GETTING STARTED WITH
THE MINIMED™ 670G SYSTEM

Medtronic

INTRODUCTION | MINIMED CARE

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MiniMed® Care

At Medtronic we aim to develop new and innovative products to help improve the lives of people with diabetes.

We are committed to providing you with ongoing personalised support and education to help you achieve your goals whilst being on insulin pump and continuous glucose monitoring.

Online education

Access to product and therapy resources

Newsletters

Tips and tricks and ongoing support

MiniMed™ eShop

Order diabetes supplies 24/7

STARTRIGHT

Our free onboarding program will provide you with personalised support as you start your journey with the MiniMed™ 670G system.

StartRight is designed to ensure that you have all the tools that you need to get the best out of your new therapy.

Register for StartRight today for personalised and exclusive access to:

- Highly trained StartRight team
- Pro-active communication with tips and tricks as well as lifestyle recommendations supporting your therapy

REGISTER TODAY

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www.medtronic-diabetes.co.uk/minimedcare/

INTRODUCING THE MINIMED™ 670G SYSTEM

GETTING STARTED WITH THE MINIMED™ 670G INSULIN PUMP

GETTING STARTED WITH CONTINUOUS GLUCOSE MONITORING (MANUAL MODE)

APPENDIX

GETTING STARTED WITH SMARTGUARD™ AUTO MODE

APPENDIX

This information is not intended to constitute medical advice and does not contain all of the information necessary for the proper care and treatment of patients with diabetes.

Information contained herein does not replace the recommendations of your healthcare professional. Please refer to your HCP and to the instructions for use for more information. When using an insulin pump, check your blood glucose minimum 4 times a day.

This document does not replace the Instructions for Use. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use.

MINIMED™ 670G SYSTEM COMPONENTS

THE WORLD'S FIRST SELF-ADJUSTING INSULIN PUMP SYSTEM[1,2]

Some user interaction required.

Guardian™ Sensor 3

Our most accurate[3] sensor drives our exclusive SmartGuard™ technology with a smart and reliable design.[4]

MiniMed™ 670G insulin pump

CONTOUR® NEXT LINK 2.4 blood glucose meter

The only meter to link wirelessly to the MiniMed™ 670G insulin pump for highly accurate sensor calibration[5,6]

MiniMed™ Mio™ Advance infusion set

Medtronic offers a wide range of infusion sets so that you can choose the right one for your comfort and safety.

CareLink™ Software

Upload to CareLink™ software to conveniently track your glucose control and remotely share this information with your healthcare professional.

References:
1. Bergenstal, R. M. et al. Jama. 2016; 316 (16): 1407 - 1408
2. Iturralde E, et all. The Diabetes Educator. 2017; 43(2):223 - 232
3. Christiansen M, et al. Diabetes Technol Ther. 2017; 19(9): 1-11
4. Guardian Sensor 3 Performance Report; 6026113-25A1_A 2016-10
5. Bailey T, et al. Clin Chim Acta 2015;448:139–145
6. Bailey T, et al, Diabetes Technol Ther 2014 Feb 1; 16(Suppl 1), P-164

GETTING STARTED WITH THE MINIMED™ 670G INSULIN PUMP

WELCOME

Welcome! We are glad that you have chosen insulin pump therapy and are excited for you to begin using your insulin pump.

Whether you've chosen pump therapy because of its convenience, the flexibility it provides, or to help improve your glucose control, your pump will be a valuable tool in helping to manage your diabetes.

This guide is devided into three chapters: The first chapter provides step-by-step instructions on the basic operation and programming of your pump.

In chapter 2 you will learn about continuous glucose monitoring (CGM) and the SmartGuard™ Suspend features and chapter 3 is focussed on SmartGuard™ Auto Mode, When using SmartGuard™ Auto Mode, your pump will automatically adjust your basal insulin delivery based on your sensor glucose values. Using your pump to complete each practice exercise will help you become comfortable with the basics and prepare you for your in-person training. The information is presented in an order that will build your skills and knowledge.

NOTE: Did you know that a complete explanation of the technical and operational aspects of your pump can be found in the *MiniMed™ 670G System User Guide?*

During your in-person training, your trainer will build on this information and help ensure that you are confident to begin pump therapy.

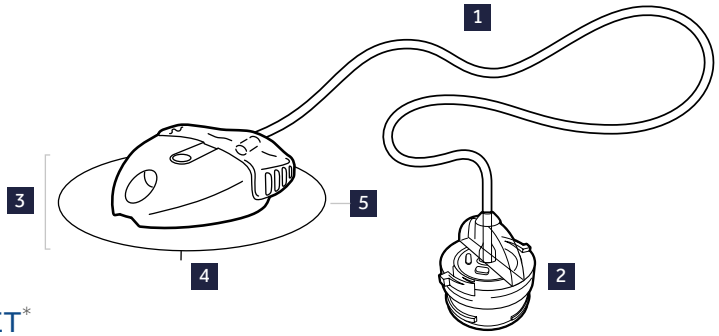
Here are some quick tips to keep in mind as you work through this information:

- Be sure you are not attached to your new insulin pump while you practice.
- If you press the wrong button, press the button to go back to the previous screen and try again.
- If you do not touch a button for 15 seconds, the pump screen will turn dark. Press any button and the pump screen will return.
- Avoid the Reservoir & Tubing screen until you have completed all practice necessary to feel comfortable using this insulin pump.

We hope you enjoy learning about your new insulin pump system.

IMPORTANT: Do not insert the reservoir until you have been instructed to do so by your healthcare professional and have received formal training with a certified product trainer. Attempting to use insulin in your pump before you have received training may result in the delivery of too little or too much insulin, which can cause hyperglycaemia or hypoglycaemia.

THE DELIVERY OF INSULIN



INFUSION SET*

1. **Tubing:** carries insulin from the pump to you
2. **Reservoir Connector:** end of the tubing that attaches the reservoir which holds the insulin
3. **Insertion Site Section:** other end of the tubing that attaches to you
4. **Cannula:** tiny flexible tube placed into your body** by the insertion needle included in the insertion site section
5. **Adhesive:** holds the infusion set in place
6. **Reservoir Compartment:** part of the pump where the reservoir fits

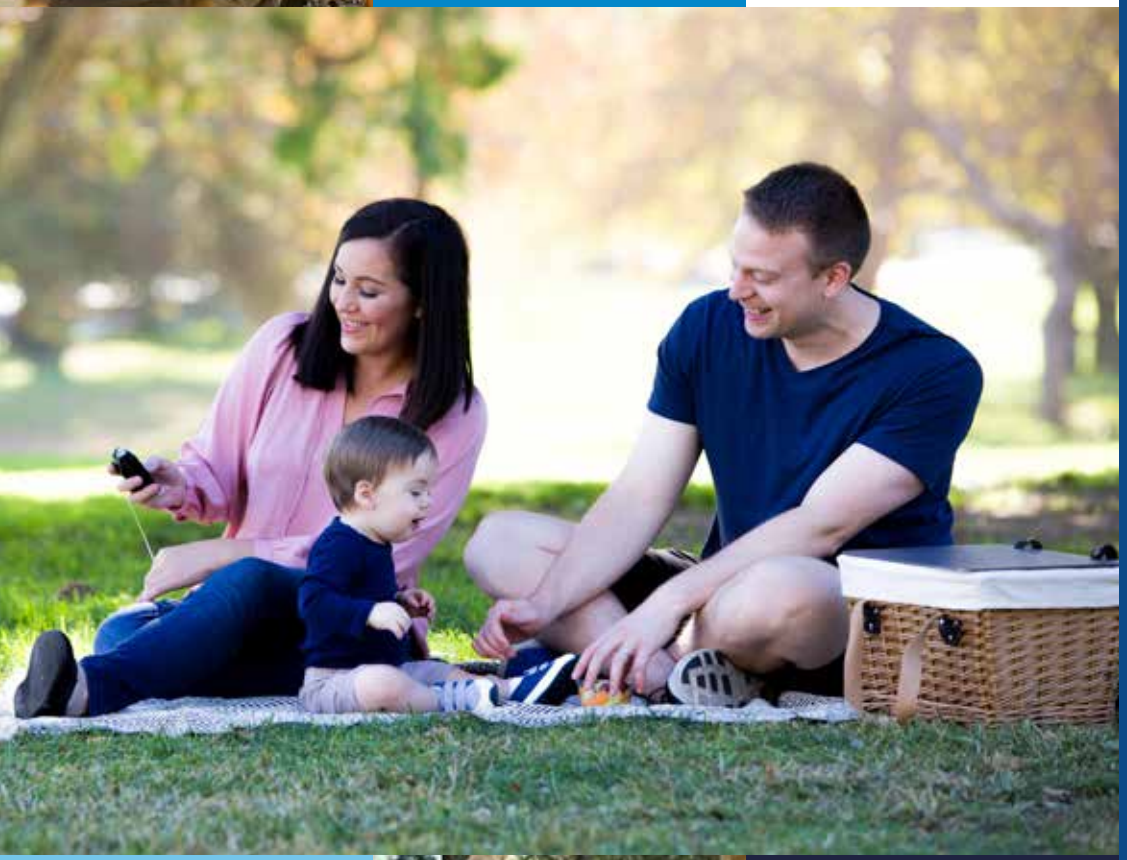
RESERVOIR

PUMP

You should replace both the infusion set and the reservoir every 2 to 3 days.

*MiniMed™ Mio™ Advance infusion set shown in illustration.

**Some infusion sets do not use a cannula but have a small needle that remains inserted in the body.



GETTING STARTED WITH THE MINIMED™ 670G INSULIN PUMP

SECTION 1: PUMP BASICS

Before inserting the battery or pressing any buttons, let's take a closer look at your pump.

THE FRONT OF YOUR PUMP

Up, Down, Left, and Right

- Press to scroll up or down through a menu or list
- Press to move to desired area on the screen
- Press to change the value in an area
- Press to unlock your pump when it has been in Sleep mode.

Back

- Press to return to a previous screen
- Press and hold to return to the starting screen, called the Home screen.

Select

- Press to select or confirm a value or menu option that is highlighted
- Press when directions say 'select '
- Press to access the menu when you are on the Home screen.

Graph

- Press to show the SG (Sensor Glucose) graph on the Home screen (when you are using CGM).
- Press to return to the Home screen when you are on the SG graph.
- Press and hold to put the pump into Sleep mode.

Notification Light

- Flashes when an Alert or an Alarm is occurring.

THE BOTTOM AND BACK OF YOUR PUMP

Medtronic Diabetes HelpLine Telephone Number

Pump Serial and Model Number

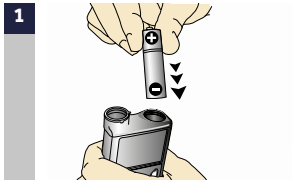
You may need to provide this information if you call for assistance.

INSERTING THE BATTERY

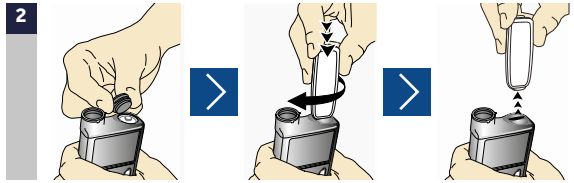
Your insulin pump is powered by a AA battery. A lithium, alkaline, or rechargeable AA battery can be used. The battery you place into your pump should always be new or fully charged.

To insert the battery and get started, you will need:

- Battery cap found with the pump
- Pump clip found with the accessories
- AA battery found with the accessories

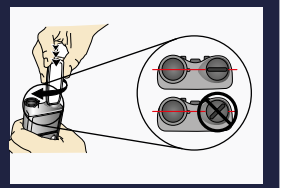


Place the battery into the battery compartment with the negative (flat) end going in first.



Place the battery cap onto the pump. Use the edge of the pump clip to turn the cap to the right (clockwise) and tighten until the slot is horizontal to the pump. See image below.

NOTE: Do not undertighten or overtighten the battery cap. Overtightening the battery cap can cause damage to your pump case. Undertightening the battery cap will prevent the pump from recognising the new battery. Turn the battery cap clockwise until the cap is aligned horizontally with the pump case, as shown in the example to the right.



Once the battery is inserted, the pump will power on and the Startup Wizard will begin. You will need to follow it step-by-step to set up your language, time format, time and date.

Select your language.

SECTION 2: HOME SCREEN

You are now on the Home screen. The Home screen is your starting point.
The following information is displayed on the Home screen.

Status bar: provides a quick look at the pump's status

Current time

BG reading: displays a BG taken in the last 12 minutes

Active insulin: displays any insulin still active from previous boluses

STATUS ICONS

The Status icons can provide a quick look about the status of the pump.
When using your pump, you will see the following icons:

BATTERY ICONS

The color and fill of the battery icon indicate the charge level of your pump battery.
When your battery is full, the icon is solid green.
As your battery life is used, the icon changes from solid green in the following order.
When your battery is low, the icon has a single red bar. When you battery needs to be replaced immediately, the icon is solid black with a red outline.

RESERVOIR ICON:

- Approximately 85%–100% of the reservoir remains.
- Approximately 71%–84% of the reservoir remains.
- Approximately 57%–70% of the reservoir remains.
- Approximately 43%–56% of the reservoir remains.
- Approximately 29%–42% of the reservoir remains.
- Approximately 15%–28% of the reservoir remains.
- Approximately 1%–14% of the reservoir remains.
- The reservoir remaining amount is unknown.

Audio icon: Shows the audio mode that you are using: audio, vibrate, or audio and vibrate.

NOTE: There will be times when you will need additional status information than is indicated by the status icons. For instance, the Reservoir icon may indicate your reservoir is getting low on insulin, but you may need to know exactly how many units are left. Additional information can be found in the status screens, in **Menu options on page 16.**

UNLOCKING THE PUMP

After the Backlight has been off for a few minutes, the pump goes into Sleep mode and the pump is locked. When you wake up your pump from Sleep mode, you must unlock your pump before navigating to the menu. Press the button that is highlighted to unlock the pump. This confirms you are reading the screen and the button presses are not accidental.

If you press an incorrect button, the screen prompts you to try again.

If you press the Back button, you will be taken to the current Home screen.

You can press and hold if you wish to put the pump into Sleep mode and keep it locked when you are not using it. Doing this can also help save battery life.

BACKLIGHT

When you are not pressing buttons on your pump, you will notice that the Backlight will soon turn off. The pump is still on, it is just saving battery life. You can simply press any button to make the screen reappear.

SECTION 3: MENU

There are seven items on the main menu. Each menu item contains the features and functions that pertain to that menu item.

From the Home screen, press to go to the menu.

SCROLL BAR
When a screen or a menu has more than six lines the scroll bar appears on the right side of the screen. Press to view the additional items.

MENU OPTIONS

Here you see a brief summary of the information found within each menu item.

BOLUS	Lets you choose between Bolus Wizard™, Manual Bolus, or Preset Bolus. You can also access your Delivery Settings from here.
ENTER BG	You can manually enter a BG reading from this screen.
BASAL	Lets you switch to a Temp Basal or a Preset Temp basal rate, or change to a different Basal Pattern. You can also access your Delivery Settings from here.
AUDIO OPTIONS	Lets you choose Audio, Vibrate, or both to inform you of alerts and notifications. You can also change the volume here and go to the Alert Silence screen.

STATUS	Status screens let you view information about Auto Mode readiness; notifications you have received in the last 24 hours; Quick Status, including your last bolus, last BG entry, current basal rate, and estimated reservoir volume and battery status; pump status including estimated reservoir volume, when it was started, time left, and pump serial number; sensor status, including last calibration and next calibration due; and settings review, which includes your current pump settings.
SUSPEND DELIVERY	Lets you stop all insulin delivery. This is commonly used when disconnecting to swim or bathe.
OPTIONS	Lets you select SmartGuard™, History, Reservoir & Tubing, Delivery Settings, Event Markers, Reminders, and access the Utilities menu.
UTILITIES	Lets you select Sensor Settings, Airplane Mode, Display Options, Time & Date, Remote Bolus, Block, Self Test, Manage Settings, Sensor Demo, Device Options, and Language.

NOTE: You will not be using all of these options right away. We will focus on the ones that you will need to get started.

MAIN MENU WHEN USING MANUAL MODE

(PUMP ONLY OR WITH CGM)

Press

Bolus
- Bolus Wizard
- Manual Bolus
- Preset Bolus
- Delivery Settings

Enter BG
- BG Entry

Basal
- Temp Basal
- Preset Temp
- Basal Patterns
- Delivery Settings

Audio Options
- Alert Silence Options
  - High Alerts Only
  - High & Low Alerts
  - All Sensor Alerts
  - Duration
- Audio (On/Off)
- Vibrate (On/Off)
- Volume (-/+)

Status
- Auto Mode Readiness
- Notifications
- Quick Status
- Pump
- Sensor
- Settings Review

Suspend Delivery

Options
- SmartGuard™
- History
- Reservoir & Tubing
- Delivery Settings
- Event Markers
- Reminders
- Utilities
  - Sensor Settings
  - Airplane Mode
  - Display Options
  - Time & Date
  - Remote Bolus
  - Block
  - Self Test
  - Manage Settings
  - Sensor Demo
  - Device Options
  - Language

NAVIGATION

Press from any screen to open the **Menu**.

Press and to scroll through the menu items.

Press on the desired menu item to open.

The scroll bar appears on menus to indicate when additional text is available.

Press to scroll down to view additional items.

Press to scroll back up.

Press to go to previous screen. Hold to return to the **Home** screen.

GETTING STARTED | MENU IN MANUAL MODE

MAIN MENU WHEN USING SMARTGUARD™ AUTO MODE

Press

Bolus
- BG
- Carbs

Enter BG
- BG Entry

Temp Target
- Duration
- Cancel Temp Target

Audio Options
- Alert Silence Options
  - High Alerts Only
  - High & Low Alerts
  - All Sensor Alerts
  - Duration
- Audio (On/Off)
- Vibrate (On/Off)
- Volume (-/+)

Status
- Auto Mode Readiness
- Notifications
- Quick Status
- Pump
- Sensor
- Settings Review

Suspend Delivery

Options
- SmartGuard™
- History
- Reservoir & Tubing
- Delivery Settings
- Event Markers
- Reminders
- Utilities
  - Sensor Settings
  - Airplane Mode
  - Display Options
  - Time & Date
  - Remote Bolus
  - Block
  - Self Test
  - Manage Settings
  - Sensor Demo
  - Device Options
  - Language

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Press to scroll back up.

Press to go to previous screen. Hold to return to the **Home** screen.

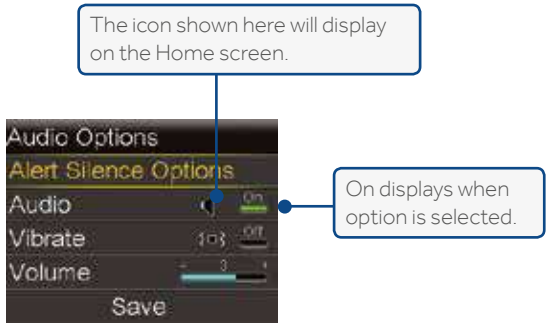
GETTING STARTED | MENU IN SMARTGUARD™ AUTO MODE

SECTION 4: MAIN MENU ITEMS – A CLOSER LOOK

Now you are ready to set some basic features found within the Menu.

