

Professor Jim Mann

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University of Otago
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Friday, August 09, 2019

(Plenary)

17:30 - 17:45 The Best Diet - The Battle of the Macronutrients: Low Fat or Low Carbohydrates



The Best Diet

The battle of the macronutrients: low fat or low carbohydrates

Jim Mann



WHO Collaborating Centre for
Human Nutrition



The New Zealand - China
Non-Communicable Diseases
Research Collaboration Centre
新西兰-中国非传染性疾病研究合作中心

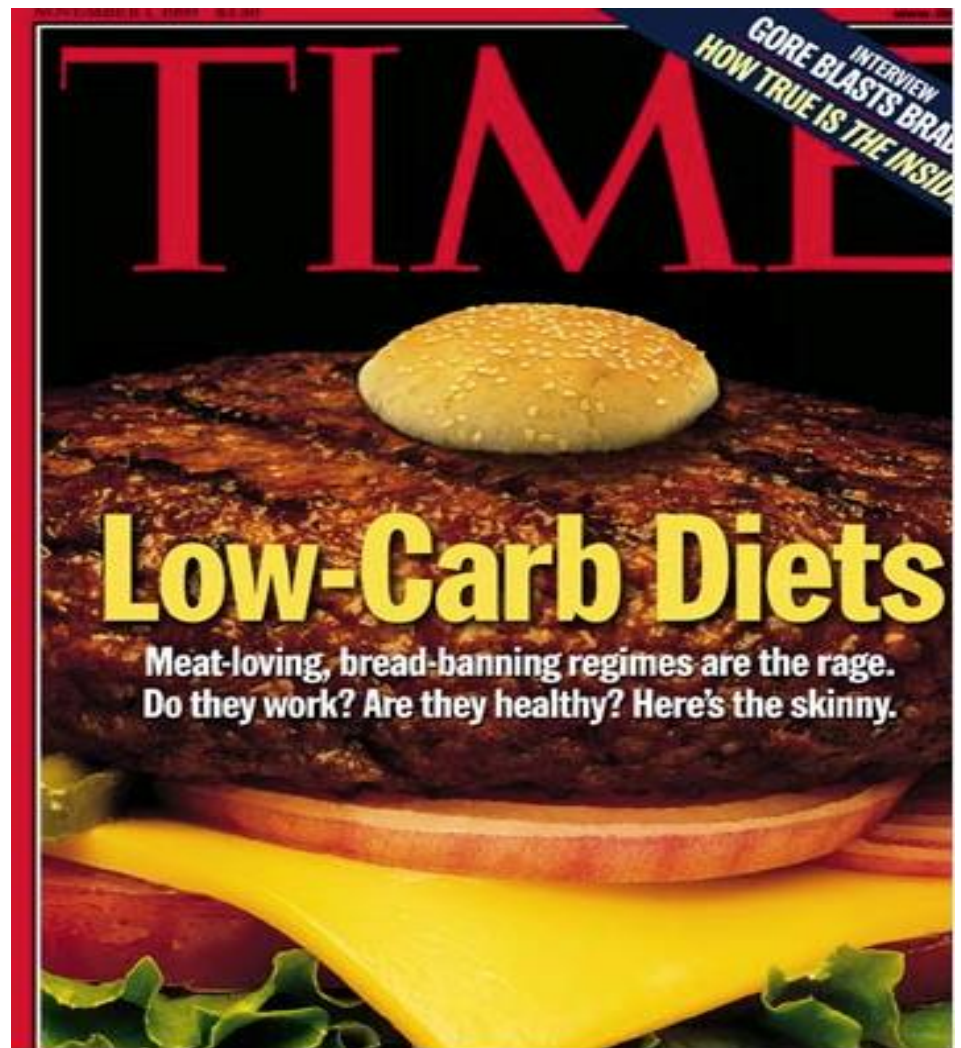
National
Science
Challenges

HEALTHIER
LIVES

He Oranga Hauora



1 November 1999



High carb or high fat? The running diet debate

For years it's been accepted that high carbs are needed to sustain performance. But is it really true, or should we be turning to fats instead?



FEATURE

Are some diets “mass murder”?

