Single-Case Design Study:

The Effects of Reducing Caloric Intake on Weight Loss in a Female over Fifty

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Introduction

This research report examines the effects of a personalized diet modification and nutrition plan on weight loss and health markers in an African American female over 50 with pre-existing conditions. This report employs a single-subject design to investigate whether a structured nutritional plan can lead to significant weight loss and improve key health indicators (e.g., blood pressure, blood glucose levels). Findings suggest that changes in diet, nutrition, and exercise help eliminate risk factors such as obesity, diabetes and heart disease, as well as cancer, fatty liver, and kidney disease.

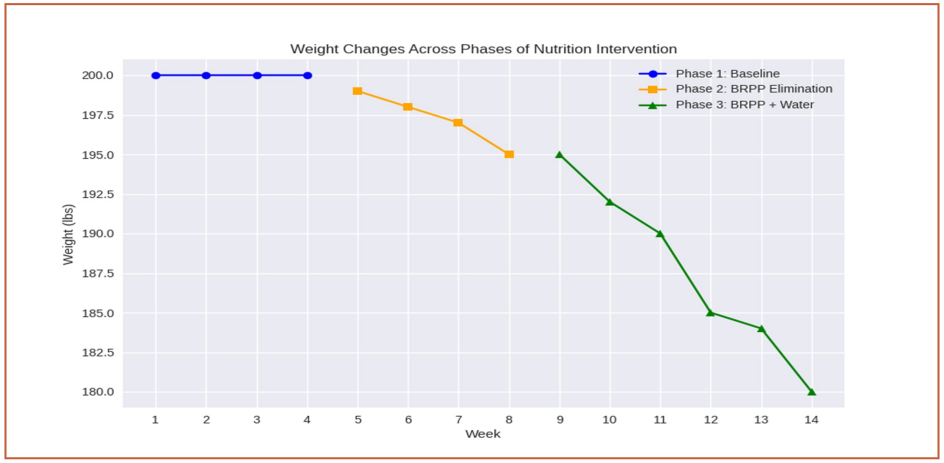
Methodology|Assessment Tools

Participant: The subject was an adult female with an initial body weight of 200 pounds. Inclusion criteria required that the participant be medically cleared for weight loss and capable of independently operating the measurement instruments.

Digital Weight Scale (lbs): A calibrated, digital weight scale was used to measure body weight in pounds. Measurements were taken weekly under consistent conditions (e.g., same time of day, minimal clothing).

BMI Calculator: BMI was calculated weekly- *BMI=Weight (lb) ×703Height (in)2\text{BMI} = \frac{\text{Weight (lb)} \times 703}{\text{Height (in)}^2}* : [see Results]

Results



Phase 1. Baseline BMI: 30.4; Phase 2 BMI: 29.6*; Phase 3 BMI: 27.4

Participant height=5'8"/ Start weight=200

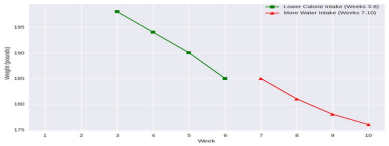
BMI+Wt. Status~Underweight: -18.5| Healthy Weight: 18.5-24.9| Overweight: 25.0-29.9| Obesity: 30.0+

**This study employed a strict No BRPP diet for phases 2 & 3. Results may vary based on an individual's baseline weight, height, gender, and other lifestyle and health factors. BRPP [bread, rice, pasta, potatoes].*

Conclusions|Implications

This study provided the motivation and framework to evaluate the impact of targeted dietary adjustments.

Even at the conclusion of the study, the participant continued utilizing the BRPPSS restrictions (decreased salt and sugar intake also).



The findings suggest that personalized strategies addressing specific dietary triggers can be beneficial for those seeking sustainable weight management. Sustained weight loss is not solely about reducing calories, but also involves lowering salt and sugar intake and incorporating regular aerobic activity. The broader goal is to support overall health through structured, intentional lifestyle changes.

Disclaimer: Always consult your primary physician or health care provider before engaging in weight loss programming or rigorous physical activity.

Low carbohydrate dietary patterns favoring animal-derived protein and fat sources, were associated with higher mortality, whereas those that favored plant-derived protein and fat intake, from sources such as vegetables, nuts, and whole-grains, were associated with lower mortality, suggesting that the source of food notably modifies the association between carbohydrate intake and mortality.

Reference:

Seidelmann, S. B., Claggett, B., & Hu, F. B. (2018). The association between low-carbohydrate diets and mortality in the Multiethnic Cohort Study. The Lancet Public Health, 3(9), e419–e428.

Different levels of carbohydrate intake have been shown to improve blood sugar control and reduce cardiovascular risk in people with diabetes. Future studies will likely focus on tailoring dietary recommendations based on genetic variations and the role of gut hormones in health care.

Reference:

Wylie-Rosett, J., Aebersold, K., Conlon, B., Isasi, C. R., & Ostrovsky, N. W. (2013). Health effects of low-carbohydrate diets: where should new research go?. *Current diabetes reports*, *13*(2), 271–278.

CSWE Competency Alignment [EPAS, 2022]

Competency 4: Engage in research-informed practice & practice-informed research

Competency 7: Assess Individuals, Families, Groups, Organizations or Communities [I.F.G.O.C.]

Competency 8: Intervene with I.F.G.O.C

Competency 9: Evaluate Practice with I.F.G.O.C.

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