Pump screen	How to enter your calibration BG
BG screen When you manually enter a BG, the pump will prompt if you want to calibrate your sensor with the BG reading. Press ◎ then select **Enter BG**.	Enter a BG meter reading specifically for calibration.
Calibrate Sensor screen Press ◎, then select: **Options > Utilities > Sensor Settings > Calibrate Sensor**	Enter a BG meter reading specifically for calibration.
BG Meter screen The BG Meter screen appears after your Accu-Chek Guide Link meter sends a BG meter reading to your pump, and after you confirm the BG.	Select the Calibrate Sensor option to calibrate your sensor with the current BG meter reading.
BG screen in Event Markers Press ◎, then select: **Options > Event Markers > BG**	When you enter a BG meter reading in Event Markers, the Event Markers screen has an option to use the BG value for calibration.
BG field in the Bolus Wizard screen Press ◎, then select: **Bolus > Bolus Wizard** The Bolus Wizard feature is only available in Manual Mode.	When you enter a BG meter reading to deliver a bolus using the Bolus Wizard feature, the Bolus Wizard feature gives you the option to use the BG value for calibration after the bolus is delivered.
BG field in the Auto Mode Bolus screen Press ◎, then select **Bolus**. Auto Mode Bolus is only available in Auto Mode.	When you enter a BG meter reading to deliver a bolus using the Auto Mode Bolus feature, Auto Mode gives you the option to use the BG value for calibration after the bolus is delivered.

When to calibrate

The following table describes when to calibrate your sensor.

Calibrate	Description
After warm-up is complete.	Do your first sensor calibration. Your pump displays a Calibrate now alert within two hours after starting a new sensor. Your first SG reading appears up to five minutes after you calibrate.
Within six hours after your first calibration.	Do your second sensor calibration. Six hours after you calibrate for the first time, a Calibrate now alert appears, and your pump stops calculating your SG values. It takes up to five minutes after you calibrate to receive SG values again.
Within 12 hours after your second calibration and at least every 12 hours thereafter.	After you do your second calibration, you need to calibrate at least every 12 hours. For better sensor performance, it is recommended that you calibrate your sensor three or four times each day. If you do not calibrate for more than 12 hours, a Calibrate now alert appears. It takes up to five minutes after you calibrate to receive SG values again.
When the Calibrate now alert appears.	You may also receive additional Calibrate now alerts to let you know that another calibration is required to improve performance. It takes up to five minutes after you calibrate to receive SG values again.

Note: When a BG is entered for calibration, dashes appear in place of the SG reading, and "Calibrating…" appears on the sensor graph.

Guidelines for calibrating

Follow these guidelines for best sensor calibration results:

- Calibrate three or four times spread out throughout the day to improve accuracy. For details, see *When to calibrate, on page 206*.
- You can calibrate any time. However, calibrating with two or three trend arrows may temporarily decrease accuracy until the next calibration. For an example of trend arrows on the Home screen, see *Home screen with CGM in Manual Mode, on page 173*.

- Always calibrate immediately after you check your BG. Never calibrate with a BG meter reading taken more than 12 minutes earlier as that BG value would no longer be considered valid.
- Always use clean, dry fingers when you check your BG levels.
- Use only your fingertips when obtaining blood samples for calibration.

Note: If your BG meter readings are significantly different than your SG readings, wash your hands and calibrate again.

Disconnecting the transmitter from the sensor

Always refer to your transmitter user guide for instructions on disconnecting the transmitter from the sensor.

Removing the sensor

Always refer to the sensor user guide for instructions on how to remove the sensor.

Turning off Sensor Settings

You can turn off Sensor Settings at any time. If you disconnect the transmitter from the sensor, turn off the Sensor Settings to avoid getting a sensor alert. Your sensor settings remain in your pump. You cannot make changes to the settings until you turn on the Sensor Settings again.

To turn off Sensor Settings:

1. Press ◎ and go to the Sensor Settings screen.

   Options > Utilities > Sensor Settings
2. Select **Sensor**.
3. Select **Yes** to turn off the sensor feature.

11

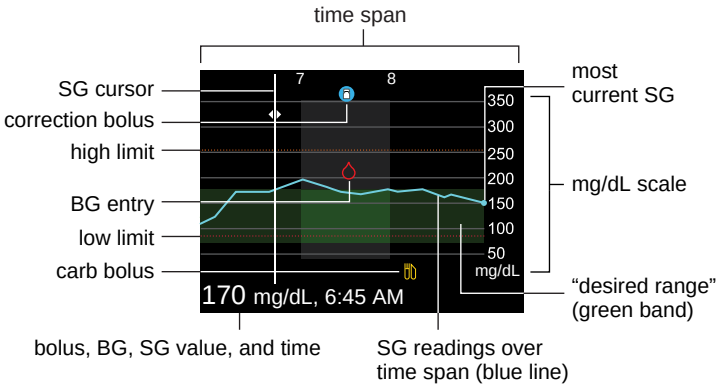
Using CGM

11 Using CGM

This chapter provides information on how to use CGM on your pump and view your sensor glucose (SG) data. This information helps you identify SG trends, including being notified if your SG is falling or rising rapidly. You can also view historical SG readings in a graph format. Information is also included on how to silence your glucose alerts.

The sensor graph

The sensor graph displays your current SG reading that is wirelessly sent to your pump by the transmitter.



The sensor graph includes the following information:

- The most recent SG reading.
- Your historical SG readings for the last 3-hour, 6-hour, 12-hour, or 24-hour periods.

- Your high and low SG limits.
- The bolus deliveries you have given during the time period shown on the graph.
- Any suspend events that have occurred.

If an SG reading does not appear on the graph, some possible reasons for this include:

- An error condition or a sensor-related alert is occurring.
- A new sensor that you just inserted is still initializing.
- A new sensor that just initialized is still calibrating.
- An existing sensor that you have recently reconnected is not ready.
- More than six hours have passed since the initial sensor calibration.
- More than 12 hours have passed since the last sensor calibration.

To view the sensor graph:

1. From the Home screen, press the button.

   A full-screen view of the 3-hour graph appears.
2. Press ⌃ to navigate to the 6-hour, 12-hour, and 24-hour graphs.
3. Press < to view SG readings and event details.
4. To exit the full-screen view, press , or press the button again.

Identifying rapid changes in SG

When you use a sensor, trend arrows appear on the Home screen if your SG has been rising or falling faster than a certain per-minute rate. The number of arrows that appear tell you how quickly your SG is changing.

The following table shows the trend arrows and their corresponding rates.

↑	SG has been rising at a rate of 1 mg/dL per minute or more, but less than 2 mg/dL per minute.
↓	SG has been falling at a rate of 1 mg/dL per minute or more, but less than 2 mg/dL per minute.
↑↑	SG has been rising at a rate of 2 mg/dL per minute or more, but less than 3 mg/dL per minute.

↓↓	SG has been falling at a rate of 2 mg/dL per minute or more, but less than 3 mg/dL per minute.
↑↑↑	SG has been rising at a rate of 3 mg/dL per minute or more.
↓↓↓	SG has been falling at a rate of 3 mg/dL per minute or more.

Silencing glucose alerts

The Alert Silence option lets you make SG alerts silent for a set period of time. This is useful in situations where you do not want to disturb others, such as when you are in a business meeting or in a movie theater. When using this option, one of the following status icons appears on the Home screen, depending on your Audio Options settings: vibrate only, audio only, or vibrate and audio. Your system still records the time and glucose value for any alerts that occur. You can view this information in the Alarm History screen.

Note: Alert Silence does not silence the Auto Mode exit alert, the High SG alert, or the Low SG XX mg/dL (XX represents 50 mg/dL or below) alarm. These are based on set glucose thresholds and cannot be silenced.

If a glucose alert occurs when you are using the Alert Silence option, the notification light begins to flash and the Sensor alert occurred alert appears to let you know an alert was silenced, but there is no vibration or beep. If you have not cleared the alert by the end of the preset alert silence duration, your pump begins to beep or vibrate periodically until the alert is cleared.

The following table describes the glucose alerts that are silenced with each option.

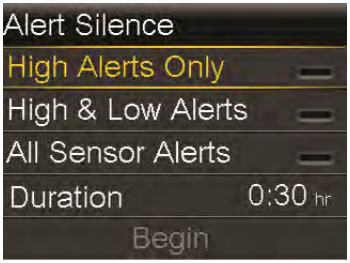
Option	Silences these alerts
High Alerts Only	Alert on high, Alert before high, and Rise Alert

Option	Silences these alerts
High & Low Alerts	Alert on high, Alert before high, Rise Alert, Alert on low, Alert before low, Suspend before low, and Resume Basal Alert **Note:** Alert on low cannot be silenced if the SmartGuard Suspend on low or SmartGuard Suspend before low options are turned on.
All Sensor Alerts	All of the alerts listed previously for High & Low Alerts, plus the following: • All calibration alerts, reminders, or error messages • All alerts relating to sensor insertion, including alerts about sensor warm-up, changing your sensor, sensor expiration, sensor errors, connection issues, and so on • All alerts related to your transmitter, including all alerts about your transmitter battery and all connection issues

To silence Glucose alerts:

1. Press ◎ and go to the Alert Silence screen.

   Audio Options > Alert Silence Options



2. Select **High Alerts Only**, **High & Low Alerts**, or **All Sensor Alerts** to set the alerts you want silenced. Refer to the previous table for details about the alerts silenced with each selection.