From low fat to Atkins and beyond, diets that are based on poor nutrition science are a type of global, uncontrolled experiment that may lead to bad outcomes, concludes **Richard Smith**

Richard Smith *chair, Patients Know Best*

Attributing disease or mortality to diet is scientifically difficult. Associations are first made through observational studies, but recording exactly what people eat is hard. We eat very varied diets, and maybe over time our diets change. Then converting our diet into components of fat, carbohydrate, protein, and the like is unreliable. So to make a link between diet recorded over a short period of time and diseases and deaths encountered perhaps decades later is inevitably difficult.

Diet Doctor: **Landmark diabetes report says low-carb is a top option**

The ADA's consensus report was written by a group of 14 experts led by Dr. William S. Yancy, Jr., who is a member of Diet Doctor's medical review board.



Reducing overall carbohydrate intake for individuals with diabetes has demonstrated the most evidence for improving glycemia and may be applied in a variety of eating patterns that meet individual needs and preferences.



Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report

Diabetes Care 2019;42:731–754 | <https://doi.org/10.2337/dci19-0014>

Corresponding author: William S. Yancy Jr., will.yancy@duke.edu

Critical Review

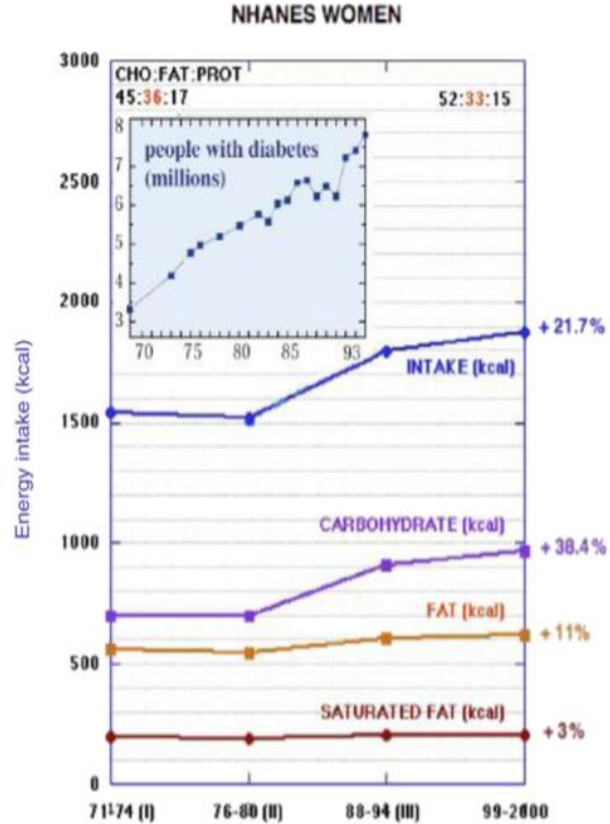
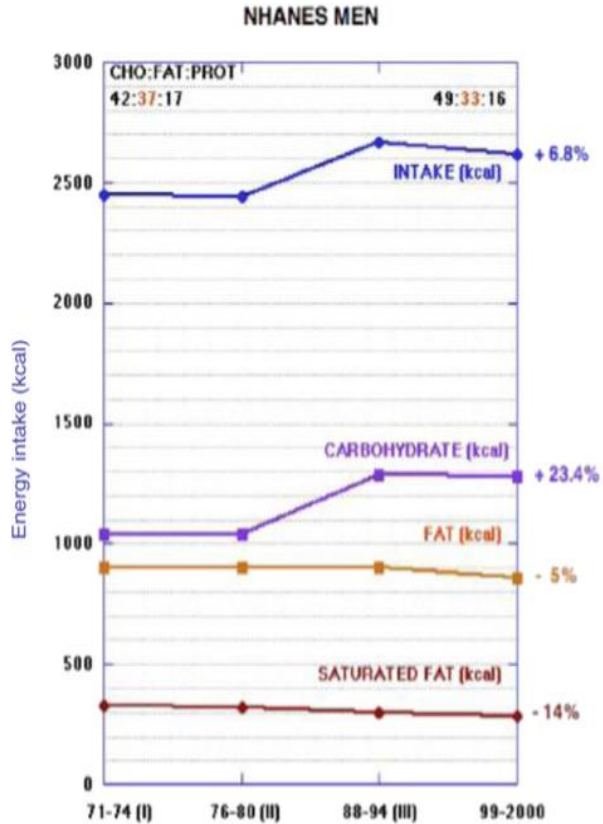
Dietary carbohydrate restriction as the first approach in diabetes management: Critical review and evidence base

A B S T R A C T

Here we present 12 points of evidence supporting the use of low-carbohydrate diets as the first approach to treating type 2 diabetes and as the most effective adjunct to pharmacology in type 1. They represent the best-documented, least controversial results. The insistence on long-term randomized controlled trials as the only kind of data that will be accepted is without precedent in science. The seriousness of diabetes requires that we evaluate all of the evidence that is available. The 12 points are sufficiently compelling that we feel that the burden of proof rests with those who are opposed.

