A Reliable, Valid, Sensitive and Simple Method to Quantify Carbohydrate Routine Consumption among Patients with Type 2 Diabetes.

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Abstract

A1c and cardiovascular health may be negatively impacted by postprandial hyperglycemia, which is predominantly caused by carbohydrate ingestion, according to growing data. The 24-hour dietary recall (ASA24) method is the industry standard for measuring carbohydrate intake, although it is laborious, time-consuming, undersamples due to a brief measurement period, and is frequently unworkable. Alternatives are required.

Research Approach and Techniques : We created the Carbohydrate Routine Consumption (CRC) scale, which takes five minutes to complete and score and quantifies weekly portions of 16 popular high and low glycemic load items. 204 persons with type 2 diabetes received the ASA24 and the CRC tests from us.

Results : The CRC had comparable concept and discriminant validity to the ASA24, was dependable, and was associated with it. Clinicians and researchers can use the CRC with confidence because it is psychometrically solid and simple to use.

Keywords : Type 2 diabetes mellitus; diet; knowledge; attitude; practices; complications

Introduction

Given that carbs contribute significantly to post-meal glucose (PPG) (1), which in turn contributes significantly to A1c (2), and Researchers and doctors need to assess routine carbohydrate consumption since it may be a separate factor in diabetic cardiovascular problems (3). The American Diabetes Association's (ADA's) 2020 Standards of Care, which indicate that "Reducing overall carbohydrate consumption for patients with diabetes has showed the most evidence for reducing glycaemia and may be utilised in a range of dietary patterns," made this more obvious. Although many researchers and physicians find the 24-hour dietary recall (ASA24) (4) to be impractical, it is the gold standard for measuring carbohydrate intake. The ASA24 requires a professional examiner to conduct three planned 30-minute telephone interviews for standardisation.

using an online form to record every nutrient consumed over the course of the previous 24 hours, along with how those items were prepared. The ASA24 server analyses the data, and the user must submit a batch request for all recalls finished during a study. The results are ordinarily made accessible a day later. As a result, we created a shorter, self-report questionnaire that can be completed in five minutes and evaluated in one minute. This questionnaire quantifies the servings of carbs that are regularly consumed (CRC) in a normal week (see supplemental figure S1).

Conclusion

These results show that the CRCHGL may be used by doctors and researchers to swiftly and readily get insight into a person's regular carbohydrate consumption and whether or not it changes over time.
A patient consuming 49 servings per week (one SD above the mean), based on the CRC data from the current and earlier studies, would be consuming a high carbohydrate load. A patient would dramatically lower their daily carbohydrate load if they cut back by 16 servings. Additionally, the CRC can be used as a teaching tool for a low-carbohydrate diet, emphasising foods 17–32 and avoiding foods 1–16. However, if a clinician or researcher requires a thorough nutritional analysis of a specific day's eating habits (including accurate measurement of total energy, macronutrients, and micronutrients), the Only ASA24 is an option.

Discussion

The CRCHGL is a straightforward and broadly focused metric (servings of meals with a high glycemic load in the previous week) for estimating regular carbohydrate consumption. The CRCHGL's psychometric characteristics were comparable to those of the ASA24. The CRCHGL also had a connection to de-

pressed symptoms. A1c decreases were correlated with decreases in the CRCHGL but not with decreases in the ASA24. Although moderate construct validity correlations were expected, they were modest in the current data set. The greater association between total calories consumed and the ASA24 was the only indicator in the ASA24's advantage. The ASA24's total carbs and total calories come from the same interview, evaluating the same 24 hours, whereas the CRCHGL represents eating behaviour from the prior day, hence the higher connection. 7 days. Additionally, the very small and restricted sample (research study participants) suggests a replication of these findings using a wider and more representative group of T2D patients.

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