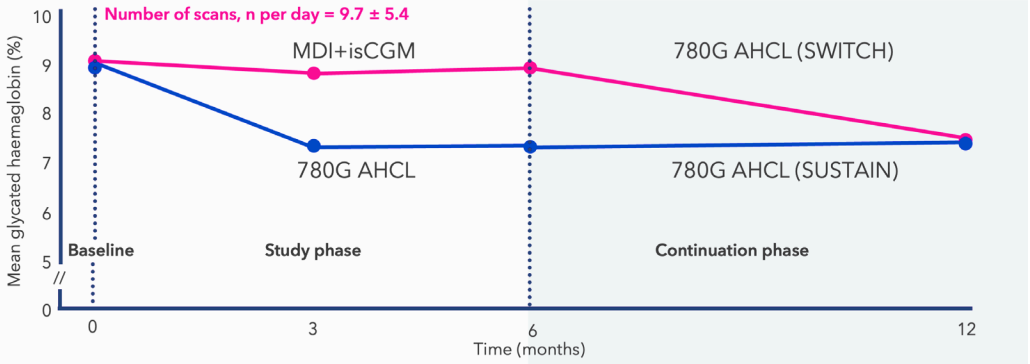
# Advanced hybrid closed loop therapy versus conventional treatment in adults with type 1 diabetes (ADAPT): a randomised controlled study

**The ADAPT study indicates that the MiniMed™ 780G system drives and sustains significant improvements in glycemic metrics including A1C and Time in Range compared to the outcomes of MDI + isCGM therapy.**

## Objective

Compare the performance of the MiniMed™ 780G system to that of multiple daily injection (MDI) and continuous glucose monitoring (CGM) therapy in people living with type 1 diabetes not currently meeting glycemic targets.




**Early:** Difference between groups seen as early as 3 mos. **1.4% lower A1C at 6 mos.**

**Extended Phase:** Glycemic improvements were **reproduced and sustained** in the continuation phase[1]

**+27% Time in Range without hyperglycemia vs. control group**
**+6.6 hours in range vs. MDI +isCGM group**

### Continued results

Glycemic improvements were seen early, reproduced and sustained in the extended phase, promoting long-term efficacy of AID systems.

### Increased therapy automation

Participants using the MiniMed™ 780G system spent 95.8% of the time in SmartGuard™ mode (advanced hybrid closed-loop).

### User satisfaction

The switch group reported a significant increase in treatment satisfaction[1] and reduction in fear of hypoglycemia.[2]

### Standard of care

Results demonstrate that AID therapy can and should be introduced as the standard of care to people living with type 1 diabetes that are not meeting glycemic targets.

## Outcomes

**Individuals that switched from MDI + isCGM therapy to the MiniMed™ 780G system yielded and maintained a lower HbA1c and an increased Time in Range over a 12 mo. period, producing significant changes in glycemic targets in as early as 3 mos.**

## Design

Multi-national, randomized controlled study evaluating the performance of MiniMed™ 780G system vs. MDI + isCGM (standard of care) in a T1D population with an average of 18 years of age, at least 2 years since diagnosis, and not currently meeting glycemic targets (8% A1C or greater A1C).

- Evaluated 82 individuals living with type 1 diabetes currently on MDI + isCGM therapy for at least 3 months.
- 50% (41) randomized directly to the MiniMed™ 780G system to evaluate system performance.
- Evidence was collected in an initial 6-month study phase, and additional 6-month continuation phase.

## Parameters assessed

In the analysis of glycemic metrics of 82 individuals, the 50% randomized users that transitioned to the MiniMed™ 780G system experienced glycemic improvements that were reproduced and sustained early and at 12 mos. A1c decreased in as early as 3 mos. in the switch group (down 1.4% at 6 mos. and sustained in continuation phase). TIR (70-180 mg/dL) increased substantially (+27% TIR without hyperglycemia in switch group vs. control group), increasing time spent in range by 6.6 hours vs. the control group.


Choudhary P et al. Lancet Diabetes. 2022; 10: 720–31.

Edd SN et al. Diabetes Obes Metab. 2023; 1-11. DOI: 10.1111/dom.15217.


Due to inherent study limitations, caution is advised when attempting to extrapolate these results to new patients. There could be significant differences.

