Effects of Nutrition Education and Fruit and Vegetable Supplementation on Macronutrient and Antioxidant Intake in Overweight and Obese Adults

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INTRODUCTION

Fruit and vegetable intake is associated with reduced risk for chronic disease, including cancer and cardiovascular disease.1 Data high in fruits and vegetables are a good source of antioxidants.2

OBJECTIVE

The study was conducted to determine the effects of nutrition education and fruit and vegetable supplementation on macronutrient and antioxidant intake.

METHODS

The study was approved by the University Institutional Review Board. Voluntary consent was collected. Education sessions were held at North Dakota State University.

Participants

47 male and female adults over the age of 18 years

Inclusion criteria

• Body mass index (BMI) greater than or equal to 30 kg/m

Exclusion criteria

• Pregnant or lactating
• History of bariatric surgery
• BMI less than 25 kg/m
• Age 18 years

The study was approved by the University Institutional Review Board.

Instruments

Three-day food record

Statistical Analysis

• t-test
• ANOVA

RESULTS

Demographics of Research Participants

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Age (years)</th>
<th>BMI (kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>8</td>
<td>42.1 ± 14.2</td>
<td>33.0 ± 11.1</td>
</tr>
<tr>
<td>Education</td>
<td>15</td>
<td>47.7 ± 10.7</td>
<td>32.5 ± 6.0</td>
</tr>
<tr>
<td>Fruit and Vegetable</td>
<td>24</td>
<td>46.9 ± 11.9</td>
<td>32.7 ± 7.1</td>
</tr>
</tbody>
</table>

Pre- and post testing (2 weeks)

No significant changes in macronutrient and antioxidant intakes were seen between pre and post testing in control and fruit and vegetable groups.

Further research should focus on interventions aimed at increasing antioxidant-rich fruit and vegetable consumption in individuals to reduce the risk of chronic disease.

DISCUSSION

Significant differences in total energy, protein, and fat intakes were seen between pre and post intervention in education group.

No significant changes in macronutrient and antioxidant intakes were seen between pre and post intervention in control and fruit and vegetable groups.

REFERENCES
