Casual Friday Series

Anti-inflammatory Diets Part 5: Carnivore II

A Biogenetix Clinical Presentation

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J Obes. 2012; 2012: 258624.
Published online 2011 Dec 22. doi: 10.1155/2012/258624
PMCID: PMC3253466
PMID: 22235369

The Carnivore Connection Hypothesis: Revisited

Jennie C. Brand-Miller, [1, 2 *] Hayley J. Griffin, [3] and Stephen Colagiuri [1]

Author information · Article notes · Copyright and License information Disclaimer

Abstract

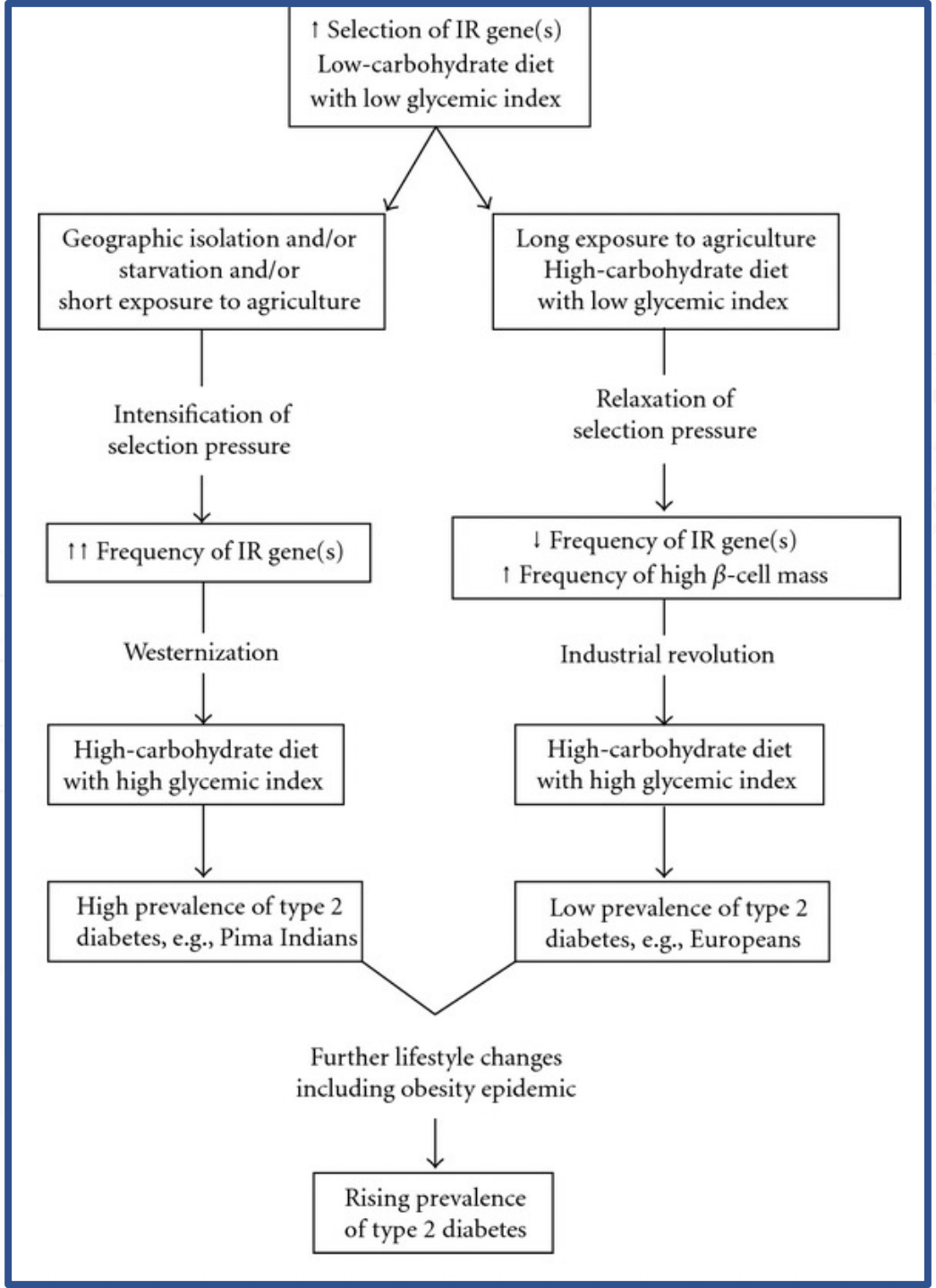
Go to:

The "Carnivore Connection" hypothesizes that, during human evolution, a scarcity of dietary carbohydrate in diets with low plant : animal subsistence ratios led to insulin resistance providing a survival and reproductive advantage with selection of genes for insulin resistance. The selection pressure was relaxed at the beginning of the Agricultural Revolution when large quantities of cereals first entered human diets. The "Carnivore Connection" explains the high prevalence of intrinsic insulin resistance and type 2 diabetes in populations that transition rapidly from traditional diets with a low-glycemic load, to high-carbohydrate, high-glycemic index diets that characterize modern diets. Selection pressure has been relaxed longest in European populations, explaining a lower prevalence of insulin resistance and type 2 diabetes, despite recent exposure to famine and food scarcity. Increasing obesity and habitual consumption of high-glycemic-load diets worsens insulin resistance and increases the risk of type 2 diabetes in all populations.

1. Introduction

Go to:

Nearly two decades ago, Brand-Miller and Colagiuri published the Carnivore Connection hypothesis [1], proposing that dietary carbohydrate, both quantity and quality, played a critical role in the natural history of type 2 diabetes. We proposed that low glucose intake associated with a low-carbohydrate, high-protein carnivorous diet during the Ice Ages which dominated the last two million years of human evolution led to insulin resistance becoming a survival and reproductive advantage. When food energy was abundant, but dietary carbohydrate scarce, those with greater inherent insulin resistance were able to redirect glucose from maternal use to fetal metabolism, increasing birth weight and survival of offspring. In certain groups of people, other factors such as geographic isolation or starvation may have contributed further to positive selection for insulin resistance genes.


↑ Selection of IR gene(s)
Low-carbohydrate diet
with low glycemic index
Geographic isolation and/or
starvation and/or
short exposure to agriculture
Long exposure to agriculture
High-carbohydrate diet
with low glycemic index
Intensification of
selection pressure
Relaxation of
selection pressure
↑↑ Frequency of IR gene(s)
↓ Frequency of IR gene(s)
↑ Frequency of high β-cell mass
Westernization
Industrial revolution
High-carbohydrate diet
with high glycemic index
High-carbohydrate diet
with high glycemic index
High prevalence of type 2
diabetes, e.g., Pima Indians
Low prevalence of type 2
diabetes, e.g., Europeans
Further lifestyle changes
including obesity epidemic
Rising prevalence
of type 2 diabetes

The “Macros” Conversation

Vs

The Diabetogen Conversation

Integr Med (Encinitas). 2016 Aug; 15(4): 8–17.

PMCID: PMC4991654

PMID: 27574488

Is the Diabetes Epidemic Primarily Due to Toxins?

