

# Routine blood glucose measurements can accurately estimate hemoglobin A1c in diabetes

April 22 2014

---

Hemoglobin A1c is the standard measurement for assessing glycemic control over time in people with diabetes. Blood levels of A1c are typically measured every few months in a laboratory, but now researchers have developed a data-based model that accurately estimates A1c using self-monitored blood glucose (SMBG) readings, as described in *Diabetes Technology & Therapeutics (DTT)*.

In "[Accuracy and Robustness of Dynamical Tracking of Average Glycemia \(A1c\) to Provide Real-Time Estimation of Hemoglobin A1c Using Routine Self-Monitored Blood Glucose Data](#)," authors Boris Kovatchev, PhD, Frank Flacke, PhD, Jochen Sieber, MD, and Marc Breton, PhD present the computer algorithm they developed based on a training data set drawn from 379 subjects and then evaluated for accuracy on an independent test data set. The authors propose that estimation of real-time A1c could increase individuals' motivation to improve diabetes control.

"Patients are used to an A1c result from their doctor visits, and this study highlights simple estimated A1c values from SMBG data," says Satish Garg, MD, Editor-in-Chief of *Diabetes Technology & Therapeutics* and Professor of Medicine and Pediatrics at the University of Colorado Denver. "This may become an important tool for improved patient self-management."

**More information:** The article is available free on the *DTT* website at <http://www.liebertpub.com/dtt>.

Provided by Mary Ann Liebert, Inc

Citation: Routine blood glucose measurements can accurately estimate hemoglobin A1c in diabetes (2014, April 22) retrieved 27 April 2024 from <https://medicalxpress.com/news/2014-04-routine-blood-glucose-accurately-hemoglobin.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.