem persists, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. |
| E-58 Temp. Error | <ul style="list-style-type: none"> ▶ The temperature is above or below the proper range for the meter. | <ul style="list-style-type: none"> ▶ Move the meter to an area within the proper temperature range indicated for test strip use in the test strip package insert. Wait 5 minutes before turning on the meter. Repeat the test. Do not artificially heat or cool the meter. |
| E-59 Battery Empty | <ul style="list-style-type: none"> ▶ The batteries are extremely low. | <ul style="list-style-type: none"> ▶ Insert new batteries. See Chapter 8, Maintenance. |
| E-60 Time/Date Error | <ul style="list-style-type: none"> ▶ The time and date settings may be incorrect. ▶ You have changed the batteries. | <ul style="list-style-type: none"> ▶ Ensure the time and date are correct and adjust, if necessary. See Chapter 5, Changing Meter Settings. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|----------------------------|--|---|
| HI bG Warning | <ul style="list-style-type: none"> ▶ Your blood glucose may be higher than the measuring range of the system. | <ul style="list-style-type: none"> ▶ If you are experiencing any of the common symptoms of high blood glucose, contact your healthcare professional immediately. ▶ Treat your high blood glucose as recommended by your healthcare professional. ▶ Consider checking bG, ketones, and insulin. |
| Insulin Sensitivity | <ul style="list-style-type: none"> ▶ Insulin sensitivity is outside of the acceptable meter range. | <ul style="list-style-type: none"> ▶ Check your entries and contact your healthcare professional to determine the appropriate settings. |
| Invalid Bolus Advice Times | <ul style="list-style-type: none"> ▶ The acting time value is less than the offset time. | <ul style="list-style-type: none"> ▶ The acting time value must be set equal to or greater than the offset time. Reset the acting time value or revise the offset time. |
| Invalid Date | <ul style="list-style-type: none"> ▶ The date entered is invalid (dates for reminders cannot be set to occur in the past). | <ul style="list-style-type: none"> ▶ Re-enter date. |
| Invalid Hyper Values | <ul style="list-style-type: none"> ▶ The hyper warning limit value must be greater than all of your target ranges in the time block settings. | <ul style="list-style-type: none"> ▶ Reset the hyper warning limit or revise the target ranges in time blocks and re-enter the hyper warning limit. ▶ Enter a hyper warning limit that is above the target ranges of your time blocks. See Chapter 5, Changing Meter Settings. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|--------------------------|---|--|
| Invalid Hypo Values | <ul style="list-style-type: none"> ▶ The hypo warning limit value must be less than all of your target ranges in the time block settings. | <ul style="list-style-type: none"> ▶ Reset the hypo warning limit or revise the target ranges in time blocks and re-enter the hypo warning limit. ▶ Enter a hypo warning limit that is below the target ranges of your time blocks. See Chapter 5, Changing Meter Settings. |
| Invalid Record Time/Date | <ul style="list-style-type: none"> ▶ The time/date entered is invalid (Add Data entries cannot be set to occur in the future). | <ul style="list-style-type: none"> ▶ Re-enter time/date. |
| Invalid Target Range | <ul style="list-style-type: none"> ▶ The lower target range value is above the upper target range value. ▶ The range selected conflicts with your hyper and/or hypo warning limit settings. | <ul style="list-style-type: none"> ▶ Reset the target range values. ▶ Enter the correct lower target range value and upper target range value. See Chapter 5, Changing Meter Settings. ▶ Reset range or revise warning limit settings and re-enter range. ▶ Enter the correct lower target range value and upper target range value. See Chapter 5, Changing Meter Settings. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|----------------------|---|--|
| LO bG Warning | <ul style="list-style-type: none"> ▶ Your blood glucose may be lower than the measuring range of the system. | <ul style="list-style-type: none"> ▶ Treat your low blood glucose as recommended by your healthcare professional. ▶ If you are experiencing any of the common symptoms of low blood glucose, contact your healthcare professional immediately. |
| Meter Battery Low | <ul style="list-style-type: none"> ▶ Battery power is low. | <ul style="list-style-type: none"> ▶ Install new batteries. See Chapter 8, Maintenance. |
| No bG with Bolus | <ul style="list-style-type: none"> ▶ You have not tested your bG and are attempting to deliver a bolus. | <ul style="list-style-type: none"> ▶ It is recommended to test bG before delivering insulin. |

