

Diabetes Management Before and During Pregnancy

Kimberly K. Trout, Guest Editor

For many women, pregnancy is a time of heightened awareness about the importance of self-care. Women generally have a strong desire to do what is best for their growing baby and will often make positive choices towards healthy behaviors during what they know is a crucial time in their baby's development. Smoking cessation is a great example of how powerful the "pregnancy motivating factor" can be. Women who have failed at attempts to quit smoking before pregnancy often are able to muster the ability to finally do it. There is no disputing that quitting smoking benefits both mother and child.

Yet, surprisingly, evidence is not as robust for other aspects of self-care and prenatal care. For example, determining the optimal nutritional prescription for women with gestational diabetes mellitus (GDM) conventionally has involved limiting carbohydrate intake. Optimal carbohydrate intake during pregnancy is one of several important topics that are discussed in this *Diabetes Spectrum* From Research to Practice section, which provides an update on the management of individuals with diabetes before and during pregnancy.

On the topic of carbohydrate consumption during pregnancy, the research of Teri L. Hernandez has certainly called into question the notion that, when it comes to carbohydrates, fewer is always better. Her article titled "Nutrition Therapy in Gestational Diabetes: The Case for

Complex Carbohydrates" (p. 82) discusses this topic. Dr. Wadia R. Mulla then provides a counterpoint in her commentary on why low-carbohydrate diets should remain a recommendation for women with GDM ("Low-Carbohydrate Diets Should Remain the Initial Therapy for Gestational Diabetes," p. 89).

If medical nutrition therapy alone does not achieve satisfactory blood glucose control during pregnancy, what pharmacological agents can be used as adjuncts? In the past, insulin was the automatic drug of choice in pregnancy, which is discussed in an article titled "Insulin Use in Pregnancy: An Update" by Alyson K. Blum (p. 92). However, in their article titled "Oral Medications for Diabetes in Pregnancy: Use in a Rural Population" (p. 98), Shelley Jayne Thorkelson and Kristi R. Anderson point out that many clinicians are now using oral agents as first-line pharmacological therapy during pregnancy.

Another important, but sometimes overlooked, aspect of diabetes care during pregnancy is the effect of economic and social disparities on health outcomes. The results of a randomized, controlled trial that my colleagues and I report in a feature article elsewhere in this issue ("Macronutrient Composition or Social Determinants? Impact on Infant Outcomes With Gestational Diabetes Mellitus," p. 71) highlight the need for further study in this area. In our research section, authors

Department of Family and Community Health, University of Pennsylvania School of Nursing, Philadelphia, PA

Correspondence: Kim Trout, kt Trout@nursing.upenn.edu

DOI: 10.2337/diaspect.29.2.79

©2016 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. See <http://creativecommons.org/licenses/by-nc-nd/3.0> for details.

Virginia J. Goldschmidt and Betty Colletta also offer insight into the challenges of providing optimal care when dealing with limited availability of resources for one's clients in their article "The Challenges of Providing Diabetes Education in Resource-Limited Settings to Women With Diabetes in Pregnancy: Perspectives of an Educator" (p. 101).

In the final article of our update on diabetes and pregnancy, titled "Implementation of Preconception Care for Women With Diabetes" (p. 105), Irma Yehuda reviews the importance of preconception care for women with diabetes. "Precision medicine" has become the new buzzword adopted by the National Institutes of Health for targeting disease treatment and prevention based on an individual's specific profile. This profile takes into account three

main contributing factors: genetics, environment, and lifestyle. Targeting therapies with consideration given to individual variations in these factors may ultimately illuminate the future of diabetes care in pregnancy. For example, we soon may discover that, based on a specific genomic profile, some women may have better tolerance of certain foods than others in maintaining glucose homeostasis. Preconception counseling is one element of precision medicine that we can carry out today; it assists women in setting the stage for an optimal intrauterine environment for their infant based on their own genetics, environment, and lifestyle history.

My greatest joy as a certified nurse-midwife is in assisting women and their families in bringing healthy babies to birth. When pregnancy is complicated by diabetes, there are

challenges that make this task more difficult. The information presented in this From Research to Practice section is intended to assist clinicians (and their patients) in achieving the ever-present goal of healthy outcomes for both mother and baby at the end of each pregnancy affected by diabetes. I thank our peer reviewers, who ensure that our readership is provided with articles of the highest quality to inform our provision of patient care. *Diabetes Spectrum* is the journal committed to translating the best available evidence into useful information for practicing diabetes clinicians, and I am happy to have had the opportunity to contribute to this effort.

Duality of Interest

No potential conflicts of interest relevant to this article were reported.