   Note: If you select **All Sensor Alerts**, you will not receive most alerts related to your SG readings, your sensor, calibration requirements, or your transmitter. The Low SG XX mg/dL (XX represents 50 mg/dL or

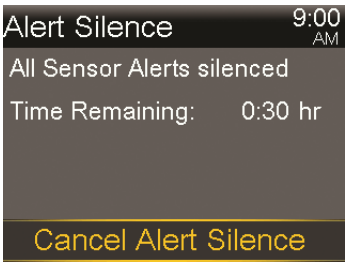
below) alarm, the Auto Mode exit alert, and the High SG alert cannot be silenced. You still receive and hear these alerts when Alert Silence is on. If a silenced glucose alert occurs, the notification light flashes and a message appears to notify you that a silenced alert occurred, but there is no vibration or beep. You can view the specific alert in Alarm History. For more information, see *Alarm History, on page 143*.

3. Set the **Duration**. The duration can be set in 30-minute increments from 30 minutes to 24 hours.
4. Select **Begin**. The Alert Silence settings immediately take effect and you are returned to the Sensor Settings screen.

To cancel Alert Silence:

1. Press ◎ and go to the Alert Silence screen.

   Audio Options > Alert Silence



2. Select **Cancel Alert Silence**.

12

SmartGuard Auto Mode

12 SmartGuard Auto Mode

The Auto Mode feature is part of SmartGuard technology. It automatically controls basal insulin delivery. However, the Auto Mode feature still requires your input for meals, calibrations, and times when you need the target value raised.

Note: A total daily dose of at least 8 units, but no more than 250 units, is required to operate in Auto Mode.

About SmartGuard Auto Mode

SmartGuard Auto Mode is an insulin delivery feature designed to help people on intensive insulin therapy to achieve better control 24 hours a day. This is achieved by automatically controlling basal insulin delivery to regulate glucose levels to a target sensor glucose (SG) amount. The standard target SG setting is 120 mg/dL and the target can be set temporarily to 150 mg/dL for exercise and other events.

When Auto Mode is active, the SG values it receives from the transmitter are used to automatically calculate the basal insulin dose. This process of automatic delivery of insulin is called Auto Basal.

Auto Mode depends on reliable, accurate sensor measurements and your accurate entry of carbs to deliver insulin for meals. Therefore, the basic management of the therapy requires the following activities:

- Periodic blood glucose (BG) readings using a BG meter to calibrate the sensor. The minimum calibration is every 12 hours. For better sensor performance, it is recommended that you calibrate your sensor three or four times each day. You may also receive periodic requests from your pump for BG readings without the need for calibration.
- Use of the Auto Mode Bolus feature to deliver boluses to cover meals, and when your pump recommends a bolus.

> **Note:** Delivering a bolus in SmartGuard Auto Mode is similar to delivering a bolus with the Bolus Wizard feature in Manual Mode.

A BG reading above 150 mg/dL causes Auto Mode to automatically calculate if a correction bolus is needed to bring BG down to the 150 mg/dL BG correction target. If needed, a correction bolus will be recommended.

Manual Mode

In this user guide, the term Manual Mode refers to system functions other than Auto Mode. In other words, if Auto Mode is not active, the system is in Manual Mode.

Before using SmartGuard Auto Mode

SmartGuard Auto Mode can be enabled at any time, but it does not activate until the system completes a 48-hour warm-up period while you use the pump to deliver insulin. This warm-up period begins the midnight after the pump starts delivering insulin and it does not require sensor use. During the warm-up period, your Auto Mode system collects and processes data that help enable its automatic function.

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 hyperglycemia or hypoglycemia. Auto Mode uses the recent delivery history on your pump to determine the Auto Basal delivery amount you receive. If you have been practicing with your pump, you must clear the active insulin and the total daily doses in the pump before using Auto Mode. Use the Clear Active Insulin option in the Manage settings menu to clear both active insulin and the total daily dose.

To prepare your pump for SmartGuard Auto Mode:

1. Cancel any active Temp Basal rates. See *Canceling a temp basal or preset temp basal rate, on page 77*.
2. Ensure your delivery is not suspended. See *Stopping and resuming your insulin delivery, on page 78*.
3. Set your carb ratio. See *Changing your carb ratio, on page 94*.
4. Review your high and low limit settings. Your high and low limit settings apply to Auto Mode. See *Understanding glucose settings, on page 176* for details.
5. Enter a BG reading if you have not entered one in the past 12 minutes. If necessary, calibrate your sensor. If you have just started a new sensor, calibrate your sensor, and then wait 30 minutes before you enter a BG for Auto Mode. For more information about calibrating your sensor, see *Calibrating your sensor, on page 204*.

Setting up SmartGuard Auto Mode

Auto Mode can be enabled at any time but does not activate until the 48-hour warm-up period has been completed. For details about the warm-up period, see *Before using SmartGuard Auto Mode, on page 220*. Once enabled, Auto Mode begins automatically when all conditions are met and a BG is entered. For more information, see *SmartGuard Auto Mode Readiness, on page 223*.

To set up Auto Mode:

1. Press ◎ and go to the Auto Mode screen.

   Options > SmartGuard > Auto Mode

2. Select **Auto Mode** to turn the feature on or off.
3. Select **Auto Mode BG alert** to turn it on or off.

> **Note:** The Auto Mode BG alert is set to On by default. When this setting is on, your pump alerts you when Auto Mode requires a BG to remain active. For information about the conditions that cause Auto Mode to require a BG, see *Safe Basal, on page 226*.

4. Select **Save**.

Conditions to activate SmartGuard Auto Mode

If you have been using Auto Mode and you turn off your pump for less than two weeks, there will only be a five-hour warm-up period once the pump is restarted. The other conditions must still be met before Auto Mode will activate.

If you have turned off your pump for more than two weeks, a new 48-hour warm-up period will be required.

If Auto Mode is enabled but not active, the Auto Mode Readiness screen indicates the reason why Auto Mode has not yet activated. See *SmartGuard Auto Mode Readiness, on page 223*.

It takes five hours for the Auto Mode Active Insulin to be updated. This update time happens under the following conditions:

- When your pump is turned on the first time
- May occur following a complete pump reset caused by a loss of power or a software error
- Following a Suspend lasting four hours or longer

Once the Active Insulin is updated, it will be valid unless one of the conditions above happens, which will restart the update period. Auto Mode will then be locked out for another five hours.

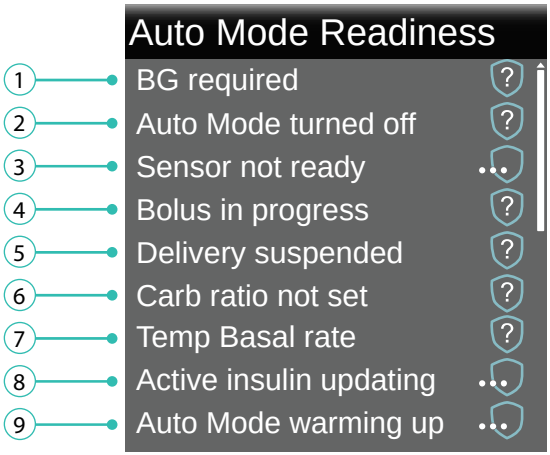
SmartGuard suspend features and SmartGuard Auto Mode

When SmartGuard Auto Mode is active, the SmartGuard suspend features are unavailable and automatically turned off. If Suspend before low or Suspend on low are on, they are automatically turned off when Auto Mode becomes active. If your pump exits Auto Mode, the SmartGuard suspend features are not active until you turn them on after you exit Auto Mode. If you want to use the SmartGuard suspend features, you must manually turn them on after you exit Auto Mode. See *Low SG settings, on page 178*.

SmartGuard Auto Mode Readiness

The Auto Mode Readiness screen indicates whether your pump is ready to enter Auto Mode, or return to Auto Basal from Safe Basal.

The following table shows what to do when the wait icon or the question icon appear by items on the Auto Mode Readiness status screen.



Line	Item	Instructions
1	Calibration required	Perform a fingerstick and calibrate your sensor.
	BG required	Perform a fingerstick and enter a new BG.
	Wait to enter BG...	Wait until the pump prompts you to enter a BG.
	Processing BG...	Wait until the BG has processed.

Line	Item	Instructions
2	Auto Mode turned off	Turn on Auto Mode in the SmartGuard, Auto Mode screen.
3	Sensor not ready	Do the following: • Check to see if your pump has a transmitter ID entered in Utilities, Device Options. For example, GT6133333M. Make sure your pump is paired with a transmitter. For more information, see *Pairing your pump and transmitter, on page 199*. • 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. • If your SG is outside of the 40 to 400 mg/dL range, your pump will not enter Auto Mode.
	Sensor off	Turn on the sensor in the Utilities, Sensor Settings 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.

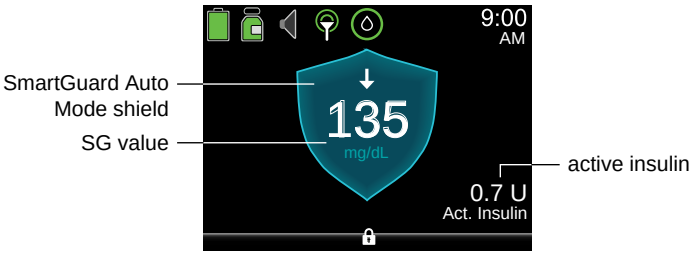
Line	Item	Instructions
6	Carb ratio not set	When you turn on the Bolus Wizard feature for the first time, enter your Carb Ratio in the Edit Carb Ratio screen. You can also enter your Carb Ratio in the Bolus Estimate Setup screen, even if the Bolus Wizard feature is not turned on.
7	Temp Basal rate	If 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 five hours to complete. You must wait until this amount is updated before Auto Mode can activate.
9	Auto Mode warming up	Auto Mode gathers information on your insulin delivery history in order to personalize its automatic delivery of insulin. This may require up to 48 hours to complete.