| Display Shows | Possible Cause(s) | Possible Solution(s) |
|----------------------|--|--|
| Test Strips Expiring | <p>► The test strips expire at the end of the current month.</p> | <p>► This message may appear when using a white code key in the meter. It means the test strips expire at the end of the current month. At the end of the month, discard the white code key and any remaining test strips. Insert a black code key. Make sure the time and date in the meter are correct. If you need a black code key, please contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.</p> <p>► Ensure the time and date are correct and adjust, if necessary. See Chapter 5, Changing Meter Settings.</p> |

NOTE

- For additional information on errors and warnings, see Chapter 6, Icons, Reminders, Warnings, and Errors.
- If you have a question or if you see any other error screen, please contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

10 Technical Information

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10.1 Overview

This chapter provides you with important performance information regarding the meter.

10.2 Product Limitations

Please read the literature packaged with your test strips to find the latest information on product specifications and limitations.

10.3 Specifications

| | |
|--|---|
| Blood volume | Refer to the test strip package insert. |
| Sample type | Fresh capillary whole blood |
| Measuring time | Refer to the test strip package insert. |
| Measuring range | Refer to the test strip package insert. |
| Test strip storage conditions | Refer to the test strip package insert. |
| Meter storage conditions (with batteries inserted) | -4 °F to 122 °F |
| System operating conditions | Refer to the test strip package insert. |
| Relative humidity operating range | Refer to the test strip package insert. |
| Memory capacity | 1,000 diary records |
| Automatic power off | 2 minutes |

| | |
|-------------------------------------|--|
| Power supply | Three AAA batteries (recommended: alkaline) |
| Display | LCD |
| Dimensions | 3.7 x 2.1 x 1 inches (LWH) |
| Weight | Approximately 3.6 oz with batteries inserted |
| Construction | Hand-held |
| Protection class | III |
| Meter type | The ACCU-CHEK Aviva Expert meter is suitable for continuous operation. |
| Control solution storage conditions | 36 °F to 90 °F |
| Interface | IR; LED/IRED – Class 1 |

10.4 Product Safety Information

WARNING

Choking hazard. Small parts. Keep away from children under the age of 3 years.

Electromagnetic Compatibility

This meter meets the electromagnetic immunity requirements as per EN ISO 15197 Annex A. The chosen basis for electrostatic discharge immunity testing was basic standard IEC 61000-4-2. In addition, it meets the electromagnetic emissions requirements as per EN 61326. Its electromagnetic emission is thus low. Interference from other electrically driven equipment is not to be anticipated.

Performance Analysis

The ACCU-CHEK Aviva Expert system (ACCU-CHEK Aviva Expert meter with ACCU-CHEK Aviva Plus test strips) is calibrated with venous blood containing various levels of glucose. The reference values are obtained using the hexokinase method. For method comparison, the results were compared with results obtained using the hexokinase method with deproteinization (automatic analyzer). The hexokinase method is traceable to an NIST standard.

Measuring Principle

Refer to your test strip package insert for more information.

WARNING

- Strong electromagnetic fields may interfere with the proper operation of the meter. Do not use this meter close to sources of strong electromagnetic radiation.
- To avoid electrostatic discharge, do not use the meter in a very dry environment, especially one in which synthetic materials are present.

10.5 Disposing of the Meter, Strips, Lancets, and Batteries

WARNING

- Any product coming in contact with blood is considered contaminated (potentially infectious).*
- During normal testing any blood glucose meter may come in contact with blood. Lancing devices may also be considered sharps. Disposal of sharps is regulated by law in many jurisdictions.

Roche is committed to recycling and sustainability. Please consider the following points when disposing of your used testing materials:

- Comply with any laws or ordinances relating to the disposal of sharps and/or contaminated products. Contact your local health department or other appropriate authorities for proper handling and disposal of used meters, used test strips, used lancets, and used batteries.

- Consider recycling of the meters and batteries at an appropriate facility. Be aware the meter is potentially hazardous electronics scrap (e-scrap) and should be disposed of accordingly. The batteries are potentially hazardous also and should be disposed of accordingly.
- Decontaminate the meter before recycling or disposing.
- Users in professional environments (i.e., healthcare professionals) should follow their existing policies and procedures that govern the proper handling and disposal of potentially infectious waste, e-scrap, and batteries.