AUDIO OPTIONS

You will use Audio Options to set the pump to beep (Audio), vibrate (Vibrate), or beep and vibrate (Audio and Vibrate). If you choose Audio or Audio and Vibrate, you can also increase or decrease the Volume.



NOTE: You can have both Audio and Vibrate on at the same time.

DISPLAY OPTIONS

Display Options allows you to choose the brightness of your pump screen. This is also where you go to change the amount of time your pump stays on before it goes into Power Save mode.

To change the **Display Options** from the Homescreen, select **Options > Utilities > Display Options.**

DID YOU KNOW? The Auto setting automatically adjusts the screen brightness to match your current environment. Your pump arrives set to Auto.

STATUS

There will be times when you need information about your pump status. For example, the status icon on your Home screen shows you if the insulin in your reservoir is getting low, but you may need to know exactly how many units are left. This information can be found in the Status screens.

1

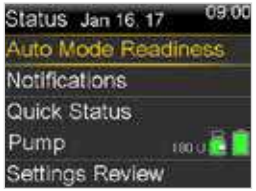
From the Home screen, press ⊙.

2

1) Press ⌄ to highlight **Status**.

2) Press ⊙ to select **Status**.

3



Press ⌄ to highlight the status item you wish to view and press ⊙.

Here you can see the status information that can be found when you select each menu item:

AUTO MODE READINESS	Displays messages and information letting you now whether or not you are ready to enter into SmartGuard™ Auto Mode.
NOTIFICATIONS	Shows the names and times of alarms, alerts, messages, and reminders that you have received over the past 24 hours. To see more alerts and alarms, go to History in Utilities.
QUICK STATUS	Provides a current summary of pump information including the last bolus you delivered, the last BG entered, and your current basal rate.
PUMP	Provides detailed information about your pump, including the date you last changed the reservoir, and the number of units left in it.
SENSOR	Provides detailed information about your sensor, including when the next calibration is due, the sensor life, and the transmitter battery status. **NOTE:** This information is only available after the sensor feature has been turned on.
SETTINGS REVIEW	Displays the current settings you have programmed into your pump.

NOTE: You can go back to the previous screen by pressing .

SECTION 5: BASAL PATTERNS

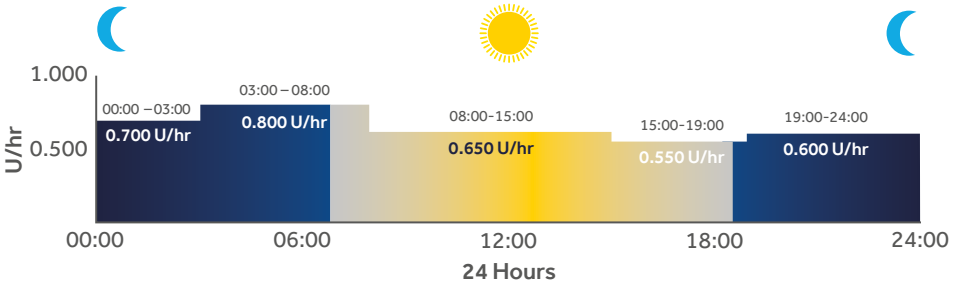
Basal insulin is delivered throughout the day and night to cover insulin needs between meals and during the night.

The pump supplies basal insulin by delivering small amounts of short-acting insulin throughout each hour, every hour of the day and night. This allows for insulin to be increased and decreased to adjust for your body's needs.

Basal insulin amounts must be programmed into your pump. This is done by setting a basal pattern. A basal pattern consists of one or more basal rates being delivered over the course of 24 hours.

It is likely when you start on pump therapy, that you will need more than one basal rate throughout the day and night to meet your body's insulin needs.

For example, a Basal Pattern may look like this:



In this example, the basal pattern includes 5 different basal rates over 24 hours.

NOTE: The basal rates shown are for illustration purposes only – your basal settings may be different.

BASAL PATTERNS SET UP – SETTING MULTIPLE BASAL RATES

IMPORTANT: The following are some examples of basal rates for you to practise entering while learning how to use your pump. You will need to work with your healthcare professional to get your personal basal rates. Do not use these practise basal rates for your therapy. Attempting to use these settings in your pump could result in the delivery of too little or too much insulin, which can cause hyperglycaemia or hypoglycaemia.

1

From the Home screen, press ◎.

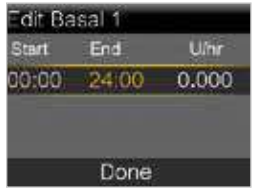
Select **Basal > Delivery Settings > Basal Pattern Setup.**

2

Select **Basal 1 > Options > Edit.**

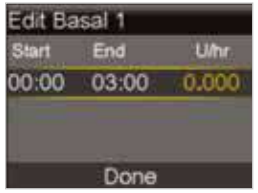
NOTE: You can also access Delivery Settings from the Options menu.

3



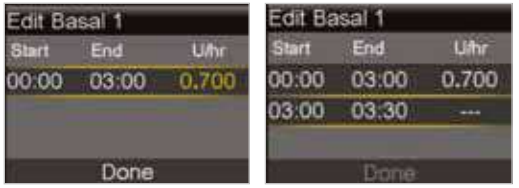
Press ◎ on the time segment. The **End** time will be flashing.

4



Press ⌃ to change End time to 03:00 and press ◎.

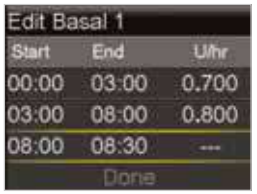
5



You can see you are automatically asked to enter the end time of the second basal rate. This basal rate will need to end at 08.00 and will need to be changed to 0.800 U/hr.

Press ⌃ to 0.700 U/hr and press ◎.

6



Change End time to 08:00 and basal rate to 0.800 U/hr using ⌃ and press ◎. You can now enter the next end time.

7

Repeat steps 3 to 6 to enter the 3 next time segments and basal rates. For the last time segment, you will need to enter 24:00 as the end time to complete the full 24 hours.

Select **Done**.

8 Verify that **Basal 1** is entered correctly. Press ⟩ to view all basal rates.

9

This basal pattern delivers 15.85 U over 24 hours.

If NO changes need to be made: Select **Save**.

10 *If changes need to be made:* Press ↩. Press ⌃ and press ◎. Repeat steps 7 to 9.

11 Select **Save**.

TEMP BASAL

This feature lets you immediately increase or decrease your basal insulin for the period of time (duration) that you set. It is often used for exercise and sick days.

A Temp Basal can be set in either:

- **Percent:** delivers a percent of the current basal rate.
- **Rate:** delivers the amount that you enter.

A Temp Basal can be set to deliver more or less than your current basal rate. It can be set in any 30 minute increment for up to 24 hours.

SETTING A TEMP BASAL

This example will show setting a Temp Basal to deliver 80% of the current basal rate for the next two hours.

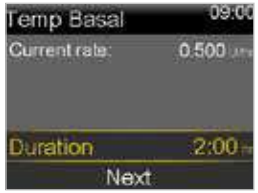
1

Press ⊙.

Select **Basal**.

Select **Temp Basal.**

2



Press ⌃ to set duration and press ⊙.

Select **Next.**

3

Select **Percent**.

Press ⌃ or ⌄ to enter the percent of the current basal rate desired and then press ⊙.

Select **Begin**.

NOTE: If you choose to use Rate, press ⌃ to Type and press ⊙. You can then enter the U/hr you want delivered.

4

The Home screen displays a **Temp Basal** banner to indicate that you have a Temp Basal active.

5

From the menu select **Cancel Temp Basal** to review the details of the active Temp Basal.

When the Temp Basal delivery is complete, the basal will automatically return to the regularly programmed basal rate.

CANCELLING A TEMP BASAL

If you need to return to your regularly programmed basal rate before your Temp Basal is completed, you can cancel it.

1

Press ⊙.

Select **Cancel Temp Basal**.

2

You can see the details about the Temp Basal. Select **Cancel Temp Basal**.

If you decide not to cancel, just press ↩.

You can see that the Home screen no longer displays the Temp Basal banner.

SUSPEND DELIVERY

Remember that your pump is delivering basal insulin throughout every hour of the day. There will be times when you will want to manually suspend, or stop delivery, and disconnect from your pump. This is done using the manual Suspend Delivery feature. Using Suspend Delivery stops all insulin delivery. The most common reasons to manually suspend delivery might include bathing and water activities. Infusion sets are designed so you can easily disconnect from your pump and leave it in a safe place. Talk with your healthcare professional about a plan including BG checks and possible correction boluses when disconnecting and reconnecting your pump.

TO PLACE THE PUMP IN MANUAL SUSPEND:

From the Menu, select **Suspend Delivery** > Press ◎ and select **Yes.**

Notice that the Home screen has changed.

To resume Basal Insulin Delivery, select **Resume Delivery** from the menu and select **Yes** to resume delivery.

WARNING: When delivery is resumed, basal insulin will begin to deliver again. The pump will not deliver any of the basal insulin you missed while the pump was suspended.

If you manually suspend delivery while a bolus is delivering, the bolus delivery will stop. When you resume delivery, the remainder of the bolus will not be delivered.

SECTION 6: GIVING BOLUSES

A bolus is given for two reasons: to cover food that contains carbohydrate or to correct glucose levels that are above your target range. Giving a bolus will be one of the most common things you do with your pump. Instead of having to take shots at meals, or between meals if your glucose is too high, you can program your pump to give the insulin. When using the pump, you are able to give precise bolus amounts.

BOLUS WIZARD™

Calculating how much bolus insulin to give can be challenging. When using the Bolus Wizard™ feature, all you will need to do is enter your current BG reading along with the amount of carbs you are about to eat.

Once you do this, the Bolus Wizard™ feature uses the individual settings provided by your health care professional to estimate your bolus amount. Because these settings are specific to you, you can use it to calculate the precise amount of bolus insulin you need for your food and BG. This can help you better control your glucose levels.

NOTE: Before using the Bolus Wizard™ feature, you need to program your individual settings with the help of your health care professional.

You will need your Carb Ratio, Sensitivity Factor, BG Targets, and your Active Insulin Time to complete the setup. If you do not have your personal settings yet, you may practise with the practise settings in the examples below.

Be sure your personal settings are entered before actually using the Bolus Wizard™ foryour therapy.

TURNING THE BOLUS WIZARD™ FEATURE ON AND SET UP

1

2

Press ◎.

Select **Options.**

Select **Delivery Settings.**

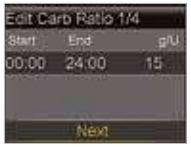
Select **Bolus Estimate Setup.**

Select **Bolus Wizard** to turn it on.

Press ◎ to continue reading text and select **Next**.

3

Follow the instructions to program the following settings: Carb Ratio, Insulin Sensitivity Factor (Sensitivity), BG Target and Active Insulin Time. Each setting will include a short description: you need to select **Next** and enter the requested data.



Carb Ratio

Insulin Sensitivity Factor

BG Target

Active Insulin Time

4

Select **Save.** THE BOLUS WIZARD™ SETUP IS NOW COMPLETE.

USING THE BOLUS WIZARD™ FEATURE

Before we start, let's take a look at the Bolus Wizard™ entry screen.

NOTE: The boluses shown are for illustration purposes only – your settings and bolus results will be different.

USING THE BOLUS WIZARD™ FEATURE – EXAMPLE: FOOD AND CORRECTION BOLUS

If you have tested your glucose using your compatible Ascensia meter, the BG will already be showing.

Active Ins. adjust. is the active insulin from previous boluses that is being adjusted (subtracted) from the correction dose.

1

2

Press ◎.

Select Bolus.

Select Bolus Wizard.

1. You will first test and enter your BG.
2. You will then enter grams of carbohydrates to be eaten.

3

Select **Next.**

4

Select **Deliver Bolus.**

5

NOTE: The BG value entered appears on the Home screen and will remain here for 12 minutes.

There may be times you enter either a BG value or carbs. For example, you would enter:

- only grams of carbs if you finished your meal, but are eating additional carbs
- only a BG value if you tested two hours after your meal to see if you needed a correction bolus

NOTE: You will receive messages when you enter a BG below 3.9 mmol/L or above 13.9 mmol/L. These prompt you to take appropriate steps to treat as instructed by your healthcare professional.

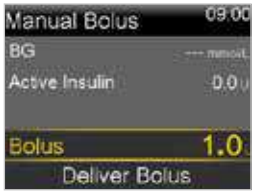
WARNING: Do not use the Bolus Wizard™ feature to calculate a bolus for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in the active insulin amount. Therefore, the Bolus Wizard™ feature could prompt you to deliver more insulin than needed. Too much insulin can cause hypoglycaemia. Consult with your healthcare professional for how long you need to wait after a manual injection of insulin before you can rely on the active insulin calculation made by the Bolus Wizard™ feature.

GIVING A MANUAL BOLUS

When giving a manual bolus, you simply enter the amount of bolus insulin that you think you need for the carbohydrates you are eating, or to lower your BG if it is high.

IMPORTANT: Make sure you are **NOT** connected to the pump while you are giving practise boluses.

1



Press ◎ to open the Menu.

Select Bolus. Select Manual Bolus.

Press ⌃ to 1.0 u and press ◎.

2

Select Deliver Bolus.

3

Confirmation that the Bolus has started will appear.

4

The Home screen will show the amount as it is being delivered.

5

Once the bolus has finished delivering, the pump will return to the normal Home screen.

NOTE: Notice there is Active Insulin now displayed. Active insulin is insulin from boluses that is still working to lower blood glucose levels. Each time you give a bolus, it is added to the active insulin amount. As time passes, the amount will decrease. You will learn more about active insulin during your training.

STOPPING A BOLUS THAT YOU HAVE STARTED

1

Press ◎ to open the Menu.

Select Stop Bolus.

2

Press ❯ and select Yes.

3

Review the Bolus Stopped screen to see how much of the bolus was delivered.

Select Done.

NOTE: The **Bolus Stopped** screen will show you how much of the bolus insulin was delivered before it was actually stopped

GETTING STARTED | GIVING BOLUSES

CHECKING LAST BOLUS

There may be times when you need to see the time or amount of the last bolus that was given. You can see the last bolus delivered in the Quick Status Screen. From the Home screen, press ◎, select **Status > Quick Status** and press ◎.

The (N) behind the Last bolus amount means the bolus was delivered as a normal bolus. There are additional ways to give a bolus which you will learn about later in your training.

CHECKING BOLUS HISTORY

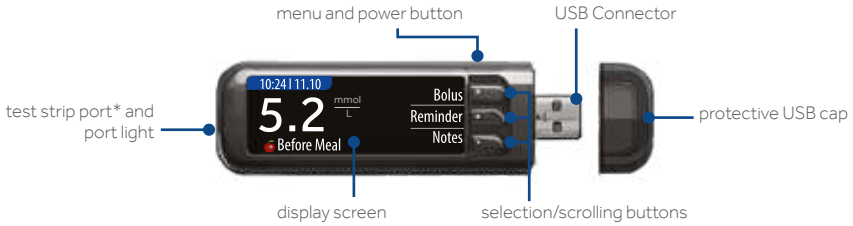
You can see the last several boluses you delivered in **Menu > Options > History > Daily History** and select the day you would like to review.

NOTE: You can press the ❮ and ❯ arrows to move from day to day. You can also see further details by pressing ◎ on any item listed.

SECTION 7: USING THE CONTOUR® NEXT LINK 2.4 METER

The CONTOUR® NEXT LINK 2.4 meter is the only meter able to communicate wirelessly with your MiniMed™ 670G insulin pump. This can make your diabetes management easier by automatically sending your BG meter readings over to the pump. This is especially helpful when using the Bolus Wizard™ and the Event Marker options.

Review the parts of your meter here:



CONTOUR® NEXT LINK 2.4 METER

CHARGING YOUR METER

Your meter has a permanent rechargeable battery. **It is important that you charge the meter prior to your in-person training.** To charge your meter:

1) Remove the cap to reveal the USB connector.
2) Plug the USB connector into the wall charger or a computer.
3) The computer must be ON and not in sleep, hibernate, or power save mode.
4) The meter will briefly display **Do Not Test – charging** and the test strip port light will flash. You cannot do a blood glucose test while the battery is charging.
5) When charging is complete, the test strip port light will turn off. You can then unplug the meter.

You will connect your pump and meter at your in-person training. For more information on using your meter, see the User Guide found in the meter box.

* The CONTOUR® NEXT LINK 2.4 meter only works with CONTOUR®NEXT glucose testing strips.

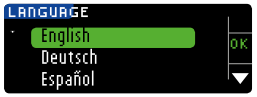
GETTING STARTED | USING THE CONTOUR® NEXT LINK 2.4 METER

CONNECTING THE PUMP AND METER

1

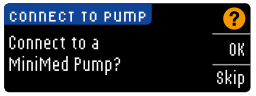
Hold the Menu button until the meter turns on

2



Scroll to your language and press **OK.** Press **OK** to confirm.

3

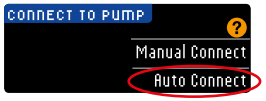


Press **OK** when asked **Connect to a MiniMed™ Pump?**

4

Press **OK**.

5



Press **Auto Connect.**

Put the meter down and pick up your pump.

6

Press ◎.

Select **Options.**

Select **Utilities.**

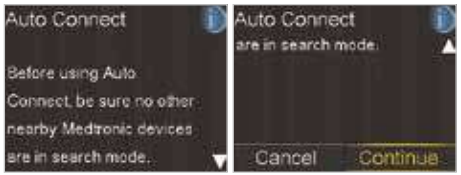
Select **Device Options.**

Select **Connect Device.**

7

Select **Auto Connect** on your pump.

8



Press ⌄.

Press ›.

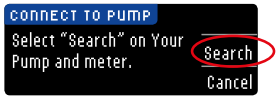
Select **Continue.**

Place the meter and pump next to each other.

9

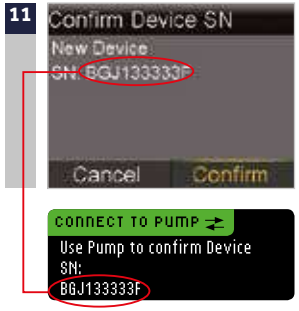
Select **Search** on your pump.

10



Select **Search** on your meter. The search may take up to 2 minutes.

11



Check to see that the Device SN (serial number) on the pump screen matches the Device SN on the meter.

If they match select **Confirm** on the pump.

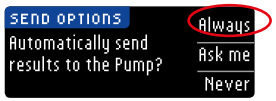
GETTING STARTED | USING THE CONTOUR® NEXT LINK 2.4 METER

12

Check to see that the SN on the back of the pump matches the SN now on the meter screen.

Select **Next** on the meter.

13



Press **Always.**

Then press **OK.**

14

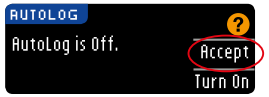
Select the desired **Date Format.**

15

Press **OK.**

If time and date are not correct you must change them on the pump.

16



Press **Accept** to select **AutoLog is off.**

AutoLog allows you to mark a test result as Before Meal, After Meal or Fasting.

17

Accept or **Change** High and Low Alerts.*

18

Accept or **Change** the Target Range.* Press **Accept** again to confirm.

19

Setup is now complete and you are ready use the meter.

* For more detail on this feature see your meter guide.

