What Monitoring Strategies Are Most Successful For Promoting Weight Loss? A Randomized Controlled Trial

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Background

While tracking progress is one of the strongest predictors of success in healthy eating and physical activity interventions, it is uncertain whether it matters which behaviour (diet, activity or weight) is being tracked.

Aim

To determine the effectiveness of 4 different monitoring strategies on weight loss, body composition, blood markers, & psychosocial indices in adults with overweight/obesity undertaking a 12 month weight loss programme.

Methods

250 adults with overweight/obesity were randomised to track either a) their weight daily, b) dietary intake using MyFitnessPal, c) hunger (using a novel method called “hunger training”), or a control group for 12 months.

All participants received diet and exercise advice and 171 participants completed the study.

Results

• All groups lost weight over the course of the intervention (typically 3.9-6.8kg) with no difference between the intervention groups and the control (all p ≥ 0.06).

• However, participants who tracked hunger lost significantly more weight at 1-year than those who tracked dietary intake (3.2 kg, 0.1-6.4 kg, p = 0.040), or who met regularly with a support person (2.9 kg, 0.2-5.3 kg, p = 0.001).

• Few significant differences were observed in eating behaviour (all p ≥ 0.111), although the face-to-face and hunger tracking groups reported more favourable effects on depression and anxiety at 1-year than control participants.

• Adherence to the monitoring strategies (% recommended days) ranged from 29.6% for attendance at the monthly face-to-face sessions.

Adherence to Monitoring Strategies

Month 0  Month 12  Difference (95% CI)

Brief Support

90.2 (14.4)  87.3 (15.2)  

99.9 (16.4)  97.9 (18.4)  2.2 (-1.0, 5.3)

97.5 (16.9)  94.8 (18.7)  0.8 (-2.1, 3.7)

95.6 (12.8)  94.2 (12.1)  1.7 (-0.9, 4.3)

96.0 (17.5)  89.2 (15.7)  -1.1 (-3.8, 1.6)

Daily Self-Weighing

Weighed & discussed successes and challenges in the clinic every month for 15 minutes.

MyFitnessPal

Tracked diet using the MyFitnessPal app or website every day for the 1st month, and for one week every month during months 2-12.

Hunger Training

Tested capillary blood glucose every time they wanted to eat for the 1st two weeks. If blood glucose was ≤ their individualised cut-off (average of fasting blood glucose from days 1-23), they could eat, otherwise they relied on one hour if still hungry. Completed a booklet every day for the 1st month and for one week every month during months 2-12 where they noted perceived hunger and food consumed.

Conclusions

• Adding a single monitoring strategy to one session of diet & exercise advice does not result in more weight loss at 12 months than just receiving advice alone.

• Hunger training resulted in greater weight loss than other monitoring strategies.

• The use of monitoring strategies does not worsen psychological outcomes.

• Adherence to monitoring behaviour declines rapidly over 12 months regardless of strategy.

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References