THE MINIMED™ 770G SYSTEM
SCHOOL NURSE GUIDE
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Purpose
This guide is intended to help school nurses with the basic operation of a student’s MiniMed™ 770G system. Please note that this booklet does not cover all aspects of insulin pump therapy and continuous glucose monitoring (CGM). It is written for healthcare professionals with some experience with this technology.

School Orders with Backup Plan

Every student on the MiniMed™ 770G system should have signed orders from the student’s healthcare professional. They should include:

- Name of device with programmed settings. Note that the pump may be operating in one of two modes. See next page for more information.

- A backup plan if the pump is not able to be used to deliver insulin with:
  - rapid-acting insulin pens or syringes, and doses for food and for correcting high blood glucose (BG)
  - long-acting insulin pens or syringes, and dose if necessary for prolonged stays at school

The responsibilities of the parents/guardians, school nurse, and other school personnel should also be established.

The MiniMed™ 770G System Components

It's a good idea for every student on the MiniMed™ 770G system to have extra pump supplies, i.e., an infusion set, serter, and reservoir so the student can change his own infusion set or change with the help of a caregiver or trained professional.
UNDERSTANDING THE MINIMED™ 770G SYSTEM

The MiniMed™ 770G system can deliver insulin in two different ways – Manual Mode and SmartGuard™ Auto Mode.

Manual Mode is using the pump with or without a continuous glucose monitor (CGM) in a traditional way, like previous insulin pump systems from Medtronic.

SmartGuard™ Auto Mode automatically adjusts basal insulin every 5 minutes based on sensor glucose (SG) readings. A student using SmartGuard™ Auto Mode must still check BGs and calibrate (update) the sensor periodically, as well as bolus for carbs before meals.

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**Manual Mode**

Using the pump with pre-programmed basal rates
- Basal rates are pre-programmed.
- Bolusing can be done with the Bolus Wizard™ feature or with manual boluses.
- May be used with or without CGM.

**SmartGuard™ Auto Mode**

Using self-adjusting basal insulin based on SG readings.
- Basal insulin is automatically adjusted every 5 minutes.
- Bolusing before meals using the Bolus Wizard™ feature is necessary.
- CGM is required.

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HOME SCREEN IN MANUAl MODE

Without CGM  With CGM

HOME SCREEN IN SMARTGUARD™ AUTO MODE

SmartGuard™ Auto Mode shields
## Important information about SmartGuard™ Auto Mode:
- Basal insulin is delivered based on sensor glucose (SG).
- Algorithm uses a target of 120 mg/dL.
- A student can temporarily change the target to 150 mg/dL, like for exercise.
- Carbs should be entered into the pump before meals.
- BG checks are necessary to calibrate the sensor.
- When a student enters a BG over 150 mg/dL, SmartGuard™ Auto Mode may recommend a correction bolus.
- A student may receive a BG required alert if the pump needs a BG for SmartGuard™ Auto Mode.

## How to tell when the Pump is in SmartGuard™ Auto Mode

**SmartGuard™ shield**

If you see the SmartGuard™ shield, the pump is in SmartGuard™ Auto Mode, which includes Safe Basal.

### Safe Basal

There are times in SmartGuard™ Auto Mode when basal insulin is being delivered according to recent insulin needs, but is not being adjusted based on SG readings. This is called **Safe Basal**. When the pump is in Safe Basal, you will see the SmartGuard™ shield is gray.

Safe Basal activates, for example, if the pump and transmitter are not communicating, or a BG entered is very different from the SG. Frequently, these situations will resolve themselves before the student is aware of it.

If the pump is in Safe Basal and there is something that can be done to resolve the issue, the pump will alert the student what to do, like check a BG.
A Student’s Responsibilities in SmartGuard™ Auto Mode

When a student is wearing the MiniMed™ 770G system and SmartGuard™ Auto Mode is active, the student must still perform certain tasks:

1. Check BG and calibrate sensor
2. Bolus for carbs before eating
3. Respond to alarms and alerts

Check BG and calibrate sensor

Students should check their BGs prior to meals and calibrate their sensor. Calibrating the sensor is performing a fingerstick, and using that BG value to update the device. It’s best to calibrate the sensor 3-4 times a day, like before meals and bedtime. So while at school, it’s reasonable a student might calibrate once before lunch and/or if the device asks for a calibration.

Bolus for carbs before eating

When in SmartGuard™ Auto Mode, a student must bolus for carbs before each meal and snack. Giving insulin before a meal can help students avoid post-meal highs, which could lead to fewer alerts and improved glucose control. Check the school orders for the ideal length of time to bolus pre-meal.