To check Auto Mode Readiness:

1. Press ◎ and select **Status** to go to the Status screen.
2. Select **Auto Mode Readiness**.

Home screen with SmartGuard Auto Mode

When your pump transitions into Auto Mode, the Home screen on your pump changes to display a shield that contains a real-time display of your current SG level. The Home screen also displays your current Active Insulin value.



Using SmartGuard Auto Mode

The following sections provide information on how to use SmartGuard Auto Mode and how to view your SG data. This information helps you identify SG trends, including indications that your SG is falling or rising rapidly. You can also view historical SG readings in a graph format.

Safe Basal

Safe Basal is an automatic function within SmartGuard Auto Mode and cannot be modified. The Safe Basal rate is determined by the Auto Mode feature based on your insulin delivery history. It lets you have time to perform additional actions required to ensure Auto Mode remains active. Safe Basal delivers insulin at a constant rate to cover your basal needs. Safe Basal does not adjust insulin delivery based on your current SG values.

When the pump is in Safe Basal, the Auto Mode shield appears with a white outline.

Several conditions can cause a transition into Safe Basal. The following table describes these conditions and the actions you must take to resume Auto Basal delivery. An optional setting called the Auto Mode BG alert can be set to have the pump alert you when a BG entry is required. This setting is turned on by default. For more information about the Auto Mode BG alert, see *Setting up SmartGuard Auto Mode, on page 221*.

Condition	Instructions
Auto Mode has been at the minimum delivery limit for 2 1/2 hours.	Enter a BG. An Auto Mode min delivery alert occurs if the Auto Mode BG alert is enabled.

Condition	Instructions
Auto Mode has been at the maximum delivery limit for four hours.	Enter a BG. An Auto Mode max delivery alert occurs if the Auto Mode BG alert is enabled.
Your sensor might be reading lower values than your actual glucose values.	Enter a BG. A BG required alert occurs if the Auto Mode BG alert is enabled.
An entered BG is 35% or more different than your current SG value.	Enter a BG. A BG required or Cal required for Auto Mode alert occurs if the Auto Mode BG alert is enabled.
No SG data has been received for more than five minutes.	• If SG data is not available due to a signal interference, three dashes appear on the screen in place of the SG data. If the interference is intermittent, the Auto Mode shield appears with a white outline, and no action is required. • If your pump has not received SG data for 30 minutes or more, a Lost sensor signal alert occurs. For more information, see *CGM (sensor) alarms, alerts, and messages, on page 262*. • If the SG data is not available because you need to calibrate the sensor again, calibration has expired, or when the system detects another calibration is required to improve sensor performance, you receive a Calibrate now alert. Calibrate your sensor. See *CGM (sensor) alarms, alerts, and messages, on page 262*. The Auto Mode BG alert does not apply to this condition.

After 90 minutes in Safe Basal, if the condition that caused the pump to transition into Safe Basal is not resolved, the pump enters Manual Mode.

Note: When you change your sensor, your pump switches to Safe Basal for up to 90 minutes. The pump tells you to calibrate and enter a BG for Auto Mode.

Example: Safe Basal

Alex's pump is in Auto Mode. Before lunch, he checks his BG, and enters the value into his pump. Alex notices the BG he entered was much higher than his current SG reading. Alex receives a BG required alert for Auto Mode. His pump displays a gray shield, indicating that Auto Mode is now in Safe Basal delivery. He washes his hands, repeats his fingerstick, and enters the new BG into the pump.

Alex checks his user guide and realizes that his pump entered Safe Basal because the difference between his SG and BG entry was greater than 35%.

Block Mode when in SmartGuard Auto Mode

Block Mode lets a caregiver block the patient from changing settings or delivering a bolus directly on the pump. In Block Mode, the following actions can be done while the pump is in Auto Mode:

- Auto Basal delivery
- BG correction bolus if BG was sent from your Accu-Chek Guide Link meter
- Calibration if BG was sent from your Accu-Chek Guide Link meter

The following actions cannot be done in Block Mode:

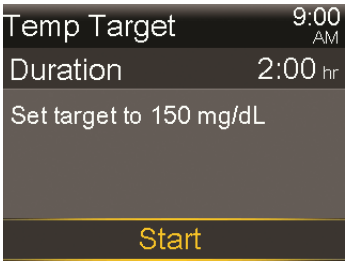
- Bolus delivery or entry unless prompted by the Bolus Recommended screen
- Changes to Auto Mode settings
- Manual BG entry

Setting Temp Target

You can set a temporary SG target (Temp Target) of 150 mg/dL for situations in which you would like your target to be temporarily higher, such as exercise. Check with your healthcare professional regarding use of a Temp Target.

To set a Temp Target:

1. Press ◎ and select **Temp Target** to go to the Temp Target screen.



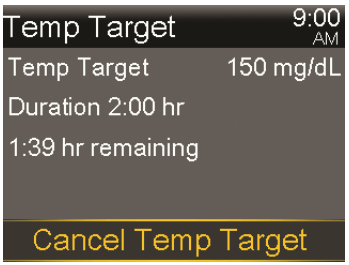
2. Set the duration. The default is two hours and the maximum duration is 12 hours. Use ⌃ and ⌄ to set the duration in 30-minute increments.
3. Select **Start**.

   The screen shows Temp Target Started, and then changes to the Home screen, where a banner shows the remaining Temp Target time.

   When the Temp Target time runs out, the banner disappears from the Home screen.

To cancel Temp Target:

1. Press ◎ and select **Cancel Temp Target** to go to the Temp Target screen.

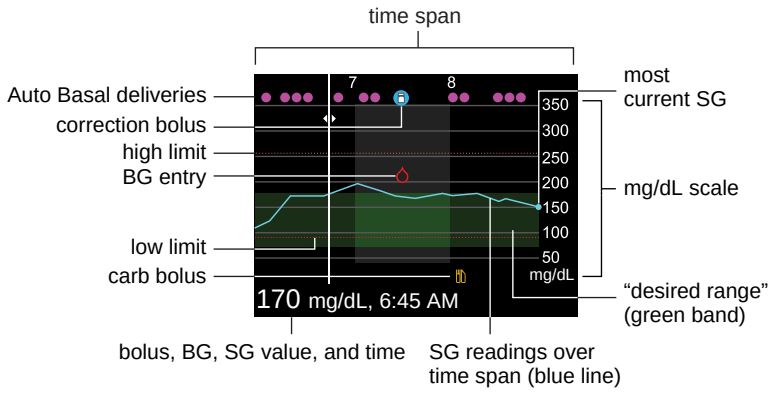


2. Select **Cancel Temp Target**.

   The Temp Target will be canceled and the Home screen will appear, with no Temp Target banner.

SmartGuard Auto Mode sensor graph

Your Auto Mode sensor graph displays your current SG reading that is wirelessly sent to your pump by your transmitter.



The Auto Mode sensor graph includes the following information:

- The bolus, BG, SG value, and time are displayed at the bottom of the screen. When you select a location on the graph, the specific details of the SG or event appear. Each Auto Basal delivery is displayed as a separate event rather than a delivery in units per hour. In addition, it is labeled as "Basal." For example, "Basal, 0.225 U" means 0.225 U was fully delivered at that time.
- Historical SG readings are displayed for the last 3-hour, 6-hour, 12-hour, or 24-hour periods. They appear as a blue line across the screen.
- Correction boluses are shown as white vials inside blue circles.
- Meal (carb) boluses are shown as yellow knife and fork symbols. These represent any bolus amounts that include a carb entry.
- BG entries appear as red drop symbols.
- The numerous small magenta dots along the top represent the automatically delivered basal insulin (Auto Basal or Safe Basal) delivered by SmartGuard Auto Mode.
- A time change event appears as a white clock symbol.

If an SG reading does not appear on the graph, some possible reasons for this include:

- An error condition or a sensor-related alert is occurring.

- A new sensor that you just inserted is still initializing.
- A new sensor that just initialized is still calibrating.
- An existing sensor that you have recently reconnected is not ready.
- More than six hours have passed since the initial sensor calibration.
- More than 12 hours have passed since the last sensor calibration.

To view the sensor graph:

1. From the Home screen, press the ❖ button to display the SG graph.

   A full-screen view of the 3-hour graph appears.
2. Press ⌃ to navigate to the 6-hour, 12-hour, and 24-hour graphs.
3. Press ⟨ to view SG readings and event details.
4. To exit the full-screen view, press ↩ or press the ❖ button again.

Enter BG

The BG screen lets you manually enter a BG value. When you access the BG screen, it does not show any previously entered manual or linked meter BG values. If a BG value is received from a linked meter, that value will immediately display in a separate BG Meter screen and you will be prompted to confirm the BG value.

When you enter a BG while in Auto Mode, a correction bolus may be suggested.

To manually enter BG readings:

1. Press ◎ and select **Enter BG** to go to the BG screen.
2. Select **Enter BG**.
3. Enter a BG value.
4. Select **Save**.
5. A screen appears prompting you to calibrate your sensor with the BG value if you want. Select **Yes** or **No**.

SmartGuard Auto Mode Bolus

Delivering a bolus in SmartGuard Auto Mode is similar to delivering a bolus using the Bolus Wizard feature in Manual Mode. The Bolus feature in Auto Mode requires you to enter either carbs or a BG value. You may also choose to enter both. Auto Mode then calculates the bolus amount needed to cover the meal or correction. Once you confirm this amount, Auto Mode will deliver the bolus.

The Auto Mode Bolus screen shows your current Active Insulin value.

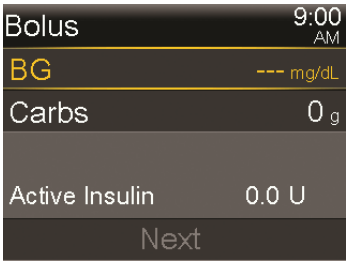
WARNING: Do not use Auto Mode for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in Auto Mode. Therefore, Auto Mode could deliver too much insulin. Too much insulin may cause hypoglycemia. Consult with your healthcare professional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

Note: Auto Mode Bolus only supports Normal boluses. Square Wave, Dual Wave, Easy, Manual, and Preset bolus types cannot be delivered while in Auto Mode.