*29 CFR 1910.1030-Bloodborne pathogens (Code of Federal Regulations)

10.6 Warranty and Limited License

ACCU-CHEK Aviva Expert Meter Limited 3-Year Warranty

Roche Diagnostics warrants to the original purchaser of the meter that your ACCU-CHEK Aviva Expert meter will be free from defects in materials and workmanship for 3 years from the date of purchase. If during this 3-year period, the meter does not work properly because of a defect in materials or workmanship, Roche Diagnostics will replace it with a new ACCU-CHEK Aviva Expert meter or equivalent product free of charge. The warranty on the replacement meter will expire on the date of the original warranty expiration or 90 days after the shipment of a replacement system, whichever period is longer. The purchaser's exclusive remedy with respect to the ACCU-CHEK Aviva Expert meter shall be replacement.

This warranty does not apply to the performance of an ACCU-CHEK Aviva Expert meter that has been damaged by accident or has been altered, misused, tampered with, or abused in any way.

THE PRECEDING WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, AND ROCHE DIAGNOSTICS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ROCHE DIAGNOSTICS BE LIABLE TO THE PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES ARISING FROM OR IN ANY WAY CONNECTED WITH THE PURCHASE OR OPERATION OF THE METER OR ITS PARTS. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IF ANY IS IMPLIED FROM THE SALE OF THE METER, SHALL EXTEND FOR A LONGER DURATION THAN FOUR YEARS FROM THE DATE OF PURCHASE.

Some states do not allow limitations on how long an implied warranty will last or the exclusion of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights, which vary from state to state.

Warranty and Service Instructions

All requests for return of ACCU-CHEK Aviva Expert meters under the preceding warranty or service policy must be made to ACCU-CHEK Customer Care Service Center. You will be mailed a return authorization label, which must be affixed to your carton for shipping the system to Roche Diagnostics. Cartons received without this label will be returned to you at your expense.

Customers experiencing difficulties should review the troubleshooting information in Chapter 9 of this booklet. Further inquiries should be directed to ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Be sure to fill out and mail the Warranty Card that comes with the ACCU-CHEK Aviva Expert system.

Limited License

CAUTION

A RESTRICTED LICENSE LIMITS USE OF THE ACCU-CHEK AVIVA EXPERT SYSTEM—READ CAREFULLY THE LIMITATIONS RECITED BELOW.

The ACCU-CHEK Aviva Expert system (meter, including the code key, and test strips) and its use are protected by U.S. Patent Nos. 6,645,368 (expires 22-December-2017); 8,298,401 (expires 4-October-2022); 8,303,801 (expires 4-October-2022); 8,329,026 (expires 4-October-2022); 7,276,146 (expires 4-October-2022); 7,276,147 (expires 4-October-2022); 7,407,811 (expires 9-May-2020); 7,452,457 (expires 2-May-2026); 7,488,601 (expires 1-February-2026); 7,494,816 (expires 29-December-2019); 7,569,126 (expires 28-December-2026); and 7,604,721 (expires 12-August-2026). A license to use the ACCU-CHEK Aviva Expert system is required until the last-to-expire patent listed above and is only granted when the ACCU-CHEK Aviva Expert meter is used with the ACCU-CHEK Aviva Plus test strips and ACCU-CHEK Aviva Plus code keys.

ACCU-CHEK Aviva Plus test strips are provided with a specifically matched ACCU-CHEK Aviva Plus code key. These test strips and code keys are specifically manufactured for operation with the ACCU-CHEK Aviva Expert meter. Use of other test strips with an unmatched code key or even with the matched code key supplied by another manufacturer may prevent or impair the proper function of the ACCU-CHEK Aviva Expert system.

Using the ACCU-CHEK Aviva Expert system indicates your acceptance of the restricted license to use the ACCU-CHEK Aviva Expert system only with ACCU-CHEK Aviva Plus test strips and the corresponding ACCU-CHEK Aviva Plus code key. If you do not agree to the terms and conditions of the restricted license, you may return, at the place of purchase, the unused ACCU-CHEK Aviva Expert system for a full refund. If you have any questions, please call the ACCU-CHEK Customer Care Services Center at 1-800-688-4578.