Joseph Pizzorno, ND, Editor in Chief

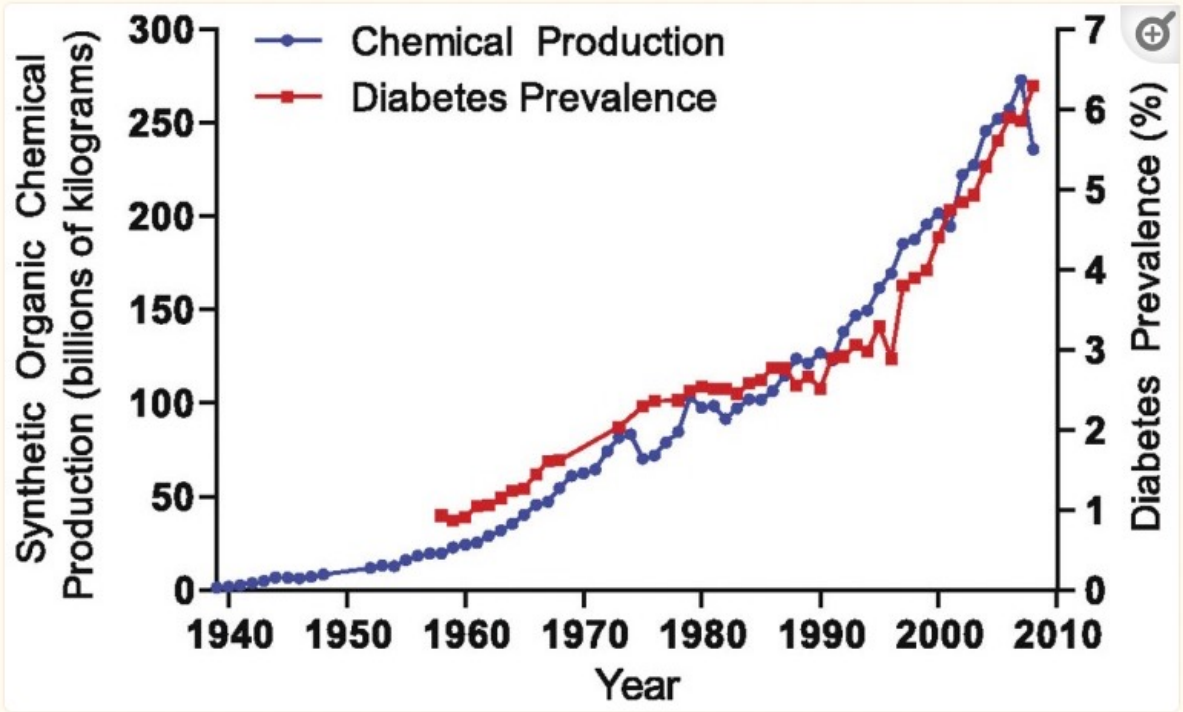
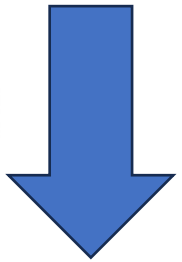


Figure 3

The Diabetes Epidemic Correlates With Release of POPs Into the Environment[4]

Market Supply



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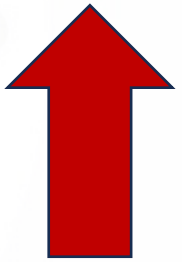
Saturated Fatty Acid + processed food-based inflammation = Cholesterol buildup and Heart disease.

Heritage Food
(Carnivore)



Rx Users

Curr Dev Nutr. 2021 Dec; 5(12): nzab133.
Published online 2021 Nov 2. doi: 10.1093/cdn/nzab133
PMCID: PMC8684475
PMID: 34934897

Behavioral Characteristics and Self-Reported Health Status among 2029 Adults Consuming a "Carnivore Diet"

Belinda S Lennerz, Jacob T Mey, Owen H Henn, and David S Ludwig

Dietary variety is near-universally recommended in National Guidelines to satisfy human nutritional needs (1, 2). Consumption of a variety of food groups from both plant and animal food sources has been linked to favorable health outcomes in epidemiologic studies (3) and clinical trials (4–6) and is expected to satisfy the recommended DRIs of macronutrients (i.e., protein, carbohydrates, and fats), micronutrients (i.e., vitamins and minerals), and food components (e.g., dietary fiber).

Nevertheless, restrictive diets have long been promoted for various health and philosophical reasons. One notable eating pattern, a vegan diet, that eliminates animal foods has been promoted for ethical (7), environmental (8), and health (9) benefits—including reduction in BMI, improvement in serum lipids, and cancer prevention (9). However, these reported benefits may be confounded by dietary and nondietary health behaviors, and negative effects have also been reported (10). Vegan diet consumers may not meet DRIs for vitamin B-12, calcium, and protein, and adverse events, such as an increased incidence of bone fractures (11), have been observed.

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Although several contemporary treatments of obesity or type 2 diabetes promote high intake of meat and fat (e.g., the Atkins diet) (33), these diets typically include, or reintroduce after short periods, consumption of low-carbohydrate vegetables and low-sugar fruits. Whereas a recent perspective suggests that all essential nutrients can be obtained from a carnivore diet (34), few empirical data are available. Therefore, the aim of this study was to characterize the motivation, dietary behaviors, self-perceived health status, and satisfaction of a large group of adults habitually consuming a carnivore diet, and thereby to provide insights into this poorly characterized dietary approach.