When a BG reading is over 150 mg/dL in Auto Mode, the pump may recommend a correction bolus. SmartGuard Auto Mode calculates the recommended correction bolus. SmartGuard Auto Mode takes several factors into account that include your BG reading and active insulin.

After you confirm your BG reading from an Accu-Chek Guide Link meter on the pump, Bolus recommended appears below the BG value if the pump calculates that a correction bolus is needed. Select **Bolus** to deliver the recommended bolus. If you manually enter your BG, a Bolus recommended screen appears. Select **Bolus** to deliver the recommended bolus.

If the BG is under 150 mg/dL or if the bolus is zero after the pump accounts for active insulin, no correction is recommended.



If you use an Accu-Chek Guide Link meter, you can send your BG meter readings directly to your pump. A confirmation screen appears for you to confirm the BG value on the pump. Confirmed BG values are automatically used in the BG field of the Auto Mode Bolus screen. The confirmed BG values are valid for up to 12 minutes after sending them to the pump. Confirm the BG meter reading from an Accu-Chek Guide Link meter before you use the Auto Mode Bolus feature. If you do not use an Accu-Chek Guide Link meter, you must manually enter your BG value.

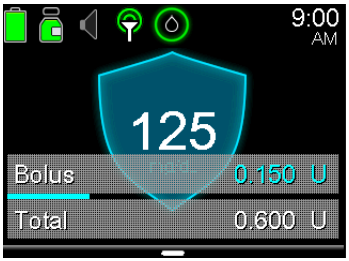
Note: Do not use a BG meter reading in the Auto Mode Bolus screen if more than 12 minutes have passed since you have taken the BG meter reading. That BG meter reading and the corresponding bolus amount may no longer be accurate.

To use the Auto Mode Bolus feature:

1. Press ◎ and select Bolus to go to the Bolus screen in Auto Mode.
2. If you use an Accu-Chek Guide Link meter, go to step 3. Otherwise, enter your BG value. You can enter a value within the range of 20 to 600 mg/dL.
3. Enter your Carb amount in grams. If you choose not to enter a Carb amount, go to step 4.
4. Select **Next**.

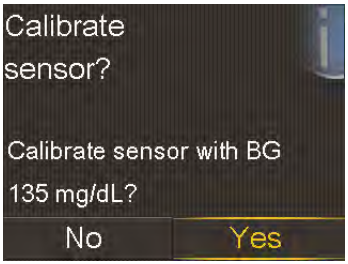
   The screen indicates the amount of the calculated bolus.
5. Select **Deliver Bolus**.

   A screen appears briefly to indicate the bolus delivery has started. Then, the Home screen appears and shows the progress of the bolus delivery.



Note: You can stop a bolus at any point by pressing ◎ and selecting **Stop Bolus**.

6. If a new BG value is used in the Auto Mode Bolus feature, the following screen also appears to ask you to calibrate your sensor. Select **Yes** or **No**.



Alert Silence

The Alert Silence option lets you temporarily silence SG alerts. This is useful in situations where you do not want to disturb others, such as when you are in a business meeting or in a movie theater. When using this option, your system still records the time and glucose value for any alerts that occur. You can view this information in the Alarm History screen. See *Alarm History, on page 143* for details.

If a glucose alert occurs when you are using the Alert Silence option, the notification light begins to flash and the Sensor alert occurred alert appears to let you know an alert was silenced, but there is no vibration or sound. If you have not cleared the alert by the end of the preset alert silence duration, your pump begins to beep or vibrate periodically until the alert is cleared.

Note: The following alarms and alerts are never silenced:

- Low SG XX mg/dL (XX represents 50 mg/dL or below) alarm

- Auto Mode exit alert
- High SG alert

For more information about the Auto Mode exit alert or the High SG alert, see *SmartGuard Auto Mode alerts and messages, on page 273*. For more information about the Low SG XX mg/dL (XX represents 50 mg/dL or below) alarm, see *CGM (sensor) alarms, alerts, and messages, on page 262*.

You can check the status of the Alert Silence option in the Sensor screen. For more information, see *Status screens, on page 50*.

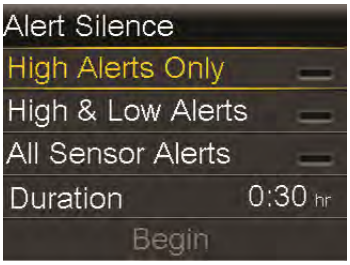
The following table describes the glucose alerts that are silenced with each option.

Option	Silences these alerts
High Alerts Only	Alert on high, Alert before high, and Rise Alert
High and Low Alerts	Alert on high, Alert before high, Rise Alert, Alert on low, and Alert before low **Note:** Alert on low cannot be silenced if the SmartGuard Suspend on low or SmartGuard Suspend before low options are turned on.
All Sensor Alerts	All of the alerts listed previously for High and Low Alerts, plus the following: • All calibration alerts, reminders, or error messages • All alerts relating to sensor insertion, including alerts about sensor warm-up, changing your sensor, sensor expiration, sensor errors, connection issues, and so on • All alerts related to your transmitter, including all alerts about your transmitter battery and all connection issues

To set Alert Silence in Auto Mode:

1. Press ◎ and go to the Alert Silence screen.

   Audio Options > Alert Silence Options



2. Select High Alerts Only, High and Low Alerts, or All Sensor Alerts to set the alerts you want silenced. Refer to the previous table for details about the alerts silenced with each selection.

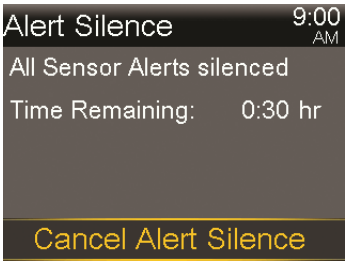
> **Note:** If you select **All Sensor Alerts**, you will not receive most alerts related to your SG readings, your sensor, calibration requirements, or your transmitter. The Low SG XX mg/dL (XX represents 50 mg/dL or below) alarm, the Auto Mode exit alert, and the High SG alert cannot be silenced. You still receive and hear these alerts when Alert Silence is on. If a silenced glucose alert occurs, the notification light flashes and a message appears to notify you that a silenced alert occurred, but there is no vibration or beep. You can view the specific alert in Alarm History. For more information, see *Alarm History, on page 143*.

3. Set the **Duration**. The duration can be set in 30-minute increments from 30 minutes to 24 hours.
4. Select **Begin**. The Alert Silence settings immediately take effect and you are returned to the Sensor Settings screen.

To cancel Alert Silence:

1. Press ◎ and go to the Alert Silence screen.

   Audio Options > Alert Silence



2. Select **Cancel Alert Silence**.

Exiting SmartGuard Auto Mode

The pump will exit SmartGuard Auto Mode:

- Auto Mode has been in Safe Basal for 90 minutes. See *Safe Basal, on page 226*.
- A High SG alert has occurred.
- You have not cleared any suspend event messages within four hours.
- You manually turned off the Sensor feature or disconnected the transmitter.

Some alarms cause the pump to exit SmartGuard Auto Mode and also turn the Auto Mode feature off. Auto Mode is turned off if an alarm initiates a pump reset. If this occurs, you will no longer see the SmartGuard Auto Mode shield on your Home screen. You must turn the Auto Mode feature on again and go through a five-hour warm-up period.

You can turn off Auto Mode at any time. For more information, see *Setting up SmartGuard Auto Mode, on page 221*.

Returning to SmartGuard Auto Mode

If you have automatically transitioned to Manual Mode, you can return to Auto Mode if all readiness conditions are satisfied and you enter a BG. For more information, see *SmartGuard Auto Mode Readiness, on page 223*.

Note: If you have turned Auto Mode off, you cannot return to Auto Mode until you turn Auto Mode on again.

You can return to Auto Mode if the following conditions are satisfied:

- Auto Mode is enabled on your pump.

- Your sensor is providing good SG values.
- A bolus is not in progress.
- A temp basal rate is not in progress.
- 48-hour warm-up is complete.
- Auto Mode is not in a five-hour warm-up period.
- You have entered a new BG reading.

If any of these conditions are not met, Auto Mode cannot restart.

13

Alarms, alerts, and messages

13 Alarms, alerts, and messages

This chapter describes the general behavior of the most common and the most serious notifications and how to resolve them. For information about how to set your notification preferences in the app, see the MiniMed Mobile app user guide.

About alarms, alerts, and messages

Your pump has a sophisticated safety network. If this safety network detects anything unusual, it conveys this information in the form of notifications. Notifications include alarms, alerts, and messages.

When you receive more than one notification and there are multiple messages to view, a small white flap appears on the notification icon in the upper-right corner of the screen . When you clear the first notification, the next notification becomes visible.

Note: It is important that you promptly respond to all notifications and confirmations that appear on your pump. In the event that you do not respond, your pump may remain on that screen until addressed.

When you respond to a message, there may be times when another message appears. Always be sure to address all notifications you have received.

A white triangle in the lower-right corner means you must press ∨ to continue.

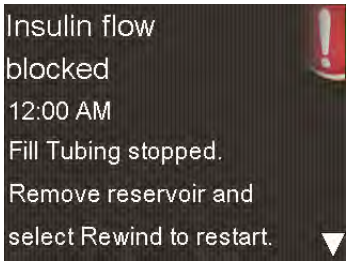
WARNING: If you receive a Critical pump error alarm on your pump, the following screen displays and the pump sirens.

Immediately disconnect from your insulin pump and discontinue use. Contact 24-Hour Technical Support for assistance.

