

# Automated insulin delivery ups time in target glucose range in type 1 diabetes

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Among patients with type 1 diabetes, percentage of time in the target

glucose range is increased with the use of an open-source automated insulin delivery (AID) system, according to a study published in the Sept. 8 issue of the *New England Journal of Medicine*.

Mercedes J. Burnside, M.B., Ch.B., from the University of Otago in New Zealand, and colleagues conducted a multicenter, open-label trial involving 97 patients (48 children and 49 adults) with type 1 diabetes who were randomly assigned to use an open-source AID system or a sensor-augmented insulin pump (44 and 53 patients, respectively).

The researchers found that the mean time in the target range increased in the AID group ( $61.2 \pm 12.3$  to  $71.2 \pm 12.1$  percent) and decreased in the [control group](#) ( $57.7 \pm 14.3$  to  $54.5 \pm 16.0$  percent) at 24 weeks (adjusted difference, 14 percentage points), with no treatment effect based on age. Compared with those in the control group, patients in the AID group spent 3 hours 21 minutes more in the target glucose range (70 to 180 mg/dL) per day. Neither group experienced severe hypoglycemia or [diabetic ketoacidosis](#). Owing to connectivity issues, two patients in the AID group withdrew from the trial.

"Patients in the AID group had improved glycemic control while maintaining a low percentage of time during which the glucose level was less than 70 mg per deciliter," the authors write.

**More information:** Mercedes J. Burnside et al, Open-Source Automated Insulin Delivery in Type 1 Diabetes, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2203913](https://doi.org/10.1056/NEJMoa2203913)

Sue A. Brown, On the Path toward Expanding Treatment Options for Diabetes, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMe2209840](https://doi.org/10.1056/NEJMe2209840)



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