

Ketogenic Diet's Vascular Risk Factors: A Systematic Review and Meta-Analysis

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INTRODUCTION

- It is known that the leading cause of death in the United States is due to cardiovascular disease.
- Previous research has shown that there is a strong relationship between high fat consumption and raised cholesterol levels which can lead to atherosclerosis.
- Thus, it is often believed high fat diets will eventually cause heart disease, though this outcome has not been observed from the Ketogenic diet.
- Previous research of the Ketogenic diet has been directed towards individuals who are at risk of cardiovascular disease, diabetes, and can be used in aid of epilepsy.
- The Ketogenic diet is a high fat, low carbohydrate diet with the purpose of lowering blood sugar and insulin levels.
- This study aimed to provide evidence towards whether the cholesterol levels and arterial hemodynamics differed amongst healthy or obese populations when prescribed this diet; bringing awareness of diets that improve overall health and body composition.

METHODS

- This study was performed by conducting a systematic review along with a metanalysis.
- Searches of PubMed and Google Scholar were conducted to find relevant literature that compared healthy and obese individuals
- Individuals were either prescribed the Ketogenic diet or an alternative diet such as the Plant-based, Mediterranean, or Calorie Deficit.
- High Density Lipoproteins (HDL), Low Density Lipoproteins (LDL), and Systolic (SBP) and Diastolic (DBP) blood pressures were observed.

RESULTS

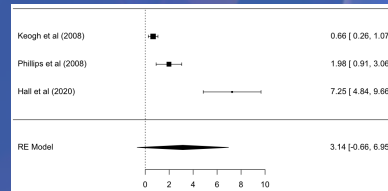


Figure 2: This forest plot shows that the Ketogenic diet was in favor for the HDL concentrations.

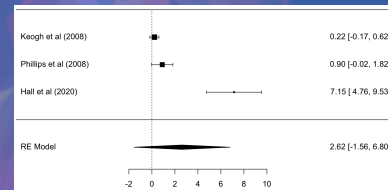


Figure 2: This forest plot shows that the Ketogenic diet was in favor for the LDL concentrations.

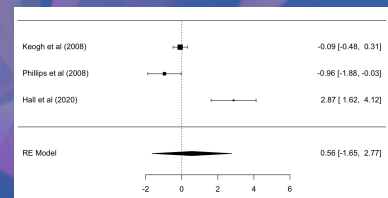


Figure 3: This forest plot shows that the Ketogenic diet was in favor for the SBP.

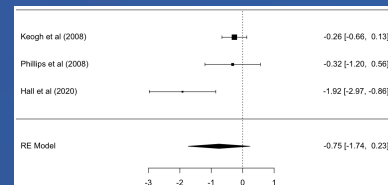


Figure 4: This forest plot shows that the Ketogenic diet was not in favor for the DBP.

KEYPOINTS

- No significant differences of HDL and LDL cholesterol levels between the Ketogenic diet and Non-Ketogenic diets.
- No significant differences for Systolic or Diastolic blood pressures found amongst the diets studied.
- There was implication of different populations having different responses to the Ketogenic diet.
- This implication suggests that “fad” diets are not always correct for every individual.

FUTURE DIRECTIONS

- This study was able to review a multitude of populations who were prescribed the Ketogenic diet.
- Due to the variety of individuals, it would be beneficial to focus on specificity of populations in the future.
- Future studies such as this are warranted in order to provide more information on how specific populations regarding gender, age, and health status respond to the Ketogenic diet.

ACKNOWLEDGEMENTS

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ALLIES in STEM

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