

Randomized trial of behavioral weight loss for HIV-infected patients

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Introduction

■Obesity is increasingly prevalent in HIV-infected patients and compounds their cardiovascular disease (CVD) risk.

■Behavioral weight loss programs are recommended for overweight and obese individuals, but have not been systematically studied in people living with HIV.

■We conducted the first randomized trial testing the efficacy of an empirically validated behavioral weight loss program in HIV-infected patients.

Methods

■40 overweight or obese HIV-infected patients with an undetectable viral load and CD4 count >200 were randomly assigned to a fully-automated Internet-delivered behavioral Weight Loss program (WT LOSS) or Internet Education Control.

■The behavioral weight loss program includes 12 weekly video lessons, a platform to submit self-monitoring data, and automated feedback tailored to the individual.

■The primary outcome was weight loss over the 12-week program

■Secondary outcomes were health-related quality of life (HRQOL), use of behavioral weight control strategies, and CVD risk factors, including blood pressure, glucose, HbA1c, insulin, cholesterol and triglycerides.

Results

■92% of randomized participants completed the study.

■Average weight losses in intent-to-treat analyses were significantly greater for WT LOSS than Control (4.4 ± 5.4 kg vs 1.0±3.3 kg, p=.02).

■On average, participants viewed 7 lessons and submitted their data on 8 of the 12 weeks; both measures of adherence were strongly related to weight loss (r=.61 and .63, p<.01).

■Participants in WT LOSS reported greater increases in the use of weight control strategies than Controls (e.g., setting exercise goals, weighing self daily)

■59% of WT LOSS versus 21% of Controls reported improvements in HRQOL (p<.05).

■There were no significant differences between WT LOSS and Control on changes in CVD risk factors.

Table 1

Baseline demographic characteristics				
	Full Sample (n = 40)	WTLOSS (n=20)	CONTROL (n=20)	
Variable				P
Age, mean (SD), years	49.9 (8.8)	46.3 (9.8)	53.6 (6.0)	0.01
Gender, no. (%) male	21 (52.5)	12 (60)	9 (45)	0.34
Race, no. (%)				0.48
Caucasian	27 (67.5)	15 (75)	12 (60)	
African American	5 (12.5)	1 (5)	4 (20)	
Native American	3 (7.5)	1 (5)	2 (10)	
Other	5 (12.5)	3 (15)	2 (10)	
Ethnicity, no. (%) ¹				0.21
Non-Hispanic	32 (80)	18 (90)	14 (70)	
Hispanic	6 (15)	2 (10)	4 (20)	
Education, no. (%)				0.70
High school or less	18 (45)	10 (50)	8 (40)	
Some college/College degree	22 (55)	10 (50)	12(60)	
Annual household income ¹				0.34
<\$20,000	24 (60)	14 (70)	10 (50)	
\$20,000-\$60,000	8 (20)	4 (20)	4 (20)	
>\$60,000	6 (15)	2 (10)	4 (20)	
Smoking status, no. (%) smokers	16 (40)	8 (40)	8 (40)	1.00
BMI, mean (SD), kg/m ²	34.2 (6.7)	33.0 (5.1)	35.4 (7.9)	0.25
CD4 cell count, mean (SD), cells/μL	742.6 (339.2)	619.1 (313.4)	866.1 (325.2)	0.02
History of substance abuse	13 (32.5)	8 (40)	5 (25)	0.31
History of alcohol abuse	10 (25)	6 (30)	4 (20)	0.47
History of depression	27 (67.5)	11 (55)	16 (80)	0.09

Abbreviations: BMI, body mass index
Normal weight= BMI 18.5-24.9; Overweight=BMI 25-29.9; Obese=BMI ≥30.

Discussion & Conclusions

•HIV-infected patients responded well to a 12-week, Internet-delivered behavioral weight loss program despite low socioeconomic status (60% had income <\$20,000), mental health comorbidities (67% had history of depression), and complex medical regimens (average 4.3 medications in addition to cART).

