

Newly Published Study: A randomized controlled trial of pharmacist-led therapeutic carbohydrate and energy restriction in type 2 diabetes¹


- Published September 2021 in *Nature Communications*
- Led by the University of British Columbia
- Randomized, controlled clinical study
- 188 patients that participated in the 12-week study, 98 patients followed a Pharm-TCR diet, and 90 patients received treatment-as-usual.*
- Primary objective: **To determine if a Pharm-TCR diet (Ideal Protein) can safely reduce and/or eliminate the use of glucose-lowering medications and lead to improvements in A1C, body composition, cardiometabolic health, and quality of life.**²

New research proves diet can put Type 2 diabetes into remission

Low calorie, low carb food, under pharmacist supervision, can eliminate meds

September 10, 2021

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A randomized controlled trial of pharmacist-led therapeutic carbohydrate and energy restriction in type 2 diabetes

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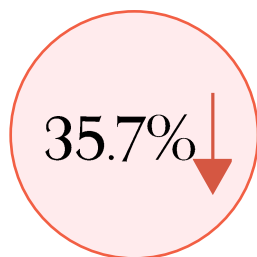
Type 2 diabetes can be treated, and sometimes reversed, with dietary interventions; however, strategies to implement these interventions while addressing medication changes are lacking. We conducted a 12-week pragmatic, community-based parallel-group randomized controlled trial (ClinicalTrials.gov: NCT03781165) evaluating the effect of a low-carbohydrate (<50 g), energy-restricted diet (<1500 kcal/day; Pharm-TCR; n = 98) compared to treatment-as-usual (TAU; n = 90), delivered by community pharmacists, on glucose-lowering medication use, cardiometabolic health, and health-related quality of life. The Pharm-TCR intervention was effective in reducing the need for glucose-lowering medications through complete discontinuation of medications (35.7%; n = 35 vs. 0%; n = 0 in TAU; p < 0.0001) and reduced medication effect score compared to TAU. These reductions occurred concurrently with clinically meaningful improvements in hemoglobin A1C, anthropometrics, blood pressure, and triglycerides (all p < 0.0001). These data indicate community pharmacists are a viable and innovative option for implementing short-term nutritional interventions for people with type 2 diabetes, particularly when medication management is a safety concern.

*Treatment-as usual defined as: given information pamphlets on diet and lifestyle conforming with 2013 Diabetes Canada (formerly the Canadian Diabetes Association) Clinical Practice Guidelines. 1Durrer, C., McKelvey, S., Singer, J. et al. A randomized controlled trial of pharmacist-led therapeutic carbohydrate and energy restriction in type 2 diabetes. Nat Commun 12, 5367 (2021). <https://doi.org/10.1038/s41467-021-25667-4> |

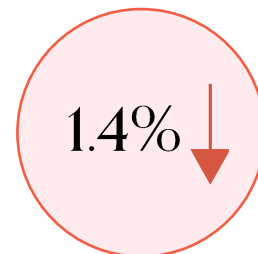
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Reported Primary Outcomes for Pharm TCR patients after 12 weeks



Of patients experienced discontinuation of glucose lowering medication (p < 0.0001)

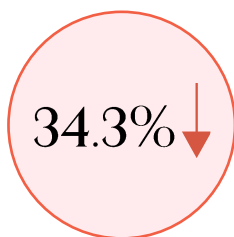


Reduction in A1C (p < 0.0001)

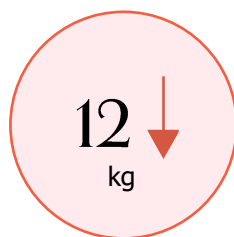
Secondary Outcomes



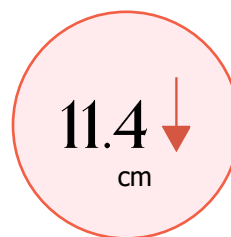
reduction in fasting plasma glucose (p < 0.0001)



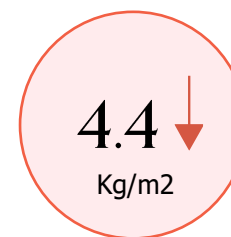
reduction in triglycerides (p < 0.0001)



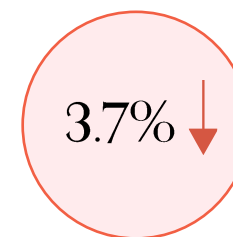
reduction in total body weight* (p < 0.0001)



reduction in waist circumference (p < 0.0001)



reduction in BMI (p < 0.0001)



reduction in body fat percentage (p < 0.0001)

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