




Very low carbohydrate diets can improve blood pressure, blood sugar levels and weight control

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Which leads to greater metabolic improvements: a very low-carb (VLC) diet or the DASH diet?

A randomized trial compares the VLC and DASH diets among adults who are overweight and have hypertension, prediabetes or type 2 diabetes.

 <p>Both VLC and DASH diets improved outcomes.</p>	 <p>Additional behavioral supports had no impact on outcomes.</p>	 <p>The VLC diet led to greater improvement in blood pressure, HbA1C, and weight.</p>
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Source: Saslow, LR. A Randomized Trial of a Very Low-Carbohydrate vs. DASH Diet Leads to Greater Metabolic Improvements Among Adults with Hypertension, Prediabetes or Type 2 Diabetes, and Overweight or Obesity. *AnnFamMed* 2023.

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Comparing Very Low-Carbohydrate vs DASH Diets for Overweight or Obese Adults With Hypertension and Prediabetes or Type 2 Diabetes: A Randomized Trial. Credit: *The Annals of Family Medicine* (2023). DOI: 10.1370/afm.2968

Adults with hypertension, prediabetes, or type 2 diabetes, and who are overweight or obese, are at an increased risk of serious health

complications. However, experts disagree about which dietary patterns and support strategies should be recommended. Researchers randomized 94 adults with the aforementioned conditions, using a 2 x 2 diet-by-support factorial design, comparing a very low-carbohydrate (VLC) or ketogenic diet versus a Dietary Approaches to Stop Hypertension (DASH) diet. Additionally, they compared results with and without extra support activities, such as mindful eating, positive emotion regulation, social support and cooking education.

Using intent-to-treat analyses, the VLC diet led to greater improvement in estimated mean [systolic blood pressure](#) (SBP; -9.8 mmHg vs. -5.2 mmHg, $P = .046$), greater improvement in glycosylated hemoglobin (HbA1c; -0.4% vs. -0.1% , $P = 0.034$), and greater improvement in weight (-19.14 lbs vs. -10.33 lbs, $P = 0.0003$), compared to the DASH diet. The addition of extra support did not have a statistically significant effect on outcomes.

For adults with hypertension, prediabetes or type 2 diabetes, and are overweight or obese, a VLC diet demonstrated greater improvements in systolic blood pressure, glycemic control, and weight over a four-month period compared to a DASH diet.

What we know:

Nearly half (47%) of adults in the United States have hypertension and about half have prediabetes or type 2 diabetes. Approximately 42% of adults in the United States are also obese. These conditions can trigger stroke, end-stage renal disease, myocardial infarction and premature death. While first-line treatment for these individuals should be a diet and lifestyle intervention, experts disagree about which diet should be recommended.

What this study adds:

For adults who are overweight or obese, have hypertension, as well as prediabetes or type 2 diabetes, a very low carbohydrate diet demonstrated greater improvements in systolic [blood pressure](#), glycemic control, and weight over a four-month period compared to a DASH diet.

The study is published in *The Annals of Family Medicine* journal.

More information: Laura R. Saslow et al, Comparing Very Low-Carbohydrate vs DASH Diets for Overweight or Obese Adults With Hypertension and Prediabetes or Type 2 Diabetes: A Randomized Trial, *The Annals of Family Medicine* (2023). [DOI: 10.1370/afm.2968](https://doi.org/10.1370/afm.2968)

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