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Author information

Nationality

- 64% of participants were from the United States and Canada
- 11% from Europe
- 8% from Australia

Sex

Two-thirds of the participants were male. One-third were female.

Age

Participants' ages ranged from 18 to 85. The median age was 44.

Weight

Participant body weight ranged from 38 kg to 176 kg (84 lb to 388 lb)/

The median weight was 76 kg (168 lb).

Education

64% of participants had at least a college education.

Income

20% of respondents reported high income, 66% middle income, and 14% were low income.

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Why did they begin the carnivore diet?

The vast majority (93%) of participants stated that they started the carnivore diet to improve health and lose weight.

What health reasons?

Under health reasons, the participants cited the following specific areas:

- Body weight/body composition 78%
- Focus and energy 74%
- Allergy/skin/autoimmunity 56%
- Digestive health 52%
- Athletic performance 46%
- Mental health 45%
- Diabetes 11%

https://www.doctorkiltz.com/the-harvard-carnivore-diet-study/

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Ruminant (red) meat

The most common carnivore diet food was ruminant meat.

- 85% of respondents reported consuming either or a combination of beef, bison, lamb, goat, and venison at every meal or at least daily.

Eggs and High Fat Dairy

The other most popular diet foods that participants ate daily or at every meal, included:

- Eggs: 44%
- Cheese and cream 43%

Pork

- 13% of the participants reported eating pork at least once a day.
- 53% reported consuming pork one to a few times a week.

Poultry

- 2.5% reported consuming poultry at least once a day
- 38% consumed poultry weekly.

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Behavioral Consuming a "Carnivo

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Fish

- 3.5% consumed fish daily
- 36% consumed fish weekly

Organ meat

- 42% of participants reported consuming organ meats at least once a week

Bone Broth

- 52% of participants consumed carnivore diet bone broth at least monthly

Milk

- 17% of participants reported consuming milk at least once a week
- 65% reported never consuming milk while on the carnivore diet

Herbs and Spices

- 21% of participants reported using herbs and spices daily.

Salt

- 36% of the participants consumed salt liberally
- The remainder reported low to medium salt intake

Fat content of meat

- 61% consumed high-fat meat

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How often did participants eat on the carnivore diet?

- 81% of participants ate one to two meals a day
- 64% ate two meals a day
- 17% ate only one meal a day
- 17% ate three times or more a day
- 2% ate less than once a day

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Compared to most diets, carnivore dieters reported a very high level of compliance across various categories:

- 89% never consumed legumes
- 87% never consumed breaded and fried fast food meats
- 81% never consumed candy & milk chocolate
- 80% never used multivitamin supplements.
- 79% never consumed grains
- 78% never consumed sugar
- 75% never ate desserts
- 74% never consumed honey
- 74% never consumed starchy vegetables
- 69% never consumed non-starchy vegetables
- 66% never consumed fruit
- 65% never consumed non-calorie sweeteners

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- 100% of Diabetics came off injectable medication.
- 92% came off insulin completely.
- 84% of diabetes patients came off all oral medications.
- CRP inflammatory marker decreased across the board.
- 90% of participants report improvement in all diseases.

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- 95% improved overall health
- 91% improved hunger/food cravings
- 89% improved energy
- 85% improved mental clarity
- 83% improved focus
- 78% improved strength
- 76% improved endurance
- 69% improved sleep
- 69% improved chronic disease
- 66% improved memory

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- 98% improved or resolved diabetes and insulin resistance
- 97% improved or resolved gastrointestinal conditions
- 96% improved or resolved musculoskeletal issues
- 96% improved or resolved psychiatric symptoms
- 93% improved or resolved overweight/obesity (mean BMI decreased from 27.2 to 24.3)
- 93% improved or resolved hypertension
- 92% improved or resolved urologic issues
- 92% improved or resolved dermatologic issues
- 89% improved or resolved autoimmune conditions
- 84% improved or resolved cardiovascular issues

The Wedge Protocol