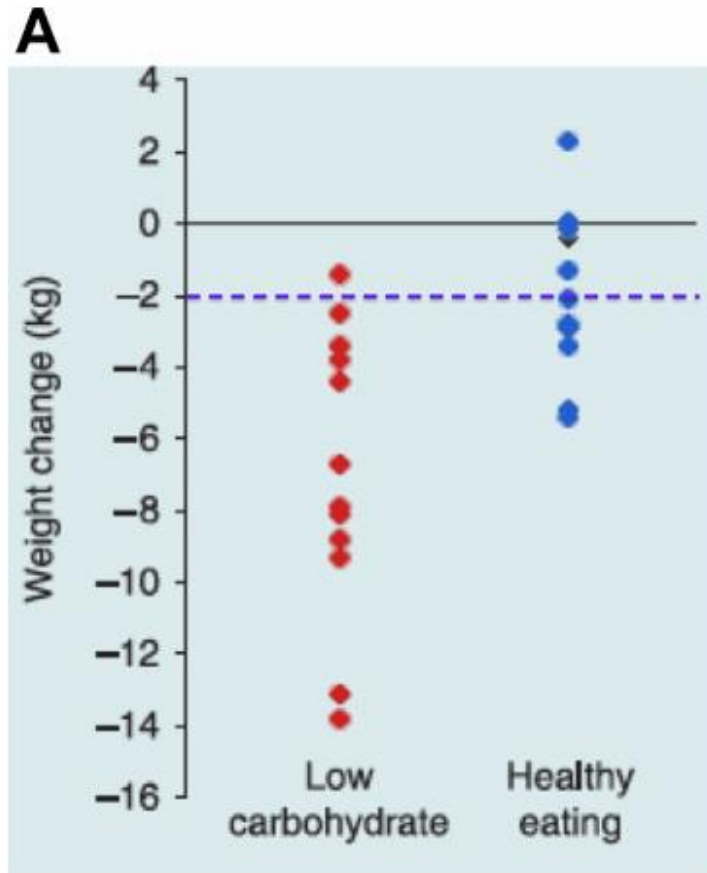
Funding was received from among other sources: Atkins Foundation (several of the authors), Global Dairy Platform, McDonalds, Jenny Craig, Low Carb Meal Replacement Company,