SECTION 8: INTRODUCTION TO CARELINK™ PERSONAL SOFTWARE

CareLink™ Personal software is a web-based program that is provided free of charge by Medtronic. This software allows you to upload the data from your pump and glucose meter to a secure website and organise it into easy-to-read reports and charts. These reports provide an overview of how insulin, food intake, and exercise affect your glucose control.

Reviewing the data on these reports allows you and your healthcare professional to identify glucose patterns and trends so you can determine if any pump settings need to be adjusted.

You will need to set up your CareLink™ Personal account so you can upload your pump and meter every two to three days after you start using them. You and your healthcare professional will be able to review your information and adjust your pump settings as needed.

If you are not currently using CareLink™ Personal software, you can follow these steps to set up your account:

1) Go to **https://carelink.minimed.eu**.
2) Select the **Sign Up Now** button.
3) Choose your country and language.
4) Read the Term of Use for CareLink™ Personal services.
5) Create a Username and Password and enter all required information.
6) Follow through the reCAPTCHA feature of enrolment on the bottom of the screen.
7) Check the box and click **Submit.**

You will learn more about using CareLink™ Personal software at your in-person training.

When uploading your information from your pump to CareLink™ Personal software, you will use the meter as the communication device from the pump to your computer

SECTION 9: CHANGING THE RESERVOIR AND INFUSION SET

The MiniMed™ 670G uses the same infusion sets and reservoirs as previous Medtronic Paradigm™ insulin pumps. If you were using a Medtronic pump, much of this process will be the same. However, please follow these steps as there are a few very important changes.

WARNING: Do not insert the reservoir until you have been instructed to do so by your healthcare professional and have received formal training with a certified product trainer. Attempting to use insulin in your pump before you have received training may result in the delivery of too little or too much insulin, which can cause hyperglycaemia or hypoglycaemia.

WARNING: Remember to always remove current reservoir and infusion set before rewinding the pump.

1

Wash your hands.

2

Press ◎.

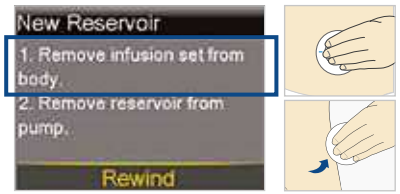
Select **Options.**

Select **Reservoir & Tubing.**

3

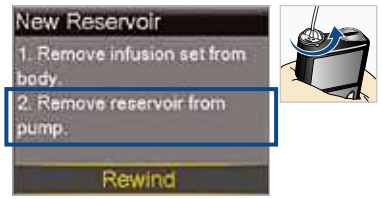
Select **New Reservoir.**

4



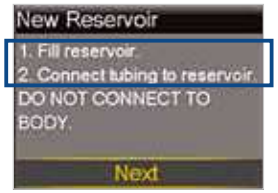
Remove the infusion set you have been using by loosening the adhesive and pulling away from body.

5



Remove the used reservoir from the pump.

6

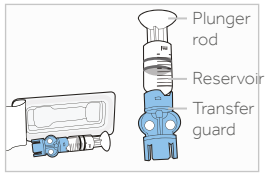


Select **Rewind**.

FILL RESERVOIR & CONNECT TO THE INFUSION SET TUBING

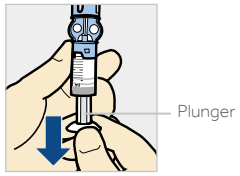
Follow the next steps to fill reservoir with insulin and connect to the infusion set tubing.

1



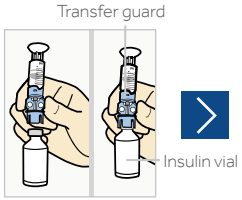
Remove from package. Make sure insulin vial is at room temperature to reduce the risk of air bubbles.

2



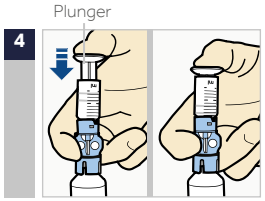
Pull plunger down to the amount that you plan to fill with insulin.

3



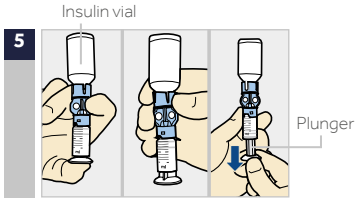
Wipe vial with alcohol. Place vial on table. Firmly press the blue transfer guard onto vial.

4



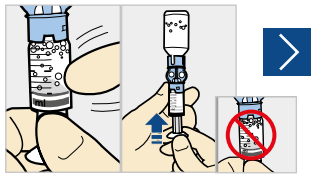
Push and hold plunger down.

5



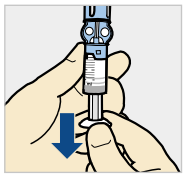
With your thumb still on the plunger, flip over so vial is on top. Release thumb and pull plunger down to fill with insulin.

6



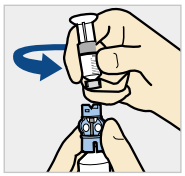
Tap the reservoir to move air bubbles to top of reservoir. Push plunger up to move air into vial.

7



If needed, pull plunger back down to amount of insulin needed for 2-3 days.

8



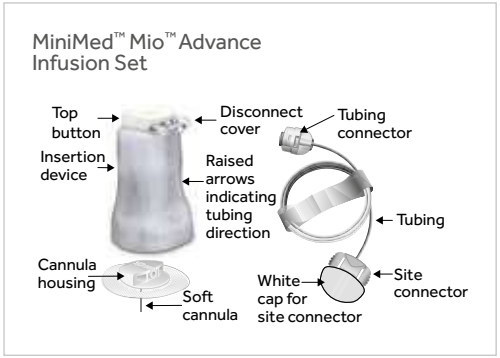
To avoid getting insulin on the top of the reservoir, turn vial over so it is upright. Hold transfer guard and turn reservoir counter-clockwise and remove from transfer guard.

WARNING: If insulin or any liquid gets inside the tubing connector, it can temporarily block the vents that allow the pump to properly fill the infusion set. This may result in the delivery of too little or too much insulin, which could cause hyperglycemia or hypoglycemia.

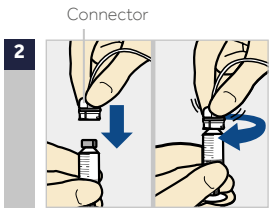
CONNECT RESERVOIR TO INFUSION SET

You will place the tubing connector onto the end of the infusion set to the filled reservoir.

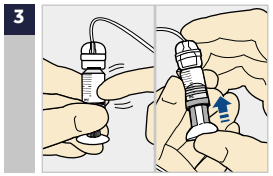
1



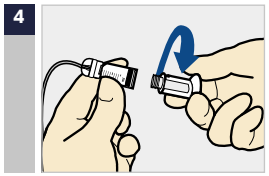
Remove infusion set from package. Remove the paper that holds the tubing together and unwind.



Gently push the tubing connector onto reservoir. Turn clockwise until locked. You will hear a click.



If you see air bubbles, tap reservoir to move them to top. Push plunger just a bit to move them into tubing.



Twist plunger counter-clockwise to loosen and remove.

THE BACKLIGHT MAY HAVE TURNED OFF

Press any button to turn the screen back on.

Press ⓞ to open the menu. If the pump is locked, you will need to unlock the pump after pressing ⓞ.

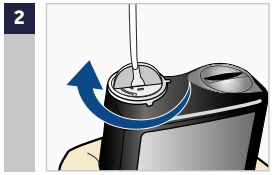
Select **Load Reservoir** from the menu.

Select **Next.**

PLACE RESERVOIR INTO PUMP

Now place the filled reservoir into the reservoir compartment of the pump.

Place reservoir into pump.



Turn clockwise, until you feel reservoir lock into place.

Select **Next**.

LOAD RESERVOIR AND FILL TUBING

Follow these steps to load the reservoir and fill the tubing.

Select **Load** and keep holding ⓞ.

When you see this screen, select **Next**.

Drops at end of tubing

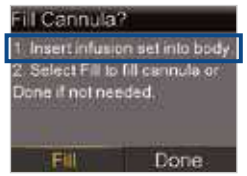
Select **Fill** and keep holding ⓞ until you see drops at the end of tubing, then let go.

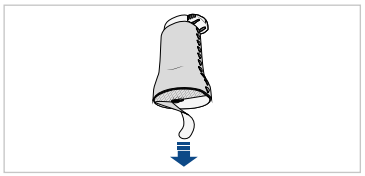
After you see drops, press ⟩ and select **Next**.

INSERT INFUSION SET

Next, follow the steps to insert the infusion set into your body.

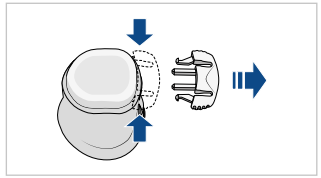
1





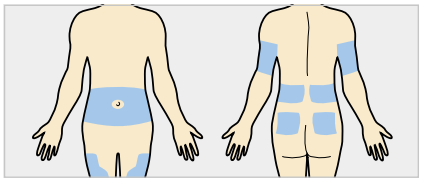
Remove the paper backing from the adhesive. Be careful not to touch the adhesive.

2



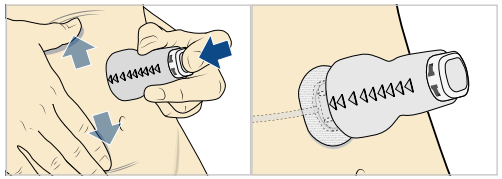
Remove the disconnect cover from the insertion device by gently squeezing the sides of the disconnect cover then pulling it away from the insertion device. Keep the disconnect cover for later use.

3



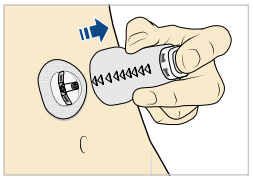
Choose an insertion site from the shaded areas shown here. Wipe with alcohol or other antiseptic.

4



Stretch the skin until smooth. Place the insertion device in the desired location on your skin. The raised arrows indicate the direction to connect the tubing. Press the top button completely down to insert the infusion set.

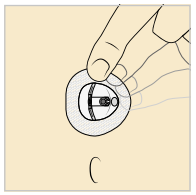
5



Gently and carefully remove the insertion device by pulling straight away from your body.

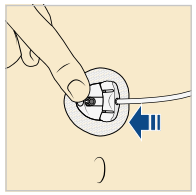
GETTING STARTED | CHANGING THE RESERVOIR AND INFUSION SET

6



Press the adhesive onto the skin with your finger. Replace the infusion set if the adhesive does not stick to the skin

7



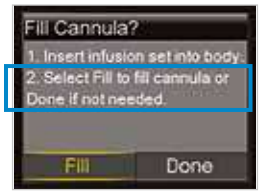
Gently hold the cannula housing steady with your finger. Then push the site connector straight into the cannula housing until you hear a click.

NOTE: Dispose of the insertion device in an appropriate sharps container and in accordance with your local laws.

FILL CANNULA

You will now fill the cannula, the little tube under your skin, with insulin.

1



Select **Fill**.

2

Select **Fill amount** and enter :
- 0.600 if using 6mm cannula
- 0.600 if using 9mm cannula

Then press ⊙.

NOTE: Your pump will remember the **Fill amount** that you used last. Always verify that the Fill amount is correct.

- If it is correct, press ⌄ to **Fill Now** and press ⊙.
- If it is incorrect, press ⊙. Change to correct amount and. Press ⊙. Then select **Fill Now**.

3

Select **Fill Now**.

4

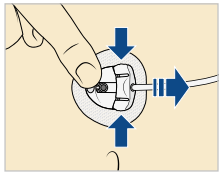
The Home screen displays the insulin as it fills the cannula.

NOTE: Select **Stop Filling** if you need to stop, for example, if you notice the **Total** amount is incorrect. This should rarely happen if you have verified the **Fill amount** on the previous screen.

YOUR INFUSION SET CHANGE IS NOW COMPLETE!

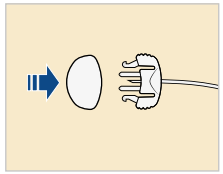
DISCONNECTING THE INFUSION SET FROM YOUR BODY

1



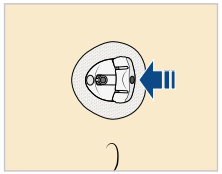
To disconnect, gently hold the cannula housing steady with your finger. Then squeeze the sides of the site connector and pull it out from the cannula housing

2



Put the white cap on the site connector.

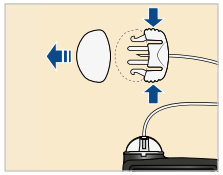
3



Put the disconnect cover on the cannula housing. Then push the cover into the cannula housing until you hear a click.

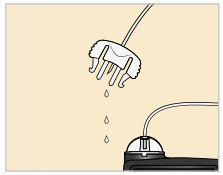
RECONNECTING THE INFUSION SET TO YOUR BODY

1



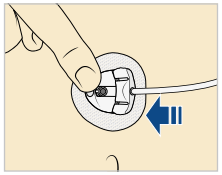
Remove the white cap from the site connector by squeezing the side of the site connector then pulling the white cap off.

2



Ensure there is no air in the tubing. ONLY if there is air in the tubing: Fill the tubing with insulin and watch for drops as instructed. Do not leave any air in the tubing.

3



Use your finger to gently hold the cannula housing steady. Push the site connector into the cannula housing until you hear a click.

SECTION 10: ALERTS AND ALARMS

ALERTS

An alert makes you aware of a situation that may need your attention. When an alert occurs, you should check to see what your pump is telling you. Examples of alerts include **Low reservoir** or **Low battery**.

ALARM

When an alarm occurs, something has been detected that is preventing insulin from being delivered. You are not getting insulin. **It is important that you address an alarm right away**. Examples of alarms are **Insulin flow blocked** and **Replace battery now**.

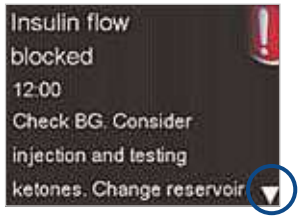
WHEN AN ALERT OR ALARM OCCURS:

	ALERT	ALARM
Notification Light	The red light on the pump will blink once followed by a pause, blink again followed by a pause. This sequence continues until the alert is cleared. The flashing pattern is shown here:	The red light on the pump will blink twice followed by a pause, blink twice again follwed by a pause. This sequence continues until the alarm is cleared. The flashing pattern is shown here:
Audio	Depending on your Audio Option settings, the pump emits a repeated alert tone, a continuous two-pulse vibration, or both.	Depending on your Audio Option settings, the pump emits a repeated alarm tone, a continuous three-pulse vibration, or both.
Display	The pump will display a notification with a yellow icon and instructions on what to do.	The pump will display a notification with a red icon and instructions on what to do.

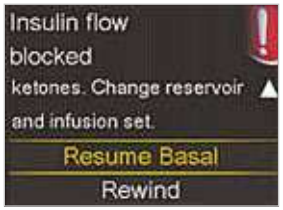
TO ADDRESS AND CLEAR THE ALERT OR ALARM:

1. Read the text on the screen to understand the alert or alarm and the steps that should be taken
2. Press ⌄.
3. Press ⊙ on the desired option.

Example of alarm:



Press ⌄



- Alert: the audio/vibration pattern repeats every 5 minutes or every 15 minutes (depending on the alert) until the alert is cleared.
- Alarm: the audio/vibration pattern repeats every minute for 10 minutes if the alarm is not cleared. **After 10 minutes, the alarm begins to siren**.

IMPORTANT: It is important that you are able to address an **Insulin flow blocked** alarm. This alarm means that insulin is not able to get through the tubing or cannula. If this alarm occurs, check your blood glucose and check to see if your infusion set has become dislodged or if your tubing is kinked.

- If you don't detect an issue and are unable to change your reservoir and infusion set right away, you might choose to select **Resume Basal**. If an Insulin flow blocked alarm occurs again, follow the steps on the screen. Select **Rewind** and change your reservoir and infusion set.
- If you detect an issue or if your reservoir has run out of insulin, follow the steps on the screen. Select **Rewind** to change your reservoir and infusion set.

You can call the Product helpline if you have questions about your pump, alerts or alarms.

SMARTGUARD™ TECHNOLOGY

CONTINUOUS GLUCOSE MONITORING – SMARTGUARD™ IN MANUAL MODE

SECTION 11: WELCOME TO CONTINUOUS GLUCOSE MONITORING (MANUAL MODE)

Continuous glucose monitoring (CGM) gives you a more complete picture of your glucose control than blood glucose monitoring alone. Using a sensor allows you to receive up to 288 sensor glucose readings per 24 hours, filling the gaps between your BG tests. CGM alerts notify you of high and low glucose values. Graphs and trend arrows show the speed and direction your glucose levels are moving.

The MiniMed™ 670G includes SmartGuard™ technology, our latest advancement in diabetes management. SmartGuard™ is pump technology that automatically adjusts insulin delivery based on sensor glucose values. SmartGuard™ can be used in two modes: Manual Mode or Auto Mode. In this section, you will learn about using CGM and SmartGuard™ low management in Manual Mode. You will learn about SmartGuard™ in Auto Mode, in the chapter **SMARTGUARD™ AUTO MODE.**

The first step in using CGM is understanding the items included in your CGM system.

YOUR CGM SYSTEM INCLUDES 3 KEY ITEMS:

1 TRANSMITTER*	Guardian™ Link 3 transmitter connects to the glucose sensor and sends glucose readings to your insulin pump.
2 GLUCOSE SENSOR	The Guardian™ Sensor 3 measures glucose levels in interstitial-fluid.
3 INSULIN PUMP	The MiniMed™ 670G insulin pump displays glucose readings.

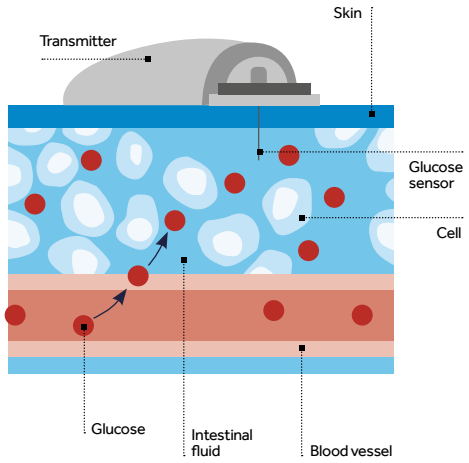
Other items include: One-press Serter, Oval tape, charger, and tester.

Always use the components that were sent with the MiniMed™ 670G insulin pump.

Drawings throughout this document are only generic representations of the system components.
* The transmitter must be within 1.8 meters (6 feet) of the insulin pump in order to communicate sensor readings.

SECTION 12: SENSOR GLUCOSE (SG) AND BLOOD GLUCOSE (BG)

Your **BG meter** measures glucose levels in your **blood**. The **glucose sensor** measures glucose in the fluid surrounding the cells of your tissue called **interstitial fluid**.



Glucose travels between these two areas (blood and interstitial fluid). Most of the time, it travels to your blood first, and then to your interstitial fluid. Because of how glucose moves, **your BG meter readings (BG) and sensor glucose readings (SG) will be close, but will rarely match exactly**. This difference is normal and should be expected.

When glucose levels are rising or falling quickly, you should expect to see an even larger difference between your BG meter readings and the SG readings.

Examples of times when this larger difference may occur include:

- After meals or taking a bolus of insulin
- During exercise
- When arrows appear on your pump screen, as explained in "Trends" on page 58.