Remember, your body still needs insulin while your pump is removed. It is important that you consult your healthcare professional to determine an alternate method of receiving insulin while your pump is removed. For more information on the Critical pump error alarm, see *Pump alarms, alerts, and messages, on page 244*.

Alarms

An alarm warns you of a condition that needs your immediate attention. Stopped insulin delivery and low glucose levels are the most common reasons for alarms.



WARNING: Always address alarms immediately when they occur. Ignoring an alarm can result in hyperglycemia or hypoglycemia.

When an alarm occurs:

Display: The pump displays a notification with a red icon and instructions.

Notification light: The red notification light blinks twice, followed by a pause, in a continuous repeating pattern.

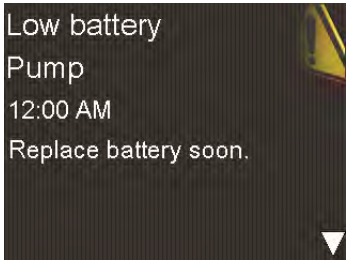
Audio: Depending on your Audio Options settings, the pump emits an alarm tone, a continuous three-pulse-and-pause vibration pattern, or both the alarm tone and vibration.

You must resolve the underlying problem that triggered the alarm. In most cases, you clear an alarm by pressing ✓ and then you make a selection. In some cases, however, clearing the alarm does not fix the underlying problem. The alarm repeats until the underlying problem is fixed.

If you do not respond to an alarm, after ten minutes the alarm tone escalates to a loud emergency siren.

Alerts

An alert makes you aware of a situation that may require your attention. When an alert occurs, always check your pump screen to see if any action is required.



When an alert occurs:

Display: The pump displays a notification with a yellow icon and instructions.

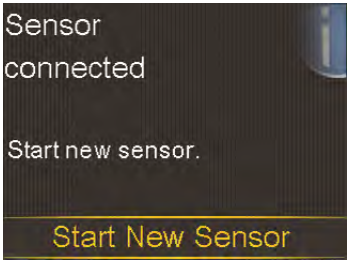
Notification light: The red notification light on your pump blinks once, followed by a pause, then blinks once again in a continuous repeating pattern.

Audio: Depending on your Audio Options settings, the pump either beeps or vibrates in a continuous three-pulse-and-pause pattern, or does both.

To clear an alert, press ✓ and then make a selection. If you do not respond to an alert, the pump beeps every five minutes or every fifteen minutes, depending on the alert. Some alerts will also escalate to a loud emergency siren after ten minutes.

Note: If an alert occurs when you are in a screen other than the Home screen, the alert message may appear after you return to the Home screen.

Messages



A message informs you about the status of your pump or if you need to make a decision.

When a message occurs:

Display: The pump displays a notification with a blue icon and instructions.

Notification light: Does not illuminate or blink.

Audio: Depending on the message, the pump emits a message tone, an alert tone, or no tone. Depending on your Audio Options settings, you may hear a tone, feel a one-pulse-only vibration, or hear a tone and feel a vibration.

You clear the message by pressing ∨ and making a selection.

Pump alarms, alerts, and messages

The following table lists the most common or serious alarms, alerts, and messages related to your pump. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution.

Title and text	Type	Explanation	Next steps
Active Insulin cleared Any Active Insulin amount has been cleared.	Alert	Your active insulin amount is now at 0 units. This may occur because certain alarms automatically clear active insulin.	• Select **OK** to clear the alarm. • The active insulin tracked prior to pump restart is not included in new Bolus Wizard calculations. Consult your healthcare professional for how long you need to wait after active insulin is cleared before you can rely on the active insulin calculation of the Bolus Wizard feature. • You can check Daily History for the time and amount of your last bolus.
Auto Suspend Insulin delivery suspended. No buttons pressed within time set in Auto Suspend.	Alarm	Insulin delivery is currently suspended by Auto Suspend. Auto Suspend is a feature you enabled to automatically suspend insulin delivery and trigger an alarm after no buttons are pressed for a specified period of time. Insulin delivery is suspended until you clear the alarm and resume basal delivery.	• To clear the alarm and resume basal insulin delivery, select **Resume Basal**. • Check your blood glucose (BG) and treat as necessary.

Title and text	Type	Explanation	Next steps
Battery failed Insert a new AA battery.	Alarm	The pump battery does not have enough power.	• Select **OK** to clear the alarm. • Remove the old battery and insert a new AA battery.
Battery not compatible. See User Guide.	Alarm	The battery that you inserted into the pump is not compatible.	• To clear the alarm, remove the incompatible battery. • Insert a new AA battery.
Bolus not delivered Bolus entry timed out before delivery. If bolus intended, enter values again.	Alert	Bolus values entered, but bolus was not delivered within 30 seconds.	• Select **OK** to clear the alert. • If bolus delivery was intended, check your BG, re-enter bolus values and deliver bolus.
Bolus stopped Cannot resume bolus or cannula fill. XX.XXX of YY.YYY U delivered. ZZ.ZZZ U not delivered. If needed, enter values again.	Alarm	The battery power was exhausted while a bolus or Fill Cannula was in progress, or you did not respond to the Resume bolus? message after replacing the battery.	• Note the amount of insulin not delivered. • Replace the AA battery. • Select **OK** to clear the alarm. • Deliver the remaining bolus amount if needed.

Title and text	Type	Explanation	Next steps
Check settings Startup Wizard settings complete. Check and set up your other settings.	Alert	Some settings have been cleared or reverted to factory default values.	• Select **OK** to clear the alert. • Review any settings that you have not already set in Startup Wizard and re-enter the values, if necessary.
Critical pump error Delivery stopped. Pump not working properly. Stop using pump. Remove infusion set from body. Consider other insulin treatment. See User Guide.	Alarm	Your pump has encountered an error that cannot be resolved. For example, your pump may have a mechanical problem.	The pump is not able to deliver insulin. Remove your infusion set and stop using your pump. • Consider another form of insulin delivery. • Check your BG, and treat as necessary. • Write down the error code that appears on the alarm screen. • Call 24-Hour Technical Support for assistance with your pump.
Delivery limit exceeded Delivery stopped. Check BG. See User Guide for more information.	Alarm	Your pump has suspended because the hourly delivery limit was met. This limit is based on the maximum bolus and maximum basal setting. If this alarm occurs during a bolus, the bolus is canceled before it can complete.	• Check your BG. • Select **Resume Basal**. • Check Bolus History and re-evaluate your need for insulin. • Continue to monitor your BG.

Title and text	Type	Explanation	Next steps
Device Limit You must delete an existing device (*device type*) before you can pair a new one (*device type*).	Message	The pump is already paired with the maximum number of devices for this type. The following list describes the maximum number of each *device type* to pair with the pump: • Meter–four Accu-Chek Guide Link meters • CGM–one Guardian Link (3) transmitter • Mobile Device–one compatible mobile device	• Select **OK** to clear the message. • Go to the Manage Devices screen and select the device you want to delete from the list of devices. Select **Delete**, and then select **Yes** to confirm or **No** to cancel. Pair the pump and the desired device.
Device not compatible Device cannot be used with this pump.	Alert	The pump cannot pair with the selected device.	• Select **OK** to clear the alert. • Call 24-Hour Technical Support for assistance.

Title and text	Type	Explanation	Next steps
Device not found Make sure device is in range and in pairing mode.	Alert	The pump did not pair with the device.	• Select **OK** to clear the alert. • Make sure the device is not already paired with a pump. • Make sure the device is ready to pair with the pump. • Make sure you are away from any electronic devices that might cause interference, such as cellular phones that are not paired with the MiniMed 770G System and other wireless devices. • Move the device closer to the pump. • Try to pair the pump with the device again.
Fill Cannula? Select Fill to fill cannula or select Done if not needed.	Alarm	You had the Fill Cannula screen displayed for 15 minutes.	• To proceed and fill the cannula, select **Fill**. • If you do not need to fill the cannula, select **Done** to skip this process.

Title and text	Type	Explanation	Next steps
High BG XXX mg/dL Check infusion set. Check ketones. Consider insulin injection. Monitor BG. Confirm BG?	Alert	Your BG meter reading is above 250 mg/dL. This alert applies when the Auto Mode feature is off. For High BG XXX mg/dL when the Auto Mode feature is on, see *SmartGuard Auto Mode alerts and messages, on page 273*.	• Select **No** to prevent the remote BG from being used by your pump. Select **Yes** to confirm the BG reading. • Check your BG and treat as necessary.
Insert battery Delivery stopped. Insert a new battery now.	Alarm	The battery was removed from the pump. If a bolus was in progress when the battery was removed, a Resume bolus? message appears and a tone sounds when a new battery is inserted. The message indicates how much bolus was delivered.	• Insert a new AA battery. • The alarm clears when you insert a new battery. • The pump powers off after 10 minutes unless you insert a new battery.

Title and text	Type	Explanation	Next steps
Insulin flow blocked Check BG. Consider testing ketones. Check reservoir and infusion set.	Alarm	Your pump has detected that the basal or bolus insulin flow was blocked.	• Check your BG. Consider checking ketones and take an injection if needed. • Remove your infusion set and reservoir. • Select **Rewind** to start the new reservoir process using a new infusion set and reservoir. If a bolus delivery was in progress when the alarm occurred: • Check the Daily History screen for the amount of bolus already delivered before the pump alarmed. • Consider delivering remaining bolus, if the bolus insulin was not included in an insulin injection.

WARNING: Do not use 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 hypoglycemia. Consult with your healthcare professional for how long you need to wait after a manual injection of insulin before you resume Auto Mode.

