

Center for Health, Work & Environment
colorado school of public health

**Wearable Technology
and Weight Loss**

Lee S. Newman, MD, MA
Director, Center for Health, Work & Environment
Professor, Colorado School of Public Health and School of
Medicine
University of Colorado
Lee.newman@ucdenver.edu

Research

JAMA | Original Investigation

**Effect of Wearable Technology Combined With a Lifestyle
Intervention on Long-term Weight Loss**
The IDEA Randomized Clinical Trial

John M. Jakicic, PhD; Kellann K. Davis, PhD; Renee J. Rogers, PhD; Wendy C. King, PhD; Marsha D. Marcus, PhD;
Diane Helsel, PhD, RD; Amy D. Rickman, PhD, RD, LDN; Abdus S. Wahed, PhD; Steven H. Belle, PhD

**Does Wearable Technology contribute
to long-term weight loss?**

<http://jamanetwork.com/learning/video-player/13477855>

What is the issue?

- Obesity is a costly problem to individuals and society
- Interventions that focus on diet and physical activity can be effective for short term weight loss
- Long-term weight loss is hard to sustain

Can Wearable Technologies help?

- Wearable technologies provide feedback on physical activity levels
- They produce modest, *short-term* improvement in weight, if combined with programs to change behavior
- **But do they help us lose weight in the *long-term*?**
- *Very few rigorous studies*

Study of 470 Young Adults, BMI 25-40

Months
0-6

Standard weight loss intervention:
Rx for diet, physical activity, weekly group sessions

Followed
for
Months
7-24

Telephone counseling, Text prompts, access
to online resources, monthly contact

↓ *Randomized* ↓

Enhanced
Intervention

Standard
Intervention

Wearable Device

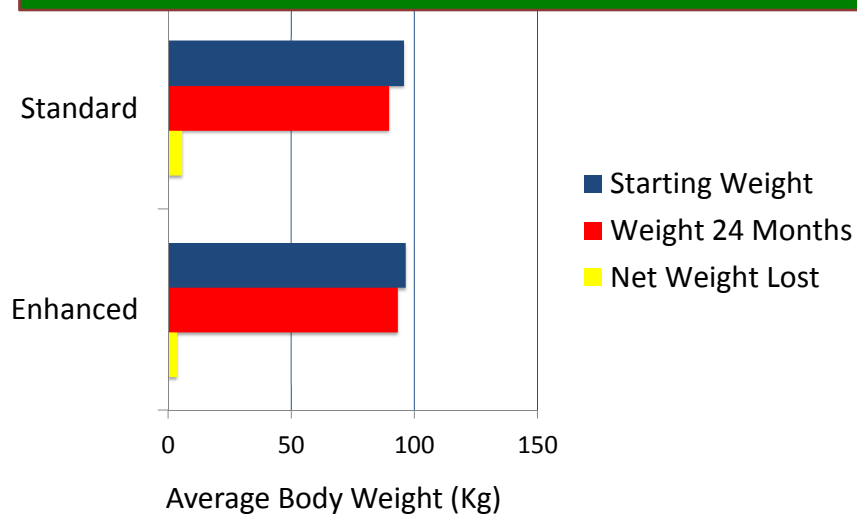
- FIT Core, by BodyMedia
 - Delivers feedback through armband display
 - Sends alerts when moderate-vigorous activity has been accomplished for 10 minutes or more at a time
 - Web-based software for self-tracking of dietary intake



Outcomes

- Both groups lost weight, and improved
 - Fitness
 - Physical activity
 - Body composition
 - Dietary intake (calories, fat, carbohydrate, protein)
- After the first 6 months, the two groups had lost similar amounts of weight, but then...

Wearable Device Was *Less Effective* for 24 month Weight Loss



Some Limitations of the Study

- Studied ages 18-35, from 2010-2012...2014
- Bias: Screened out many potential participants and lost 25% to follow-up
- No control group
- Use *varied*
- Technology was offered late in weight loss program
- “Old fashioned” technology by 2016 !

Take Homes

- Interventions produce weight loss that can be sustained for 2 years
- Adding wearable device doesn't seem to help in the long run
- Different devices, different studies, different approaches may produce different results