Macronutrient consumption during the epidemic of obesity and type 2 diabetes

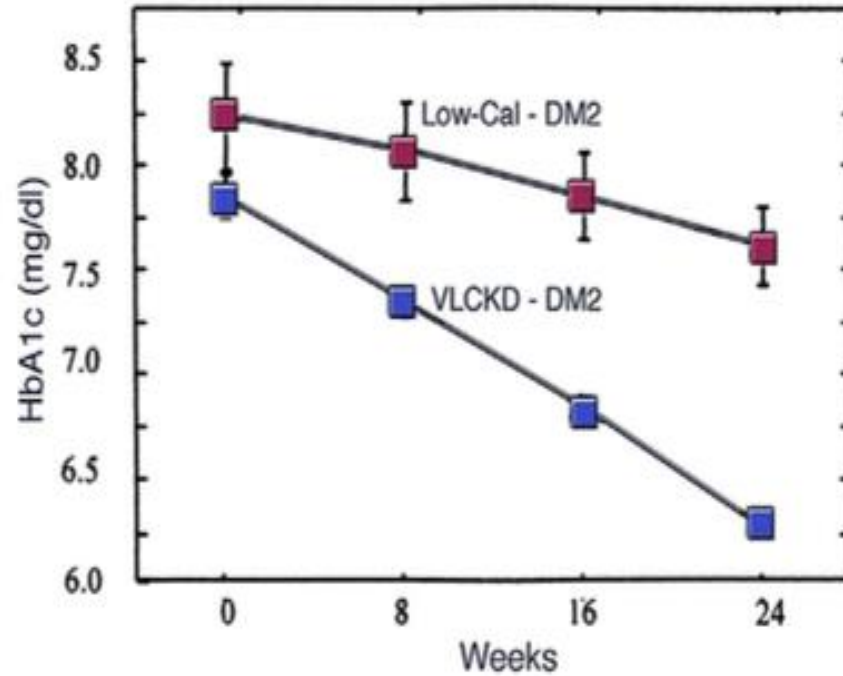


Effect of diet on weight loss

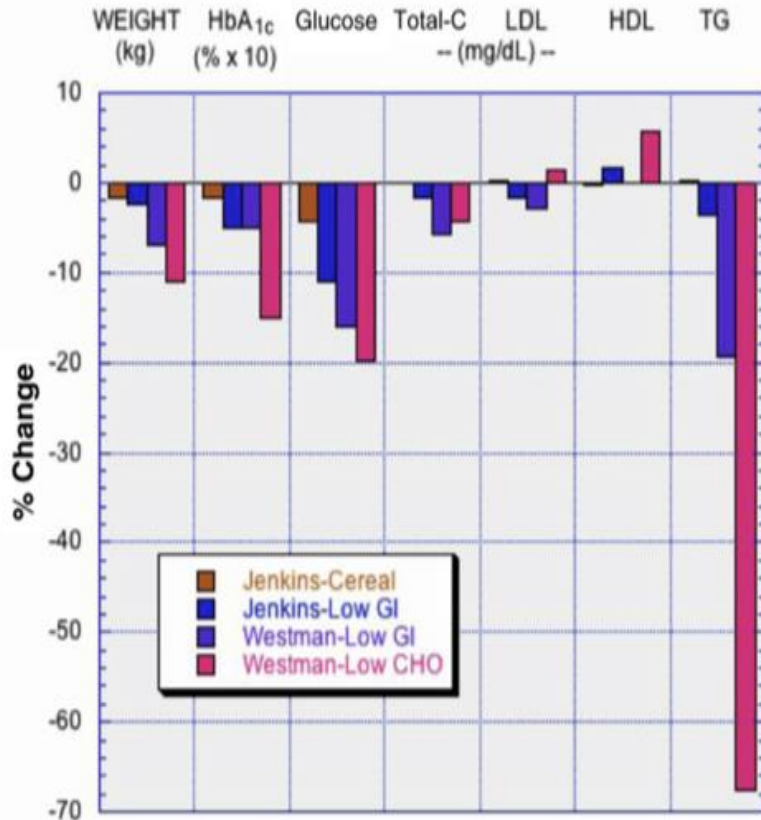
Feinman et al, 2015, *Nutrition* 31:1-13



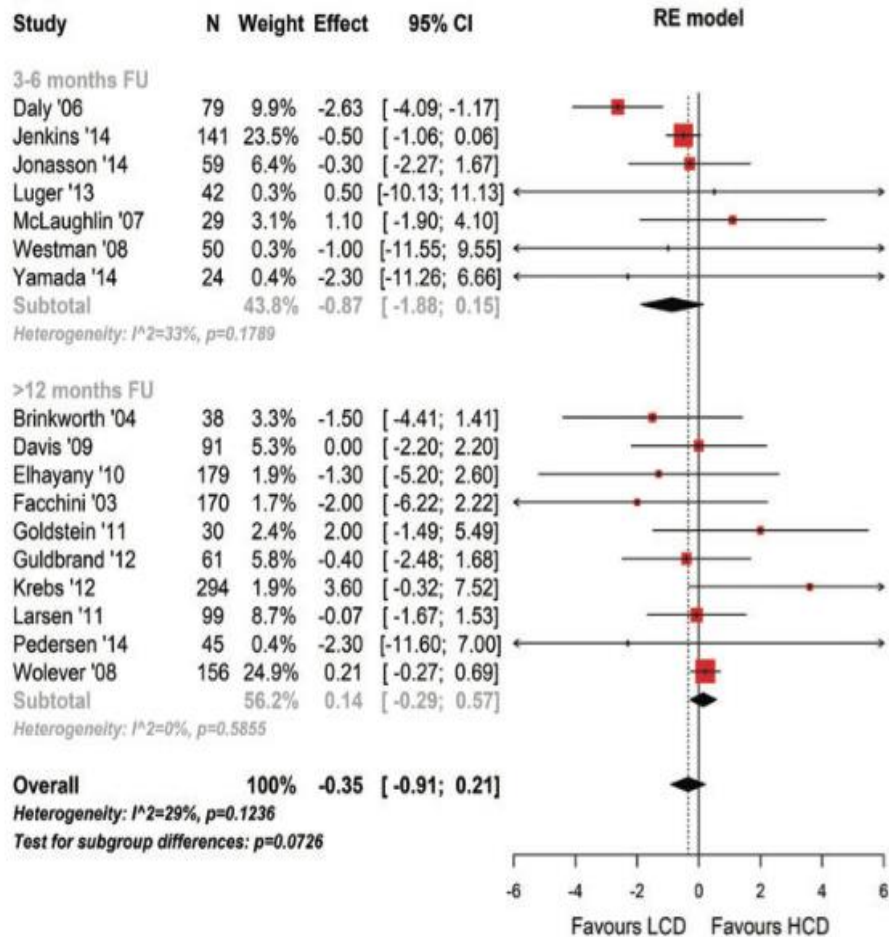
Effect of low-calorie versus low-carbohydrate ketogenic diet in type 2 diabetes



