

Yamada Bee Farm Grant for Honeybee Research

QUICK SEARCH:		ł:	[advanced]		
	Author:	Key	/word(s):		
Go					
Year:	Vc	ol:	Page:		

HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS

American Journal of Clinical Nutrition, Vol. 87, No. 1, 114-125, January 2008 © 2008 American Society for Nutrition

ORIGINAL RESEARCH COMMUNICATION

The Canadian Trial of Carbohydrates in Diabetes (CCD), a 1-y controlled trial of low-glycemic-index dietary carbohydrate in type 2 diabetes: no effect on glycated hemoglobin but reduction in C-reactive protein<sup>1,2,3</sup>

Thomas MS Wolever, Alison L Gibbs, Christine Mehling, Jean-Louis Chiasson, Philip W Connelly, Robert G Josse, Lawrence A Leiter, Pierre Maheux, Remi Rabasa-Lhoret, N Wilson Rodger and Edmond A Ryan

 $^{1}$  From the Departments of Nutritional Sciences (TMSW, CM, RGJ, and LAL) and Statistics (ALG), University of Toronto, Toronto, Canada; the Department of Medicine, St Michael's Hospital, Toronto, Canada (TMSW, PWC, RGJ, and LAL); the Research Center Hôtel-Dieu de Montréal, University of Montré al, Montréal, Canada (J-LC and RR-L); the Department of Medicine, University of Sherbrooke, Québec, Canada (PM); the Department of Medicine, St Joseph's Health Center, University of Western Ontario, London, Canada (NWR); and the Department of Medicine, University of Alberta, Edmonton, Canada (EAR)

Background: The optimal source and amount of dietary carbohydrate for managing type 2 diabetes (T2DM) are unknown.

Objective: We aimed to compare the effects of altering the glycemic index or the amount of carbohydrate on glycated hemoglobin (HbA<sub>1c</sub>), plasma glucose, lipids, and Creactive protein (CRP) in T2DM patients.

Design: Subjects with T2DM managed by diet alone (n = 162) were randomly assigned to receive high-carbohydrate, high-glycemic-index (high-Gl), high-carbohydrate, low-glycemic-index (low-Gl), or low-carbohydrate, highmonounsaturated-fat (low-CHO) diets for 1 y.

Results: The high-GI, low-GI, and low-CHO diets contained, respectively, 47%, 52%, and 39% of energy as carbohydrate and 31%, 27%, and 40% of energy as fat; they had GIs of 63, 55, and 59, respectively. Body weight and HbA<sub>1c</sub> did not differ significantly between diets. Fasting glucose was higher (P = 0.041), but 2-h postload glucose was lower (P = 0.041) 0.010) after 12 mo of the low-GI diet. With the low-GI diet, overall mean triacylglycerol was 12% higher and HDL cholesterol 4% lower than with the low-CHO diet (P < 0.05), but the difference in the ratio of total to HDL cholesterol disappeared by 6 mo (time x diet interaction, P = 0.044). Overall mean CRP with the low-GI diet, 1.95 mg/L, was 30% less than that with the high-GI diet, 2.75 mg/L (P = 0.0078); the concentration with the low-CHO diet, 2.35 mg/L, was intermediate.

Conclusions: In subjects with T2DM managed by diet alone with optimal glycemic control, long-term HbA<sub>1c</sub> was not affected by altering the GL or the amount of dietary carbohydrate. Differences in total: HDL cholesterol among diets had disappeared by 6 mo. However, because of sustained reductions in postprandial glucose and CRP, a low-Gl diet may be preferred for the dietary management of T2DM.

Key Words: Humans • randomized controlled clinical trial • diet • carbohydrate • diabetes • monounsaturated fat

## This Article

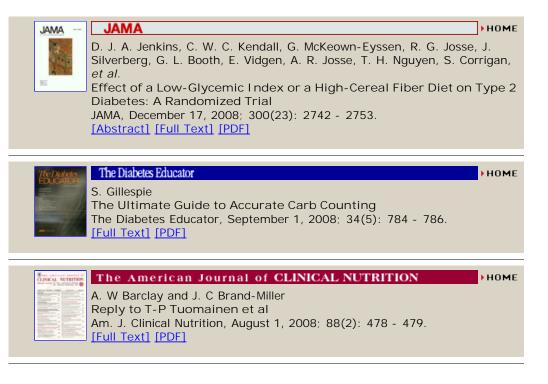
- Full Text
- Full Text (PDF)
- Purchase Article
- View Shopping Cart
- Alert me when this article is cited
- Alert me if a correction is posted
- Citation Map

301 11003
Related articles in AJCN Similar articles in this journal Similar articles in PubMed Alert me to new issues of the journal Download to citation manager © Get Permissions
Citing Articles
<u>Citing Articles via HighWire</u> <u>Citing Articles via Google Scholar</u>
Google Scholar
<ul> <li>Articles by Wolever, T. M.</li> <li>Articles by Ryan, E. A</li> <li>Search for Related Content</li> </ul>
PubMed
<ul> <li><u>PubMed Citation</u></li> <li><u>Articles by Wolever, T. M.</u></li> <li><u>Articles by Ryan, E. A</u></li> </ul>
Agricola
<ul> <li><u>Articles by Wolever, T. M.</u></li> <li><u>Articles by Ryan, E. A</u></li> </ul>

Glycemic index in early type 2 diabetes Xavier Pi-Sunyer AJCN 2008 87: 3-4. [Full Text]

A role for the glycemic index in preventing or treating diabetes? John M Miles AJCN 2008 87: 1-2. [Full Text]

## This article has been cited by other articles:



HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS Copyright © 2008 by The American Society for Nutrition