



NUTRITION CONNECTION

RETHINKING THE ROLE OF NUTRITION IN “REMISSION”

OF PREDIABETES AND TYPE 2 DIABETES

BY BRENDA RICHARDSON, MA, RDN, LD, FAND

HEALTHCARE PROVIDERS DELIVERING SERVICES for clients diagnosed with prediabetes or type 2 diabetes are often asked to produce a diet plan offering a “quick and easy cure” for this complex condition. This is frequently associated with wanting a diet fact sheet, and not anticipating that treatment involves a lifetime of managing blood glucose levels.

So, is there a diet or meal plan that offers a “cure” for diabetes? Can prediabetes and type 2 diabetes be “reversed” or put into “remission”? What are the current best practice recommendations for nutritional management of prediabetes and type 2 diabetes?

The statistics about diabetes in the United States offer insight on the staggering number of clients that healthcare providers are serving. In 2019, 37.3 million Americans—or 11.3 percent of the population—had diabetes, with 1.4 million Americans diagnosed with the disease every year. Of the 37.3 million adults with diabetes, 28.7 million were diagnosed, and 8.5 million were yet undiagnosed.

The percentage of Americans age 65 and older remains high, at 29.2 percent, or 15.9 million seniors (diagnosed and undiagnosed).

Diabetes was also the seventh leading cause of death in the United States in 2019 based on the 87,647 death certificates in which diabetes was listed as the underlying cause. In 2019, diabetes was mentioned as a cause of death on a total of 282,801 certificates.

Diabetes is also an expensive disease. In 2017, the total cost of diagnosed diabetes in the United States was \$237 billion for direct medical costs and \$90 billion in reduced productivity.

This article addresses the idea of a “cure” vs “remission” for prediabetes and type 2 diabetes. Nutrition professionals must be able to grasp goals of “remission” and provide updated best practice recommendations in food and nutrition for positive outcomes.

“CURE” VS “REMISSION”

Type 2 diabetes has long been defined as an “incurable” chronic disease; however, in 2016 the World Health Organization (WHO) released a global report that added a section on diabetes reversal which is now seen included in published scientific articles. In addition to the term “reversal,” the term “remission” is also used, which has led to a paradigm shift in best practice treatment recommendations.

It should be noted that the term “cure” has *not* been applied to type 2 diabetes as there exists the potential for reoccurrence. Diabetes “cure” suggests that all aspects of diabetes are completely normalized and that no clinical follow-up, care, or management is needed to prevent further hyperglycemia (high blood sugar) and other health risks associated with diabetes. There is no cure for diabetes.

It is paramount to look at the big picture when working with clients to provide the best nutrition care and services.



It's vital to know where the client is in their diagnosis and current management. Some clients are totally new to understanding diabetes and the role of medical nutrition therapy (MNT). Meanwhile, others—having already been diagnosed and living with prediabetes or type 2 diabetes—maintain consistent healthful eating, a healthy weight and body mass index (BMI), along with physical activity and may use appropriate medication.

These long-term clients may have also had metabolic surgery and are currently exhibiting normal glycemic levels. It is important to remember that these normal glycemic values need to be followed up with counseling that assists clients in nutritional management with current, short-term, and long-term management.

The period of time when a client exhibits normoglycemia is referred to as “remission.” Type 2 diabetes



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remission is defined as the return of A1C (the blood test measure of average blood sugar levels over about three months) to less than 6.5 percent after at least three months without usual diabetes medications. The term “remission” implies that a person with diabetes may need ongoing support to prevent a relapse, including lifestyle changes and regular monitoring to allow for treatment if high blood sugar returns.

The definition of remission changes slightly when surgery or lifestyle modifications have been part of treatment, with at least three months after the surgery and three months after stopping the use of medication with doctor's approval.

For lifestyle changes, only then the time frame for remission is at least six months after beginning those changes and three months after stopping the use of medication. This is due to the



benefits of lifestyle changes being slower and can take up to six months to see a true, sustainable improvement.

Remission should also be monitored by measuring A1C no less than once per year, and regular checkups are encouraged by the American Diabetes Association (ADA).

REMISSION AND NUTRITION

For many individuals living with diabetes, the most challenging part of the treatment plan is determining what to eat. There is not a “one-size-fits-all” eating pattern for people with diabetes, and meal planning should be individualized. Nutrition therapy plays an integral role in overall diabetes management, and each person with diabetes should be actively engaged in education, self-management, and treatment planning with the healthcare team, including the collaborative planning of an individualized eating plan.

For clients with a diagnosis of prediabetes or type 2 diabetes, a goal of “remission” may be considered a best practice. While remission is not yet a standardized area of practice and is not generally discussed as a first-line targeted goal of treatment, additional evidence now suggests that diabetes remission is a possible treatment result to consider.

THE METHOD OF WEIGHT LOSS
and meal patterns should be the individual client’s decision made from evidence-based information.

Significant weight loss either from lifestyle intervention (i.e., diet and exercise) or from certain procedures can result in blood glucose levels decreasing into the nondiabetic range, and with achieving remission, this can minimize or prevent future complications.

