Title
Beneficial effects of weight loss associated with a high protein diet on cardiovascular risk profile, functional status and quality of life in obese heart failure patients: A feasibility study

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Abstract 1818: Beneficial Effects of Weight Loss Associated with a High Protein Diet on Cardiovascular Risk Profile, Functional Status and Quality of Life in Obese Heart Failure Patients: A Feasibility Study

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Abstract

OBJECTIVE: Clinical management of chronic heart failure (HF) related to adequate nutritional intake currently lacks a strong scientific basis. This study was conducted to evaluate the impact of 3 diet interventions on body weight and its potential to reduce cardiovascular risks and improve functional status.

METHOD: Fourteen obese HF patients (BMI > 27 kg/m2) were randomized to 1 of 3 diets: high protein (HP); low fat (LF) or average diet/control group (CG). Body anthropometrics (weight, BMI, waist circumference), indices of cardiovascular risks including (% body fat, blood pressure, cholesterol, triglycerides), and measures of functional status (6-minute walk, max VO2) were obtained at baseline and after a 12-week nutritional support program. Statistics included two-way RMANOVA.

RESULTS: There were no significant differences in age (59±10 years), gender (78% male), NYHA (43% class II; 57% class III), HF etiology (57% non-ischemic), or ejection fraction (0.26±0.07) between the groups. The HP diet resulted in moderate reductions in body weight (Figure1) and improvements in several health parameters (Table4).
CONCLUSION: The data show that in a small group of obese HF patients, a 12-week HP diet resulted in moderate weight loss that was associated with reduced cardiovascular risks and better functional status. However, the long-term effects of a HP diet remain uncertain.

Figure Comparison of Weight Changes in the HP, LF and CG from Baseline to 12 Weeks

![Graph showing weight changes](image)

Mean changes in outcomes from baseline to 12 weeks, by diet group and time

<table>
<thead>
<tr>
<th>Outcome</th>
<th>HP n=12</th>
<th>LF n=12</th>
<th>CG n=12</th>
<th>HP vs LF p</th>
<th>LF vs CG p</th>
<th>HP vs CG p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body mass index, kg/m²</td>
<td>-3.32</td>
<td>2.15</td>
<td>-0.06</td>
<td>.001</td>
<td>.005</td>
<td>.995</td>
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<tr>
<td>Mean circumference, cm</td>
<td>0.79</td>
<td>0.54</td>
<td>0.21</td>
<td>.405</td>
<td>.644</td>
<td>.337</td>
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<tr>
<td>Body fat, %</td>
<td>1.42</td>
<td>2.58</td>
<td>1.18</td>
<td>.772</td>
<td>.722</td>
<td>.480</td>
</tr>
<tr>
<td>Systolic blood pressure, mmHg</td>
<td>-1.34</td>
<td>4.00</td>
<td>1.10</td>
<td>.716</td>
<td>.306</td>
<td>.311</td>
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<tr>
<td>Diastolic blood pressure, mmHg</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td>HDL cholesterol, mg/dl</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td>Triglycerides, mg/dl</td>
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<td>0.00</td>
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<td>1.00</td>
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<tr>
<td>24-hour amb. activ, meters</td>
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<td>2.01</td>
<td>1.18</td>
<td>.772</td>
<td>.722</td>
<td>.480</td>
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<tr>
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<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
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