

Abstract Title

Practice-Based Evidence in Nutrition (PEN) Knowledge Pathway- Should the Dietary Approaches to Stop Hypertension (DASH) nutrition care plan be recommended for overweight, hypertensive children? – A review and update of the literature

H. Resvick¹, J. Madill², B. Hartman³; ¹4th-year student, Honors Specialization in Nutrition & Dietetics, School of Food and Nutritional Sciences, Brescia University College, ²Associate Professor, Research Chair, Nutrition and Transplantation, CNTRP Researcher; School of Food and Nutritional Sciences, Brescia University College; ³Assistant Professor, School of Food and Nutritional Sciences, Brescia University College

Abstract

Introduction: The effectiveness of the DASH diet for adults is well documented but not well-known in children. Paediatric primary hypertension [PPH] is estimated between 1-3% in Canada and compounded by increasing obesity rates, further emphasizing the need for research in this area.

Objectives: a) to update research in PPH and b) to provide RDs with evidence-based therapeutic guidelines.

Methods: PEN for Healthy Weight/Obesity-Pediatric/Paediatric, along with the DASH dietary recommendations for management of hypertension in adults were first consulted. Then, a literature review using PubMed, Scopus, and Summon searches were conducted using keywords: hypertension, high blood pressure, overweight, obese*, DASH diet, dietary approaches to stop hypertension, low sodium diet, low salt diet, child*, and adolescent*. Two hundred and eight original research articles were considered. Included were: English publications (2007-2018); specific reference to the DASH diet or elements of DASH; children and adolescents between 9-21 years of age; comorbidities including obesity, diabetes, and metabolic syndrome. Excluded were: animal studies; adult studies; and the use of DASH for medical conditions differing from above. Fifteen full-text articles were obtained and included for PEN grading.

Results: Eight studies (53%) demonstrated a reduction in blood pressure using the DASH diet or elements of DASH; one (6%) showed no association; three studies (20%) showed a positive benefit with sodium reduction, two (13%) did not show benefit; and one study (6%) reported that increased dairy intake was beneficial in decreasing hypertension.

Conclusion: Research supporting the use of the DASH diet as a therapeutic strategy for PPH remains limited. However, there is convincing evidence that weight reduction, sodium limitation and increased servings of fruit, vegetables, and low-fat dairy may be beneficial.

Significance to Dietetics: The DASH nutrition care plan may prove to be an effective tool for patients with PPH; however, DASH may not meet dietary requirements for calcium and vitamin D without RD supervision to ensure nutritional adequacy with this population.