Title and text	Type	Explanation	Next steps
Insulin flow blocked Check BG. Consider testing ketones. Estimated 0 U insulin in reservoir. Change reservoir and infusion set.	Alarm	Your pump has detected that the insulin flow was blocked and there is no insulin in the reservoir.	• Check your BG. Consider checking ketones and take an injection if needed. • Remove your infusion set and reservoir. • Select **Rewind** to start the new reservoir process using a new infusion set and reservoir. If a bolus delivery was in progress when the alarm occurred: • Check the Daily History screen for the amount of bolus already delivered before the pump alarmed. • Consider delivering remaining bolus, if the bolus insulin was not included in an insulin injection.

Title and text	Type	Explanation	Next steps
Insulin flow blocked Fill Cannula stopped. Remove infusion set from body. Change reservoir and infusion set.	Alarm	Your pump has detected the insulin flow was blocked while filling the cannula.	• Check your BG. Consider checking ketones and take an injection if needed. • Remove your infusion set and reservoir. • Select **Rewind** to start the new reservoir process using a new infusion set and reservoir.
Insulin flow blocked Fill Tubing stopped. Remove reservoir and select Rewind to restart.	Alarm	Your pump has detected the insulin flow was blocked while filling the tubing. Possible connection issue between the tubing and reservoir.	• Remove the reservoir and select **Rewind** to restart the fill tubing process. • Disconnect tubing from reservoir. • Be sure tubing is not crimped or bent. • Continue following the steps displayed on the pump using the same infusion set and reservoir. • If this alarm occurs again, use a new infusion set.
Loading incomplete Remove reservoir and select Rewind to restart loading.	Alarm	You pressed ↩ after loading began.	• Remove the reservoir to start again. • Select **Rewind** and follow the on-screen instructions.

Title and text	Type	Explanation	Next steps
Low battery Pump Replace battery soon.	Alert	The battery in the pump is low on power. Remaining battery life is 10 hours or less.	• Select **OK** to clear the alert. • Replace the AA battery as soon as possible. Otherwise, insulin delivery stops, and the Replace Battery Now alarm occurs. • If the pump is delivering a bolus or filling the cannula, wait until delivery is complete to replace battery.
Low BG XX mg/dL Treat Low BG. Do not bolus until BG is normal. Monitor BG. Confirm BG?	Alert	Your BG meter reading is below 70 mg/dL.	• Select **No** to prevent the remote BG from being used by your pump. Select **Yes** to confirm the BG reading. • Check your BG and treat as necessary.
Low reservoir *XX* units remaining. Change reservoir.	Alert	Your reservoir is low on insulin, according to the number of units set in the Low Reservoir Reminder.	• Select **OK** to clear the alert. • Change the reservoir soon. • If you do not change the reservoir after you receive this alert, you will receive a second Low reservoir alert when the insulin level reaches half of your original alert amount.

Title and text	Type	Explanation	Next steps
Manage settings error Delivery stopped. Backup settings cleared from Manage Settings. Current settings are working properly. Select OK to restart. See User Guide.	Alarm	A pump error has occurred, and you need to restart your pump. Your backup settings have been lost, but your current settings are unchanged.	• Select **OK** to restart your pump. Your current settings are unchanged. Only your backup settings are lost. • When the pump restarts, follow instructions on the pump display. • If the pump was delivering a bolus or filling the cannula, check Daily History and evaluate your need for insulin.
Max Fill reached 3*X.X* U. Did you see drops at the end of tubing?	Alarm	You have exceeded the number of units expected to fill the tubing. By now, insulin should be at the end of the tubing.	• If you see drops at the end of the tubing, select **Yes**. • If you do not see drops, select **No**. • Follow instructions displayed on the pump.
Max Fill reached 4*X.X* U. Remove reservoir and select Rewind to restart New Reservoir procedure.	Alarm	You have exceeded the number of units expected to fill the tubing. By now, insulin should be at the end of the tubing.	• Remove the reservoir. • Check if you still have insulin in the reservoir. If you do, you can continue using the same reservoir. • Select **Rewind** to restart the new reservoir procedure.

Title and text	Type	Explanation	Next steps
No reservoir detected Rewind before loading reservoir.	Alarm	There is no reservoir in the pump or the reservoir is not properly locked into place.	• Select **Rewind**. • Ensure that your reservoir is filled with insulin. • When prompted, ensure that your reservoir is inserted and properly locked into place.
Power error detected Delivery stopped. Record your settings by uploading to CareLink or write your settings on paper. See User Guide.	Alarm	The internal power source in your pump is unable to charge. Your pump is operating on the AA battery only.	• Select **OK** to clear the alarm. • Check your BG and treat as necessary. • Record your settings as soon as possible because your AA battery may not last long. • Call 24-Hour Technical Support for assistance with your pump.
Power loss AA battery was removed for more than 10 min or power was lost. Select OK to re-enter time and date.	Alarm	Your pump battery has been out for more than ten minutes, and your pump has lost power. You must reset your time and date.	• Select **OK** to go to the Time & Date screen. • Enter the current time, time format, and date.

Title and text	Type	Explanation	Next steps
Pump error Delivery stopped. Current settings cleared. Pump restart needed. Select OK to restart and then re-enter your settings. See User Guide.	Alarm	Your pump encountered an error and will restart. Your pump settings will return to factory default values.	• Select **OK** to restart your pump. • When the pump restarts, follow instructions on the pump display. • After restart, check settings and re-enter values as needed. • If you recently saved backup settings in Manage Settings, use Restore Settings. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate your need for insulin. • If this alarm recurs frequently, write down the error code displayed on the alarm screen (you can also find it in your Alarm History) and call 24-Hour Technical Support.

Title and text	Type	Explanation	Next steps
Pump error Delivery stopped. Settings unchanged. Pump restart needed. Select OK to restart. See User Guide.	Alarm	A pump error has occurred, you need to restart your pump.	• Select **OK** to restart your pump. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate your need for insulin. • If this alarm recurs frequently, write down the error code displayed on the alarm screen (you can also find it in your Alarm History) and call 24-Hour Technical Support.
Pump error Delivery stopped. Settings unchanged. Select OK to continue. See User Guide.	Alarm	Your pump encountered an error but a restart is not necessary. The issue is resolved. Your settings are not changed.	• Select **OK** to resume basal delivery. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate your need for insulin. • If this alarm recurs frequently, write down the error code displayed on the alarm screen (you can also find it in your Alarm History) and call 24-Hour Technical Support.

Title and text	Type	Explanation	Next steps
Pump restarted Delivery stopped. Settings unchanged. Select OK to continue. See User Guide.	Alarm	Your pump has encountered a problem and has restarted. Your settings have not been changed.	• Select **OK** to continue. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate your need for insulin. • If this alarm recurs frequently, write down the error code displayed on the alarm screen (you can also find it in your Alarm History) and call 24-Hour Technical Support.
Replace battery Battery life less than 30 minutes. To ensure insulin delivery, replace battery now.	Alert	Battery life is low and will be exhausted within 30 minutes.	• Select **OK** to clear the alert. • Replace the AA battery.
Replace battery now Delivery stopped. Battery must be replaced to resume delivery.	Alarm	Insulin delivery has stopped due to low power. Battery was not replaced after the Low battery Pump alert.	Replace the battery immediately to resume insulin delivery.

Title and text	Type	Explanation	Next steps
Reservoir estimate at 0 U To ensure insulin delivery, change reservoir.	Alert	Your reservoir level is estimated at 0 units.	• Select **OK** to clear the alert. • Change the reservoir now.
Resume bolus? *XXX* of *YYY* U delivered. Resume delivery of *ZZZ* U?	Message	A normal bolus delivery has been interrupted because the pump battery was removed. If it is within 10 minutes since this interruption, you can resume this bolus.	• Check the message to see how much of the bolus was actually delivered. • To cancel remaining amount of bolus, select **Cancel**. • To resume remaining amount of bolus, select **Resume**.
Resume Dual bolus? *XX* of *YY* U delivered. Resume delivery of *ZZ* U for *XX:XX* hr?	Message	The Square portion of Dual Bolus delivery has been interrupted. If it is within 10 minutes since this interruption, you can resume this bolus.	• Check the message to see how much of the Dual Wave bolus was actually delivered. • To cancel remaining amount of bolus, select **Cancel**. • To resume remaining amount of bolus, select **Resume**.

Title and text	Type	Explanation	Next steps
Resume Dual bolus? *XX* of *YY* U delivered. Resume delivery of *ZZ* U now, and *AA* U Square for *XX:XX* hr?	Message	The Now portion of a Dual Wave bolus delivery has been interrupted because the pump battery was removed. If it is within 10 minutes since this interruption, you can resume this bolus.	• Check the message to see how much of the Dual Wave bolus was actually delivered. • To cancel remaining amount of bolus, select **Cancel**. • To resume remaining amount of bolus, select **Resume**.
Resume Square bolus? *XX* of *YY* U delivered for *XX:XX* hr. Resume delivery of *ZZ* U for *XX:XX* hr?	Message	The Square Wave bolus delivery was interrupted. If it is within 10 minutes since this interruption, you can resume this bolus.	• Check the message to see how much of the Square Wave bolus was actually delivered. • To cancel remaining amount of bolus, select **Cancel**. • To resume remaining amount of bolus, select **Resume**.
Rewind required Delivery stopped. Rewind was required due to pump error. Select OK to continue. See User Guide.	Alarm	Your pump encountered an error.	• Select **OK** to clear the alarm after the pump has completed rewinding. • Select **Reservoir & Tubing** from the Home screen to start the new reservoir process using a new infusion set and reservoir. For details, see *Setting up the reservoir and infusion set, on page 117*.

Title and text	Type	Explanation	Next steps
Stuck button Button pressed for more than 3 minutes.	Alarm	The pump has detected that a button has been pressed for an unusually long time.	• Select **OK** to clear the alarm. • If this alarm occurs again, call 24-Hour Technical Support for assistance with your pump. If you are unable to clear the alarm: • See *Troubleshooting pump issues, on page 283*. • Consider another form of insulin, because your pump is not delivering insulin. • Check your BG and treat as necessary. • Call 24-Hour Technical Support for assistance with your pump.