WARNING: Sensor glucose (SG) is not the same as blood glucose. Your SG and BG readings will be close to one another, but will rarely match exactly.

Do not make treatment decisions, such as determining your insulin dose for meals, using the MiniMed™ 670G continuous glucose monitor (CGM) values, as they are not intended to be used to make such treatment decisions. The MiniMed™ 670G CGM does not replace a blood glucose meter.

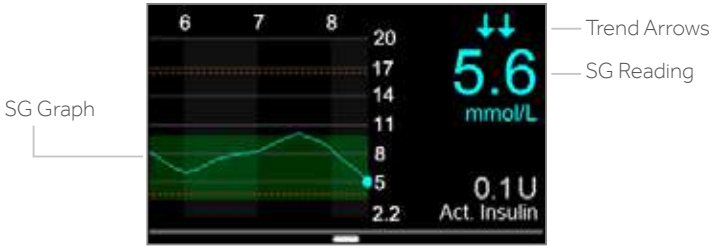
Always use the values from your blood glucose meter for treatment decisions. Blood glucose values may differ from sensor glucose values. Using the sensor glucose readings for treatment decisions could lead to high or low blood glucose.

SECTION 13: TRENDS

When using CGM, you will want to focus on sensor glucose (SG) trends. These trends give insight into the direction and the speed that your glucose is changing. The sensor graph and trend arrows are used to show your trend information.

NOTE: When using CGM, focus less on each individual glucose number and more on the direction and speed that your glucose is changing.

Example of Sensor information on the Home Screen



By looking at the sensor information above, you can see that your current glucose reading is 5.6 mmol/L. When you look at the graph, you can see that your SG is falling.

In this example, you see arrows above the number. The arrows indicate the rate that the glucose values are moving up or down:

↑ or ↓ - SG has been rising or falling by about 1-2 mmol/L over the last 20 minutes

↑↑ or ↓↓ - SG has been rising or falling by about 2-3 mmol/L over the last 20 minutes

↑↑↑ or ↓↓↓ - SG has been rising or falling by about 3 mmol/L or more over the last 20 minutes

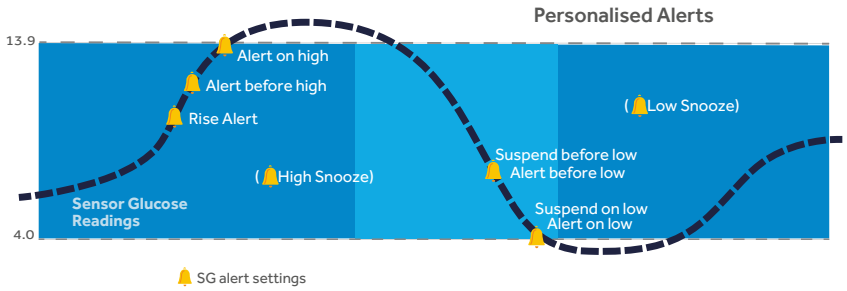
NOTE: You may be likely to notice your glucose trending up or down after eating, giving a bolus, or when exercising.

SECTION 14: PERSONALISED ALERTS

Your SmartGuard™ alert and suspend settings are most beneficial if they are personalised for your needs. Settings will be set during your CGM training. They can then be adjusted as you learn more from the information provided by your sensor while you wear it. Your healthcare professional will work with you to determine your initial settings and help with adjustments that need to be made.

Your alert settings in SmartGuard™ apply to both Manual Mode and Auto Mode. However, the SmartGuard™ Suspend settings apply only to Manual Mode. When the pump switches from Manual Mode into Auto Mode, the SmartGuard™ Suspend settings turn off. See chapter "SMARTGUARD™ AUTO MODE" for information on how Auto Mode works.

The graph below shows the different settings that can be personalised for both high and low SG readings.



NOTE: Please make sure the settings prescribed for you by your healthcare professional are available at the time of your in-person training.

TURNING THE SENSOR FEATURE ON

Before you set up any of the SmartGuard™ settings, you must first turn the sensor feature on.

Press ◎.

Select **Options.**

Select **Utilities.**

Select **Sensor Settings.**

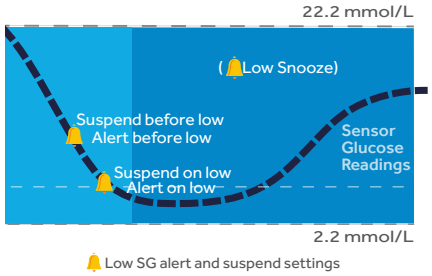
Select **Sensor** to turn feature **On.**

You can now access the SmartGuard™ features menu and enter the settings.

LOW SETTINGS

Let's now first look at the Low Setup. You can choose to be alerted before or when you have reached your low limit.

You can also use the SmartGuard™ Suspend features that can automatically suspend insulin if you are approaching or have reached your low limit. The low settings that can be chosen are shown here:



The first step is to set the low **(Lo)** limit. This can be set from 2.8 to 5.0 mmol/L (in 0.2 increments). This is the value on which the other low settings are based. You can think of this limit as the lowest SG value that you would like to avoid reaching.

Furthermore, if you do reach it, you would like to spend as little time at or below it as possible. You can set up to eight low limits for different periods of the day or night.

Alert	Reason	Steps to take
Alert before low	If **Suspend before low is on**, you will be alerted when insulin is suspended. If **Suspend before low is off**, you will be alerted when the sensor predicts you will reach your pre-set low limit in 30 minutes.	Do not treat your glucose based on SG. Confirm it using your BG meter. Treat if necessary based on instructions from your healthcare professional and continue to monitor.
Alert on low	Sensor glucose value is equal to or lower than your pre-set low limit.	

IMPORTANT: It In addition to **Alert Before low** and **Alert on low**, your system also has a fixed Low SG XX mmol/L (2.8mmol/L or below) alert. This fixed alert is factory set and cannot be changed or turned off.

You will receive this alert if your SG reaches or falls below 2.8 mmol/L.

This alert occurs in both Manual Mode and SmartGuard™ Auto Mode.

SmartGuard™ Suspend features	Impact on insulin delivery if suspend feature is turned on	Information displayed by the pump	
Suspend before low	Suspend before low is a low management feature of SmartGuard™. When Suspend before low is on, your pump will temporarily stop delivering insulin if the SG value is approaching your low limit. **This will keep you from getting additional insulin that would continue to lower your SG level.**	You will receive this alert message and need to check your BG. Insulin delivery will remain suspended after the alert is cleared.  If the alert is not cleared in 10 minutes, the pump will begin to siren.	After the Suspend before low or Suspend on low message is cleared and insulin delivery stops, the Home screen will display: ▪ **Suspended before low** or **Suspended on low** at the bottom of the screen in a red banner. ▪ a shaded area to represent the time when insulin has been suspended ▪ a flashing SmartGuard™ suspend icon. 
Suspend on low	Suspend on low is a low management feature of SmartGuard™. When Suspend on low is set to on, your pump will temporarily stop delivering insulin if your SG has reached or fallen below your low limit. **This keeps additional insulin from being delivered.**	You will receive this alarm message and need to check your BG. Insulin will remain suspended after the alarm is cleared.  If the Suspend on low alarm is not cleared after 10 minutes: ▪ The pump will begin to siren. ▪ This emergency message will appear on the pump screen. Insulin will remain suspended for a maximum of 2 hours.  	

NOTES:
- Only one suspend feature can be used during each time segment; you cannot turn both **Suspend before low** and **Suspend on low** on.
- If either Suspend on low or Suspend before low is turned on, Alert on low will automatically be set to on so you know that your glucose is at or below your low limit.

NOTE: Insulin delivery will not be suspended if you are more than 3.9 mmol/L above your low limit.

WARNING: Do not use the Suspend on low feature to prevent or treat low glucose. The Suspend on low feature is designed to suspend insulin delivery when you are unable to respond to the Suspend on low Alarm.

Always confirm your SG using your BG meter, and follow the instructions of your healthcare professional. Using Suspend on low to prevent or treat low glucose may result in prolonged hypogylcaemia.

RESUMING BASAL ALERT

In addition to suspending insulin delivery, the pump can also automatically resume delivery of basal insulin. If insulin has been suspended by either **Suspend before low** or **Suspend on low** feature, basal insulin delivery will automatically be resumed if either of these conditions apply:

- if SG values are above the low limit and are rising.
- after a maximum suspend time of 2 hours.

When the **Resume basal alert** is on, you will be alerted when basal insulin is automatically resumed because SG values are above the low limit and are rising. If the **Resume basal alert** is off, basal insulin will still be resumed, you just will not receive an alert.

If basal insulin is resumed after the maximum 2 hour suspend time, you will be alerted even if the **Resume basal alert** is off. It is important that you check your BG and ensure your glucose is at a safe level.

IMPORTANT: The maximum time insulin will be suspended is 2 hours. Additional information regarding SmartGuard low management suspend features can be found in **Appendix - SmartGuard™ suspend features on page 94.**

SETTING UP YOUR LOW SETTINGS

1

Press ⊙.

Select **Options.**

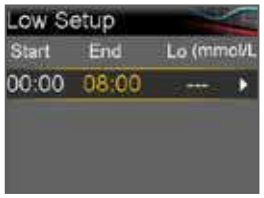
2

Select **SmartGuard.**

3

Select **Low Setup.**

4

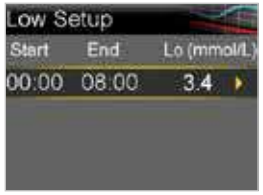


Press ⊙ on the time segment.

If you are setting only one time segment, press ⊙. If you are setting multiple time segments, press ⌃ to the end of the first segment, and press ⊙.

In this example, multiple time segments are set.

5



Press ⌃ or ⌄ to set **Lo** limit and press ⊙.

In this example, the limit is set to 3.4 mmol/L.

6

Press ⊙ to continue onto the next screen.

7

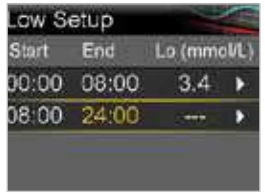
Select each feature you wish to turn on. If a feature is on, select it again to turn it back off.

*In this example, **Suspend before low** has been turned on.*

8

Once settings are selected, select **Next**.

9



Press on ⊙ the time segment.

Press ⌃ to set the **End** time of the second segment and press ⊙.

10

Press ⌃ or ⌄ to set the **Lo** limit and press ⊙.

Press ⊙ to continue onto the next screen.

11

Select each feature you wish to turn on. If a feature is on, you can select it again to turn it back off.

*In this example, **Alert on low** and **Suspend before low** have been turned on.*

Select **Next**.

12

Select **Done**.

13

Verify that settings are correct and select **Save.**

YOUR LOW SETUP IS NOW COMPLETE.

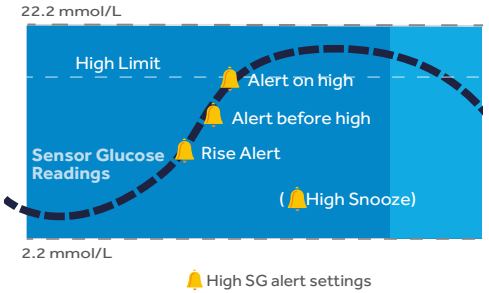
NOTE: Only one suspend feature can be used during each time segment; If either Suspend feature is turned on, **Alert on low** will automatically be turned on.

NOTE: You can set up to 8 different time segments throughout the day and night. Each time segment can have different low limits and low SG alerts that work best for you during that time of day or night.

HIGH SETTINGS

Let's now look at the High Setup. These settings allow you to be alerted if your sensor glucose:

- is rising rapidly **(Rise Alert)**
- is approaching your high limit **(Alert before high).**
- has reached your high limit **(Alert on high).**



The first step is to set the high **(Hi)** limit from 5.6 to 22.2 mmol/L (in 0.2 increments). This is the value on which other high SG settings are based. You can set up to eight high limits for different time segments throughout the day or night. The high **(Hi)** limit or limits that you enter also apply to SmartGuard™ Auto Mode.

NOTE: Your high limit is not the same as your glucose target. Your healthcare professional will help you determine the best setting so that you are alerted only when needed.

Alert	Reason	Steps to take
Alert before high	When **Alert before High** is on, you will receive an alert any time the SG is predicted to reach your high limit, making you aware of a potential high glucose level before it occurs. This can help you to evaluate what has occurred and take any necessary action as directed by your healthcare professional.	Do not treat your glucose based on SG. Confirm it using your BG meter. Treat if necessary based on instructions from your healthcare professional and continue to monitor.
Time before high	**Time before High** determines how many minutes before reaching the high limit that you will receive an **Alert before High.** This can be set from 5 to 30 minutes.	
Alert on high	When the **Alert on High** is on, you will receive an alert any time your SG reading reaches or exceeds your high limit. This allows you to evaluate and treat if necessary as instructed by your healthcare professional.	
Rise alert	The **Rise Alert** will notify you when your glucose is rising rapidly. This alert can help you understand how much your glucose levels are affected by meals or, for example, when forgetting to give a bolus. The **Rise Alert** can be set to alert if glucose is rising as follows: ↑ - SG is rising at a rate of 0.056 mmol/L per minute or more ↑↑ - SG is rising at a rate of 0.111 mmol/L per minute or more ↑↑↑ - SG is rising at a rate of 0.167 mmol/L per minute or more **Custom** - SG is rising at the rate that you set. This can be set from 0.050 to 0.275 mmol/L per minute	

SETTING UP YOUR HIGH SETTINGS

1

Press ⊙.
Select **Options.**

2

Select **SmartGuard.**

3

Select **High Setup.**

4

Press ⊙ on the time segment.

If you are setting only one time segment, press ⊙. If you are setting multiple time segments, press ⌃ to the end of the first segment, and press ⊙.

In this example, only one time segment is set.

5

Press ⌃ or ⌄ to set **Hi** limit and press ⊙.

In this example, the limit is set to 13.8 mmol/L.

6

Press ⊙ to continue onto the next screen.

7

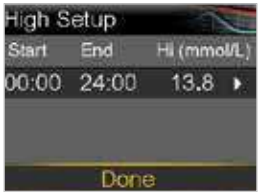
Select each feature you wish to turn on. If a feature is on, select it again to turn it back off.

8

Once settings are selected, select **Next.**

In this example, the Alert on high has been turned on.

9



Select **Done.**

10

Verify that settings are correct and select **Save.**

YOU HAVE NOW SET UP YOUR HIGH SG SETTINGS.

WARNING: Do not make treatment decisions, such as determining your insulin dose for meals, using the MiniMed™ 670G CGM values, as they are not intended to be used to make such treatment decisions. The MiniMed™ 670G system CGM does not replace a BG meter. Always use the values from your BG meter for treatment decisions. BG values may differ from SG values. Using the SG readings for treatment decisions could lead to high or low BG.

NOTE: You can set up to 8 different time segments throughout the day and night. Each time segment can have different high SG limits and high SG alerts that work best for you during that time of day or night.

SNOOZE

The **High Snooze** and **Low Snooze** features can be set for the amount of time that you want to wait to be reminded that an alert condition still exists.

Once a high or low alert is received and cleared, you will be alerted again only if the alert condition still exists after the snooze time you have set. The snooze time for your high SG alerts can be set from 5 minutes to 3 hours. The snooze time for your low SG alerts can be set from 5 minutes to 1 hour.

1

Press ⊙.

Select **Options.**

Select **SmartGuard.**

Select **Snooze.**

2

Select **High Snooze.**

Press ⌃ or ⌄ to set the desired time and press ⊙.

3

Select **Low Snooze.**

Press ⌃ or ⌄ to set the desired time and press ⊙.

Verify that the settings are correct and select **Save.**

NOTES: Additional details about the SmartGuard™ suspend features can be found in the **Appendix on page 94.** See the **MiniMed™ 670G System User Guide** for a complete explanation of the technical and operational aspects of your pump.

The SmartGuard ™ **Suspend on low** and SmartGuard ™ **Suspend before low** features are automatically turned off when SmartGuard ™ Auto Mode becomes active.

CHANGE HIGH AND LOW SETTINGS

As you use CGM, you and your healthcare professional may find that changes need to be made to the existing settings.

To make these changes, press ⊙ > **Options > SmartGuard > High Setup or Low Setup.**

ALERT SILENCE FEATURE

The **Alert Silence** feature allows you to silence sensor alerts for a set period of time.

If a sensor alert occurs when the **Alert Silence** feature is on, a message is displayed to notify you that a sensor alert occurred and the notification light flashes, but there is no beep or vibration.

You can go to Alarm History in the History menu to see which sensor alert or alerts occurred.

If you have not cleared the message when the **Alert Silence** period ends, the pump will beep and/or vibrate until cleared.

To set Alert Silence, press ⊙ > **Audio Options > Alert Silence Options > Select the alert > Duration > set the time** and press ⊙ > **Begin.**

Alerts will automatically return to audio and/or vibrate at the end of the duration that you set.

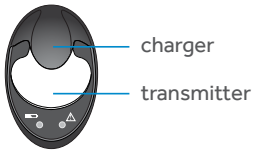
The Low SG XX mmol/L (2.8 mmol/L or below) and Alert on Low alerts cannot be silenced.

SECTION 15: CONNECTING YOUR PUMP AND TRANSMITTER

Before using the sensor for the first time, you will need to wirelessly connect the pump and transmitter so that they can communicate with each other. This allows the sensor information to be displayed on the pump screen.

TO WIRELESSLY CONNECT YOUR PUMP AND TRANSMITTER:

1



Attach your transmitter to the charger and make sure it is fully charged.

For more information on charging the transmitter, see Charging and storing the Guardian™ Link 3 transmitter on page 92.

2

Press ⊙.
Select **Options.**
Select **Utilities.**
Select **Device Options.**
Select **Connect Device.**

Only one transmitter can be connected to the pump at one time. When you need to connect a new transmitter, you must first select **Manage Devices,** select the old transmitter number and select **Delete.**

3

Select **Auto Connect.**

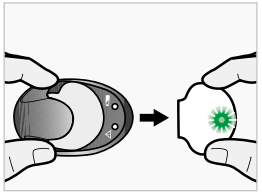
Steps for Manual Connect can be found in the *MiniMed™ 670G System User Guide.*

4

5

Press ⌄. Select **Continue.**

6



Make sure the transmitter is on the charger before proceeding. Now start the search processes on both devices.

Remove transmitter from charger. If green light on transmitter does not flash, reconnect to charger until fully charged.

7

Immediately select **Search** on the pump.

The search can take up to 2 minutes.

8

When the device is found, confirm that the serial number (SN) shown on the pump is the serial number on the back of your transmitter.

If you receive the **No devices found** message, place the transmitter back onto the charger. Then remove the transmitter from the charger and immediately select **Retry** on the pump.

If SN matches, select **Confirm.**

THE CONNECTION IS NOW COMPLETE.

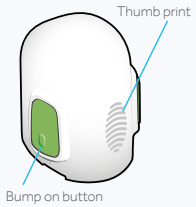
The transmitter serial number will be displayed on the pump screen.

NOTE: These steps only need to be done as a first time set-up. You will not have to repeat them with each new sensor you start.