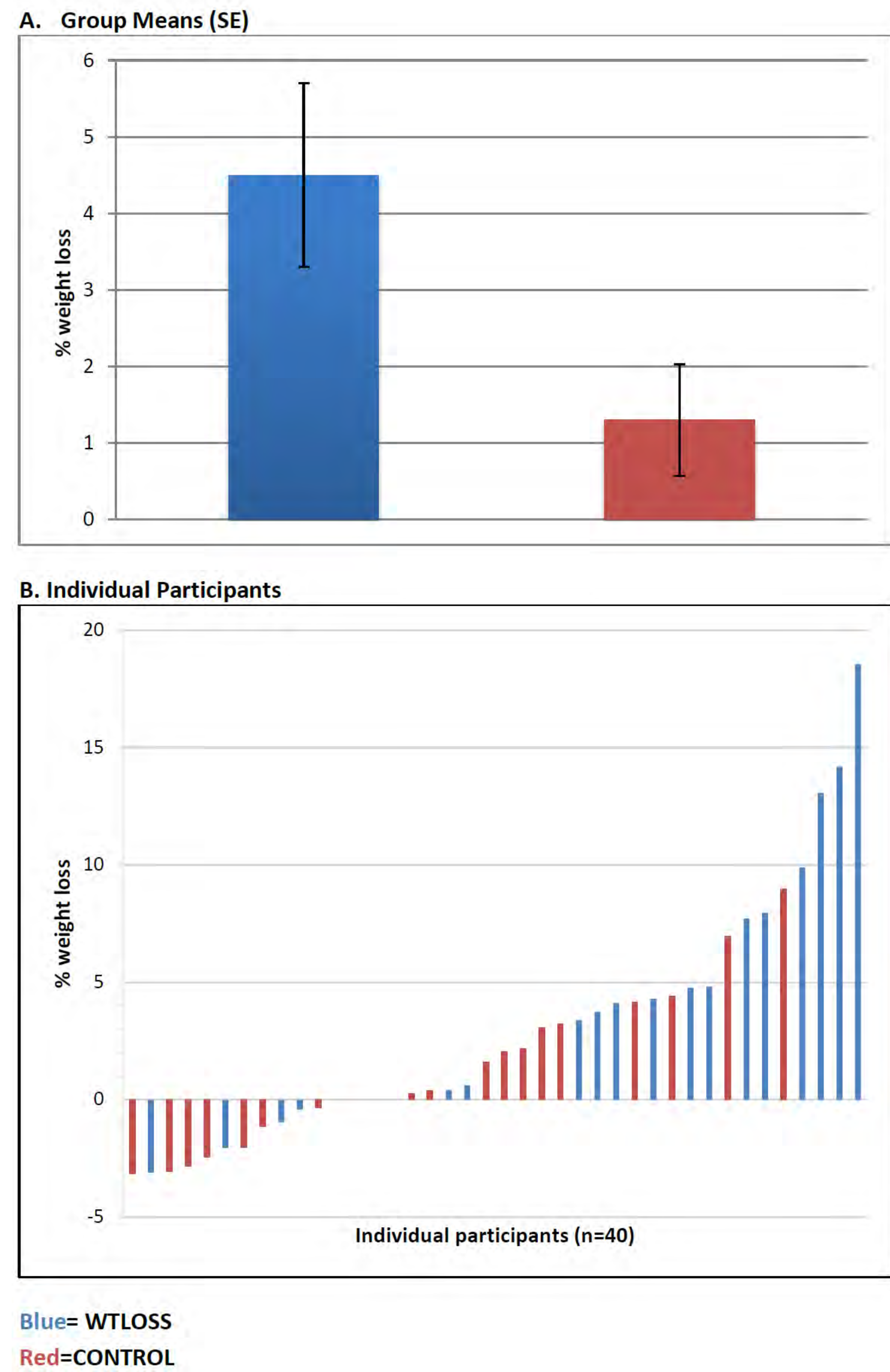
•HIV-infected participants in this trial, on average, lost a similar amount of weight (4.4 kg) to that reported among non-HIV participants enrolled in the same program.

•The weight loss program tested in this trial is completely automated and can be easily disseminated.

•Further research on the efficacy of weight loss interventions for improving the health of HIV-infected patients is needed.

Figure 1

Percent body weight losses over the 12-week trial in the WTLOSS (blue) and CONTROL (red) groups using intent-to-treat. 1A. Group means (SE); 1B. Individual participants



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Trial registration: ClinicalTrials.gov, NCT02421406