Respond to alarms and alerts

Students should respond promptly to all alarms and alerts to avoid highs and lows, which could lead to more time spent in target range.

**Important to know:** The MiniMed™ 770G system is a Bluetooth®-enabled device. This means that students are able to view their sensor glucose values and receive optional glucose alerts on a smartphone using the MiniMed™ Mobile app. This data may also be available remotely to their parents or caregiver through the CareLink™ Connect app if the student’s mobile device is connected to WiFi or mobile data.

**USING SMARTGUARD™ AUTO MODE**

Sam’s pump is in SmartGuard™ Auto Mode, and she would like to eat a meal. She knows that she should check her BG, calibrate the sensor and then enter carbs into the pump for the food she is certain she will eat.

Note: indicated for ages 2 and over.
**Pump Buttons**

When you are not pressing buttons on the 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.

**Unlocking the Pump**

After the Backlight has been off for a few minutes, the pump goes into Sleep mode and the pump is locked. To use the pump, press Select twice. You will see a screen like the one shown here. Press the arrow key that is highlighted on the pump to unlock.

**Locking the Pump**

If you would like to lock the pump, simply press and hold the Graph button.
To use the Accu-Chek® Guide Link meter to enter a BG with or without carbs for food and calibrate the sensor:* 

1. Check BG.

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

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

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

*It is not recommended to calibrate your CGM device when sensor or blood glucose values are changing rapidly, e.g., following a meal or physical exercise.
5. Select **Carbs** to enter carbs for food.
   
   If you are not eating carbs, go to the next step.

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

7. Select **Deliver Bolus** to give the bolus.

The Bolus Started message briefly appears, the Home screen appears, with a banner showing the bolus being delivered.
USING THE PUMP IN SMARTGUARD™ AUTO MODE

To manually enter a BG and carbs for food, deliver a bolus, and calibrate the sensor:

1. Press 🌡.

2. Select Bolus.

3. Select BG.

4. Press ↑ or ↓ to enter your BG reading, and press 🌡.

5. Select Carbs.
6. Press ‹ or › to enter carbs for your food, and press ✕.

7. Select Next.

8. Review the calculated bolus amount.

9. Select Deliver Bolus to deliver the bolus.

The message Bolus Started briefly appears.

A message appears asking if you want to calibrate using the entered BG.
10. Select Yes to calibrate.
   Select No to not calibrate.

The Home screen appears showing the bolus being delivered.
Recommended Bolus

If a BG entered is greater than 150 mg/dL, SmartGuard™ Auto Mode may recommend a correction bolus.

1. Read the message on the first screen.

2. Press ✔ to finish reading the message.

3. Select Bolus.
   SmartGuard™ Auto Mode will calculate how much insulin to deliver.

A CORRECTION BOLUS IN SMARTGUARD™ AUTO MODE

Sam's pump is in SmartGuard™ Auto Mode. After lunch, Sam notices her glucose levels are higher than normal, so Sam checks her BG. SmartGuard™ Auto Mode recommends a correction bolus for the high BG value, and Sam delivers the bolus. Sam feels safe knowing that SmartGuard™ Auto Mode estimates her correction bolus amount based on her glucose needs at that moment.

Situations related to Sam have been used for illustrative purposes only.
Bolusing for carbs without a BG entry

There may be times in SmartGuard™ Auto Mode when a student would like to eat a second helping of food or a snack without checking a BG.

1. Press 🔔.

2. Select Bolus.

3. Press ⬇️ to Carbs and press 🔔.

4. Press ⬆️ to enter the amount of carbs you are eating and press 🔔.

5. Select Next.


The Home screen appears showing the bolus being delivered.
Entering a BG

There may be times that SmartGuard™ Auto Mode requests a BG entry. You may check with a linked meter, or manually enter the BG.

If you are manually entering the BG:

1. Press Enter from the Home screen.

2. Select Enter BG and manually enter BG value.

3. Select Save.

Note: You will have the option to calibrate immediately after entering and saving the BG.
To Enter a Temp Target

The default SmartGuard™ Auto Mode target is 120 mg/dL, although a student may want to temporarily change the SmartGuard™ Auto Mode target to 150mg/dL, like for physical activity.

1. Press .
2. Select Temp Target.
3. Press ▲ or ▼ to set the Temp Target duration and then press . The duration can be set in 30 minute increments. The default is 2 hours.
4. Select Start.

