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# Evaluating a nutrition education component of the Ka Mau Te WEHI program.

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Greer Gibson  
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# Abstract

**Background:** New Zealand has high rates (32%) of obesity amongst the adult population; Māori (50.2%) and Pacific (68.7%) populations are most affected. Lifestyle interventions are effective in achieving weight loss, but are often expensive, whilst group and online lifestyle interventions are more cost effective.

**Objectives:** To develop and assess a component of the nutrition education content for the Internet team-based, incentivised behaviour change Ka Mau Te WEHI weight loss intervention for Māori and Pacific adults BMI  $\geq 30$  kg/m<sup>2</sup> at risk of or with T2DM and/or cardiovascular disease.

**Methods:** Three Internet team-based competitions were conducted in New Zealand's North Island, with seven teams of up to seven participants (n=146) per region. The nutrition education was developed to address key eating behaviours associated with increased risk of weight gain and improve nutrition literacy. The education delivered through daily tips on the website and weekly challenges. Eating behaviours and nutrition literacy were assessed at baseline and six-months.

**Results:** Although 143 participants started the program; only 41.1% (n=60) completed it. Key eating behaviours changed; 18.3% decrease in drinking one or more sugar sweetened beverages/day, mean days eating fast food decreased by  $-1.7 \pm 2$  days ( $p < 0.001$ ); mean days eating fruit  $+1 \pm 1.8$  ( $p < 0.001$ ) and vegetables  $+0.8 \pm 2$  ( $p = 0.006$ ) increased significantly. Weight loss was not significant between baseline and six months [ $-4.5 \pm 17.3$  kg ( $p = 0.115$ )].

**Conclusion:** Although this program was attractive to the target population, a high dropout rate was evident and clinically significant weight loss was not achieved. Despite this, the innovative approach used for nutrition education led to significant dietary behaviour changes. Further research to improve retention and build on eating behaviour changes achieved in this at-risk population is warranted.

**Key words:** Māori, Pacific Islanders, weight loss, lifestyle intervention, obese.

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## Abbreviations

AHEAD	Action for Health in Diabetes
ANS	New Zealand Adult Nutrition Survey
BMI	Body mass index
CVD	Cardiovascular disease
DASH	Dietary Approaches to Stop Hypertension
DPP	Diabetes Prevention Program
ILI	Intensive lifestyle intervention
Kg	Kilogram
MoH	Ministry of Health
NHS	New Zealand Health survey
RCT	Randomised control trial
SD	Standard deviation
SES	Socioeconomic status
T2DM	Type two diabetes mellitus
USA	United states of America
WC	Waist circumference
WEHI	Weight loss and Healthy eating Intervention
WHO	World Health Organisation