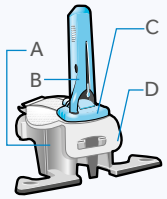
SECTION 16: INSERTING AND STARTING THE SENSOR*

Before you insert your sensor, gather all of your supplies:

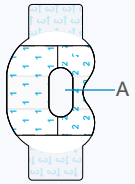
GUARDIAN™ SENSOR 3 SYSTEM COMPONENTS*



One-press Serter



Guardian™ Sensor 3 & Plastic Pedestal
A – Pedestal
B – Needle Housing
C – Sensor
D – Clear Liner



Sensor Oval tape
A – Pre-cut Hole

Guardian™ Link 3 Transmitter

One-press Serter is required in order to insert the sensor properly.

Guardian™ Sensor 3 is individually packaged and comes attached to a plastic pedestal which is necessary for proper loading into the serter.

Sensor Oval tape is required to keep the sensor securely in place.

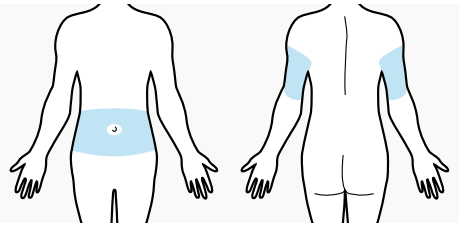
Guardian™ Link 3 transmitter is connected after the sensor is inserted and covered with the overtape.

*For more details on the Guardian™ Sensor 3 components, consult the user guides for Guardian™ Link 3 transmitter, Guardian™ Sensor 3, and One-press Serter.

SELECTING YOUR SITE

Your sensor can be inserted in any of the shaded areas shown here*.
The sensor insertion site should be at least:

- 5 centimetres (2 inches) from your navel
- 2.5 centimetres (1 inch) from your insulin pump infusion site
- 2.5 centimetres (1 inch) from any manual insulin injection site



NOTE: Assistance may be needed for sensor insertion into the back of the upper arm. Some users found it difficult to insert the sensor into the arm by themselves

FOR BEST SENSOR GLUCOSE PERFORMANCE, AVOID SITES:

- Where clothing may rub or constrict (for example, your beltline).
- Where your body naturally bends a great deal which may cause the sensor to pull out.
- That are scarred or have hardened tissue or stretch marks.
- Where there is a great deal of motion or friction.

PREPARING YOUR SITE

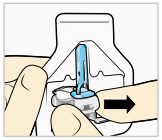
- Wash your hands with soap and water.
- Do not use IV prep or the sensor may not work properly.

*For more information, please refer to the Guardian™ Sensor 3 Instruction for Use.

INSERTING YOUR SENSOR

1 **Open the sensor package.** Pull the corner of the paper covering to open the sensor package.

2a **Hold the sensor by the plastic pedestal.** Remove the sensor with attached pedestal by holding the pedestal only.Place the sensor and pedestal on a clean, flat surface (such as a table).



2b **Tuck adhesive tab.** Make sure that the sensor's adhesive tab is tucked under the sensor connector and snaps.

Correct Incorrect

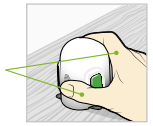
3

NOTE: Refer to the illustrations for correct and incorrect ways to hold serter for loading.

Correct Incorrect

Load sensor into serter. Grip the serter exactly as shown **with your thumb placed on the thumb print on the serter. Do not hold the side buttons.** Push the serter down onto the pedestal until the base of the serter sits flat on the table.

Fingers are NOT holding the side buttons.

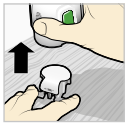


4 **Detach serter from pedestal.** To detach the serter from the pedestal, grip the serter as shown with thumb placed on thumb print on the serter. With the other hand, place two fingers on the pedestal arms, and slowly pull the serter straight up.

Note: Make sure that the pedestal is firmly on the table before pulling the serter away.

Caution: Do not detach the pedestal from the serter in mid-air as this may damage the sensor.

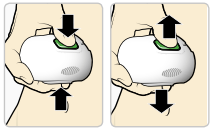
Note: The thumb print on the serter can be used for either left-handed or right-handed insertion.



Note: The sensor remains inside the serter after removing the pedestal. The arrow on both sides of serter indicate location of the sensor needle.

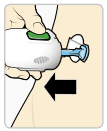
5a **Place serter on body.** Hold the serter steadily against your cleaned insertion site, without pushing the serter too deeply into the skin.

5b **Insert sensor.** Press and release the **bump** on both buttons at the same time. Do not pull the serter away from your body just yet.



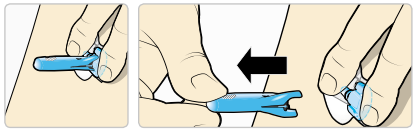
5c **Hold serter against body.** Continue to hold the serter against your body for at least five seconds to allow the adhesive to stick to your skin.

5d **Remove serter from body.** Slowly pull the serter away from the skin, making sure the buttons are not pressed.



NOTE: Failing to hold the serter securely flat against the body may allow the serter to spring back after pressing the buttons and result in improper insertion of the sensor.

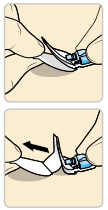
6 **Remove needle housing.**
Gently hold the base of the sensor against the skin with one hand. With other hand, hold the needle housing at the top and slowly pull it straight away from the sensor. Dispose of the needle housing in a sharps container.



Note: Apply additional liquid adhesive. You may use an optional adhesive such as Skin Tac™ under the adhesive pad prior to removing the liner. Allow it to dry.

IMPORTANT: All sensor tapes and adhesives stick best when you apply pressure after putting them on your skin. Doing so helps the sensor stay securely placed and fully inserted.

7a **Remove adhesive pad liner.** Hold the sensor in place and gently remove the adhesive liner from under the adhesive pad. Do not remove the liner on the rectangular adhesive tab yet.



7b **Press entire adhesive pad to skin.**
Firmly press the adhesive against the skin and smooth the entire adhesive pad so that it sticks to your skin.

Note: The Guardian™ Sensor 3 adhesive is sensitive to pressure. Continue applying pressure on the adhesive to ensure that the sensor remains insertedin the skin for 7 days of wear.

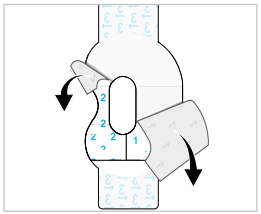
8a **Untuck adhesive tab.**
Untuck the adhesive tab from under the sensor connector.

8b **Straighten adhesive tab.**
Straighten the adhesive tab so that it lies flat against your skin, but do not remove the adhesive liner yet.

TAPING THE SENSOR

Before you connect the transmitter to your sensor, it is very important that you properly secure the sensor against your skin using the provided tape.

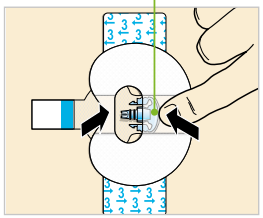
1



Remove liner 1 and liner 2.

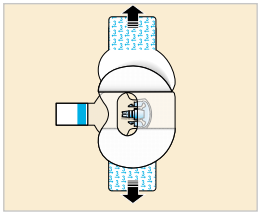
2

Wide part of tape covers half of sensor base.



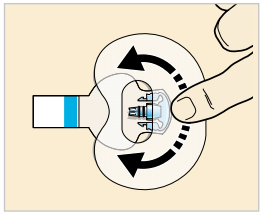
Apply the tape as, shown and press it down firmly.

3



Remove liner 3 from each side.

4

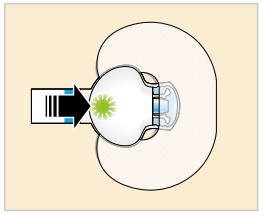


Smooth the tape.

IMPORTANT: All Guardian™ Sensor 3 tapes and adhesives stick best when you continue to apply pressure after putting them on your skin. Doing so helps the sensor stay securely placed and fully inserted.

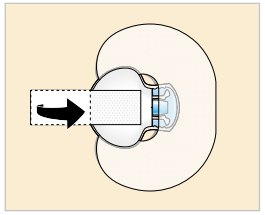
CONNECTING YOUR TRANSMITTER

1



Connect the transmitter to the sensor.

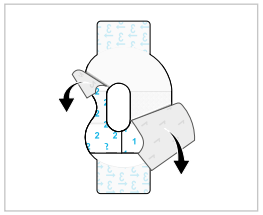
2



Remove the liner from the adhesive tab. Cover the transmitter with the adhesive tab. Do not pull the tab too tightly.

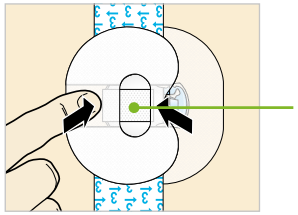
NOTE: Wait for the green light on the transmitter to flash. If the green light does not flash, refer to the Troubleshooting section of your transmitter user guide.

3



To apply the 2nd tape, remove liner 1 and liner 2.

4

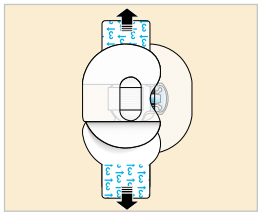


Wide part of tape covers end of transmitter and skin.

Rotate the 2nd tape and place the tape over the transmitter. Press it down firmly.

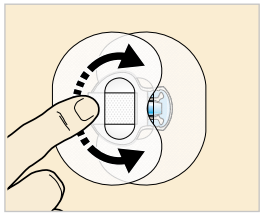
IMPORTANT: If you do not see a green light flashing on the transmitter after it is connected to the sensor, disconnect the transmitter and place it back on the charger to ensure that it is fully charged. Then reconnect the transmitter to the sensor.

5



Remove liner 3 from each side.

6



Smooth the tape.

It is very helpful to remember the order of these four steps when changing your sensor:

1 **Insert** the sensor.
2 **Tape** the sensor in place.
3 **Connect** the transmitter.
4 **Apply** a second Oval tape.

IMPORTANT TO KNOW: Check your sensor site regularly. Apply additional tape if the sensor and transmitter are not secure.

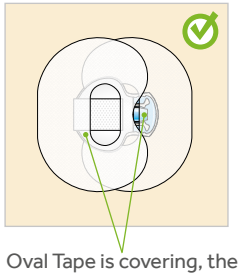
When your transmitter is connected to your sensor they form a water-tight seal to a depth of 2.4 meters (8 feet) for up to 30 minutes. You can shower and swim without removing them.

Properly applying the Oval tape is key to ensuring your success with the sensor. Due to the sensor's small size and flexible nature, the Oval tape helps to secure it from body motion or physical activity that can cause it to be pulled out.

CHECKING FOR PROPER TAPE APPLICATION

It is important to check your sensor site periodically to make sure the sensor is still secure and has not been pulled out. If the sensor has been pulled out, do not try to push it back into place. A new sensor may need to be inserted.

Correct



Oval Tape is covering, the sensor, skin around sensor, and back of transmitter.

STARTING THE SENSOR

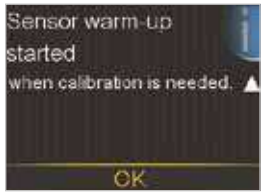
Once you have inserted the sensor and connected the transmitter, the pump and transmitter will begin to communicate.

Make sure your pump is on the Home screen so that the **Start New Sensor** message will be displayed when the sensor is ready to be started. *This typically takes less than a minute, but may take up to 10 minutes.*

1

Select **Start New Sensor**.

2



The **Sensor warm-up started** message will appear.

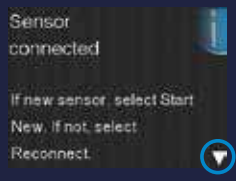
Press ⌄ and then ◎ to clear.

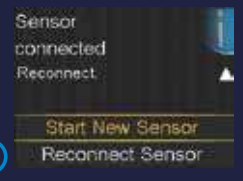
3

Warm up... will appear on the Home screen until sensor is ready for the first calibration.

*If 15 minutes have passed and the Warm up bar does not appear or it looks like it is not progressing, look into the **Quick Status** screen. If you see the time of **Next cal** listed, the sensor is in Warm up.*

NOTE: The next time you connect a transmitter, you will see these screens. Select **Start New Sensor** if you have just inserted a new sensor. Select **Reconnect Sensor** if you have only disconnected and reconnected the transmitter.





SECTION 17: CALIBRATING

Your CGM system requires blood glucose meter readings in order to provide you with SG readings. These BG meter readings are entered into the pump and are for sensor **calibrations.** Calibration is essential for optimal CGM performance. CGM does not eliminate the need for BG meter tests.

To calibrate, you must use a *fingerstick* blood sample to test your BG on your meter, and then enter that value into your pump. The pump will accept BG meter readings between 2.2 mmol/L to 22.2 mmol/L.

After inserting a new sensor, a calibration is needed:

- Within **2 hours** after you connect the transmitter to your sensor and start the **Warm up** period. Your pump will notify you with a **Calibrate now** alert when it is ready for its first calibration.
- Again within **6 hours** (first day of inserting sensor only)
- Again every **12 hours**.
- When the system detects that a calibration is needed for optimal performance.

WARNING: Always use the fingertip for blood samples used for calibrating the sensor while in SmartGuard™ Auto Mode. The fingertip was the only site studied for use with Auto Mode. Do not use blood samples from the palm to calibrate the sensor as this site was not studied for use with Auto Mode and the performance of the system is not known.

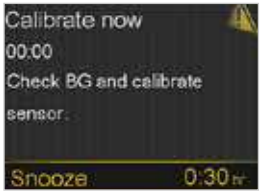
After the first day, the minimum number of calibrations required is one every 12 hours, but you may receive a **Calibrate now** alert if one is needed sooner. Calibrating three to four times per day is optimal. It is best to calibrate when your glucose is not changing rapidly.

For example, before meals is often a good time to calibrate. Calibrating when there are ↑↑, ↓↓, ↑↑↑, ↓↓↓ may decrease sensor accuracy.

IMPORTANT: BG readings should be entered immediately.
Avoid using an old BG or reusing BG readings from previous calibrations.
Wait at least 15 minutes in between calibration attempts.

NOTE: Calibrations are necessary in order to continue to receive SG readings, alerts, and alarms.

Within two hours after starting a new sensor, or any other time a calibration is necessary, you will receive a **Calibrate now** alert. If you cannot calibrate right away (for example, if you are driving or in a meeting), you can set the **Snooze** to remind you to calibrate in the time that you set. You can change the time if you desire.



If you plan to test your BG and calibrate right away, simply select **Snooze.**

Once you select **Snooze,** Calibration required will appear on the Home screen until you enter a BG to calibrate.

You will not receive SG readings or sensor alerts and alarms until a calibration BG is entered.

REMEMBER: Calibrations are necessary in order to continue to receive sensor glucose readings, alerts and alarms.

CALIBRATING THE SENSOR

There are several different ways that you can enter a BG reading to calibrate the sensor.

CALIBRATING BY USING THE CONTOUR® NEXT LINK 2.4 METER

When you use the compatible Ascensia meter, the meter value automatically appears on the BG Meter screen.

1

Select **Yes** to confirm the BG meter reading.

If you do not believe the meter result is accurate, do not confirm now. Select **No**, wash your hands, and re-test your BG.

2

Select **Calibrate Sensor** to calibrate using the BG value.

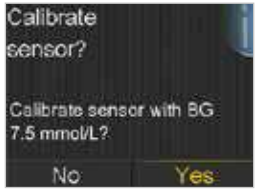
Select **Done** if you wish to do neither.

CALIBRATE THROUGH THE BOLUS WIZARD™ FEATURE

1

In the Bolus Wizard:
Select Deliver Bolus.

2



Press ⟩ and select **Yes** to calibrate sensor.

You can also calibrate through "Enter BG" on the menu, the Sensor Settings and Event Markers menu. For complete instructions, see the *MiniMed™ 670G System User Guide*.

Once you have entered a calibration BG, the Home screen will show you that the system is calibrating.

You will start seeing SG readings again within five minutes.

WARNING: If you notice a large difference between your BG meter reading and SG readings, wash your hands and do another BG fingerstick test to help ensure a more accurate reading. Check the sensor site to ensure the sensor overtape is still holding the sensor in place. If it is not, you will need to remove and insert a new sensor.

You can use the **Calibration Reminder** to give you notice before the next calibration is necessary.

This can help ensure that you calibrate 3-4 times a day. The **Calibration Reminder** defaults to On with a reminder time of 1:00 hour and you can change it by going to the Reminders menu option.

SECTION 18: READING THE SENSOR DISPLAY

Once the sensor has started giving you SG readings, the Home screen will display your readings in a way that is similar to the example shown below.

NOTE: This is the sensor display when your pump is in Manual Mode. The display is different when your pump is in SmartGuard™ Auto Mode. See chapter **SmartGuard™ Auto Mode** for information about Auto Mode display.

STATUS ICONS

In addition to the pump icons, you will see additional sensor icons when using CGM.

Connection: The connection icon appears green when the Sensor feature is on and your transmitter is successfully communicating with your pump. The connection icon appears with a red cross when the Sensor feature is turned on, but the transmitter is not connected, or communication with your pump has been lost.

Calibration: Shows the approximate time left until your next sensor calibration is due. Appears only when the Sensor feature is turned on. The colour and the circle around the icon indicate the status. When your sensor is fully calibrated, the icon has a solid green circle around it. As the time for your next sensor calibration approaches, the green circle around the icon becomes smaller, and the colour of the icon changes. When the icon turns red, a sensor calibration is required. If the time until your next sensor calibration is unavailable, the icon has a solid blue circle around a question mark. When the sensor is not ready for a calibration, the circle shows three dashes.

Audio icon: If Alert Silence is on: audio  , vibrate  , or audio and vibrate  .

SMARTGUARD™ SUSPEND ICON

During any time segment when either SmartGuard™ **Suspend before low** or SmartGuard™ **Suspend on low** is set to On, you will see the SmartGuard™ suspend icon on the Home screen.

Suspend before low or **Suspend on low** is on and ready. If either suspend feature becomes active, the icon will flash while insulin delivery is stopped.

Suspend before low or **Suspend on low** is on but is unavailable. This can be due to a recent suspend event or when no SG values are available.

SENSOR STATUS

You can go to the Sensor status menu to see, for example, when your next calibration is due, time left on your sensor, and battery life remaining on your transmitter.

From the Home screen, press ⊙.

Select **Status.**

Select **Sensor.**

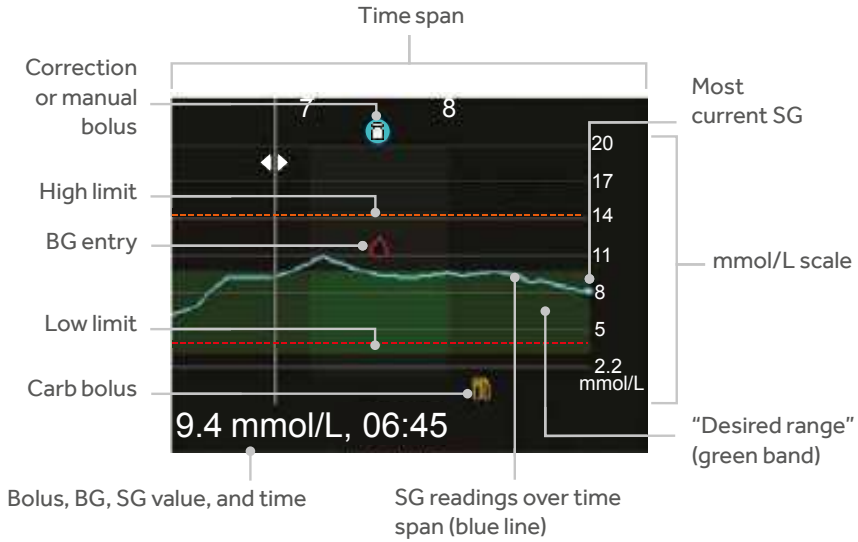
You will also see additional sensor status information in **Notifications, Quick Status,** and **Settings Review** screens.