Research has demonstrated that initial weight loss and keeping as many undesired pounds off over time is the surest way to achieve and maintain remission. Numerous studies support that weight loss between 3 percent and 10 percent from a starting weight can result in remission. This is especially true if weight loss

is started early in the disease course.

The method of weight loss and meal patterns should be the individual client’s decision made from evidence-based information. Weight loss through lifestyle changes, metabolic surgery, or targeted medications are all options where clients continue to need long-term monitoring and support.

In January, the American Diabetes Association published the Standards of Care in Diabetes—2023. The Standards of

Care recommendations include screening, diagnostic, and therapeutic actions that are known or believed to favorably affect health outcomes of people with diabetes. A few recommendations from the ADA’s Standards of Care include:

- An emphasis on supporting higher weight loss (up to 15 percent) based on the efficacy of and access to newer medications when appropriate.
- Meal plans should be individualized while keeping nutrient quality, total calorie, and metabolic goals in mind. Studies have shown that a variety of eating plans, varying in micronutrient composition, can be used effectively and safely in the short-term to achieve weight loss. These included low-calorie meal replacements, a Mediterranean eating pattern, and low carbohydrate meal plans with additional support. However, no single



REFERENCES

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approach has been proven to be superior, and more research and data are needed to identify and validate those meal plans that are optimal for long-term outcomes and acceptability.

- Reducing carbohydrate intake for individuals with diabetes has demonstrated the most evidence for improving blood sugars and may be applied to a variety of meal patterns that meet individual needs and preferences.

THE NUTRITION CARE TEAM

The ADA's Standards of Care recommend that all healthcare professionals should refer people with diabetes for individualized medical nutrition therapy provided by a Registered Dietitian Nutritionist (RDN) who is knowledgeable and skilled in providing diabetes-specific MNT at diagnosis, and as needed throughout the life span. The healthcare team all work collaboratively in the planning and implementation of an individualized eating plan.

The Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP) works closely with the RDN in the overall planning and teaching of MNT by providing meals and snacks to help clients learn appropriate foods and choices. Planning healthy options on menus and meal plans allow clients to learn how to manage preferences and portions to support their treatment goals.

CONCLUSION

It is important to help clients realize there is no "quick fix" for prediabetes or type 2 diabetes, and many factors are involved in leading to a diagnosis. Prediabetes or type 2 diabetes did not "suddenly appear" overnight, and an overall realistic treatment plan is needed for success.

The overriding goal of this article was to present the paradigm shift in looking at "remission" of prediabetes and type 2 diabetes. While remission through diet is not generally discussed as a first-line target of treatment, it is important that we as healthcare providers are familiar with the term and how it applies to prediabetes and type 2 diabetes. Significant weight loss either from lifestyle intervention (i.e., diet and exercise) or from certain procedures can result in blood glucose levels decreasing into the nondiabetic range, and achieving remission can minimize or prevent future complications. We should be

able to discuss this with our clients and consider remission in the overall treatment planning and goals as appropriate.

When it comes to health care, one size does *not* fit all, and a mixture of various approaches at different intensities is likely necessary to maximize remission rates. We need to make sure we are providing "best practice" in diabetes support to include early diagnosis, individualized medical nutrition therapy, and presenting all options for success. **E**

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BRENDA RICHARDSON, MA, RDN, LD, FAND | ✉ brenda@brendarichardson.com

Brenda Richardson is a lecturer, author, and owner/president of Brenda Richardson, LLC. She is a long-time RDN consultant in long-term care, and now serves as an Independent Auditor for the Gluten-Free Certification Organization.

CE QUESTIONS | NUTRITION CONNECTION



This **Level II** article assumes that the reader has a thorough knowledge of the topic. The desired outcome is to facilitate application of knowledge into practice by drawing connections among ideas and using information in new situations.

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- In 2019, the United States had ____ million Americans with diabetes.
 - 31.2
 - 37.3
 - 39.1
- Diabetes is a very costly disease, and in 2017 the total cost of diagnosed diabetes in the U.S. (direct medical costs and reduced productivity) was:
 - \$237 billion
 - \$241 billion
 - \$248 billion
- In 2019, diabetes was the ____ leading cause of death in the United States.
 - 5th
 - 6th
 - 7th
- The World Health Organization in 2016 defined type 2 diabetes as _____, as there exists the potential for reoccurrence.
 - Unmanageable
 - Untreatable
 - Incurable
- The period of time where clients exhibit normal blood sugar levels with type 2 diabetes is referred to as:
 - Staged
 - Remission
 - Cured
- The period of time for defining remission with type 2 diabetes is _____, dependent on when surgery or lifestyle changes occurred.
 - 3-6 months
 - 1-2 months
 - 1 year
- CDM, CFPPs should work closely with the RDN and healthcare team to include incorporating the term “remission” in type 2 diabetes treatment goals when appropriate as a component of:
 - “Best practice”
 - Organic food programs
 - World Health Organization mandates



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