Comparison of low-glycemic index diet with high-cereal diet and of low-glycemic index diet with low-carbohydrate diet



Meta-analysis of changes in body weight (kg)



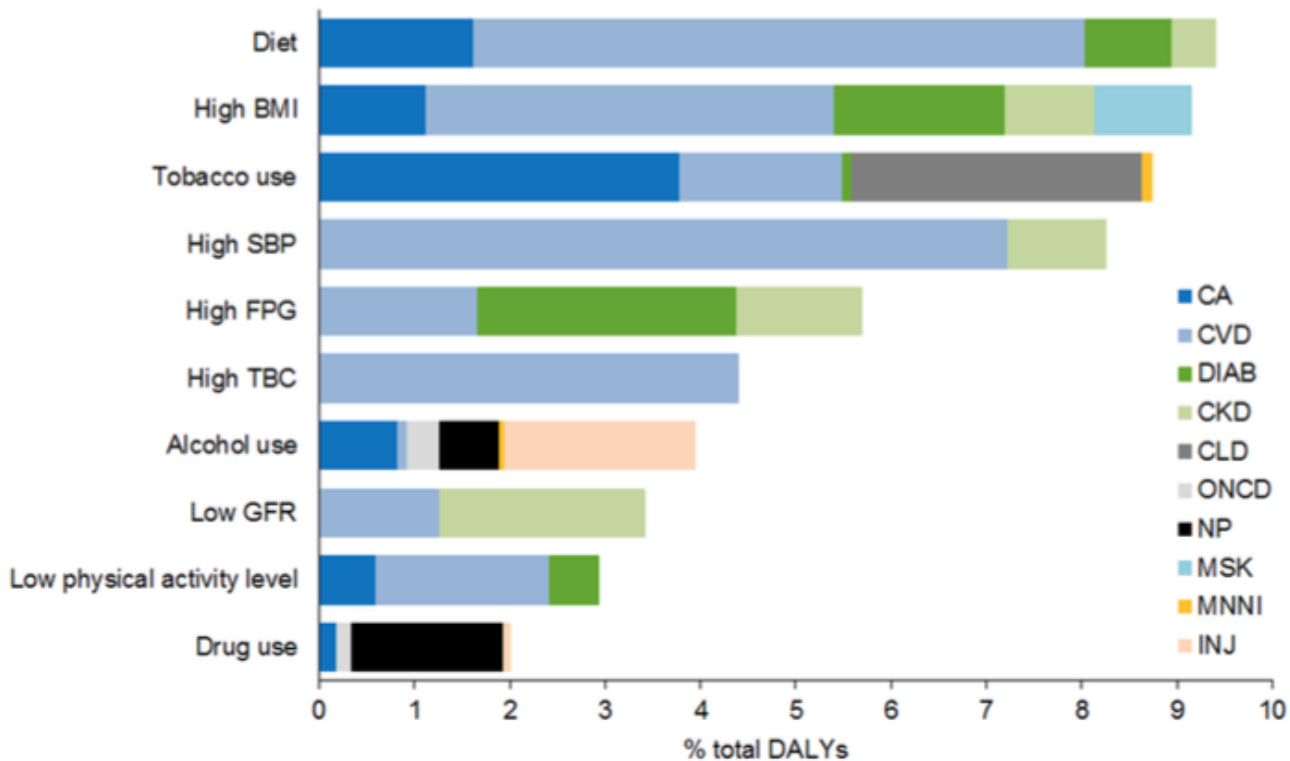
Korsmo-Haugen et al, 2019, *Diabetes Obes Metab*;21:15-27