CGM (sensor) alarms, alerts, and messages

The following table lists the most common or serious alarms, alerts, and messages related to your sensor glucose (SG) readings, as well as the status of your transmitter and sensor. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution.

Title and text	Type	Explanation	Next steps
Alert before high Sensor glucose approaching High Limit. Check BG.	Alert	Your SG value is approaching your specified high limit.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Alert before low Sensor glucose approaching Low Limit. Check BG.	Alert	Your SG value is approaching your specified low limit.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Alert on high XXX mg/dL High sensor glucose. Check BG.	Alert	Your SG value is at or above your specified high limit.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Alert on low XXX mg/dL Low sensor glucose. Check BG.	Alert	Your SG value is at or below your specified low limit.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Alert on low XXX mg/dL Low sensor glucose. Insulin delivery suspended since XX:XX AM/PM. Check BG.	Alarm	Your SG value is at or below your specified low limit, and the pump has suspended insulin delivery due to a Suspend on low or Suspend before low event.	• Select **OK** to clear the alarm. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.

Title and text	Type	Explanation	Next steps
Basal delivery resumed Basal delivery resumed at XX:XX AM/PM after suspend by sensor. Check BG.	Message	Your pump is resuming basal insulin delivery after a Suspend on low or Suspend before low event occurred.	• Select **OK** to clear the message. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Basal delivery resumed Low settings change caused basal to be resumed at XX:XX AM/PM. Check BG.	Alert	Your pump is resuming basal insulin delivery after a Suspend before low or a Suspend on low event occurred, because you have turned off the Suspend before low or the Suspend on low feature.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
Basal delivery resumed Maximum 2 hour suspend time reached. Check BG.	Alert	Your pump is resuming basal insulin delivery two hours after a Suspend before low or Suspend on low event occurred.	• Select **OK** to clear the alert. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.

Title and text	Type	Explanation	Next steps
Basal delivery resumed Maximum 2 hour suspend time reached. SG is still under Low limit. Check BG.	Alarm	Your pump is resuming basal insulin delivery two hours after a Suspend before low or Suspend on low event occurred.	• Your pump has resumed basal insulin delivery; however, your SG value is still at or below your low limit. • Select **OK** to clear the alarm. • Check your BG. • Follow instructions from your healthcare professional and continue to monitor your BG.
BG not received Place pump close to transmitter. Select OK to resend BG to transmitter.	Alert	The transmitter was unable to receive the calibration BG meter readings from the pump.	• Move your pump and transmitter closer together. • Select **OK**. Your pump tries again to send your BG to your transmitter for sensor calibration.
Calibrate now Check BG and calibrate sensor.	Alert	A BG meter reading is needed immediately to calibrate your sensor so that you can continue receiving SG readings.	If you are unable to calibrate now, you can use the Snooze feature. Set the desired time, and select **Snooze**. If you do not calibrate before the Snooze time is up, the Calibrate now alert occurs again.

Title and text	Type	Explanation	Next steps
Calibration not accepted Wait at least 15 minutes. Wash hands, test BG again and calibrate.	Alert	Your system was unable to use the BG meter readings you entered to calibrate your sensor.	• Wash and dry hands thoroughly. See *Guidelines for calibrating, on page 207*. • Select **OK** to clear the alert. • After 15 minutes, enter a new BG meter reading for calibration as instructed in *Calibrating your sensor, on page 204*. If you receive a Calibration not accepted alert on your second calibration after 15 minutes, a Change sensor alert occurs. • Call 24-Hour Technical Support if you have questions.
Change sensor Insert new sensor and Start New Sensor.	Alert	You selected **No** in the Check sensor insertion message, indicating that your sensor is not fully inserted.	• Select **OK** to clear the alert. • Change your sensor. For details, see your sensor user guide. • After you change your sensor, refer to *Starting the sensor, on page 203*.
Change sensor Second calibration not accepted. Insert new sensor.	Alert	This alert occurs when you receive two Calibration not accepted errors in a row.	• Select **OK** to clear the alert. • Change your sensor. For details, see your sensor user guide.

Title and text	Type	Explanation	Next steps
Change sensor Sensor not working properly. Insert new sensor.	Alert	This alert occurs when the transmitter diagnoses a problem with the sensor that cannot be resolved.	• Select **OK** to clear the alert. • Change your sensor. For details, see your sensor user guide.
Check connection Ensure transmitter and sensor connection is secure, then select OK.	Alert	The pump fails to detect the transmitter and is unable to receive sensor signal.	• Select **OK** to clear the alert. • If your sensor is fully inserted, select **Yes**. If your sensor is not fully inserted, select **No**. • If your sensor was not fully inserted, insert a new sensor. • If you still cannot connect your sensor, see *My pump cannot find the sensor signal, on page 288*.
Lost sensor signal Move Pump closer to transmitter. May take 15 minutes to find signal.	Alert	Transmitter signal has not been received for 30 minutes during or after initialization.	• Move your pump closer to your transmitter. It can take up to 15 minutes for your pump to start communicating with your transmitter. • Select **OK** to clear the alert.
Low battery transmitter Recharge transmitter within 24 hours.	Alert	The battery in the transmitter needs to be recharged within 24 hours.	• Select **OK** to clear the alert. • Recharge your transmitter as soon as possible.

Title and text	Type	Explanation	Next steps
Low SG XX mg/dL SG is under 50 mg/dL. Check BG and treat.	Alarm	Your SG value has reached or fallen below 50 mg/dL. This alarm is factory set and cannot be changed or turned off. This alarm cannot be silenced and is always enabled, whether the pump is in Auto Mode or Manual Mode.	• Select **OK** to clear the alarm. • Check your BG and treat as necessary.

Note: XX represents the SG value that appears on your pump.

WARNING: For MiniMed 770G Users Ages 2-13: Do not rely solely on the use of a low sensor glucose (SG) value for "Alert on Low" or "Alert before Low" for alerts set at 50 mg/dL and 60 mg/dL. A low sensor glucose alert may not reflect the user's true blood glucose at these levels, or may not alert. Do not ignore symptoms of low glucose. Always confirm your sensor glucose readings with your blood glucose meter, and treat according to the recommendations of your healthcare professional. Solely relying on these sensor glucose alerts and readings for treatment decisions could result in missing severe hypoglycemia (low blood glucose) events.

Title and text	Type	Explanation	Next steps
Medical device CALL FOR EMERGENCY ASSISTANCE. I have diabetes.	Alarm	Your pump is suspended due to low SG, and you have not responded to the alarm within 10 minutes.	• Select **Dismiss**. • Immediately call for emergency assistance.
No calibration occurred Confirm sensor signal. Calibrate by XX:XX AM/PM.	Alert	The transmitter was unable to receive the calibration BG meter readings from the pump.	• Select **OK** to clear the alert. • Check the status icons on your Home screen to ensure that your pump has a signal from your sensor. If there is no sensor signal, see *My pump cannot find the sensor signal, on page 288*. • Calibrate again by the time shown on the pump screen to ensure you continue SG monitoring.
No calibration occurred Confirm sensor signal. Check BG again to calibrate sensor.	Alert	The transmitter was unable to receive the required calibration BG from the pump. Calibration is required by the system for SG values to resume. "Calibration required" appears on your sensor graph.	• Select **OK** to clear the alert. • Take another BG meter reading and calibrate again.

Title and text	Type	Explanation	Next steps
Possible signal interference Move away from electronic devices. May take 15 minutes to find signal.	Alert	There may be interference from another electronic device that is affecting the communication between your pump and transmitter.	• Move away from other electronic devices. It can take up to 15 minutes for your pump to start communicating with your transmitter. • Select **OK** to clear the alert.
Rise Alert Sensor glucose rising rapidly.	Alert	Your SG value has been rising as fast or faster than your preset Rise Alert Limit.	• Select **OK** to clear the alert. • Monitor trend and glucose level. • Follow instructions from your healthcare professional.
Sensor alert occurred Check Alarm History for silenced alerts.	Alert	Sensor alert occurred when Alert Silence is on.	• Select **OK** to clear the alert. • Check the Alarm History screen to see which alerts were silenced. • Select the alert to open the Alarm Detail screen. • Take action based on the selected alert.

Title and text	Type	Explanation	Next steps
Sensor connected If new sensor, select Start New. If not, select Reconnect.	Message	The transmitter has detected that you have connected a sensor. The pump needs to know if this is a new sensor or if you have reconnected your old sensor.	• If you have connected a new sensor, select **Start New Sensor**. • If you have reconnected a sensor you have been using, select **Reconnect Sensor**. • In either case, a "Warm-up" message appears on your Home screen, and you will be prompted to enter a BG value when your sensor is ready for calibration. Your pump starts receiving your SG values again after the two-hour initialization is complete.
Sensor connected Start new sensor.	Message	The pump has detected that this is a new sensor, which needs to be started and warmed-up.	Select **Start New Sensor**. The alert will close and a "Warm-up" message appears on the sensor graph with a progress bar.
Sensor expired Insert new sensor.	Alert	The sensor has reached the end of its useful life.	• Change your sensor. For details, see your sensor user guide. • Select **OK** to clear the alert.
Sensor signal not found See User Guide.	Alert	After multiple attempts, the pump failed to detect the transmitter and is unable to receive sensor signal.	• Select **OK** to clear the alert. • If your pump still cannot find the sensor signal, call 24-Hour Technical Support for assistance.