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

To Cancel a Temp Target

To return to the standard SmartGuard™ Auto Mode target of 120 mg/dL before the Temp Target duration expires, a student can cancel the Temp Target.

1. Press .
2. Select Cancel Temp Target. The Temp Target screen appears and shows the details of the temp target.
3. Select Cancel Temp Target to cancel the temp target.

The Temp Target Ended message and duration of the Temp Target briefly appear. Then the Home screen appears.
SmartGuard™ Auto Mode Exits

Why do exits occur?

There are times when the pump will exit SmartGuard™ Auto Mode and return to Manual Mode for safety reasons.

There could be an alarm that needs attention. For example, a student could have a high SG (over 300 mg/dL) for more than 1 hour. The pump has exited to Manual Mode, and will need a BG to return to SmartGuard™ Auto Mode. This exit to Manual Mode allows a student time to troubleshoot the hyperglycemia and take action to resolve it, like check the infusion set, give a correction bolus and monitor glucose levels.

What to do if there is an exit?

The Auto Mode Readiness screen (shown at right) helps you or a student determine why SmartGuard™ Auto Mode is not active. Go to the screen to see if there is something the student can do to activate SmartGuard™ Auto Mode, such as check a BG. The pump may ask you if you would like to view the Auto Mode Readiness screen. Or you can go there from the Home screen by selecting:

Menu > Status > Auto Mode Readiness

Manual Mode

If there is an exit, the pump will go into Manual Mode. In Manual Mode, a student’s pre-programmed Basal rates will start automatically. Also, a student can use the Bolus Wizard™ feature to bolus for meals and corrections.

Note: When the pump exits to Manual Mode, Suspend on low and Suspend before low are disabled.

When in doubt, call the student’s parent or caretaker or Medtronic’s 24-Hour Technical Support.
How to use the Bolus Wizard™ feature for Manual Mode

**Deliver correction and food bolus**

1. Check BG.
2. Press \(\text{O}\).
3. Select **Bolus**.
4. Select **Bolus Wizard**.
   
   If using a linked meter, the BG is on screen. If not, select BG.
5. Press \(\wedge\) or \(\vee\) to enter BG and press \(\text{O}\).
6. Select **Carbs**.
7. Press \(\wedge\) to enter grams of carbs and press \(\text{O}\).
8. Select **Next**.
9. Select **Deliver Bolus**.

**Deliver correction bolus—no food**

1. Check BG.
2. Press \(\text{O}\).
3. Select **Bolus**.
4. Select **Bolus Wizard**.
   
   If using a linked meter, the BG is on screen. If not, select BG.
5. Press \(\wedge\) or \(\vee\) to enter BG and press \(\text{O}\).
6. Press \(\vee\) and select **Next**.
7. Select **Deliver Bolus**.
**USING THE PUMP IN MANUAL MODE**

**Deliver food bolus—no correction**

1. Press \(\bigcirc\).
2. Select **Bolus**.
3. Select **Bolus Wizard**.
4. Press \(\uparrow\) and select **Carbs**.
5. Press \(\uparrow\) to enter the amount of carbs you are eating and press \(\bigcirc\).
6. Select **Next**.
7. Select **Deliver Bolus**.

For more information about using the MiniMed™ 770G system in Manual Mode, go to: [www.medtronicdiabetes.com/support](http://www.medtronicdiabetes.com/support)

**MANUAL MODE**

Sam is taking steroids short-term for an illness, so Sam’s doctor instructed Sam to use her pump in Manual Mode until she is done with the steroids and her insulin needs have returned to her typical daily doses. Sam feels good that she can still benefit from her insulin pump features and continuous glucose monitor.
Checking Last Bolus

Whether a student’s pump is in SmartGuard™ Auto Mode or Manual Mode, there may be times when you need to see the time or amount of the last bolus that was given. For example, you may want to check to make sure a student took a bolus at lunch. You can see the last bolus delivered in the Quick Status screen.

1. Press ○.
2. Press ▼ to Status and press ○.
3. Press ▼ to Quick Status and press ○.

Checking Bolus History

You may also want to review the last several boluses that were delivered. For example, a parent might want to know the boluses their child gave throughout the day. You can see the last several boluses delivered in Daily History.

1. Press ○.
2. Press ▼ to Options and press ○.
3. Press ▼ to History and press ○.
4. Press ▼ to Daily History and press ○.
5. Press ○ on the day you would like to review.
Here are some common alarms & alerts that you might see on a student’s pump in SmartGuard™ Auto Mode and/or Manual Mode, and how to respond.