Except where prohibited by statute, all warranties covering the ACCU-CHEK Aviva Expert system are voided by use of the ACCU-CHEK Aviva Expert system with any test strips or code keys other than ACCU-CHEK Aviva Plus test strips or code keys.

Patent Information

U.S. Pat.:<http://www.roche-diagnostics us/patents>

CAUTION

A RESTRICTED LICENSE LIMITS USE OF THE ACCU-CHEK FASTCLIX SYSTEM (device and lancet drums). READ CAREFULLY THE LIMITATIONS RECITED BELOW.

The ACCU-CHEK Fastclix system (device and lancet drums) and its use are protected by U.S. Patent Nos. 7,322,998 (expires 3-March-2020); and 7,785,338 (expires 5-January-2026). A license to use the ACCU-CHEK Fastclix system is required until the last-to-expire patent listed above and is only granted when ACCU-CHEK Fastclix lancet drums are used with the ACCU-CHEK Fastclix device.

ACCU-CHEK Fastclix lancet drums are high precision components that are produced to the close tolerances required for satisfactory operation with the ACCU-CHEK Fastclix device. Use of other lancet drums with the ACCU-CHEK Fastclix device may prevent or impair proper function of the ACCU-CHEK Fastclix device.

Using the ACCU-CHEK Fastclix device indicates your acceptance of the restricted license to use the ACCU-CHEK Fastclix device only with ACCU-CHEK Fastclix lancet drums. If you do not agree to the terms and conditions of the restricted license, you may return, at the place of purchase, the unused ACCU-CHEK Fastclix device for a full refund. If you have any questions, please call the ACCU-CHEK Customer Care Services Center at 1-800-688-4578.

Except where prohibited by statute, all warranties covering the ACCU-CHEK Fastclix device are voided by use of the ACCU-CHEK Fastclix device with any lancet drums other than ACCU-CHEK Fastclix lancet drums.

10.7 Additional Supplies

Test Strips

ACCU-CHEK Aviva Plus 50 ct test strips

ACCU-CHEK Aviva Plus 100 ct test strips

Control Solutions

ACCU-CHEK Aviva 2 level control solutions

10.8 Information for Healthcare Professionals

WARNING

Healthcare Professionals: Follow the infection control procedures appropriate for your facility.

A drop of fresh, whole blood is required to perform a blood glucose test. Refer to the test strip package insert for additional healthcare professional information.

Appendices

Appendix A: Abbreviations

| Abbreviation | Definition |
|--------------|--|
| AM | Ante Meridiem (12-hour clock notation for “before noon”) |
| BE | Bread Equivalent (equal to 12 grams of carbohydrates) |
| bG | Blood Glucose (blood glucose) |
| Carbs | Carbohydrates |
| CC | Carbohydrate Choice (equal to 15 grams of carbohydrates) |
| °F | Degrees Fahrenheit |
| g | Grams |
| Hyper | Hyperglycemia (high blood glucose) |
| Hypo | Hypoglycemia (low blood glucose) |
| IR | Infrared |

| Abbreviation | Definition |
|--------------|--|
| ISO | International Organization for Standardization |
| KE | Kohlenhydrateinheit (equal to 10 grams of carbohydrates) |
| LCD | Liquid Crystal Display |
| mg/dL | Milligrams per Deciliter |
| N/A | Not Applicable |
| NIST | National Institute of Standards and Technology (United States) |
| NPH | Neutral Protamine Hagedorn |
| PM | Post Meridiem (12-hour clock notation for “after noon”) |
| SD | Standard Deviation |
| U | Units (basal insulin units) |

Appendix B: Carb Units

For carbohydrates, the following units of measure are available on the meter.

| Abbreviation | Unit of Measurement | Gram Equivalent |
|--------------|---------------------|-----------------|
| g | Grams* | 1 gram |
| KE | Kohlenhydrateinheit | 10 grams |
| BE | Bread Equivalent | 12 grams |
| CC | Carbohydrate Choice | 15 grams |

*Standard unit of measure in the U.S.

