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Commentary

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Diabetes Diet Therapy and Carbohydrate Restriction Diet (Low-Carbohydrate Diet): Recent Changes in the Positions of the American Diabetes Association (ADA) and the Japan Diabetes Society (JDS)

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Abstract

The American Diabetes Association (ADA) has undergone a significant evolution in its stance on carbohydrate-restricted diets for diabetes management. Prior to 2008, the ADA largely rejected low-carbohydrate approaches. From 2008 onward, it progressively acknowledged their short-term efficacy for weight loss, extended this recognition to 2 years by 2011, removed time limits in the 2013 consensus report, and by 2019 explicitly positioned low-carbohydrate eating patterns as among the most studied and viable options for adults with type 2 diabetes (T2D). This supportive position has remained consistent through 2025.

In parallel, the newly released United States Department of Agriculture (USDA) Dietary Guidelines for Americans 2025–2030 reflect a paradigm shift toward higher protein intake (1.2–1.6 g/kg), emphasis on whole foods, restriction of processed foods and added sugars, and inclusion of healthy fats, aligning closely with core principles of low-carbohydrate diets. In contrast, the Japan Diabetes Society (JDS) maintained a long-standing focus on calorie restriction with relatively high carbohydrate intake from 1969 onward, only recently softening rigid macronutrient ratios. Japanese clinicians pioneered practical carbohydrate restriction in the early 2000s, with accumulating clinical reports and evidence supporting its safety, including data on physiological ketone body elevation during pregnancy and in newborns. These developments indicate growing international convergence toward more flexible, individualized, and carbohydrate-aware dietary strategies in diabetes care.

Keywords

Low-Carbohydrate Diet, Carbohydrate Restriction, Medical Nutrition Therapy, American Diabetes Association, United States Department of Agriculture, Dietary Guidelines, Japan Diabetes Society, Type 2 Diabetes

Abbreviations

LCD: Low-Carbohydrate Diet; CR: Carbohydrate Restriction; MNT: Medical Nutrition Therapy; ADA: American Diabetes Association; USDA: United States Department Of Agriculture; JDS: Japan Diabetes Society; T2D: Type 2 Diabetes

Commentary

The American Diabetes Association (ADA) and the Low-Carbohydrate Diet – Recent Changes in Position

The American Diabetes Association (ADA) rejected carbohydrate-restricted diets in 2007 and earlier. In the 2008 Nutrition Recommendations and Interventions for Diabetes, it stated, "For weight loss, either low-carbohydrate or low-fat calorie-restricted diets may be effective in the short term (up to 1 year)" [1]. This was the first acknowledgment of the effectiveness of carbohydrate restriction. In 2011, the effectiveness of carbohydrate restriction was accepted for up to 2 years in obese patients with diabetes [2]. In October 2013, the "Nutrition Therapy for Adults with Diabetes or Prediabetes: A Consensus Report" recognized carbohydrate restriction without any time limit or set restrictions [3]. By April 2019, the Consensus Recommendation emphasized that "these eating patterns (carbohydrate restriction) are among the most studied eating patterns for type 2 diabetes," explicitly recommending low-carbohydrate diets as a primary option [3]. This position has remained consistent through 2025.

Alignment with the New U.S. Dietary Guidelines and the MAHA Movement

Fig-1: The 2025–2030 U.S. Dietary Guidelines for Americans

The United States Department of Agriculture (USDA) Dietary Guidelines for Americans 2025–2030, released in January 2026, introduced a new inverted food pyramid (**Fig-1**). In this pyramid, ribeye steak is prominently displayed in a highly visible position as the first food to be noticed. The guidelines significantly increased the recommended daily protein intake from the previous 0.8 g/kg to 1.2–1.6 g/kg. They emphasize whole-food-centered eating, restriction of processed foods and added sugars, and active intake of healthy fats (including beef tallow and full-fat dairy products).

These changes align with the principles of low-carbohydrate diets (LCD) that our team has long advocated, an approach based on restricting carbohydrates while emphasizing adequate protein and natural fats.