Health losses caused by selected risk factors (% total DALYs), 2013



Ministry of Health.2016. *Health Loss in NZ 1990 – 2013: A Report from the NZ Burden of Diseases, Injuries and Risk Factors Study*, Wellington: MoH

Contributors to 'diet'



Low consumption of:

High consumption of:

Fruit & vegetables

Sodium

Whole grains

Red meat

Fibre

Trans fat

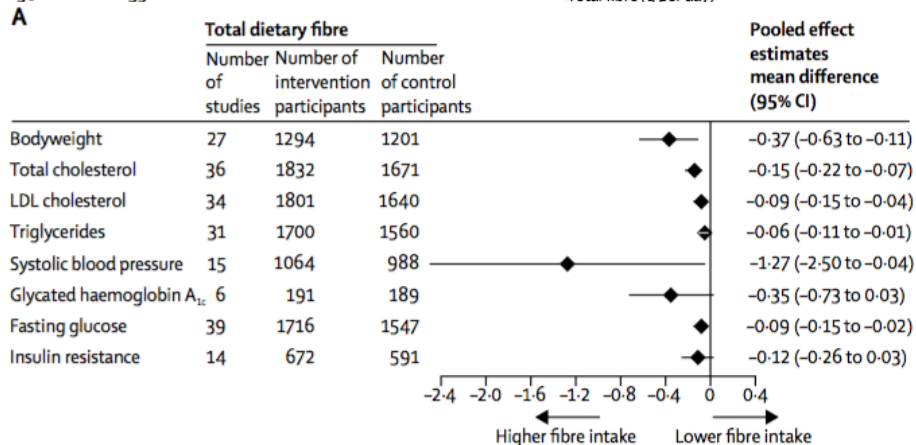
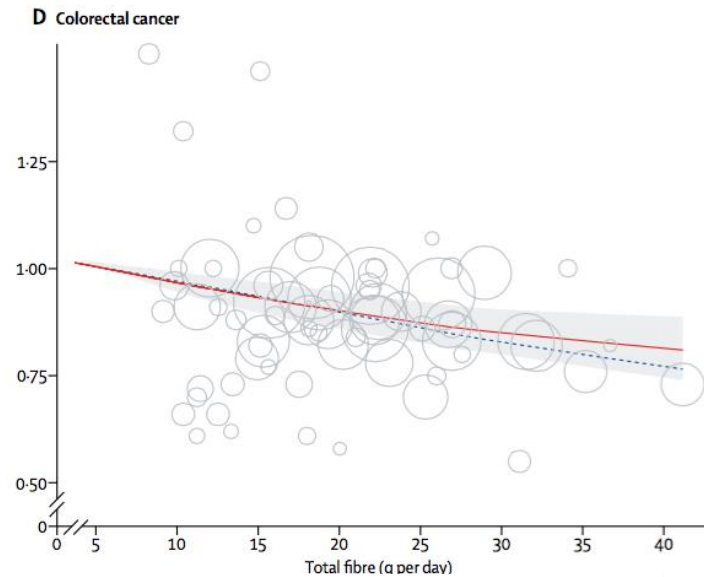
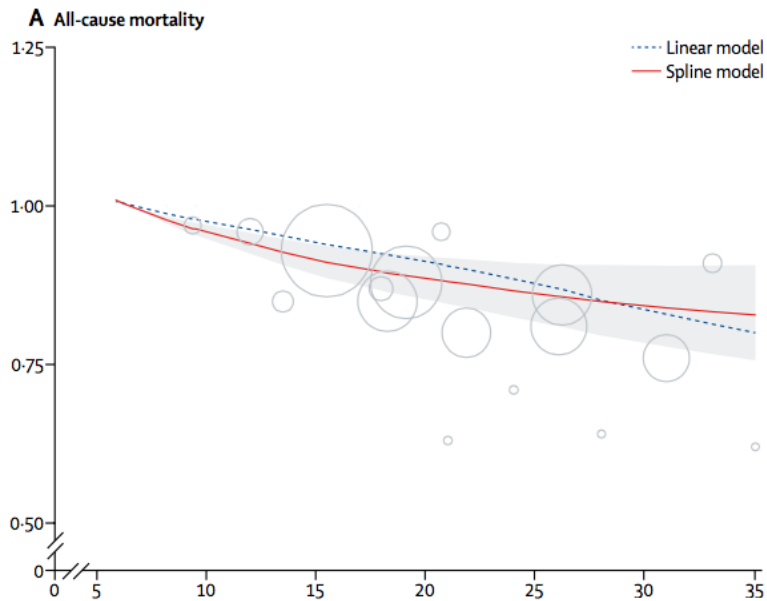
Total PUFA