1. Patient reported outcomes within the ADAPT Study: Diabetes Treatment Satisfaction Questionnaire (DTSQ) and Fear of Hypoglycemia (FHS) Survey.

2. DTSQs score for AHCL vs MDI+isCGM arm (6.1 ± 7.55 vs 0.2 ± 6.84, p=0.0003), and HFS scores for AHCL vs MDI+isCGM (-10.2 ± 15.51 vs -2.7 ± 13.08, p = 0.0409).

# MiniMed™ 780G insulin pump system

## Powered by advanced SmartGuard™ technology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**Important Safety Information for MiniMed™ 780G system with SmartGuard™ technology with Instinct sensor, Simplera Sync™ sensor, and Guardian™ 4 sensor:** The MiniMed™ 780G system is intended for the continuous delivery of basal insulin at selectable rates and the administration of insulin boluses at selectable rates for the management of type 1 diabetes mellitus in persons 7 years of age and older, and of type 2 diabetes mellitus in persons 18 years of age and older requiring insulin. The system is also intended to continuously monitor glucose values in the fluid under the skin. The MiniMed™ 780G System includes SmartGuard™ technology, which can be programmed to automatically adjust insulin delivery based on the continuous glucose monitoring (CGM) sensor glucose values and can suspend delivery of insulin when the sensor glucose (SG) value falls below or is predicted to fall below predefined threshold values. The system is intended for use with connected sensors, including the Simplera Sync™ and Guardian™ 4 sensors and integrated continuous glucose monitors, including the Instinct sensor, each of which has different wear-time, form factor, insertion site, and other distinguishing characteristics that relate to sensor performance. Consult the appropriate sensor user guide when using the system. Discuss treatment decisions with your HCP.

**WARNING:** Do not use the SmartGuard™ feature for people who require less than 8 units or more than 250 units of total daily insulin per day. A total daily dose of at least 8 units, but no more than 250 units, is required to operate in the SmartGuard™ feature.

**WARNING:** Do not use the MiniMed™ 780G system until appropriate training has been received from a healthcare professional. Training is essential to ensure the safe use of the MiniMed™ 780G system.

**WARNING**: Do not use SG values to make treatment decisions, including delivering a bolus, while the pump is in Manual Mode. When the SmartGuard™ feature is active and you are no longer in Manual Mode, the pump uses an SG value, when available, to calculate a bolus amount. However, if your symptoms do not match the SG value, use a blood glucose (BG) meter to confirm the SG value. Failure to confirm glucose levels when your symptoms do not match the SG value can result in the infusion of too much or too little insulin, which may cause hypoglycemia or hyperglycemia.

Pump therapy is not recommended for people whose vision or hearing does not allow for the recognition of pump signals, alerts, or alarms. The safety of the MiniMed™ 780G system has not been studied in pregnant women or in persons using other anti-hyperglycemic therapies that do not include insulin. For complete details of the system, including product and important safety information such as indications, contraindications, warnings and precautions associated with system and its components, please consult https://www.medtronicdiabetes.com/important-safety-information#minimed-780g-instinct and the appropriate user guide at https://www.medtronicdiabetes.com/download-library.

**Important Safety Information for Extended Infusion Set:** The Extended Infusion Set is indicated for up to 7 days of wear for the subcutaneous infusion of insulin from an infusion pump. It is NOT indicated for intravenous (IV) infusion or the infusion of blood or blood products. Inaccurate medication delivery, infection and/or site irritation may result from improper insertion and maintenance of the infusion site. Before insertion, clean the insertion site with isopropyl alcohol. Remove the needle guard before inserting the infusion set. If using this infusion set for the first time, do the first set-up in the presence of your healthcare professional. Do not leave air in the infusion set. Prime completely. Check frequently to make sure the soft cannula remains firmly in place as you may not feel pain if it pulls out. The soft cannula must always be completely inserted to receive the full amount of medication. If the infusion site becomes inflamed, replace the set, and use a new site until the first site has healed. Replace the infusion set if the tape becomes loose, or if the soft cannula becomes fully or partially dislodged from the skin. Regularly replace the infusion set as indicated in the instructions for use, or per the insulin labeling, whichever duration is shorter. For more details, see https://www.medtronicdiabetes.com/important-safety-information.

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