Appendix C: Explanation of Symbols

You may encounter the following symbols on the packaging, on the type plate (back of meter), and in the instructions for the ACCU-CHEK Aviva Expert meter, shown here with their meaning.

| | |
|---|--|
|  | Caution, refer to safety-related notes in the instructions for use accompanying this product. |
| Rx only | Federal law (USA) restricts this device to sale by or on the order of a physician per 21 CFR 801.109.* |
|  | 1.5V AAA |

* Code of Federal Regulations

Appendix D: Meter Settings and Range Limits

| Data Type | Unit of Measurement | MIN | MAX | Increments | Default Setting |
|----------------------|---------------------|------|------|-------------------|---------------------|
| Acting Time | hours:minutes | 1:30 | 8:00 | 0:15 | 4:00 |
| Basal Insulin | Units | 0 | 99 | Insulin Increment | 0 |
| bG Threshold (High) | mg/dL | 120 | 350 | 1 | Hyper Warning Limit |
| bG Threshold (Low) | mg/dL | 50 | 100 | 1 | Hypo Warning Limit |
| Bolus Insulin | Units | 0 | 50 | Insulin Increment | 0 |
| Carb Ratio (carbs) | grams | 1 | 240 | 1 | No entry ("--- g") |
| | BE | 0.1 | 20 | 0.1 | No entry ("--- BE") |
| | KE | 0.1 | 24 | 0.1 | No entry ("--- KE") |
| | CC | 0.1 | 16 | 0.1 | No entry ("--- CC") |
| Carb Ratio (insulin) | Units | 0.1 | 50 | 0.1 | 1 |
| Carbohydrates | grams | 0 | 240 | 1 | No entry ("--- g") |
| | BE | 0 | 20 | 0.1 | No entry ("--- BE") |
| | KE | 0 | 24 | 0.1 | No entry ("--- KE") |
| | CC | 0 | 16 | 0.1 | No entry ("--- CC") |

| Data Type | Unit of Measurement | MIN | MAX | Increments | Default Setting |
|-------------------------------|---------------------|-----|-----|--|-----------------------|
| Exercise 1 (health event) | % | -50 | 50 | 1 | 0 |
| Exercise 2 (health event) | % | -50 | 50 | 1 | 0 |
| Hyper Warning Limit | mg/dL | 180 | 350 | 1 | 300 |
| Hypo Warning Limit | mg/dL | 50 | 90 | 1 | 70 |
| Illness (health event) | % | -50 | 50 | 1 | 0 |
| Insulin Increment | Units | 0.5 | 1 | | 0.5 |
| Insulin Sensitivity (bG) | mg/dL | 1 | 999 | 1 | No entry ("---mg/dL") |
| Insulin Sensitivity (insulin) | Units | 0.1 | 50 | 0.1 | 1 |
| Max Bolus | Units | 0 | 50 | 1 or 0.5 (per the insulin increment value) | No entry ("---U") |

| Data Type | Unit of Measurement | MIN | MAX | Increments | Default Setting |
|-----------------------------|---------------------|------|-------------|------------|---------------------|
| Meal Rise (bG) | mg/dL | 50 | 200 | 1 | 50 |
| Offset Time | hours:minutes | 0:45 | Acting Time | 0:15 | 1:00 |
| Premenstrual (health event) | % | -50 | 50 | 1 | 0 |
| Snack Size (carbs) | grams | 0 | 24 | 1 | No entry ("--- g") |
| | BE | 0 | 2 | 0.1 | No entry ("--- BE") |
| | KE | 0 | 2.4 | 0.1 | No entry ("--- KE") |
| | CC | 0 | 1.6 | 0.1 | No entry ("--- CC") |
| Stress (health event) | % | -50 | 50 | 1 | 0 |
| Target Range Upper Value | mg/dL | 100 | 300 | 1 | 140 |
| Target Range Lower Value | mg/dL | 50 | 140 | 1 | 70 |

¹The insulin increment is used when entering bolus and basal insulin data.

