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How to use 780G advanced hybrid closed loop system most effectively and avoid disappointments? Some practical tips from first experiences

In recent weeks, we have seen the emergence of the MiniMed 780G, an advanced hybrid insulin pump system, on several European markets.

The effectiveness of this system has been well documented in clinical trials; however, it seems important for an individual user to highlight a few points that are crucial for optimizing treatment with the MiniMed 780G pump.

According to the author of the letter, these include:

- Bolus Calculator settings should be slightly more “aggressive” than in previously used systems, but not “too aggressive”, because the device considers the suggested dose of insulin to be too excessive and so will not give the assumed dose of insulin.
- The patient starting treatment with the 780G pump should remain in manual mode for at least 5–7 days before going into “SmartGuard” mode. One also needs to remember to reset the pump if it was used for training purposes before connecting it.
- Keep in mind that although in SmartGuard mode it is possible to achieve a very good glycemic control of diabetes, it will not be “normoglycemia!”

- The patient should be prepared for the fact that after administration of the prandial bolus, for safety and protection against hypoglycemia, the pump will hold the base. As a result initially patients can experience moderate, late post-meal hyperglycemia.
- In SmartGuard mode, the pump “learns” the patterns of glycemia, patterns of patient’s behavior. Over time, the control of diabetes will get better.
- Pump learning mode is a two-week mode (this is especially important when making changes to the device settings).
- If the patient observes significant increases in post-meal glycemia in up to 2 h after a meal — he or she may type slightly larger (20–30%) the amount of grams of carbohydrates compared to the actually consumed.
- If post-meal glycemia increases within 2–4 hours after a meal — this is probably the effect of eating a meal high in fat: in such a situation, before meals, you need to enter the amount of grams of carbohydrates realistically calculated per meal, after 2 hours, again enter carbohydrates in the amount of 30% of the amount introduced before meals (the author suggests the rule: **rule 100%–2h–30%**) — we count only carbohydrates!
- Real time from “manual mode” to obtaining optimal glucose patterns in SmartGuard mode — 4 weeks.

It seems that taking into account these simple guidelines resulting from the author’s first experience with MiniMed 780G systems, on the one hand, will allow patients to avoid unnecessary disappointments and frustrations, especially at the beginning of therapy, on the other hand, will make the treatment with the

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system the most effective, allowing to take full advantage of this advanced hybrid closed loop personal insulin pump.

Conflict of interest

Advisory Board Panel and Speakers Bureau — Medtronic.

REFERENCES

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