

MiniMed™ 780G SmartGuard™

Automated Insulin Delivery System



How does the 780G SmartGuard work?

SmartGuard automatically delivers basal insulin, aiming for the target glucose value you choose. You can choose a target of 100, 110 or 120 mg/dL. It adjusts the basal insulin every 5 minutes based on your total daily insulin (TDI) and the current CGM glucose trends. SmartGuard also delivers automatic correction boluses as often as every 5 minutes if CGM glucose values are more than 120 mg/d. SmartGuard decides whether to give a correction bolus or not based on how much insulin has already been delivered and the rate of change of the glucose values. If the glucose levels are rising quickly, SmartGuard may deliver stronger auto correction bolus doses if it thinks the rise in glucose values is related to a meal. This is referred to as “Meal Detection.”

Which CGM does it use?

The 780G SmartGuard system is compatible with the Guardian 3 and Guardian 4 CGM. Both sensors last a maximum of 7 days. The Guardian 3 CGM requires calibration twice per day, at minimum. The Guardian 4 CGM does not require routine calibration, but the pump may request a BG check occasionally to calibrate the sensor as needed or to stay in SmartGuard.

When will it revert out of SmartGuard to manual mode without any insulin automation?

SmartGuard may revert to baseline insulin delivery (previously referred to as Safe Basal in 670G system), which is a fixed basal rate determined by SmartGuard, for the following reasons: 1) loss of CGM communication with the pump; 2) SmartGuard has concerns about CGM accuracy; or, 3) minimum or maximum insulin delivery constraints. When SmartGuard switches to baseline basal there will be a “time to exit” displayed

on the pump and in most cases, you will receive an alert requesting a BG check to stay in SmartGuard. The time to exit is a countdown of how much time is left until the pump will exit to manual mode and delivery of the programmed basal rates. You will need to enter the BG value into the pump prior to the time to exit to avoid an exit to manual mode.

How can I use it best?

Bolus before all your meals and snacks, ideally 15 minutes prior to eating. Meal Detection is designed to help you manage your glucose levels after eating but is not designed to replace meal boluses. You will get the best glucose control if you enter the total grams of carbohydrates you plan to eat into the bolus menu and deliver a meal bolus before eating.

If you receive an “Enter BG” alarm, check a fingerstick BG with a blood glucose meter and enter it into the pump to stay in SmartGuard and prevent an exit to Manual Mode.

The sensor glucose value will auto-populate into the bolus menu and SmartGuard will add a correction bolus if necessary. SmartGuard considers active insulin when recommending a bolus dose. Do not enter “fake carbs” to try to get more insulin. This may increase the chance of low glucose levels.

Treat low glucose levels with 5-10g carbs to prevent a rebound high glucose level and wait 15 minutes before treating again to give glucose levels time to rise.

You can adjust the target glucose setting, insulin-to-carb ratios and Active Insulin Time to improve glucose control in SmartGuard. You cannot adjust the basal rates or sensitivity factor in SmartGuard because these settings are not used in SmartGuard.



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- 1** Bolus before eating, ideally 15 minutes before meals and snacks.
- 2** Treat mild hypoglycemia with 5-10g carbs to avoid rebound hyperglycemia and wait 15 minutes before re-treating to allow time for the glucose values to rise. SmartGuard will have already reduced or suspended insulin delivery before glucose levels drop low so you may need fewer carbohydrates to increase the glucose level.
- 3** Follow system prompts to enter BG values into the pump to stay in SmartGuard and avoid an exit to Manual Mode.
- 4** Do not enter “fake carbs” to try to get more insulin. This may result in low glucose levels. The sensor glucose value will populate in the bolus menu automatically and a correction bolus will be recommended if needed considering the active insulin.
- 5** Use the 100 mg/dL target and 2 hours Active Insulin Time for the most aggressive insulin delivery in SmartGuard as long as you are not having too many low glucose levels.

[PANTHERprogram.org](https://www.pantherprogram.org)

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