The following are the default settings for bG test reminders. To turn on a bG test reminder, see Setting Alarm Clock Reminders: bG Test, Other in Chapter 5, Changing Meter Settings.

| Test Reminder | Default Time of Day |
|----------------------|----------------------------|
| 1 | 7:00 am |
| 2 | 9:00 am |
| 3 | 11:00 am |
| 4 | 12:00 pm |
| 5 | 2:00 pm |
| 6 | 4:00 pm |
| 7 | 7:00 pm |
| 8 | 10:00 pm |

The following are the default settings for the time blocks. Talk to your healthcare professional about setting up time blocks to help you manage your diabetes. To adjust the time blocks, see Chapter 5, Changing Meter Settings.

| Time Block | 12-Hour Format |
|------------|------------------|
| 1 | 12:00 am–5:30 am |
| 2 | 5:30 am–11:00 am |
| 3 | 11:00 am–5:00 pm |
| 4 | 5:00 pm–9:30 pm |
| 5 | 9:30 pm–12:00 am |

Appendix E: References

1. FDA Public Health Notification: "Use of Fingerstick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens: Initial Communication, (2010). Update 11/29/2010." <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm224025.htm>. Accessed March 20, 2012.
2. CDC Clinical Reminder: "Use of Fingerstick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens, (2010)." <http://www.cdc.gov/injectionsafety/Fingerstick-DevicesBGM.html>. Accessed March 20, 2012.
3. Healthcare Infection Control Practices Advisory Committee (HICPAC), William A. Rutala, Ph.D., M.P.H., and David J. Weber, M.D., M.P.H. Centers for Disease Control and Prevention, 2008. "Guideline for Disinfection and Sterilization in Healthcare Facilities. Atlanta."
4. US Environmental Protection Agency Office of Pesticide Programs "List D: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 and Hepatitis B Virus." January 9, 2009. http://www.epa.gov/oppad001/list_d_hepatitisbhiv.pdf. Accessed January 25, 2011.*

* Environmental Protection Agency

Glossary

| Term | Definition |
|------------------------|--|
| 7-day average | Includes results generated today and the previous 6 days. |
| Acting Time | The period of time from the start of the meal rise or the delivery of a correction bolus until your blood glucose level is expected to return to the target level. |
| Advice Options | Factors that influence bolus advice calculations including meal rise, snack size, acting time, and offset time. |
| After High bG Reminder | A reminder to retest your blood glucose. When enabled, this reminder occurs after a high blood glucose test result. |
| After Low bG Reminder | A reminder to retest your blood glucose. When enabled, this reminder occurs after a low blood glucose test result. |
| After Meal Reminder | A reminder to retest your blood glucose. When enabled, this reminder occurs after a meal. For this reminder to occur, you must enter carbohydrate data greater than the snack size amount. |
| Alarm | Audible or vibrating (silent) notification indicating a reminder, warning, or error. |

| Term | Definition |
|--------------------------|--|
| Basal | A dose of long-acting insulin intended to maintain normal blood glucose levels between meals and at night. |
| bG Test Reminders | Reminders to retest your blood glucose after a high blood glucose test result, after a low blood glucose test result, or after a meal. |
| bG Threshold | A bG test reminder setting. The upper limit for your blood glucose for a high bG test reminder and the lower limit for your blood glucose for a low bG test reminder. |
| Blood Glucose (bG) | The level of glucose in blood. |
| Bolus | The delivery of insulin all at once rather than slowly throughout the day, usually used to compensate for meals or high blood glucose. |
| Bolus Advice | When enabled, bolus advice provides recommendations on the amount of insulin for food intake and for correcting blood glucose levels that are not within your target range. |
| Bolus Advice Options | See Advice Options. |
| Carb Ratio | The amount of insulin necessary to account for a certain number of carbohydrates. |
| Carbohydrates (or Carbs) | Carbohydrate foods include sugars and starches. Carbohydrates can raise blood glucose levels slowly or rapidly. Carbohydrates are generally counted to calculate a bolus insulin dose. |

| Term | Definition |
|----------------|---|
| Control Result | Value displayed on meter as the result of a control test. When the Control Result is within the range shown on the label of the test strip container, then the test strips and the meter are working properly. |
| Control Test | A meter test using control solution which lets you know that the meter and test strips are working properly. |
| Current Date | Refers to the date you set through the menu Settings and then in the Time/Date screen. |
| Current Time | Refers to the time you set through the menu Settings and then in the Time/Date screen. |
| Day | Period of time starting at 12:00 am and ending at 11:59 pm. |
| End Time | The end time of a time block. |
| Health Events | A pop-up menu selection (Exercise 1, Exercise 2, Stress, Illness, Premenstrual, or Fasting) that allows information to be stored with a blood glucose test result or in a diary record and percentages that could adjust bolus advice recommendations for your current health status or activities. |
| Hi | The test result is above the meter's measurement range. |