Recent Changes in Diabetes Diet Therapy in Japan - The Japan Diabetes Society

The first edition of the Japan Diabetes Society (JDS) "Food Exchange Lists" (its bible-like reference) was published in 1965. At that time, it emphasized "appropriate calories." The explanatory notes listed the principles of diet therapy as follows:

(1) Appropriate calories
(2) Restriction of carbohydrate amount
(3) Balance of carbohydrates, protein, and fat
(4) Appropriate supply of vitamins and minerals.

Remarkably, "restriction of carbohydrate amount" was listed as the second principle. However, in the second edition of 1969, this changed to the following:

(1) Appropriate calories (calorie restriction)
(2) Balance of carbohydrates, protein, and fat
(3) Appropriate supply of vitamins and minerals.

The phrase "restriction of carbohydrate amount" was deleted. This was when "carbohydrate amount restriction" disappeared from the principles of diabetes diet therapy, and "calorie (energy) restriction" appeared for the first time. From then on, the "Food Exchange Lists" remained focused almost exclusively on calorie restriction through the 7th edition (revised in 2013 after 11 years).

In October 2013, the American Diabetes Association's (ADA) "Nutrition Therapy for Adults with Diabetes or Prediabetes" stated that there is no single "one-size-fits-all" dietary pattern suitable for all diabetic patients. In contrast, the JDS continued to recommend "calorie restriction with a high-carbohydrate diet" as the only diabetes diet therapy for a long period, from 1969 to the present. Up to the "Diabetes Treatment Guideline

present. Up to the "Diabetes Treatment Guideline 2016," the target nutrient intake ratio was set at 50–60% carbohydrates, 20% or less protein, with the remainder as fat. From the "Diabetes Treatment Guideline 2019" onward, the target nutrient intake ratios were removed from the statements (**Fig-2**).

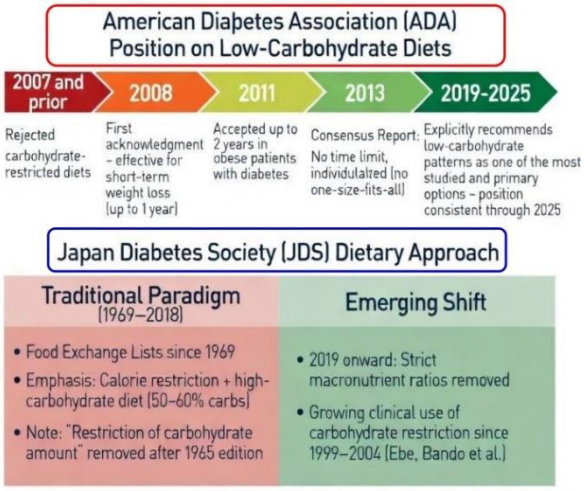

Fig-2: Changes in ADA recommendations regarding LCD in contrast with JDS guidelines

History of Evidence for the Effectiveness of Carbohydrate Restriction in Japan

Clinical practice of carbohydrate restriction in recent years began in 1999 in Uwajima, Ehime Prefecture, by Dr. Toyoaki Kamaike, and simultaneously at Takao Hospital in Kyoto by the author's brother, Dr. Youichi Ebe. They accumulated many successful cases. Based on this experience, the author published the first Japanese medical report on effective cases of carbohydrate restriction in 2004. In 2005, the author published the first book for the general public on the topic in Japan. Drs. Hiroshi Bando and Takumi Nakamura treated approximately 1,000 patients in an obesity clinic and reported the effectiveness of carbohydrate restriction in 2008. In 2009 and 2010, the author published short papers in medical journals.

When practicing carbohydrate restriction, blood ketone bodies rise to high levels. However, most Japanese physicians still regard ketone bodies as dangerous substances because of the image of diabetic ketoacidosis. In contrast, the EMPA-REG OUTCOME trial and CANVAS trial of SGLT2 inhibitors demonstrated cardiac, renal, and cerebral protective effects [4,5]. One suggested reason is that the elevation of blood ketone bodies caused by SGLT2 inhibitors may contribute positively to these protective effects.

