



ABSTRACT TITLE

Effectiveness of Apple cider vinegar on postprandial sugar levels: A retrospective cross-over study on individuals with type 2 diabetes mellitus (T2DM)

AUTHORS

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BACKGROUND AND AIM

Type 2 diabetes is one of the leading endocrine disorders at present. It is studied that Acetic acid in Apple Cider Vinegar (ACV) interferes with digestion of molecules of starch which reduces the amount of glucose absorption in the plasma of blood after meals. Aim of this study was to assess effectiveness of ACV on postprandial levels among people with type 2 diabetes.

MATERIALS AND METHODS

This is a crossover study retrospectively evaluated on participants who enrolled in the Sugarfit's diabetes reversal program (SDRP). SDRP is a personalized intervention program that provides customized nutrition, progressive fitness, and behavioural modification for the holistic management of T2DM. This crossover study was done between a) a meal without ACV and b) a meal with ACV during the 14 day continuous glucose monitoring (CGM) period. A total of 40 participants data was collected from the food log recorded during the CGM period. The outcomes analysed were a) first hour postprandial spike, b) second hour postprandial spike, c) highest spike value, d) duration of highest spike and e) duration it took to come back to baseline, with and without ACV.

RESULTS

1st hour post meal sugars without ACV was 48 mg/dl from baseline while with ACV it was 35 mg/dl. Interestingly, 2nd hour post meal sugars without ACV still remained an average of 48 mg/dl from baseline while with ACV it was reduced further down to 28 mg/dl. Highest spike value in 2 hours after the meal without ACV was 190 mg/dl while with ACV it was 165 mg/dl. Highest spike was observed with the meal without ACV at 93 minutes while with ACV it was observed at 74 minutes. It was observed that only 14% of values came back to baseline sugars without ACV meal while with ACV 28% of values came back to baseline within the next 120 minutes.

CONCLUSION

This retrospective cross-over study concludes that this simple and easy-to-implement intervention helps in controlling the post prandial blood sugar levels without any side-effects.