| Term | Definition |
|---------------------|--|
| Hyper | Hyperglycemia: an abnormally high level of glucose in the blood. |
| Hyper Warning Limit | When your blood glucose test result is above the hyper warning limit, a warning is displayed. |
| Hypo | Hypoglycemia: an abnormally low level of glucose in the blood. |
| Hypo Warning Limit | When your blood glucose test result is below the hypo warning limit, a warning is displayed. |
| Insulin Increment | The meter rounds off the insulin amount to be delivered, which the meter calculates if bolus advice is set up, or when you manually enter bolus and basal insulin data into the diary. The insulin increment can be set to 0.5 or 1 U. |
| Insulin Sensitivity | The amount of insulin necessary to lower your blood glucose by a certain amount. |
| Ketones | A by-product or waste product when your body burns stored fat for energy. Ketones are produced when there is not enough insulin to help your body use glucose for energy. Without enough insulin, glucose builds up in the blood. |
| Key Lock | A meter function which disables the keys (buttons) in order to prevent its unintended use. |

| Term | Definition |
|-------------|---|
| LO | The test result is below the meter's measurement range. |
| Max Bolus | The maximum amount of bolus insulin to be delivered at one time. A bolus that is larger than the max bolus amount requires an additional confirmation. This serves as a safety measure against unintended large boluses. You should ask the advice of your HCP for delivering large doses of insulin. |
| Meal Rise | During or after meals, an increase in blood glucose levels is considered normal, or "allowed," within a certain range, even though a meal bolus has been delivered. A meal rise is in effect for a specified time period. |
| Meal Time | A pop-up menu selection (pre-meal, post-meal, bedtime, or other) that allows information to be stored with a blood glucose test or in a diary record. |
| Meter | Blood glucose meter. |
| Note | Additional information. |
| NPH Insulin | Neutral Protamine Hagedorn. An intermediate-acting insulin that, on average, starts to lower blood glucose within 1 to 2 hours after injection. It has its strongest effect 6 to 10 hours after injection but keeps working about 10 hours after injection. Also called N insulin. |

| Term | Definition |
|--------------------|--|
| Offset Time | Offset time takes into account the expected delay for the blood glucose level to actually fall during the acting time of insulin in the body. It describes the first time period within the acting time. |
| Pre-Mixed Insulin | A commercially produced combination of two different types of insulin. |
| Remind After | A bG test reminder setting. The amount of time after a high blood glucose test result, after a low blood glucose test result, or after a meal you want the reminder to occur. |
| Reminder | When enabled, reminders occur to remind you to test your blood glucose, to retest your blood glucose or of an event or activity. |
| Snack Size | The amount of carbohydrates that is not to be counted as a regular meal with the expected meal rise. |
| Snooze | Delay of some reminders for a defined time period. |
| Soft Keys | Two buttons under the meter display used to navigate through the user interface. Just above each soft key, the meter display shows the selection (i.e., Save, Cancel, Back, etc.). |
| Standard Deviation | As it is used in this owner's booklet, standard deviation measures how widely spread the bG test results are (e.g., if the bG test results are close to the bG average, then the standard deviation is small). |

| Term | Definition |
|----------------|--|
| Start Time | The start time of a time block. |
| Target Range | The desired upper and lower limits of your blood glucose level considered acceptable as set by your healthcare professional. |
| Time Blocks | Up to eight time periods within one day to facilitate your changing insulin needs throughout the day. |
| Time Range | The user sets the duration of time. There is a start and end time. |
| User | A person using the meter. |
| Warning | Describes items and conditions that present hazards and may cause personal injury. |
| Warning Limits | See Hyper Warning Limit or Hypo Warning Limit. |

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LAST UPDATE: 2013-07

ACCU-CHEK® Aviva Expert



070063222001-1013

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Assembled in USA.

Roche Diagnostics Corporation
9115 Hague Road
Indianapolis, IN 46256

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