

SYSTEM PROFILE

MiniMed 780G at a glance

AIT

Primary optimisation lever

Active Insulin Time (AIT). Shorter AIT + lower target = optimal. Only 6.4% of users on optimal settings.

OPTIMAL TIR

78.8%

5.5 target + 2h AIT

REGISTRY

101,629

Choudhary et al. 2024

AGE UK/EU

2+

UKCA/CE, T1+T2

AGE US

7+

FDA, T1; T2 18+

Ref: Choudhary P et al. 2024 · Bassi M et al. 2025 · Priya & Kalra 2021 · Pemberton & Uday 2026.

THE ESSENTIALS

- ✓ **Tubed pump.** 3-day infusion set, 300U reservoir.
- ✓ **SmartGuard algorithm** - predictive, continuous learning. Adjusts every 5 min.
- ✓ **Compatible CGM (3 sensors):** Guardian 4 (7d), Simpler Sync (7d, upper arm), Instinct (Abbott-made, 15d, CE Mark 10 Mar 2026).
- ✓ **Target options:** 5.5, 6.1, 6.7 mmol/L. 5.5 is the lowest UK AID target.
- ✓ **AIT options:** 2, 2.5, 3, 3.5, 4 hours.
- ✓ **Auto-correction boluses.** Continuous background corrections - up to every 5 min.
- ✓ **Most aggressive for highs.** Better at pulling glucose down than basal-only systems.

GNL CONFIGURATION FRAMEWORK · PEMBERTON & UDAY 2026

Three tiers - pick the one that fits you

TIER	GLUCOSE TARGET	AIT	OUTCOME PROFILE
Optimal	5.5 mmol/L	2 hours	Highest TIR (78.8%)
Balanced	6.1 mmol/L	2.5 hours	Good balance
Protective	6.7 mmol/L	3 hours	Most conservative

Only 6.4% of users are on optimal settings. Most people leave TIR on the table. The algorithm is designed to handle aggressive settings safely - discuss moving down a tier with your team.

GETTING THE MOST FROM 780G · PART 1

Why AIT is the biggest lever

AIT tells SmartGuard how long it should assume insulin is still working. Shorter AIT = algorithm believes insulin clears faster = delivers more.

- ▶ **AIT 2 hours** - most aggressive. Works best paired with target 5.5.
- ▶ **AIT 3+ hours** - algorithm holds back. Good protection but leaves TIR behind.
- ▶ **Changing AIT alone** - modest effect. Pairing AIT with target gives the step change.

The 780G tolerates aggressive settings better than many users expect - because the algorithm constantly reads glucose and corrects both ways. Still: move one step at a time, with your team.

SMARTGUARD TOP TIPS

Getting the most from the algorithm

- ▶ **Bolus before eating.** SmartGuard can't anticipate meals. Late boluses push glucose above working range.
- ▶ **Keep sensor signal strong.** 30 min signal loss drops you out of Auto mode.
- ▶ **Confirmation checks with a real finger-stick** - not by entering the CGM number. Entering the displayed CGM reading adds no correction.
- ▶ **Temp target** for exercise or cautious moments - raises target to 8.3 mmol/L for a set duration.

EXERCISE ON THE 780G

Temp Target and fuelling

- ▶ **Temp Target 8.3 mmol/L.** Set duration 30 min - 24 hours. Reduces basal, disables auto-correction.
- ▶ **Activate 60-90 min before exercise.** Gives IOB time to drop.
- ▶ **Long sessions** - combine Temp Target with reduced mealtime bolus.
- ▶ **Post-exercise lows** can arrive hours later. Keep Temp Target on 60-90 min after stopping.

MAJOR IN THE MAJORS · #1

Two settings, most of the outcome

- ▶ **Glucose target.** 5.5, 6.1 or 6.7 mmol/L. Lower = more aggressive algorithm.
- ▶ **Active Insulin Time (AIT).** 2, 2.5, 3, 3.5 or 4 hours. Shorter = algorithm delivers more.
- ▶ **Carb ratio.** Meal boluses use your ICR - algorithm doesn't override it.
- ▶ **Basal profile.** Still the foundation. Review with your team every 4-8 weeks.

MAJOR IN THE MAJORS · #2

Staying in SmartGuard Auto mode

- ▶ **93% Auto-mode target** - CIP330 trial benchmark. If you're below 85%, there's a fix.
- ▶ **Common Auto-mode exits:** sensor signal loss, missed calibration prompts, prolonged highs above working range.
- ▶ **CareLink weekly review.** Time in Auto first, TIR second. Auto-mode time is the precondition.
- ▶ **Infusion sites.** Rotate every change - abdomen, lower back, thighs, upper outer arm.
- ▶ **Change in the morning** so you can spot absorption issues before bedtime.

MAJOR IN THE MAJORS · #3

Two actions that move HbA1c most

The AID Optimiser models what target + AIT changes will do. Use it before you change anything.

ACTION 1 **AID Algorithm Optimiser**
 Model target and AIT changes for MiniMed 780G SmartGuard. See expected TIR shift before you commit. →

ACTION 2 **Exercise Planning Explorer**
 Temp Target timing + bolus reductions for your session type. →

GO DEEPER

GNL explorers, guides & podcasts

Interactive tools, graded evidence and long-form reading when you want more than a leaflet.

GUIDE **Full AID Guide - 5-part series**
 How every AID algorithm works, side by side. →

SYSTEM **GNL MiniMed 780G Page**
 Deep dive - SmartGuard, registry data, optimisation strategy. →

PODCAST **Episode 36 - DSN Forum UK**
 780G user experience, Simplera practicalities, real-world use. →

ASK **Grace - evidence-backed Q&A**
 Ask anything about 780G, SmartGuard or T1D. →