Sugar

ω 3 PUFA

Calcium

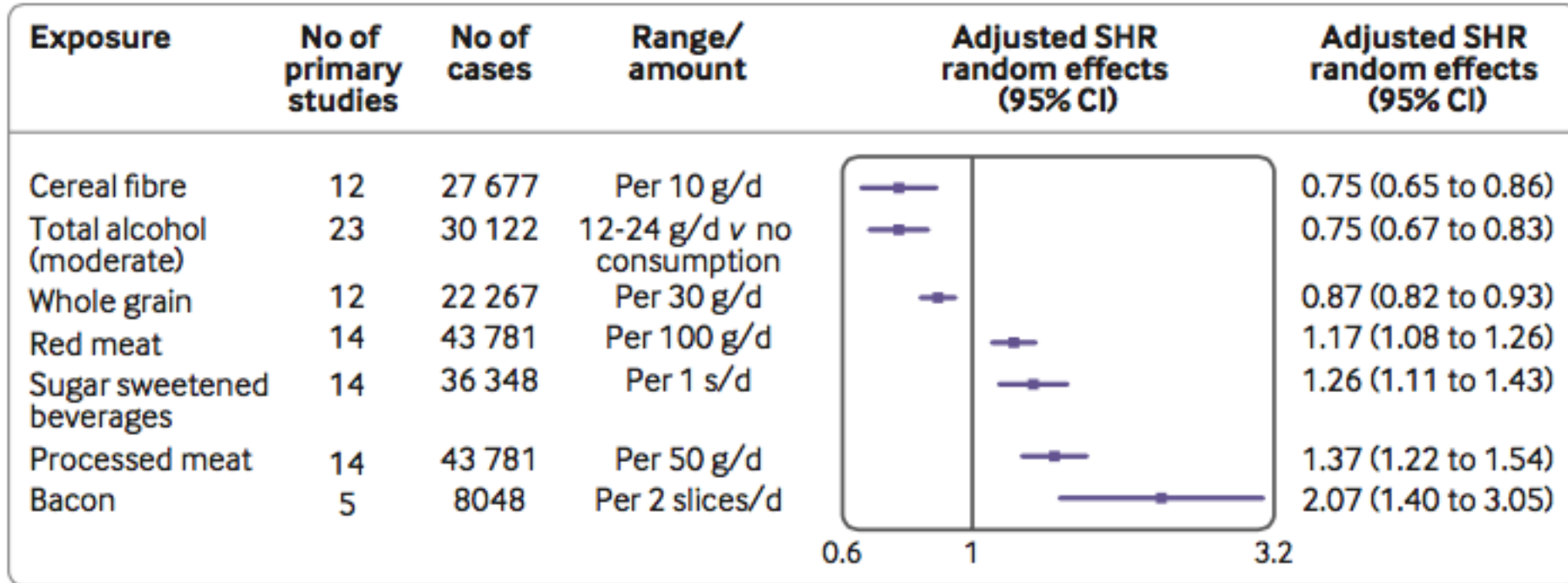




Role of diet in type 2 diabetes incidence

Neuenschwander M, Ballon A, Weber KS, et al

Cite this as: *BMJ* 2019;366:l2368



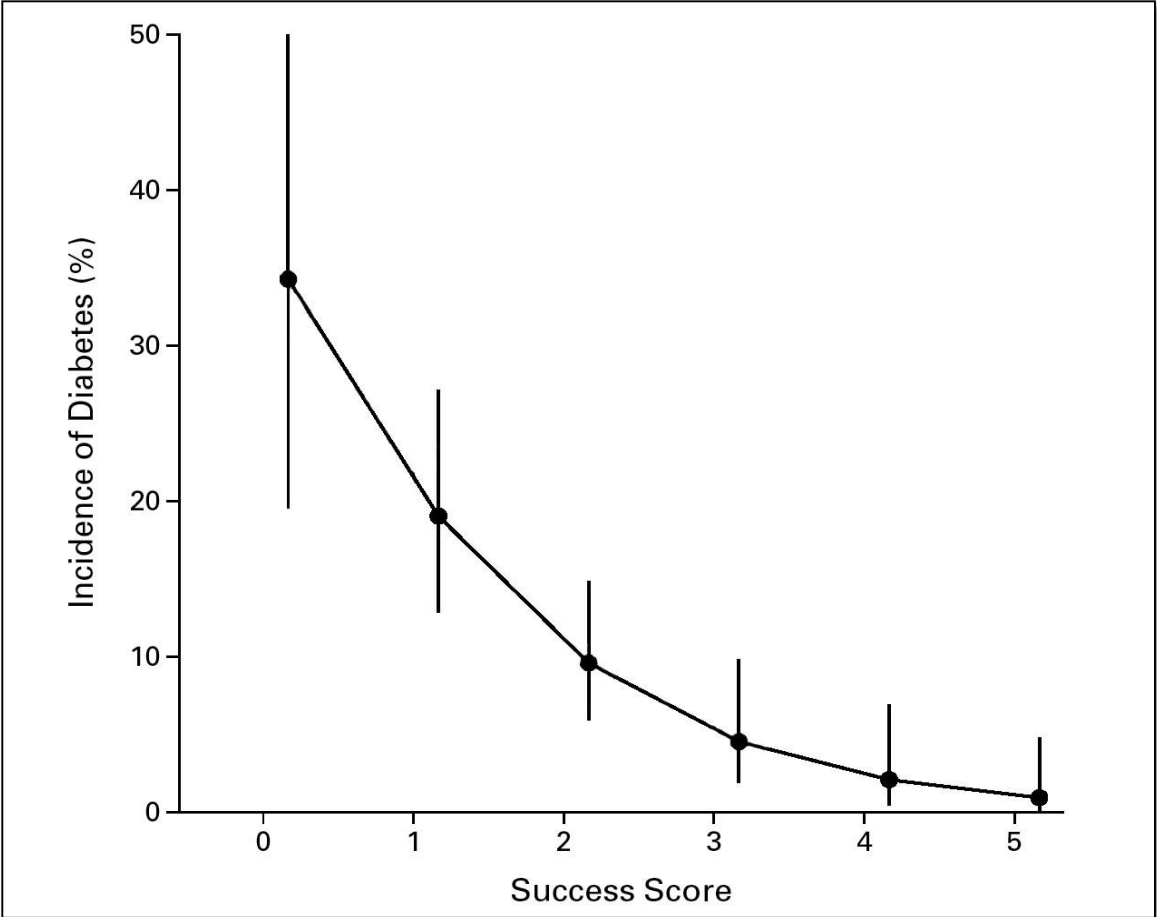
Original Research: Umbrella review of meta-analysis of observational studies *BMJ* 2019

**PREVENTION OF TYPE 2 DIABETES MELLITUS BY CHANGES IN LIFESTYLE
AMONG SUBJECTS WITH IMPAIRED GLUCOSE TOLERANCE**

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MAURI LAAKSO, M.D., ANNE LOUHERANTA, M.S., MERJA RASTAS, M.S., VIRPI SALMINEN, M.S.,
AND MATTI UUSITUPA, M.D., PH.D., FOR THE FINNISH DIABETES PREVENTION STUDY GROUP

Weight reduction	$\geq 5\%$
Moderate intensity physical activity	≥ 30 m/day
Dietary fat	$< 30\%$ TE
Dietary saturated fat	$< 10\%$ TE
Dietary fibre	$\geq 15\text{g}/1000\text{kcal}$

Finnish Diabetes Prevention Study: Incidence of diabetes during follow-up





CHO: 45 – 60% TE

FAT: 25 – 40% TE (<10% SFA)

PROTEIN: 10 – 20%

FIBRE: >30g/d