SENSOR GRAPH

A graph that shows the last 3 hours of SG readings is displayed on the Home screen. Your high glucose limit entered in your sensor settings will be shown in orange, and your low glucose limit will be shown in red.

In addition to the 3-hour graph, you can also view 6-hour, 12-hour, and 24-hour glucose trend graphs.

NOTE: One, two, or three trend arrows may sometimes appear above the SG reading. These give you insight on the speed and direction that your SG is moving. See "Trends" on page 58 to review these arrows.



The graph shows a range of SG values from 2.2 mmol/L to 22.2 mmol/L. The green band across the screen represents an SG range from 3.9 mmol/L to 10 mmol/L. The blue line shows your actual SG values over the time span. At the right end of the blue line is a blue dot representing the most current SG value.

Details about correction bolus, BG entry, and meal (carb) bolus are shown on the graph. To locate details for an icon, look for the icon on the graph, and press ⟨ or ⟩ to scroll to that icon. The details for that icon are located along the bottom of the screen. Icons shown on the graph are:

– indicates either a correction bolus or manual bolus

– indicates a BG entered either manually or using a meter

– indicates a bolus that includes a carb entry; it displays for a carb only or a carb plus correction bolus

Press ⟨ or ⟩ to cycle through the time span. The SG values and times, BG readings and times, and Bolus amounts display along the bottom of the screen.

Press ⌃ or ⌄ to change the time span shown on the graph. To access these graphs, press ⊟ from the Home screen.

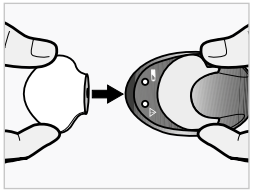
SECTION 19: OTHER SENSOR ALERTS

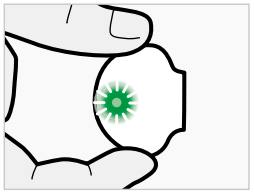
We discussed personalised alerts earlier in Section 14. There are other sensor alerts that you will receive as well. The most common alerts that you can expect to receive when using CGM can be found in the table below.

Alert	Reason	Steps to take
Calibrate now	A calibration is needed in order to receive SG readings.	Enter BG value into your pump to calibrate.
Lost sensor signal	Communication between pump and transmitter has been lost for 30 minutes during or after warm-up.	Check that the sensor is still inserted in the skin and the transmitter and sensor are still connected. Move your pump closer to your transmitter.
Calibration not accepted	Your system was unable to use the BG meter readings you entered to calibrate your sensor.	In 15 minutes, your pump will prompt you to enter a new BG meter reading for calibration. Wash your hands and dry thoroughly before checking BG.
BG not received	The transmitter was unable to receive the calibration BG reading from the pump.	Move your pump closer to your transmitter and select OK. The pump will try sending the BG again.
Sensor expired	The sensor has reached the end of its useful life.	Remove the sensor and follow the instructions for inserting and starting a new sensor.
Sensor updating	The sensor is updating.	Do not calibrate unless notified. This could take up to 3 hours.
Change sensor	You have received two Calibration not accepted alerts in a row.	Remove the sensor and follow the instructions for inserting and starting a new sensor.
Cannot find sensor signal	The pump has not received a signal from the transmitter.	Disconnect and reconnect your transmitter and sensor and select OK.

For a complete list of Alerts and Alarms, refer to the MiniMed™ 670G system User Guide.

CHARGING AND STORING THE GUARDIAN™ LINK 3 TRANSMITTER





Charge the transmitter before each use. When the transmitter is charging, a green light flashes on the charger. When charging is complete, the green light on the charger stays on, without flashing, for 15 to 20 seconds and then turn off. You will need to charge the transmitter after each sensor use. A fully charged transmitter can be used for a maximum of seven days without recharging. It can take up to two hours to fully recharge.

When you remove the transmitter from the charger, a green light should flash on the transmitter. This indicates that it has enough battery power to be connected to the sensor. If you do not see the green flashing light on the transmitter place it back on the charger until it is fully charged.

Store the transmitter, charger, and test plug in a clean, dry location at room temperature. Although not required, you may store the transmitter on the charger.

CAUTION: The transmitter must be charged every 60 days. Do not store the transmitter on the charger for more than 60 days. Otherwise, the transmitter battery will be permanently damaged. Disconnect and reconnect to the charger to re-charge again before use.

If you connect transmitter to charger and you see no lights on the charger: Replace the battery in the charger. If there are still no lights on the charger after replacing batteries, the transmitter pins may be damaged. Contact your local representative.

While charging your transmitter you see a flashing red light on the charger: Replace the battery in the charger.

While charging your transmitter you see a mix of short and long flashing red lights on the charger: Replace the battery in the charger and fully charge the transmitter.

Refer to your Guardian™ Link 3 transmitter and charger user guides for more information.

TRAVELLING BY AIR

If you wear a CGM device, it is safe for use on commercial airlines.

If questioned by airline personnel about the use of your device, please show them your Medical emergency card. If they still request that you turn off your CGM device, you must comply.

The transmitter cannot be turned off. It can be put on Airplane Mode.

If you need to temporarily stop wireless communication during the flight:

Press ⊙.

Select **Options.**

Select **Utilities.**

Select **Airplane Mode.**

Select **Airplane Mode** to turn **On.**

Select **Save.**

The transmitter continues to measure glucose levels when in Airplane Mode.

To resume wireless communication:

Press ⊙.

Select **Options.**

Select **Utilities.**

Select **Airplane Mode.**

Select **Airplane Mode** to turn **Off.**

Select **Save.**

When Airplane Mode is turned off and communication resumes, the transmitter will send up to 10 hours of sensor data to your pump.

If Airplane Mode was on for **fewer than six hours:**

1) Wait 15 minutes for sensor data to appear on pump screen.

If Airplane Mode was on for **more than six hours:**

1) Disconnect transmitter from sensor and then reconnect it.

2) Select Reconnect Sensor when it appears on the pump screen to begin sensor warm-up.

3) The sensor data (up to 10 hours) appears on the pump.

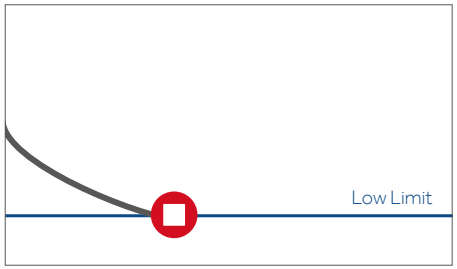
4) You will be asked to calibrate in up to 2 hours to resume sensor readings.

IMPORTANT: It is important to be extra attentive to monitoring your glucose levels while traveling. Always be prepared to respond to changes in glucose if needed.

The images below show additional detail about using the SmartGuard™ Suspend features of the MiniMed™ 670G system.

Suspend on low event:

1



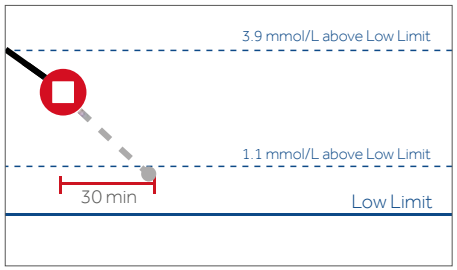
If sensor glucose (SG) reaches your low limit, insulin delivery will be stopped.

You will always receive a message and alarm when this occurs.

You will have 10 minutes to respond before the pump begins to siren and emergency message appears.

Suspend before low event:

2



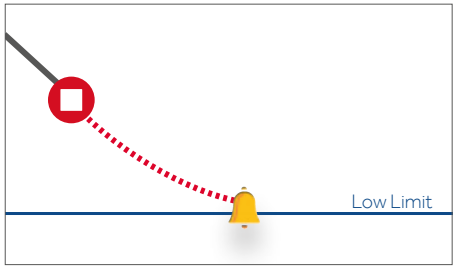
To help keep SG from reaching your low limit, insulin delivery will be stopped if SG:

- is at or within 3.9 mmol/L above the low limit
- It is predicted that your SG will approach the low limit in 30 minutes.

If **Alert before low** is on, you will receive an alert when insulin is suspended.

Alert on low during a Suspend before low event:

3



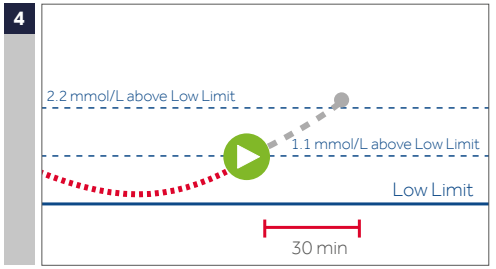
If insulin delivery has stopped due to **Suspend before low**, SG may still reach your low limit.

You will always be alerted when this occurs.

You will have 10 minutes to respond before the pump begins to siren and emergency message appears.

Automatic basal resume based on SG value:

4



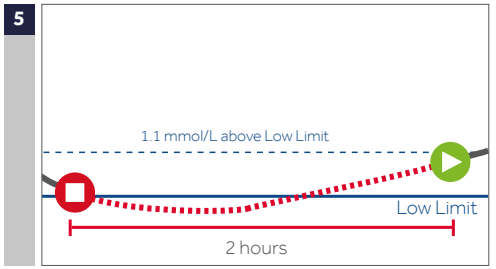
During **Suspend before low** or **Suspend on low**, basal insulin will automatically resume if:

- SG is above the low limit and trending upward
- insulin has been suspended by sensor for at least 30 minutes

If **Resume basal alert** is on, you will receive an alert when this occurs. Remember you can manually resume basal insulin at any time.

Automatic basal resume due to 2 hour maximum suspend:

5

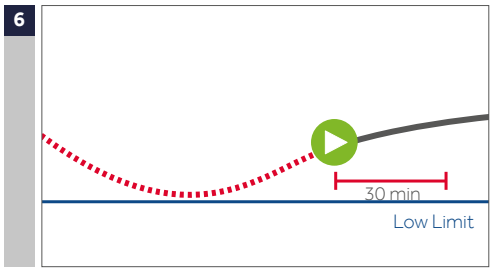


During either **Suspend before low** or **Suspend on low**, if basal insulin is not resumed due to SG values, it will automatically resume after 2 hours.

You will always receive an alert when you reach the 2 hour maximum suspend time, even if the **Resume basal alert** is set to off. Remember you can manually resume basal insulin at any time.

SmartGuard™ suspend unavailable:

6



Once basal insulin resumes following either a **Suspend before low** or a **Suspend on low** event, there will be a period of time when the SmartGuard™ suspend features are unavailable.

SmartGuard™ suspend features are most often not available for 30 minutes if you respond to the suspend alarm. However it can be up to 4 hours. See the User Guide for more specific information about this unavailable period.

SMARTGUARD™ AUTO MODE

WELCOME TO SMARTGUARD™ AUTO MODE

In this chapter of **Getting Started with MiniMed™ 670G System**, you will learn about SmartGuard™ Auto Mode technology that automatically adjusts your basal insulin delivery based on your sensor glucose (SG) values. To use this technology, your pump will need to be in SmartGuard™ Auto Mode. In this section, you will learn about Auto Mode and how it works.

For complete information about Auto Mode and your MiniMed™ 670G system, see the MiniMed™ 670G System User Guide.

NOTE: Any time your pump is not in Auto Mode, it is referred to as Manual Mode. Manual Mode is not a mode that you turn on or off in a menu, but is simply the mode the pump is in when it is not in Auto Mode.

In Auto Mode:

- Basal insulin is delivered based on your SG values and recent insulin delivery needs. This basal insulin delivery is referred to as Auto Basal.
- Auto Mode uses a target of 6.7 mmol/L.
- You can temporarily change the target to 8.3 mmol/L for exercise, or other times you would like the target raised.
- You are still required to enter carbs when you eat, and BGs to calibrate the sensor.
- When you enter a BG over 8.3 mmol/L, Auto Mode may recommend a correction bolus, depending on its calculations for your insulin needs.
- You will receive a BG required notification or alert if your pump needs a BG to enter or stay in Auto Mode.

NOTE: There are times in Auto Mode when basal insulin is being delivered according to your recent insulin needs, but is not being adjusted based on an SG reading. This is called Safe Basal. You will learn about Safe Basal after you learn about Auto Mode basics.

SECTION 20: REVIEWS AND REMINDERS BEFORE STARTING SMARTGUARD™ AUTO MODE

It is important that you read and follow these general reminders before you begin.

BG testing

The BG readings you enter into your pump may be used to:

- Calibrate your sensor
- Enter SmartGuard™Auto Mode
- Remain in Auto Mode when notified by your pump
- Recommend a correction bolus when a BG of 8.3 mmol/L or higher is entered.

If you believe any BG reading result is inaccurate, wash your hands and re-check your BG. When the pump prompts you to enter a new BG, it is important to perform a fingerstick, and enter a new BG.

Calibrating

After the first day of sensor use, the minimum number of calibrations required is one every 12 hours.

You may receive an additional **Calibrate now** alert if the system detects that a calibration is required for accuracy of SG readings. Calibrating 4 times a day is optimal. It is best to calibrate when your glucose is not changing very rapidly. Calibrating when there are ↑↑,↓↓ or ↑↑↑, ↓↓↓ arrows may decrease sensor accuracy. Many find that a good time to calibrate is before meals.

Review the calibration guidelines in the section of **CONTINUOUS GLUCOSE MONITORING (MANUAL MODE)** for more information.

Carb entry

While you are in SmartGuard™ Auto Mode, it is important that you enter your carbs and confirm insulin delivery for you to receive your food boluses.

SECTION 21: USING SMARTGUARD™ AUTO MODE FOR THE FIRST TIME

There are several steps that you need to complete before using SmartGuard™ Auto Mode for the first time. Some steps take longer than others to process, and some need to be completed before others. On the following pages you will find the instructions for how to put your pump into Auto Mode for the first time.

IMPORTANT: Work with your healthcare professional to determine when you should turn the Auto Mode feature on, and to determine your individual settings.

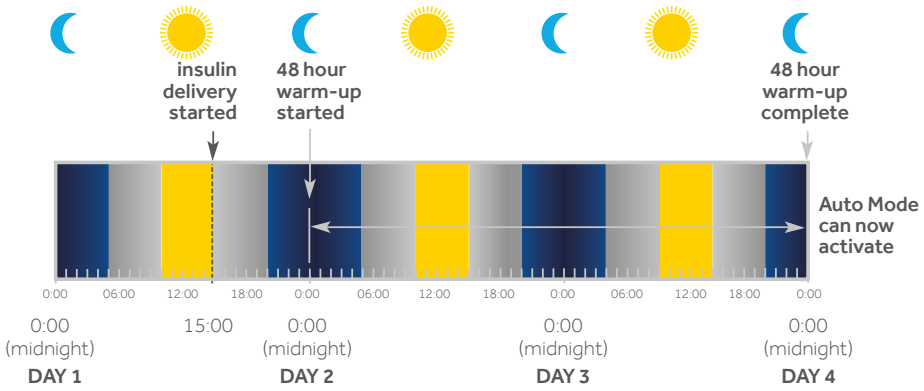
NOTE: When the Auto Mode setting is turned On, other steps must be completed for it to activate, or start working. If you are using SmartGuard™ **Suspend before low** or SmartGuard™ **Suspend on low**, they are automatically turned off when Auto Mode becomes active.

TO GET YOUR PUMP READY FOR SMARTGUARD™ AUTO MODE

1) Use your pump to deliver your insulin for at least 48 hours. This is called the Auto Mode warm up. The warm up helps the pump learn your personalised insulin needs for Auto Mode. Auto Mode warm up begins the first midnight after your pump starts delivering insulin, and takes 48 hours to complete. Your pump does not require the Auto Mode setting to be turned on for the Auto Mode warm up to occur. We will turn Auto Mode on later.

   For example, if your pump starts delivering insulin at 15:00 on Day 1, the warm up starts at 0:00 (midnight) on Day 2, and completes at 0:00 (midnight) on Day 4.

   Some alarms or alerts that occur during warm up, including a Suspend before low alert or a Suspend on low alarm, will turn off Auto Mode.



2) Turn on the Sensor option and start a sensor, if you are not currently using one. For Auto Mode to work, you must have a working glucose sensor.

   To review instructions on sensor use and CGM, see chapter **Getting Started with Continuous Glucose Monitoring (Manual Mode)**. Check with your healthcare professional if you have not received training on using your sensor.

   If your Bolus Wizard™ feature is already set up with settings from your healthcare professional, skip to step 4.

   Next, you will enter your Carb Ratio and Active Insulin Time in the Bolus Estimate Setup screen. These settings can be entered as individual Bolus Estimate settings, or as part of the Bolus Wizard™ setup. If you choose to enter the settings within the Bolus Wizard™ feature, all of the Bolus Wizard™ settings must be completed: Carb Ratio, Insulin Sensitivity Factor, BG Target and Active Insulin Time.

3) Enter your Carb Ratio and Active Insulin Time using one of the following methods:

Individual Bolus Estimate Settings

To enter your Carb Ratio and Active Insulin Time as individual settings.

a) Press ⊙.
b) Select **Options.**
c) Select **Delivery Settings.**
d) Select **Bolus Estimate Setup.**
e) Select **Carb Ratio** or **Active Insulin Time.**
f) Enter your settings.

Bolus Wizard™ Settings

To use the Bolus Wizard™ feature to enter your Carb Ratio, Active Insulin, and other Bolus Wizard™ settings, see section **Getting Started with your MiniMed™ 670G Insulin Pump.**

4) Check the Home screen for the following:
   - An active temp basal
   - A current bolus delivery, including a Square Wave™ or Dual Wave™ bolus
   - Delivery suspended.

SmartGuard™ Auto Mode cannot activate, or start working, during any of these conditions. If any of these conditions exist, you must wait until it is completed, or cancel it, before Auto Mode will work.

5) Read the following warning. Then follow the steps to turn the Auto Mode setting on.

WARNING: Do not put your pump into Auto Mode if you have used the pump in the last 3 days to practice button pressing, or if basal insulin that was programmed into your pump was not your actual basal delivery. Doing so may result in the delivery of too little or too much insulin, which can cause hyperglycaemia or hypoglycaemia. Auto Mode uses the recent delivery history on your pump to determine the Auto Basal delivery amount you receive.

TO TURN THE SMARTGUARD™ AUTO MODE SETTING ON

After you complete steps 1-5, you are ready to turn on Auto Mode.

1

Press ⊙.

Select **Options.**

2

Select **SmartGuard.**

Select **Auto Mode** on following screen.

3

Select **Auto Mode** again to turn Auto Mode on.

Check the screen to make sure that Auto Mode is set to **On.**

4

Select **Save.**

Notice that the Auto Mode BG Alert is set to **On.** You will learn about this alert in the **Information about Safe Basal** section on page 118.

NOTE: If SmartGuard™ Auto Mode is not yet ready, after selecting **Save**, you will receive an alert instructing you to check the Auto Mode Readiness screen

The last step is to enter a BG. You can enter the BG either manually in the Enter BG menu, or using the CONTOUR® NEXT LINK 2.4 meter.