Title and text	Type	Explanation	Next steps
Sensor warm-up started Warm-up takes up to 2 hours. You will be notified when calibration is needed.	Message	The sensor warm-up has begun.	Select **OK** to clear the message. A "Warm-up" message with a progress bar appears on the sensor graph during warm-up, which takes up to two hours. You will be notified when calibration is needed.
Sensor updating Do not calibrate unless notified. This could take up to 3 hours.	Alert	The SG value is unavailable due to a temporary situation.	• Select **OK** to clear the alert. • Follow the instructions on the pump screen. You do not need to change the sensor.
Suspend before low Delivery stopped. Sensor glucose approaching Low Limit. Check BG.	Alert	Your SG value is falling. Insulin delivery is suspended according to your Suspend before low setting and your SG is approaching your specified low limit. Suspend before low is not available in Auto Mode.	• Select **OK** to clear the alert. • Check your BG. If necessary, treat your BG as directed by your healthcare professional.

Title and text	Type	Explanation	Next steps
Suspend on low Delivery stopped. Sensor glucose XXX mg/dL. Check BG.	Alarm	Your SG value is at or below the low limit you specified. Suspend on low is not available in Auto Mode.	• Select **OK** to clear the alarm. • Check your BG. If necessary, treat your BG as directed by your healthcare professional.
Transmitter battery depleted Recharge transmitter now.	Alert	The battery in the transmitter needs to be recharged. SG values are not recorded or transmitted until you recharge transmitter.	• Select **OK** to clear the alert. • Recharge your transmitter.

SmartGuard Auto Mode alerts and messages

The following table lists the most common or serious alerts and messages related to Auto Mode. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides any necessary steps for problem resolution.

Title and text	Type	Explanation	Next steps
Auto Mode started Current action canceled.	Alert	This alert happens when the user starts an operation that is not allowed in Auto Mode while the pump is transitioning to Auto Mode.	• Select **OK** to clear the alert. • Allow your pump to complete its transition to Auto Mode.

Title and text	Type	Explanation	Next steps
Auto Mode started The following SmartGuard settings are now turned off: - Suspend before low - Suspend on low	Alert	Your pump has started Auto Mode. The Suspend before low and Suspend on low settings are now turned off.	• Select **OK** to clear the alert. • Allow your pump to complete the transition into Auto Mode.
Auto Mode exit X started. Would you like to review the Auto Mode Readiness screen?	Alert	Your pump has exited Auto Mode because you have turned off your sensor, a suspend event message has not been cleared within 4 hours, or you have been in Safe Basal the maximum of 90 minutes. This alert cannot be silenced, and is always enabled whenever the system is in Auto Mode.	• Select **No** to clear the alert. Select **Yes** to view the Auto Mode Readiness screen. • Check your BG. • Calibrate your sensor. • Follow instructions from your healthcare professional and continue to monitor your BG. For details, see *Exiting SmartGuard Auto Mode, on page 237* and *Returning to SmartGuard Auto Mode, on page 237*.

Title and text	Type	Explanation	Next steps
High SG SG has been high over 1 hour. Check infusion set. Check ketones. Monitor BG. Followed by **Auto Mode exit** Monitor BG and treat as necessary. X started. Enter BG to continue in Auto Mode.	Alert	Your pump has exited Auto Mode based on a set glucose threshold and length of time: • 300 mg/dL or higher for one hour • 250 mg/dL or higher for three hours. This alert cannot be silenced and is always enabled whenever the pump is in Auto Mode.	• Select **OK** to clear the alert. • Check your BG and treat as necessary.
Auto Mode max delivery Auto Mode has been at maximum delivery for 4 hours. Enter BG to continue in Auto Mode.	Alert	Auto Mode has been delivering at your maximum Auto Mode basal delivery rate for four hours. This rate is determined automatically by your system.	• Select **OK** to clear the alert. • Check your BG and enter it into your pump to exit Safe Basal and return to Auto Basal. • Follow instructions from your healthcare professional and continue to monitor your BG.

Title and text	Type	Explanation	Next steps
Auto Mode max delivery Auto Mode has been unable to bring your SG down. Enter BG and resume delivery to continue in Auto Mode.	Alert	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 the 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 hr. Enter BG to continue in Auto Mode.	Alert	Your pump has been delivering at your minimum Auto Mode basal delivery rate for two and a half hours. This rate is determined automatically by your system.	• Select **OK** to clear the alert. • Check your BG and enter it into your pump to exit Safe Basal and return to Auto Basal. • Follow instructions from your healthcare professional and continue to monitor your BG.

Title and text	Type	Explanation	Next steps
Auto Mode min delivery Your SG has been below target for 2:30 hr. Enter BG and resume delivery when ready to continue in Auto Mode.	Alert	Your pump is suspended, and your predicted SG has been below target for two and a half 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 the 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.

BG required Enter a new BG for Auto Mode.	Alert	Auto Mode requires a BG to check the reliability of the sensor.	• Select **OK** to clear the alert. • Enter a BG to return to Auto Basal from Safe Basal, or to enter Auto Mode from Manual Mode.
Bolus recommended For XXX mg/dL entered, a correction bolus is recommended. Select Bolus to program a bolus.	Alert	Auto Mode calculated that a bolus is recommended based on the BG value that you entered.	• Select **Bolus** to program a correction bolus. • Select **Cancel** if you do not want to deliver a correction bolus.

Title and text	Type	Explanation	Next steps
Cal required for Auto Mode Enter a BG and calibrate sensor for Auto Mode.	Alert	Calibration may be required by Auto Mode, even when SG values are available.	• Select **OK** to clear the alert. • Check your BG and enter it into your pump. • Calibrate your sensor using the BG that you entered.
High BG XXX mg/dL Check infusion set. Check ketones. Monitor BG. Confirm BG?	Alert	Your BG meter reading is above 250 mg/dL. This alert applies only to Auto Mode. There is an equivalent alert for Manual Mode. See *Pump alarms, alerts, and messages, on page 244.*	Select **No** to prevent the remote BG from being used by your pump. Select **Yes** to confirm the BG reading.

CareLink software alert and message

The following table lists the most common or serious alerts and messages related to CareLink software. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution. If you get an alarm, alert, or message that is not listed, select **OK** to clear the notification and call 24-Hour Technical Support.

Title and text	Type	Explanation	Next steps
CareLink uploader not found. Follow instructions on the CareLink uploader.	Message	The pump cannot find the CareLink uploader because the wrong pump code was entered, or the search timed out before the pump found the uploader.	• Select **OK** to clear the message. • Follow the instructions on the CareLink uploader. For details, see *Upload to CareLink software, on page 166*.

14

Troubleshooting

14 Troubleshooting

This chapter contains procedures and information to help you understand and address conditions that might occur with your pump.

For a list of alarms, alerts, and messages that may appear on your pump, see *Pump alarms, alerts, and messages, on page 244*.

Troubleshooting pump issues

WARNING: If you receive a critical error on your pump, the following screen displays and the pump sirens.

Immediately disconnect from your insulin pump and discontinue use. Contact 24-Hour Technical Support for assistance.

Remember, your body still needs insulin while your pump is removed. It is important that you consult your healthcare professional to determine an alternate method of receiving insulin while your pump is removed. For more information on pump alarms, see *Pump alarms, alerts, and messages, on page 244*.

My pump buttons are stuck

During atmospheric pressure changes, your pump buttons may not work for up to 45 minutes. For example, during airplane travel your pump buttons may get stuck. This is rare. If this occurs, either wait for the problem to correct itself, or if you have a new AA battery with you:

1. Remove the battery cap.
2. Place the battery cap back onto the pump.

   Your pump will check the AA battery power, and may require a new AA battery.
3. If prompted, insert a new AA battery.

   If these steps do not correct the problem, contact 24-Hour Technical Support for assistance.

What is a Check Settings alarm?

This alarm occurs when a condition causes your pump to reset to factory settings. The Check Settings alarm occurs after you re-enter the Startup Wizard settings.

The Check Settings alarm tells you that other settings may have been cleared or reverted to factory default values. Review any settings that you have not already set in Startup Wizard and re-enter the values, if necessary.

My pump is asking me to rewind

WARNING: Always make sure the infusion set is disconnected from your body before you rewind your pump or fill the infusion set tubing. Never insert the reservoir into the pump while the tubing is connected to your body. Doing so could result in an accidental infusion of insulin, which can cause hypoglycemia.

You must rewind your pump when you change the reservoir. Rewinding returns the piston in the reservoir compartment to its starting position. It is normal for your pump to ask you to rewind any time you remove and replace the reservoir, such as when you resolve an Insulin Flow Blocked alarm or address a problem when you load the reservoir.

I dropped my pump

CAUTION: Always inspect your pump to ensure there are no cracks before exposing your pump to water, especially if your pump has been dropped, or you suspect your pump is damaged. Water leakage can cause the pump to malfunction, and result in injury.

Do the following:

1. Check that all connections are still tightly in place.
2. Check the display, button area, and pump case for cracks or damage.
3. Check the infusion set, including the tubing connector and tubing for cracks or damage.
4. Review the status screen, basal rates, and other pump settings.
5. Perform the Self Test procedure. Press ◎ and select:

   Options > Utilities > Self Test
6. If the self test does not complete successfully, or if you are concerned about your pump, call 24-Hour Technical Support for assistance and check your blood glucose (BG).

I cannot get to the Manage Settings screen

These personalized settings, under the Manage Settings screen, should be provided by your healthcare professional in your training session. If you go to **Options > Utilities > Manage Settings**, a message appears telling you that the feature is not normally accessible and to consult your user guide. To access the Manage Settings screen press ◎ and select:

1. **Options > Utilities > Manage Settings**
2. Simultaneously press and hold > and ↩ for about two seconds until the Manage Settings screen appears.

My pump display times out too quickly

Your pump display times out after 15 seconds by default in order to conserve battery power. You can increase this setting up to three minutes. Press ◎ and select **Options > Utilities > Display Options**, and then adjust the Backlight setting as desired.