Medical Xpress

More variability in overnight insulin requirements in T1DM

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(HealthDay)—For individuals with type 1 diabetes, overnight insulin

requirements are significantly more variable than daytime and total daily insulin requirements during closed-loop insulin delivery, according to a study published online March 10 in *Diabetes Care*.

Yue Ruan, from the Wellcome Trust-MRC Institute of Metabolic Science at the University of Cambridge in the United Kingdom, and colleagues retrospectively analyzed overnight, daytime, and total daily insulin amounts delivered during a multicenter closed-loop trial. Over 12 weeks, 32 adults with type 1 diabetes applied hybrid day-and-night closed-loop insulin delivery under free-living home conditions. Data were analyzed from 1,918 nights, 1,883 daytime periods, and 1,564 total days. Variability of insulin requirements in individual subjects was measured by adopting the coefficient of variation.

The researchers found that the variability of overnight insulin requirements was nearly two-fold higher than the variability of total daily requirements (mean coefficient of variation, 31 versus 17 percent; P

"Overnight insulin requirements were significantly more variable than daytime and total daily amounts," the authors write. "This may explain why some people with type 1 diabetes report frustrating variability in morning glycemia."

Several authors disclosed financial ties to the pharmaceutical industry.

More information: Abstract
Full Text (subscription or payment may be required)