If you have entered a BG within the past 12 minutes, your pump may be in Auto Mode. Your pump will indicate when it is time to enter a BG. Look at your pump screen, and follow the instructions.

You may also navigate to the Auto Mode Readiness status screen to check if your pump is ready for you to enter a BG. You will learn about the Auto Mode Readiness status screen in the next section on page 104.

NOTE: If you are using a new sensor and it is still warming up, or if the first calibration for a new sensor was just entered, the pump will not be ready for you to enter a BG.

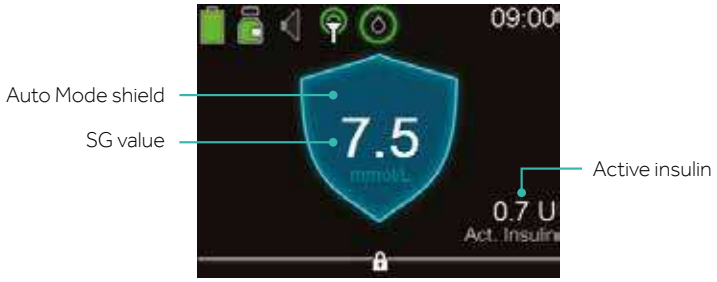
NOTE: If you enter a BG over 8.3 mmol/L, Auto Mode may recommend a correction bolus. See **Using your pump in Auto Mode.**

SECTION 22: CHECKING SMARTGUARD™ AUTO MODE READINESS

HOW TO TELL WHEN YOUR PUMP IS IN SMARTGUARD™ AUTO MODE

After SmartGuard™ Auto Mode has been turned on and each of the Auto Mode Readiness steps have been completed,Auto Mode becomes **active**. When Auto Mode is **active**, a large shield outlined in blue, with a SG value, appears on the center of your Home screen.

If you see this Home screen, your pump is in Auto Mode, and is delivering Auto Basal.



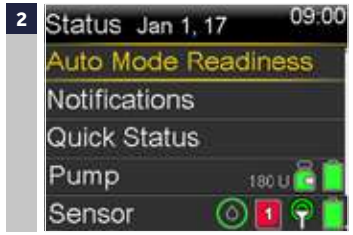
WHAT TO DO IF YOUR PUMP IS NOT IN SMARTGUARD™ AUTO MODE

If Auto Mode is turned on but not active, or working, check the Auto Mode Readiness status screen. This screen helps you determine why Auto Mode is not active. There may be actions that you can take to make Auto Mode active.

TO CHECK AUTO MODE READINESS

From the Home screen, press

Select ⊙ **Status.**



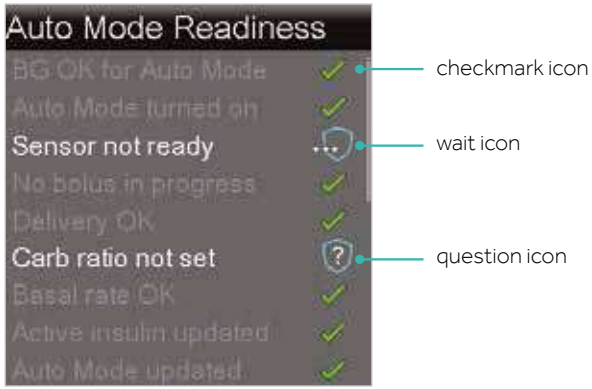
3) Select **Auto Mode Readiness.**

The Auto Mode Readiness status screen appears showing you what is ready for Auto Mode, and what is not ready for Auto Mode.

SMARTGUARD™ AUTO MODE | CHECKING SMARTGUARD™ AUTO MODE READINESS

The following Auto Mode Readiness status screen shows items that are ready, items that require you to take an action, and items that require you to wait.

- A checkmark icon ✓ means the item is ready. The item appears grayed out.
- A question icon ? by the item means that there is an action that you need to take to get your pump into Auto Mode.
- A wait icon ooo by the item means that the pump is updating and there is no action for you to take at this time.



NOTE: For help with question items and wait items, see the "Quick Reference Guide for SmartGuard™ Auto Mode Readiness status screen" on page 137.

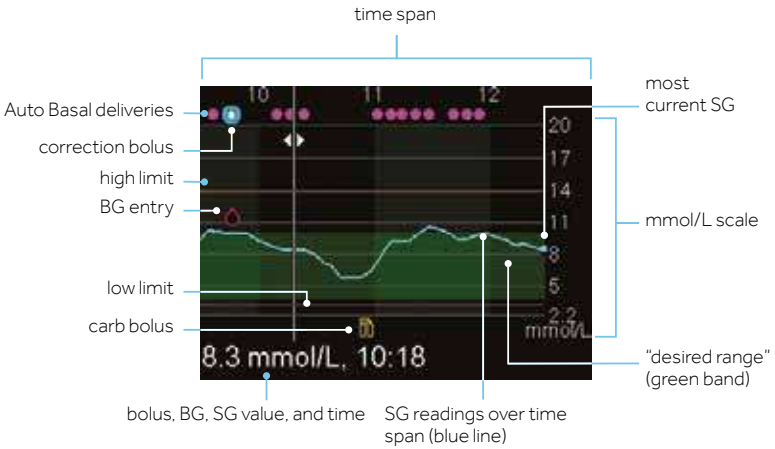
When your pump is in SmartGuard™ Auto Mode, the Auto Mode Readiness status screen shows all items grayed out and checked. This means that all the steps required for Auto Mode are complete, and Auto Mode is working or active.

If all items are not grayed out and checked, see "**Quick Reference Guide for SmartGuard™ Auto Mode Readiness status screen" on page 137.**

VIEWING THE SENSOR GRAPH IN SMARTGUARD™ AUTO MODE

The sensor graph in Auto Mode displays information about your SG values and trends, BG entries, Auto Basal deliveries, and bolus entries.

From the Home screen, press to view the sensor graph.



The graph shows a range of SG values from 2.2 mmol/L to 20 mmol/L. The green band across the screen represents an SG range from 3.9 mmol/L to 10 mmol/L. The blue line shows your actual SG values over the time span. At the right end of the blue line is a blue dot representing the most current SG value.

Details about correction bolus, BG entry, and meal (carb) bolus are shown on the graph. To locate details for an icon, look for the icon on the graph, and press or to scroll to that icon. The details for that icon are located along the bottom of the screen. Icons shown on the graph are:

- – indicates Auto Basal or Safe Basal delivery (micro boluses)
- – indicates a bolus for correction only
- – indicates a BG entered either manually or using a meter
- – indicates a bolus that includes a carb entry; it displays for a carb only or a carb plus correction bolus.

Press or to cycle through the time span. The SG values and times, BG readings and times, and Bolus amounts display along the bottom of the screen.

A bolus amount followed by an (N) indicates a normal bolus delivered through the bolus feature. Each Auto Basal delivery is displayed as a micro bolus, for example, 0.025 (M). A BG entry is labeled BG, for example BG, 6.7 mmol/L, and an SG is displayed with the value only for example,6.7 mmol/L.

Press or to change the time span shown on the graph. The choices are 3 hours, 6 hours, 12 hours, and 24 hours.

To access these graphs:

1) From the Home screen, press .
2) Press to scroll back over the graph. Sensor values will be shown at the bottom of the graph.
3) Press to see the 6-hour, 12-hour and 24-hour graphs.
4) Press to return to the Home screen.

SECTION 23: USING YOUR PUMP IN SMARTGUARD™ AUTO MODE

Now you will learn how to use your pump when it is in SmartGuard™ Auto Mode. Auto Mode screens are similar to, but not exactly the same as, Manual Mode screens. To use Auto Mode, you will follow the instructions on the screens, and apply what you already know about using your pump. First, we will start with some of the basic functions, such as entering a BG and carbs, delivering a bolus, calibrating your sensor, and entering and canceling your temp target.

ENTERING A BG IN SMARTGUARD™ AUTO MODE

You will need to enter a BG into the pump:

- To calibrate the sensor
- To continue in Auto Mode when the pump alerts you

There are two ways to enter a BG when you are in Auto Mode. You can manually enter a BG or enter a BG using the compatible meter, CONTOUR® NEXT LINK 2.4.

USING THE CONTOUR® NEXT LINK 2.4 METER TO ENTER A BG WITH OR WITHOUT CARBS FOR FOOD, DELIVER A BOLUS AND CALIBRATE YOUR SENSOR

1

Check your BG. You may need to make a selection on your meter to send the BG reading to the pump, depending on your meter setting for sending over BG results.

Select **Yes** to confirm the BG meter reading. If you do not believe the meter result is accurate, do not confirm now. Select **No**, wash your hands, and recheck your BG.

2

Bolus will be highlighted. If you want to calibrate with this BG, select **Calibrate Sensor**.

SMARTGUARD™ AUTO MODE | USING YOUR PUMP IN AUTO MODE

3

If you want to give a bolus, select **Bolus.** If you do not want to give a bolus, press ⌄ and select **Done.**

4

Select **Carbs** to enter carbs for food. If you are not eating carbs, go to the next step.

5

Select **Next** to review the calculated bolus amount.

6

Select **Deliver Bolus** to deliver the bolus.

7

The Bolus Started message briefly appears, then the Home screen appears, with a banner showing the bolus being delivered.

NOTE: If you entered a BG over 8.3 mmol/L, Auto Mode may recommend a correction bolus. Proceed through the bolus menu and enter carbs if necessary, and select **Deliver Bolus.**

NOTE: Just like in Manual Mode, you can easily stop a bolus at any time. Press ◎ and select **Stop Bolus.** Then, select **Yes** to stop the bolus. View the amount of bolus delivered, and then select **Done.**

TO MANUALLY ENTER A BG AND CARBS FOR FOOD, DELIVER A BOLUS AND CALIBRATE YOUR SENSOR

1

Press ⊙.

Select **Bolus.**

2

Select **BG.**

3

Press ⌃ or ⌄ to enter your BG reading, and press ⊙.

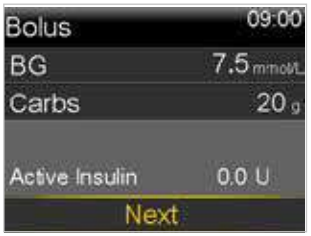
4

Select **Carbs.**

5

Press ⌃ or ⌄ to enter carbs for your food, and press ⊙.

6



Select **Next.**

7

Review the calculated bolus amount.

Select **Deliver Bolus** to deliver the bolus. Press ↩ if you do not wish to deliver the bolus.

The message Bolus Started briefly appears.

8

A message appears asking if you want to calibrate using the entered BG.

Select **Yes** if you want to calibrate.

Select **No** if you do not want to calibrate.

9

The Home screen appears showing the bolus being delivered.

NOTE: If you entered a BG over 8.3 mmol/L, Auto Mode may recommend a correction bolus. Proceed through the bolus menu and enter carbs if necessary, and select **Deliver Bolus.**

NOTE: Just like in Manual Mode, you can easily stop a bolus at any time. Press ⊙ and select **Stop Bolus.** The n, select **Yes** to stop the bolus. View the amount of bolus delivered, and then select **Done.**

TO MANUALLY ENTER YOUR BG ONLY

1

Press ⊙.

Select **Enter BG.**

2

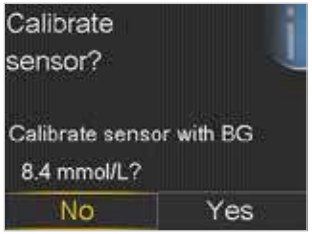
Select **Enter BG** to adjust the BG value.

3

Press ⌃ or ⌄ to enter your BG reading. and press ⊙.

Select **Save.**

4



A message appears asking if you want to calibrate using the entered BG.

Select **Yes** if you want to calibrate.

Select **No** if you do not want to calibrate.

SMARTGUARD™ AUTO MODE | USING YOUR PUMP IN AUTO MODE

5

If your BG reading is over 8.3 mmol/L, your pump may recommend a correction bolus.

a) Read the message on the first screen.

b) Press ⌄ to finish reading the message.

6

Select **Bolus.**

Start with step 5 in the previous instructions, **To manually enter a BG and carbs for food, deliver a bolus, and calibrate your sensor on page 110.**

ENTERING AND CANCELING YOUR TEMP TARGET

TO ENTER YOUR TEMP TARGET

The standard Auto Mode target is 6.7 mmol/L. You can temporarily change your Auto Mode target to 8.3 mmol/L for exercise, or other times you would like the Auto Mode target raised. Check with your healthcare professional for recommendations regarding your temp target use.

1

Press ⊙.

Select Temp Target.

2

Press ⌃ or ⌄ to set the Temp Target duration you want to use, and then press ⊙.

The duration can be set in 30 minute increments. The default is 2 hours.

Select **Start.**

3

The message Temp Target Started briefly appears, then the Home screen appears, where a banner shows the remaining Temp Target time.

SMARTGUARD™ AUTO MODE | USING YOUR PUMP IN AUTO MODE

ENTERING AND CANCELING YOUR TEMP TARGET

TO CANCEL YOUR TEMP TARGET

If you need to return to your standard Auto Mode target of 6.7 mmol/L before your Temp Target duration expires, you can cancel the Temp Target.

1

Press ⊙.

Select **Cancel Temp Target.**

The Temp Target screen appears and shows the details of the temp target.

2

Select **Cancel Temp Target** to cancel the temp target.

If you do not want to cancel the Temp Target after reviewing the details, press ↩.

The Temp Target Ended message and duration of the Temp Target briefly appear. Then the Home screen appears.

SECTION 24: SUSPENDING AND RESUMING DELIVERY IN SMARTGUARD™ AUTO MODE

When your pump is in SmartGuard™ Auto Mode, you can suspend insulin delivery any time you need to.

TO SUSPEND DELIVERY

When you bathe, shower or temporarily disconnect your pump for any reason, suspend insulin delivery so that Auto Mode tracks the correct amount of insulin that you received.

1


Press ⊙.
Select **Suspend Delivery.**

2


Select **Yes** to confirm.

3


The message **Delivery Suspended** briefly appears. Then the Home screen appears with a red shield and a red Delivery Suspended banner.

SMARTGUARD™ AUTO MODE | SUSPENDING AND RESUMING DELIVERY IN AUTO MODE

NOTE: To avoid a Lost sensor signal alert, keep your pump nearby if you disconnect for 30 minutes or longer.

NOTE: You do not need to suspend your pump when you do an infusion set change. The pump will automatically suspend during a set change process.

TO RESUME DELIVERY

1


Press ⊙.
Select **Resume Delivery.**

2


Select **Yes** to resume delivery.

The message **Delivery Resumed Successfully** briefly appears, then the Home screen appears.

SECTION 25: INFORMATION ABOUT SAFE BASAL

When your pump is in SmartGuard™ Auto Mode, but is not adjusting the basal based on SG readings, it is in Safe Basal. Similar to Auto Basal, Safe Basal automatically delivers insulin to cover your basal needs based on your recent insulin needs. However, Safe Basal does not adjust delivery amounts based on your SG values.

When your pump is in Safe Basal, the outline of the Auto Mode shield is white, as shown below. Depending on the situation, there may or may not be an SG reading displayed.

Safe Basal activates when:

- An SG reading is not available because your transmitter and pump are not communicating, or the sensor calibration has expired.
- Your sensor might be reading lower than your actual glucose values.
- Your BG value is different from your SG value by 35% or more.
- After you change your sensor, during the sensor warm up.
- Auto Mode has been at your personal minimum Auto Mode basal delivery rate for 2½ hours.
- Auto Mode has been at your personal maximum Auto Mode basal delivery rate for 4 hours.

The maximum time your pump will stay in Safe Basal is **90 minutes.** However, it may be shorter than that, and resolve itself before you are aware of it. For example, the pump will go into Safe Basal temporarily if it misses an SG value from the transmitter, but then receives the next one.

SMARTGUARD™ AUTO MODE | INFORMATION ABOUT SAFE BASAL

At other times, when the pump is in Safe Basal and there is an action you can take to help resolve the issue, you will receive an alert that indicates the action to take. Examples of these actions are entering a calibration, entering a new BG, or responding to a Lost Sensor alert.

There is an optional setting called **Auto Mode BG alert** that is designed to help limit the time spent in Safe Basal. When this alert is turned on, the pump will alert when a BG entry is recommended. Your pump will arrive with this setting turned on. The following alerts are triggered when the Auto Mode BG alert setting is on:

- Auto Mode max delivery
- Auto Mode min delivery
- BG required
- Cal required for Auto Mode

NOTE: Make sure that the Auto Mode BG alert is turned on, and follow the instructions on the pump alert screens to help limit the time that your pump is in Safe Basal delivery.

NOTE: The MiniMed™ 670G insulin pump modes and insulin delivery table in the **Appendix, on page 134** show information on Manual Mode, Auto Mode with Auto Basal delivery, and Auto Mode with Safe Basal delivery.

TO EDIT THE AUTO MODE BG ALERT SETTING

1

Press ⊙.

Select **Options.**

2

Select **SmartGuard.**

3

Select **Auto Mode.**

4

The Auto Mode screen appears with the Auto Mode BG alert set to **On** by default.

If you want to turn the Auto Mode BG alert off, select **AutoMode BG alert** to change the setting to **Off.**

5

Select **Save.**

NOTE: The maximum time the pump can stay in Safe Basal is 90 minutes. After 90 minutes in Safe Basal, if the condition that caused the transition into Safe Basal is not resolved, the pump will exit Auto Mode and enter Manual Mode. When your pump is in Manual Mode, it uses the Basal settings that you have set up. For more information, see **Information about Safe Basal on page 118.**

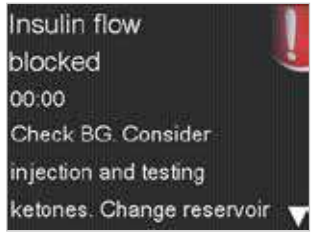
SECTION 26: INFORMATION ABOUT SMARTGUARD™ AUTO MODE AUTOMATIC EXITS

Under certain conditions, your pump will exit SmartGuard™Auto Mode automatically:

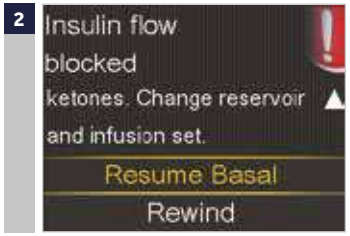
- After it has been in Safe basal for 90 minutes, and the condition that caused Safe Basal has not resolved.
- After certain pump alarms that require you to take action with your pump, and monitor your BG readings. Alarms that cause the pump to exit Auto Mode include High SG Auto Mode Exit and Insulin flow blocked.

An example of an alarm that will cause your pump to exit Auto Mode is the Insulin flow blocked alarm. To respond to this, or any alarm:

1



2



Read the message on the first screen.

Press ⌄ to finish reading the message.

Follow the instructions in the message.

NOTE: The Insulin Flow Blocked alarm will also cause Auto Mode to turn off. Always check the Auto Mode Readiness screen to get back into Auto Mode.

1


2


NOTE: If your pump has exited Auto Mode and you want to use the SmartGuard™ Suspend before low or the SmartGuard™ Suspend on low feature, you need to go to the SmartGuard™ Low Setup screen and turn the feature on. For instructions, see **Setting up your low Setup in the section CGM (MANUAL MODE).** If you want to go back into Auto Mode, see "Returning to SmartGuard™ Auto Mode" on page 124.

