

Does lowered salt intake prevent or slow the progression of diabetic kidney disease?

Clinical Question	Does salt restriction have an effect on the prevention and progression of chronic kidney disease (CKD) in people with diabetes?
Bottom Line	<p>The available data from this systematic review of randomised controlled trials, assessing salt restriction, indicate that lowering sodium intake may reduce blood pressure in participants with type 1 and type 2 diabetes, with and without hypertension and with normal or slightly abnormal kidney function.</p> <p>The median net reduction in seven long-term studies in 24-hr urine sodium excretion (treatment duration four to 12 weeks) was 76 mmol, ranging from 51 to 124 mmol. The median net reduction in 10 short-term studies (treatment duration five to seven days) was 187 mmol, with a range of 86 to 337 mmol.</p> <p>Sodium restriction may reduce systolic blood pressure by 7.36 mm Hg, diastolic blood pressure by 3.17 mm Hg and mean arterial pressure by 3.01 mm Hg in all participants.</p>
Caveat	No studies addressed the outcomes of cardiovascular events (stroke, heart failure, myocardial infarction). The number of studies on the effects of salt reduction in diabetics was limited, and the majority of available studies were of short duration with few included participants. The results show considerable heterogeneity, particularly among studies lasting only one to two weeks.
Context	There is strong evidence that our current consumption of salt is a major factor in the development of increased blood pressure (BP) and that a reduction in our salt intake lowers BP, whether BP levels are normal or raised initially. Effective control of BP in people with diabetes lowers the risk of strokes, heart attacks and heart failure and slows the progression of chronic kidney disease (CKD) in people with diabetes.
Cochrane Systematic Review	Hodson EM, Cooper TE. Altered dietary salt intake for preventing diabetic kidney disease and its progression. Cochrane Database of Systematic Reviews 2023, Issue 1. Art. No.: CD006763. DOI: 10.1002/14651858.CD006763.pub3. This review contains 13 trials with a total of 313 participants.

Pearls No. 716, January 2023, written by Assoc Professor Vanessa MB Jordan.

Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006763.pub3/full>