<table>
<thead>
<tr>
<th>Alert</th>
<th>Reason</th>
<th>Steps to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG required 12:00 AM Enter a new BG for Auto Mode.</td>
<td>A new BG entry is required for SmartGuard™ Auto Mode.</td>
<td>Perform fingerstick and enter a new BG.</td>
</tr>
<tr>
<td>Bolus recommended For 170 mg/dL entered, a correction bolus is recommended.</td>
<td>SmartGuard™ Auto Mode recommends a correction bolus based on a BG that you have entered.</td>
<td>Consider delivering the recommended correction bolus.</td>
</tr>
<tr>
<td>Cal required for Auto Mode 12:00 AM Enter a BG and calibrate sensor for Auto Mode.</td>
<td>A calibration is required to keep your pump in SmartGuard™ Auto Mode.</td>
<td>Perform a fingerstick. Enter BG and calibrate your sensor.</td>
</tr>
<tr>
<td>High SG 12:00 AM SG has been high over 1 hour. Check infusion set. Check ketones. Monitor BG.</td>
<td>This alert will appear if SG is: 300 mg/dL or higher for one hour; 250 mg/dL or higher for three hours.</td>
<td>High SG Check infusion set. Check ketones. Monitor BG.</td>
</tr>
</tbody>
</table>

Followed by

<table>
<thead>
<tr>
<th>Alert</th>
<th>Reason</th>
<th>Steps to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Mode exit 12:00 AM Basal 1 started. Would you like to review the Auto Mode Readiness</td>
<td>Exit Monitor BG and treat as necessary. Enter BG to continue in SmartGuard™ Auto Mode.</td>
<td>Perform fingerstick and treat as needed. Monitor BG.</td>
</tr>
<tr>
<td>Low SG 48 mg/dL 9:00 AM SG is under 50 mg/dL. Check BG and treat.</td>
<td>SG is under 50 mg/dL.</td>
<td>Perform fingerstick and treat as needed. Monitor BG.</td>
</tr>
</tbody>
</table>
## ALARMS & ALERTS

<table>
<thead>
<tr>
<th>Alert</th>
<th>Reason</th>
<th>Steps to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor updating 12:00 AM</td>
<td>The sensor is updating</td>
<td>Do not calibrate unless notified. This could take up to 3 hours.</td>
</tr>
<tr>
<td>Calibration not accepted 12:00 AM</td>
<td>Your system was unable to use the BG you entered to calibrate your sensor</td>
<td>Consider waiting 30+ minutes before entering calibration.</td>
</tr>
<tr>
<td>Low battery Pump 12:00 PM</td>
<td>Low battery</td>
<td>Change battery when possible. See next page for how-to instructions.</td>
</tr>
<tr>
<td>Battery failed 12:00 PM</td>
<td>Failed battery test</td>
<td>Try again, or change battery and use new battery.</td>
</tr>
<tr>
<td>Low reservoir 12:00 PM 5.0 units remaining</td>
<td>Low Reservoir</td>
<td>Change reservoir when possible.</td>
</tr>
<tr>
<td>Insulin flow blocked 12:00 AM</td>
<td>Insulin Flow Blocked</td>
<td>Follow steps to troubleshoot issues, including calling 24-Hour Technical Support. Consider changing infusion set, reservoir and insulin.</td>
</tr>
</tbody>
</table>

Read and address the alert, then clear it by pressing ✅ then ❌.
CHANGING THE BATTERY

The pump is powered by a AA battery. A brand new Lithium, Alkaline, or fully-charged rechargeable battery can be used.

1. Unscrew the battery cap using the bottom edge of the belt clip. (Or use a thick coin.)
2. Insert battery with negative (flat) end going in first.
3. Place battery cap into the pump and use the edge of the belt clip to screw the cap back on.

Do not under-tighten or over-tighten the battery cap. It should be aligned horizontally with the pump case as shown here.

Battery Alerts

- Low battery pump alert — 8-10 hours of battery life remains
- Replace battery alert — 30 minutes of battery life remains
- Replace battery now alarm — insulin delivery stopped due to low power
THINGS TO REMEMBER

The MiniMed™ 770G system with SmartGuard™ technology can help keep your students’ glucose levels in target range.*  
*More time spent in target range may help your student live a healthier life and focus on learning!

