

Overweight, obese adults use electronic device to stick to diet, exercise

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Overweight and obese adults who used an electronic diary program on a personal digital assistant did better at staying on diet and physical activity programs, researchers reported at the American Heart Association's Epidemiology and Prevention/Nutrition, Physical Activity and Metabolism 2012 Scientific Sessions.

People using the device, which provided tailored dietary and exercise feedback messages, were more successful in adhering to five treatment factors for weight loss:

- attending group sessions;
- meeting daily calorie goals;
- meeting daily fat intake goals;
- reaching weekly exercise goals; and
- monitoring eating and exercise.

The SMART (Self-Monitoring and Recording with Technology) study included 210 overweight or [obese adults](#), 84 percent women, 79 percent white, who used a paper diary, a handheld electronic device without feedback, or a handheld device that provided daily messages.

Those using the [electronic devices](#) did significantly better than those using a paper diary for attendance, self-monitoring and energy and exercise goals.

At six months, the group that received the daily feedback messages from their device had more than a 5 percent weight loss, but over time adherence declined and weight gain occurred.

At 24 months, weight loss was similar across the three groups, but was slightly better in the group receiving feedback.

"The results suggest that using an electronic diary improves treatment adherence," said Lora E. Burke, Ph.D., study author and professor of nursing and epidemiology at the University of Pittsburgh in Pennsylvania. "Over time, participants' adherence declined, particularly in the later phase as contact frequency declined and subsequently ended. Adherence in the paper diary group declined more than in the device groups."

[Study participants](#) recorded their exercise levels and daily food and beverage intakes. Devices displayed the consumed daily calories and fat grams next to targeted amounts. Users with devices providing feedback received messages on diet once a day and [exercise](#) every other day.

Thirty-nine group sessions were offered in the first 18 months, followed by one "maintenance" session in the last six months.

More frequent contact during the last half of the trial would have resulted in better adherence, Burke said. The study confirmed that reducing or withdrawing contact leads to weight regain.

The technology used in the study has since been upgraded, but the concept is the same for smartphones and self-monitoring applications, said Burke, who is conducting a study using smartphones to monitor the triggers for relapses.

Provided by American Heart Association

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