NOTE: An Insulin flow blocked alarm occurs when insulin cannot be pushed through the tubing or cannula. If this alarm occurs, make sure your reservoir is not empty and check the tubing for kinks, knots or other obvious blockages.

- If you detect an issue and are able to resolve it, check BG and select **Resume Basal.** If an Insulin flow blocked alarm occurs again, follow the steps on the screen and select **Rewind** to change your reservoir and infusion set.
- If you are unable to detect an issue, follow the steps on the screen and select **Rewind** to change your reservoir and infusion set.

SECTION 27: EXITING SMARTGUARD™ AUTO MODE MANUALLY

You can manually exit SmartGuard™ Auto Mode and return to Manual Mode any time.

TO EXIT AUTO MODE

1


Press ⊙.
Select **Options.**

2


Select **SmartGuard.**

3


Select **Auto Mode** to access the Auto Mode screen.

4


Select **Auto mode** again to turn Auto Mode off.

5


Select **Save.**

SECTION 28: RETURNING TO SMARTGUARD™ AUTO MODE

WARNING: Do not use SmartGuard™ Auto Mode for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in Auto Mode. Therefore, Auto Mode could deliver too much insulin. Too much insulin may cause hypoglycaemia. Consult with your healthcare professional for how long you need to wait after a manual injection of insulin before you resume Auto Mode.

Your pump may transition back into SmartGuard™Auto Mode if the condition that caused it to transition out of Auto Mode has been resolved, an alarm has not turned the Auto Mode setting off, and you have entered a BG into your pump. If your setting has been turned off, or you have manually turned the Auto Mode setting off, you will need to turn it back on to use Auto Mode again.

TO RETURN TO AUTO MODE

1

Press ○.
Select **Options.**

2

Select **SmartGuard.**

3

Select **Auto Mode** to access the Auto Mode screen.

4

Select **Auto Mode** again to turn Auto Mode on.

5

Select **Save.**

If your pump does not go into Auto Mode, see **Checking SmartGuard™ Auto Mode Readiness** on page 104.

SECTION 29: ALARMS AND ALERTS IN SMARTGUARD™ AUTO MODE

In addition to the pump and sensor alarms that were introduced in the pump and the CGM chapter, you may receive the following alerts and alarms only when the pump is in SmartGuard™ Auto Mode.

Title and text	Cause	Steps to take
Auto Mode started The following SmartGuard™ settings are now turned off ▪ Suspend before low ▪ Suspend on low	Your pump has started Auto Mode. The SmartGuard™ Suspend before low and Suspend on low settings are now turned off	▪ Select OK to clear the alert. ▪ Alert is information only. No action is required at this time.
Auto Mode Exit *Basal Name* started. Would you like to review the Auto Mode Readiness screen?	Your pump has exited Auto Mode.	Follow instructions for any alert or alarm you received. Check the Auto Mode Readiness status screen for information to re-enter Auto Mode.
Auto Mode max delivery Auto Mode has been at maximum delivery for 4 hours. Enter BG to continue in Auto Mode.	Alerts you when your pump has been delivering insulin at your maximum Auto Mode basal delivery rate for 4 hours. Your personal maximum Auto Mode basal delivery rate is automatically determined.	Select OK. Enter a BG to continue in Auto Mode.

Title and text	Cause	Steps to take
Auto Mode max delivery Auto Mode has been unable to bring your SG down. Enter BG and resume delivery to continue in Auto Mode.	Auto Mode has been unable to lower your SG value. Your pump is suspended, and your predicted SG is above target.	▪ Select OK to clear the alert. ▪ Check your BG and enter it into your pump. ▪ Follow instructions from your healthcare professional and continue to monitor your BG.

NOTE:
- The title of this alert appears the same as the previous Auto Mode max delivery alert in the table.
- If you have suspended your pump, you will have no delivery. However, the alert may still occur.

Auto Mode min delivery Auto Mode has been at minimum delivery for 2:30 hours. Enter BG to continue in Auto Mode.	Alerts you when your pump has been delivering insulin at your minimum Auto Mode basal delivery rate for 2 1/2 hours. Your personal minimum Auto Mode basal delivery rate is automatically determined.	Select OK. Enter a BG to continue in Auto Mode.

Title and text	Cause	Steps to take
Auto Mode min delivery Your SG has been below target for 2 1/2 hours. Enter BG and resume delivery when ready to continue in Auto Mode.	Your pump is suspended, and your predicted SG has been below target for 2 1/2 hours.	▪ Select OK to clear the alert. ▪ Check your BG and enter it into your pump. ▪ Follow instructions from your healthcare professional and continue to monitor your BG.

NOTE:
- The title of this alert appears the same as the previous Auto Mode min delivery alert in the table.
- If you have suspended your pump, you will have no delivery. However, the alert may still occur.

Auto Mode off *Basal Name* started. Would you like to review the Auto Mode Readiness screen?	Due to an alarm, the Auto Mode setting in the SmartGuard™ menu has turned off.	Check Auto Mode Readiness status screen for information to re-enter Auto Mode.

SMARTGUARD™ AUTO MODE | ALARMS AND ALERTS IN AUTO MODE

Title and text	Cause	Steps to take
BG required Enter a new BG for Auto Mode.	A new BG entry is required for Auto Mode.	Perform fingerstick and enter a new BG.
Bolus recommended For xxx mmol/L entered, a correction bolus is recommended. Select Bolus to program a bolus.	Auto Mode recommends a correction bolus based on a BG that you have entered.	Consider delivering the recommended correction bolus.
Cal required for Auto Mode Enter a BG and calibrate sensor for Auto Mode.	A BG that you entered is above 13.9 mmol/L.	Check infusion set. Check ketones. Monitor BG. Confirm BG.

NOTE: The instructions for a High BG alert in Auto Mode are different than the instructions for a High BG alert in Manual Mode.

Title and text	Cause	Steps to take
High SG SG has been high for over 1 hour. Check infusion set. Check ketones. Monitor BG. Followed by **Auto Mode exit** Monitor BG and treat as necessary. Basal Name started. Enter BG to continue in Auto Mode.	SG has been high for over one hour. This value is based on a set glucose threshold and length of time: 16.7 mmol/L or higher for one hour; 13.9 mmol/L or higher for three hours.	▪ **High SG** Check infusion set. Check ketones. Monitor BG. ▪ **Auto Mode Exit** Monitor BG and treat as necessary. Enter BG to continue in Auto Mode.
Low SG xx mmol/L SG is under 2.8 mmol/L. Check BG and treat.	SG is under 2.8 mmol/L.	Perform fingerstick and treat as needed. Monitor BG.

NOTE: You can use the Alert Silence feature in Auto Mode to silence the majority of the alerts, but the following alerts will still sound:

- Auto Mode exit
- High SG
- Auto Mode off
- Low SG XX mmol/L (2.8 mmol/L or below)

SECTION 30: TROUBLESHOOTING

Question	Answer
Why did my pump exit SmartGuard™ Auto Mode?	Your pump may automatically exit Auto Mode for several reasons. These include: ▪ Your pump has been in Safe Basal for 90 minutes. ▪ A pump alarm occurred that turns Auto Mode off. When this happens, you will receive an Auto Mode Exit alarm. Not all pump alarms deactivate Auto Mode. ▪ Auto Suspend has not been cleared within four hours. For complete instructions on SmartGuard™ Auto Mode, see the **MiniMed™ 670G System User Guide.**
How will I know when my pump automatically exits SmartGuard™ Auto Mode and transitions to Manual Mode?	If your pump automatically exits Auto Mode and transitions to Manual Mode, you will receive an Auto Mode Exit alarm. After you transition from Auto Mode to Manual Mode, the Active Insulin value may not be accurate for a period of time. For complete instructions, see the **MiniMed™ 670G System User Guide.**

Question	Answer
How do I get back into SmartGuard™ Auto Mode?	Your pump may automatically transition back into Auto Mode if the condition that caused it to transition out of Auto Mode has resolved and an alarm has not disabled (turned off) the Auto Mode setting. If your pump does not automatically transition back into Auto Mode, see Checking Auto Mode Readiness earlier
I am trying to enable (turn on) SmartGuard™ Auto Mode, but the feature is grayed out. How can I turn it on?	The Auto Mode feature may be grayed out due to any of the following: Carb ratio value is not entered, Sensor setting is off, SmartGuard™ Suspend before low is on, or SmartGuard Suspend on low is on. Check each of these settings. See *Getting your pump ready for Auto Mode* for instructions and additional information.
I am trying to activate SmartGuard™ Auto Mode. I entered a BG. The Auto Mode Readiness Status screen indicates that I need to enter another BG. What should I do?	Wait 30 minutes, then wash your hands, take a BG again, and enter the BG as a calibration.
On the Auto Mode Readiness status screen, sometimes it shows ?, and sometimes it shows ... . What is the difference?	On the Auto Mode Readiness status screen, a ? means that there is an action you can take for that step. A ... means that the pump is updating and there is no action for you to take.

SMARTGUARD™ AUTO MODE | TROUBLESHOOTING

Question	Answer
The Sensor Status screen said my next calibration wasn't due for several hours, but I got a Calibration alert before that. Why?	If the system detects the sensor requires a calibration for accuracy of SG readings, you will receive a Calibration now alert. When there is a Calibration now alert, you must enter a BG and calibrate to stay in SmartGuard™ Auto Mode.
Where can I find the alerts that appeared on my screen, after I cleared them?	You can see alerts and alarms in the Alarm History screen.

NOTE: To go to the Alarm History screen, select **Options**, then select **History**, and then select Alarm History.

I entered a BG and carbs, and now there is another screen that is telling me to enter a BG again. Can I enter the same BG that I entered before?	SmartGuard™ Auto Mode may recommend another BG entry if the BG that you entered is lower or higher than expected. If you see a screen that shows "BG recommended," wash your hands, do a fingerstick, and re-check your BG. Be sure to enter the BG that appears on your meter screen.

MINIMED™ 670G INSULIN PUMP MODES AND INSULIN DELIVERY

	Manual Mode	SmartGuard™ Auto Mode Auto Basal delivery	SmartGuard™ Auto Mode Safe Basal delivery
Home screen display			
Availability	When Auto Mode is not active. May be used with or without CGM.	When Auto Mode is turned on, after a minimum of 48 hour initial Auto Mode warm-up, and a working, calibrated sensor. Requires a BG entry as last step to enter Auto Mode*, and ongoing BG entries and calibrations.	Pump automatically transitions to Safe Basal delivery from Auto Basal delivery when valid SG values are not available, or minimum or maximum Auto Basal delivery limits have been reached.

	Manual Mode	SmartGuard™ Auto Mode Auto Basal delivery	SmartGuard™ Auto Mode Safe Basal delivery
Basal insulin delivery	Uses the basal settings programmed in Basal menu to deliver the basal rates.	Uses the SG values and the recent insulin delivery needs to automatically adjust and deliver the basal rates.	Uses the recent insulin delivery to automatically deliver a fixed rate. SG values are not used to determine the automatic basal rates. You will receive an alert if you need to take an action to return to Auto Basal.** Maximum time in Safe Basal is 90 minutes. If the cause is not resolved, the pump will exit to Manual Mode.

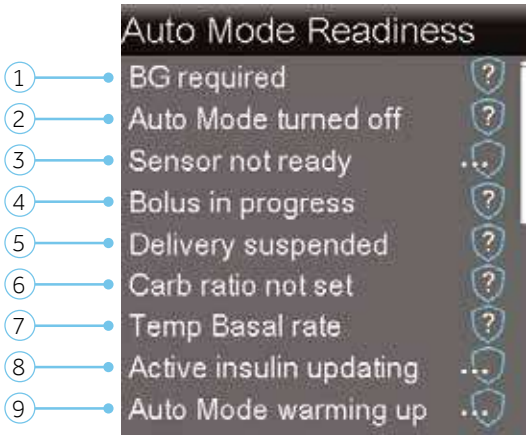
*For a complete list of Auto Mode entry requirements, see Auto Mode readiness in the Auto Mode chapter of the MiniMed™ 670G System User Guide.

**The Auto Mode BG Alert in SmartGuard™ settings must be turned ON to receive an audible BG entry Required alert. Otherwise, a visible banner only will display. The Auto Mode BG Alert is defaulted to ON.

	Manual Mode	SmartGuard™ Auto Mode Auto Basal delivery	SmartGuard™ Auto Mode Safe Basal delivery
Bolus Wizard™ settings	Uses all of the Bolus Wizard™ settings to determine Bolus Wizard™ recommended dose.	Bolus feature uses Carb ratio and Active insulin time only for bolus recommendations.	Bolus feature uses Carb ratio and Active insulin time only for bolus recommendations.

WHAT TO DO IF SMARTGUARD™ AUTO MODE IS NOT READY

The **Auto Mode Readiness Table** shows what to do when the wait icon or the question icon appears by items on the Auto Mode Readiness status screen. To open the Auto Mode Readiness status screen, from the main menu, select **Status**, and then select **Auto Mode Readiness.**



AUTO MODE READINESS TABLE

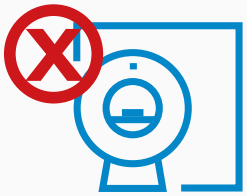
LINE	IF THIS APPEARS	DO THIS
1	Calibration required	Perform a fingerstick and calibrate your sensor.
	BG required	Perform a fingerstick and enter a new BG. Your BG must be within the 2.2-22.2 mmol/L range or your pump will not enter Auto Mode.
	Wait to enter BG...	Wait until the pump prompts you to enter a BG.
	Processing BG...	Wait until the BG has processed.
2	Auto Mode turned off	Turn on Auto Mode in the SmartGuard™ Auto Mode screen.
3	Sensor not ready	a) Check to see if your pump has a transmitter ID entered in Utilities, Device Options. For example, GT6133333F. If your pump does not have a transmitter ID entered, see Connecting your Pump and Transmitter in the section CGM (MANUAL MODE).

LINE	IF THIS APPEARS	DO THIS
		b) Check your Home screen. If you see , move your pump and transmitter closer together. The pump will try to find the transmitter signal. If after 30 minutes the pump and transmitter are still not communicating, you will receive a Lost sensor signal alert. Check that the sensor is still inserted in the skin and the transmitter and sensor are still connected. Move your pump closer to your transmitter.
	Sensor off	Turn on the sensor in the Utilities, Sensor Settings screen.
	Airplane mode on	Turn off the Airplane mode in the Utilities, Airplane Mode screen.
4	Bolus in progress	Wait until the bolus is complete or stop the bolus yourself before Auto Mode can activate.
5	Delivery suspended	If insulin delivery is suspended, Auto Mode cannot activate. Treat low BG if necessary as instructed by your healthcare professional.
6	Carb ratio not set	When you turn on the Bolus Wizard™ feature for the first time, enter your Carb Ratio in the Edit Carb Ratio screen. You can also enter your Carb Ratio in the Bolus Estimate Setup screen, even if the Bolus Wizard™ feature is not turned on.
7	Temp Basal rate	If a temp basal is currently active, you must wait until it has completed or cancel the temp basal yourself before Auto Mode can activate.
8	Active insulin updating	If active insulin is currently updating, it may take up to 5 hours to complete. You must wait until this amount is updated.
9	Auto Mode warming up	Auto Mode is gathering information on your insulin delivery history in order to personalise its automatic delivery of insulin.

FREQUENTLY ASKED QUESTIONS

As with learning anything new, you typically have questions. Here is a list of commonly asked questions. You may wish to make a note of any additional questions you may have to ask your HCP or Medtronic representative.

SHOULD THE PUMP BE REMOVED FOR X-RAYS, CT SCANS, AND MRIS?



WARNING: Do not expose your pump to MRI equipment, diathermy devices, or other devices that generate strong magnetic fields (for example, x-ray, CT scan, or other types of radiation). The strong magnetic fields can cause the devices to malfunction and result in serious injury. If your pump is exposed to a strong magnetic field, discontinue use and contact the MiniMed™ Care helpline for further assistance. Magnetic fields, and direct contact with magnets, may affect the accurate functioning of your system, which may lead to health risks such as hypoglycaemia or hyperglycaemia.

Cannula infusion sets such as the Quick-Set™, Silhouette™, and Mio™ can be left in place during the procedure. However, infusion sets that use a needle instead of a cannula to infuse insulin, such as the Sure-T™, must be removed prior to the procedure.

Do not expose your sensor or transmitter to MRI equipment, diathermy devices, or other devices that generate strong magnetic fields. Exposure to a strong magnetic field has not been evaluated and can cause the device to malfunction, result in serious injury, or be unsafe. If your sensor or transmitter are inadvertently exposed to a strong magnetic field, discontinue use and contact your local representative for further assistance.

WHAT DO I NEED TO KNOW ABOUT TRAVELING WITH MY INSULIN PUMP?

Going through Airport Security

You can wear your insulin pump while going through an airport metal detector. If you are asked to go through a full body scanner, you must remove your insulin pump and CGM (sensor and transmitter).
To avoid removing your devices, you may request an alternative screening process.

Warning: Do not send your devices through the x-ray machine as the radiation can make your pump nonfunctional or damage the part of the pump that regulates insulin delivery, possibly resulting in over delivery and hypoglycaemia.

Print and complete the information on your Medical emergency card to carry with you.

Notify security screeners that you have diabetes, that you are wearing an insulin pump and are carrying supplies with you. If there is any question, ask that they visually inspect the pump rather than removing it from your body. Remember, you may ask for a private screening if removal or lifting of clothing is required to display your pump.

General Travel Tips

- Pack extra supplies including reservoirs, infusion sets, sensors, batteries and ketone strips. Keep your supplies, insulin and a prescription with you, just in case your luggage is lost or your insulin becomes denatured. Consult with your airline for current regulations regarding flying with lithium batteries.

Warning: Never store insulin in checked luggage as it may be exposed to extreme temperatures. Extreme heat or cold can cause insulin to lose its effectiveness which could result in hyperglycaemia.

- Pack glucose tablets or carbohydrate for treatment of low glucose. In case flights are delayed or canceled, pack extra food that is easy to carry, such as nutrition bars.

ALWAYS BE PREPARED

When flying in an airplane, it is important that you stay connected to your pump and check your blood glucose more frequently. The routine hassle of travel, including stress, changes in time zones, schedules and activity levels, meal times and types of food, can all affect your diabetes control. Be extra attentive to your BG readings, and be prepared to respond if needed.

When traveling, make sure that you have backup syringes, vials of insulin or insulin pens (rapid-acting and long-acting insulin), and instructions from your healthcare provider should you need to return to insulin injections if your pump stops working.

Because travel rules are subject to change, passengers should consult their individual air carriers for regulations.

WHO TO CONTACT AND WHEN?

CONTACT MEDTRONIC

Please contact Medtronic for further guidance and technical advice on using your MiniMed pump.

- If you have any concerns that your pump isn't functioning correctly.
- If your pump displays a warning sign or alarm which you cannot switch off.
- For more information about a certain pump function.
- For guidance when adjusting your basal insulin dose, as instructed by your doctor.

Visit our website at:
www.medtronic-diabetes.co.uk

Alternatively call our customer support helpline **01923 205167**

CONTACT YOUR HEALTHCARE PROFESSIONAL

For all other inquiries regarding your health and continuing care please contact your healthcare professional.

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