Things to remember in SmartGuard™ Auto Mode:

- A student must check BGs and calibrate the sensor, bolus before meals, and respond to alarms and alerts
- Highs and lows can still occur, so make sure to have a plan in place on how to address them

For any urgent technical questions, please call the Medtronic 24-Hour Technical Support at 1-800-646-4633, option 1.

For additional information & support, go to www.medtronicdiabetes.com

Other Helpful Resources:
American Diabetes Association — www.diabetes.org
JDRF (Juvenile Diabetes Research Foundation) — www.jdrf.org

*Refers to SmartGuard™ Auto Mode. Some user interaction required. Individual results may vary.
# Minimed™ 770G Pump Modes

<table>
<thead>
<tr>
<th></th>
<th>Manual Mode</th>
<th>SmartGuard™ Auto Mode</th>
<th>SmartGuard™ Auto Mode-Safe Basal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home screen display</strong></td>
<td><img src="image1" alt="Without CGM" /></td>
<td><img src="image2" alt="With CGM" /></td>
<td><img src="image3" alt="With CGM" /></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>When SmartGuard™ Auto Mode is not active</td>
<td>SmartGuard™ Auto Mode is active</td>
<td>Pump automatically transitions to Safe Basal when SGs are available</td>
</tr>
<tr>
<td><strong>Basal</strong></td>
<td>Uses the basal settings programmed into the pump</td>
<td>Automatically adjusts basal insulin every 5 minutes depending on the SG value</td>
<td>A fixed rate is delivered for a maximum of 90 minutes. If the cause doesn’t resolve, then pump exits to Manual Mode</td>
</tr>
<tr>
<td><strong>Bolus</strong></td>
<td>Uses the programmed Bolus Wizard™ settings to recommend a dose</td>
<td>Must enter carbs into pump to get bolus recommendation. SmartGuard™ Auto Mode calculates and recommends a correction if BG &gt;150 mg/dL entered</td>
<td>Same as SmartGuard™ Auto Mode - Bolus</td>
</tr>
</tbody>
</table>
The MiniMed™ 770G system is intended for continuous delivery of basal insulin (at user selectable rates) and administration of insulin boluses (in user selectable amounts) for the management of type 1 diabetes mellitus in persons two years of age and older requiring insulin as well as for the continuous monitoring and trending of glucose levels in the fluid under the skin. The MiniMed™ 770G system includes SmartGuard™ technology, which can be programmed to automatically adjust delivery of basal insulin based on continuous glucose monitoring (CGM) sensor glucose (SG) values and can suspend delivery of insulin when the SG value falls below or is predicted to fall below predefined threshold values. The Medtronic MiniMed™ 770G system consists of the following devices: MiniMed™ 770G insulin pump, the Guardian™ Link (3) transmitter, the Guardian™ Sensor (3), one-press serter, the Accu-Check® Guide Link blood glucose meter, and the Accu-Check® Guide test strips. The system requires a prescription. The Guardian™ Sensor (3) has not been evaluated and is not intended to be used directly for making therapy adjustments, but rather to provide an indication of when a fingerstick may be required. All therapy adjustments should be based on measurements obtained using a blood glucose meter and not on values provided by the Guardian™ Sensor (3). All therapy adjustments should be based on measurements obtained using the Accu-Check® Guide Link blood glucose meter and not on values provided by the Guardian™ Sensor (3). Always check the pump display to ensure the glucose result shown agrees with the glucose results shown on the Accu-Check® Guide Link blood glucose meter. Do not calibrate your CGM device or calculate a bolus using a blood glucose meter result taken from an alternative site. It is not recommended to calibrate your CGM device when sensor or blood glucose values are changing rapidly, e.g., following a meal or physical exercise.

**WARNING:** Do not use the SmartGuard™ Auto Mode for people who require less than 8 units or more than 250 units, is required to operate in SmartGuard™ Auto Mode.

**WARNING:** Do not use the MiniMed™ 770G system until appropriate training has been received from a healthcare professional. Training is essential to ensure the safe use of the MiniMed™ 770G system.

Pump therapy is not recommended for people whose vision or hearing does not allow recognition of pump signals and alarms. Pump therapy is not recommended for people who are unwilling or unable to maintain contact with their healthcare professional. The safety of the MiniMed™ 770G system has not been studied in pregnant women. For complete details of the system, including product and important safety information such as indicators, contraindications, warnings and precautions associated with system and its components, please consult http://www.medtronicdiabetes.com/important-safety-information#minimed-770g and the appropriate user guide at http://www.medtronicdiabetes.com/download-library.