Additionally, Muneta et al. published an English-language paper on ketone body levels in the placenta, umbilical cord, and newborns [6]. The measured ketone body was β-hydroxybutyrate. This paper on placental and umbilical cord ketone body levels is believed to be the world's first. The author KE was one of the co-authors. Placental ketone body levels were 20–30 times the reference value (average 2235.0 μmol/L, n=60). Umbilical cord levels were several to 10 times the reference value (average 779.2 μmol/L, n=60). Newborn levels (day 4 after birth) were 3 times to several times the reference value (average 240.4 μmol/L, n=312). The reference value for β-hydroxybutyrate is 85 μmol/L or less.

In the placenta, umbilical cord, and newborns, high ketone body levels are normal. The Muneta paper can therefore be said to have provided evidence for the safety of ketone bodies [6]. This world-first paper on ketone body levels in the placenta and umbilical cord serves as important evidence regarding the safety of ketone bodies. The spread of LCDs has finally begun to accelerate, and KE continues to publish books almost every year.

Activities for Promoting Low-Carbohydrate Diets in Japan (JLCDPA Initiatives)

Table-1: Activities of JLCDPA and the author

Category	Details
Educational events of JLCDPA in Japan	2013–2015: 16 seminars 2016–2019: 21 seminars 2020–2025: 11 seminars
Various information from JLCDPA	Diabetic information provided over many years https://www.toushitsuseigen.or.jp/activity-past
Publication of LCD by the author	2001–2009: 3 books 2010–2019: 20 books 2020–2025: 10 books
Daily internet activity	Blog: Daily diabetes topics by Dr. Ebe (linked to X, formerly Twitter) Followers: about 10,000 (April 2026)

The Japan Low Carbohydrate Diet Promotion Association (JLCDPA), established in 2013, has continued activities aimed at the medical and social dissemination of LCD. It has supported practical implementation in clinical settings through ongoing seminars, book publications, and daily internet-based

information sharing. These activities contribute to the spread of individualized diabetes dietary therapy in Japan by clinically supporting the safety and efficacy of carbohydrate restriction, in alignment with recent directions from the ADA and USDA (**Table-1**).

Conclusion

The historical trajectory of diabetes dietary recommendations reveals a clear shift from dogmatic calorie-restricted, high-carbohydrate approaches toward evidence-based, individualized eating patterns that include carbohydrate restriction as a legitimate and often highly effective strategy proposed by Dr. Bernstein [7]. The ADA's progressive acceptance of LCDs, culminating in the 2019 consensus report and its sustained endorsement, represents a major evidence-driven policy change that prioritizes glycemic control and patient outcomes over outdated macronutrient dogma. The 2025–2030 USDA Dietary Guidelines further reinforce this direction by promoting higher protein consumption, whole-food emphasis, and reduced reliance on processed carbohydrates, changes that harmonize with long-advocated low-carbohydrate principles.

In Japan, while the JDS historically adhered to calorie restriction with higher carbohydrate targets, the removal of strict macronutrient ratios in recent guidelines and the growing body of domestic clinical experience suggest a gradual opening toward more flexible approaches. Importantly, Japanese research has contributed valuable evidence on the safety of nutritional ketosis, including groundbreaking data showing that elevated ketone bodies (β-hydroxybutyrate) are physiological and markedly high in the placenta, umbilical cord, and newborns during normal pregnancy and delivery. This challenges longstanding misconceptions equating nutritional ketosis with diabetic ketoacidosis and supports the metabolic safety of carbohydrate restriction when properly implemented. Overall, these converging trends from major U.S. organizations and evolving international practice signal a more patient-centered era in diabetes diet therapy. Continued research, education, and individualized application will be essential to maximize benefits while ensuring safety and sustainability for people living with diabetes.

Conflict of Interest

The authors have read and approved the final version of the manuscript. The authors have no conflicts of interest to declare.

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