

Diabetes self-management education: Looking for better choices

Lorig K, Ritter PL, Turner RM, English K, Laurent DD, Greenberg J. Benefits of diabetes self-management for health plan members: a 6-month translation study. *J Med Internet Res*. 2016; 18(6):e164.

This nonblinded uncontrolled study measured the effectiveness of a curriculum teaching diabetes self-management based on the Better Choices, Better Health-Diabetes guidelines. Patients were recruited to an Internet or face-to-face community-based program. Questionnaires and mail-in labs were used to collect data on 14 variables (eg, hemoglobin A1C; depression; hypoglycemic symptoms; sleep; and routine eye, foot, and kidney examinations) over 6 months.

The population was a heterogeneous sample; all participants had insurance and a high education level. Patients were required to have type 2 diabetes and be on an Anthem Medicare program. No inclusion criteria specified disease duration or severity.

The primary outcome was an adjusted effect size of change >0.4 (the mean change divided by the standard deviation) in any 1 variable at 6 months.

Although 10 of the variables had a statistically significant 6 month mean change, no single variable reached the goal effect size change of >0.4. Individually, 75% (662 of 1,242) of patients achieved the adjusted effect size of change in at least 1 of the observed variables. In summary, no clinically relevant improvements in patient-oriented outcomes were demonstrated through this specific implementation of the Better Choices, Better Health-Diabetes program.

Relevant	No	Medical care setting	Yes
Valid	No	Implementable	No
Change in practice	No	Clinically meaningful	No

Bottom line: The study did not show any clinically significant improvements in diabetes outcomes with the Better Choices, Better Health-Diabetes program in a heterogeneous population that may not be generalizable.

AUTHORS: MATTHEW HAWKS, MD,
AND DAVID MOSS, MD, NELLIS AFB FMR, LAS VEGAS, NV

Want to lose weight? Don't count those steps

Jakicic JM, Davis KK, Rogers RJ, King WC, Marcus MD, Hesel D, et al. Effect of wearable technology combined with a lifestyle intervention on long-term weight loss: the IDEA randomized clinical trial. *JAMA*. 2016; 316(11):1161–1171. Erratum in: *JAMA*. 2016; 316(14):1498.

A 2016 RCT with 470 overweight adults (body mass index 28–35 kg/m²) aged 18–35 years examined the effectiveness of wearable technology devices that monitor physical activity for long-term weight loss.

All patients received a behavioral weight loss intervention for 6 months, and then telephone counseling sessions, text message prompts, and website materials were added. After 6 months, patients were randomized to either a standard group, which included all of the above and self-monitoring of diet and exercise, or an enhanced group, which received wearable technology connected to a web-based interface to monitor physical activity and diet. All patients were prescribed 100 minutes of physical activity per week and increased at 4-week intervals to a goal of 300 minutes per week. The median day count the device was worn was 170 days and the mean time was 241 minutes per day.

At 24 months, the standard group lost more weight than the enhanced group (–5.9 vs –3.5 kg; mean difference [MD] –2.4; 95% CI, –3.7 to –1.0) and had a larger percent weight change from baseline (–6.4% vs –3.6%; MD –2.8%; 95% CI, –4.2 to –1.5). Approximately 79% of participants in each group completed the 24 months.

Relevant	Yes	Medical care setting	Yes
Valid	Yes	Implementable	No
Change in practice	No	Clinically meaningful	Yes

Bottom line: The use of wearable technology to monitor physical activity did not lead to increased weight loss in this population of patients. Recommending this type of technology is not the standard, and this study showed that the device may not help patients lose weight. In addition, not all patients will have access to these types of electronic resources. **EBP**

AUTHOR: COREY LYON, DO,
UNIVERSITY OF COLORADO FMR, DENVER, CO