

Technology can help shed pounds

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(Medical Xpress) -- Anyone who has ever struggled to stick to a restricted diet knows that willpower alone is rarely a successful offense.

But reinforcements are on the way, in the form of technology.

A group of University of South Carolina researchers in the Arnold School of Public Health has found that incorporating armband technology into [weight-loss](#) interventions can help sedentary and [overweight individuals](#) shed those unwanted pounds.

The results were published in the online journal, *International Journal of Behavioral [Nutrition](#) and [Physical Activity](#)*.

“Changing behavior is one of the hardest things for a person to do,” said Dr. Greg Hand, co-director of the Clinical Exercise Program and associate dean for research, and one of the researchers on the nine-month study. People can stick to a [diet](#), but they’ve got to change their behavior to keep the weight off.”

Hand and his colleague, exercise science and epidemiology/biostatistics professor Dr. Steven Blair, said that technology is a powerful tool because it offers real-time feedback on caloric intake and activity.

“Real-time data can be a powerful motivator,” Blair said. “It’s hard to argue with the numbers.”

Blair and Hand teamed up with five colleagues in the Arnold School’s

department of exercise science to study 197 sedentary, overweight or obese men and women between the ages of 18 and 65. Sedentary was defined as exercising less than 150 minutes moderately each week.

Essentially, the team wanted to test the effectiveness of the armband technology, which featured a wrist watch with real-time display and access to a personalized web account designed to help manage their weight loss program. While wearing the armband, individuals got real-time feedback on the amount of energy they expended and they could determine the calories they took in by entering their diet onto the website.

Participants were divided among four groups, each of which followed different weight-loss strategies: One group received a weight-loss manual; a second group received the same manual and participated in group counseling sessions to help them change their diet and physical activity habits; the third was given the manual and the armband; and the fourth received the manual, armband, and the group counseling sessions.

The study found that the group that had access to group sessions and the armband lost the most weight (nearly 15 pounds) and logged improved levels of glucose, triglycerides and lower blood pressure.

The potential for individuals to change behavior via technology is very encouraging, Hand and Blair said.

“Overall, the technology-based intervention with an armband is an effective strategy,” Hand said.

Blair and Hand say the real-time data takes the guessing out of caloric intake and physical activity; offers compelling evidence to support or encourage behavioral changes and can be used on mobile devices, offering the potential to shed pounds AND paper.

“Having the numbers in real time makes a huge difference,” Blair said. “It can reinforce one’s positive behavior immediately, or it can let them know that they need to change their [caloric intake](#) and physical activity. Moreover, it takes the guesswork out of dieting and exercise.”

Provided by University of South Carolina

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