

# Diagnosing and Managing Gestational Diabetes: Where Do We Stand?

**G**ESTATIONAL DIABETES MELLITUS (GDM) is defined as carbohydrate intolerance that begins or is first recognized during pregnancy and is associated with increased maternal, fetal, and neonatal risks.<sup>1</sup>

There is uncertainty as to the optimal approach for screening and diagnosis of GDM. National and international medical organizations, along with expert panels and working groups, have issued different criteria for the screening and diagnosis of GDM. The tests differ based on whether there is a need for fasting, the grams of glucose given, the number of appointments, and the glucose threshold for diagnosis. The American College of Obstetricians and Gynecologists (ACOG) uses a two-step approach that involves a nonfasting glucose screening of all pregnant women, followed by a glucose tolerance test if needed based on the results. Using this approach, 5% to 6% of pregnant women are diagnosed with GDM in the United States.<sup>2</sup> The World Health Organization (WHO), the International Association of Diabetes and Pregnancy Study Group (IADPSG), and the American Diabetes Association (ADA) recommend a one-step approach with a fasting 2-hour, 75-g oral glucose challenge to diagnose GDM. Using a single-step diagnostic test would increase the proportion of women diagnosed with gestational diabetes, projected to be 15% to 20%.<sup>2</sup>

Trying to standardize the criteria for diagnosing gestational diabetes prompted the National Institutes of Health (NIH) to convene a consensus panel of experts to assess the evidence and make a recommendation on which protocol should be used. In March 2013, the NIH panel concluded

that there is presently not sufficient evidence to adopt the one-step approach.<sup>2</sup> The committee stated a one-step approach would increase the prevalence of GDM and the corresponding costs and interventions without demonstrating improved outcomes for the mother or infant.

Currently the Academy's Nutrition Care Manual<sup>3</sup> recommends that pregnant women not known to have diabetes should be tested for GDM at 24 to 28 weeks of gestation, using a 75-g, 2-hour oral glucose tolerance test with plasma glucose measurement after fasting and at 1 and 2 hours. The diagnosis of GDM is made when any of the glucose values exceed the standard cutoff levels.

The registered dietitian is likely to see women diagnosed with GDM using either the one-step or two-step criteria guidelines. No matter the criteria used to diagnosis gestational diabetes, scientific evidence supports the effectiveness of Medical Nutrition Therapy (MNT) to improve maternal and neonatal outcomes.<sup>4</sup> MNT is the cornerstone for GDM management and should be initiated within 1 week after diagnosis of GDM, and include a minimum of three nutrition visits.<sup>4</sup>

The nutrition prescription for GDM focuses on an adequate calorie intake to promote appropriate weight gain for normal or underweight women with guidance from the Dietary Reference Intakes (DRI) for pregnant women. Weight loss during pregnancy is not recommended. In overweight or obese women, a modest energy restriction to slow weight gain using approximately 70% of the DRI calculated energy needs is recommended.<sup>4</sup> In addition, based on the DRI, a minimum of 175 g carbohydrate per day is encouraged to provide glucose for the fetal brain and to prevent ketosis; total carbohydrate should be less than 45% of energy intake to prevent hyperglycemia.

The RD plays an integral role on the interdisciplinary health care team by making the optimal nutrition prescription and developing the appropriate nutrition intervention plan.

## References

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2. National Institutes of Health Consensus Development Conference Statement. National Institutes of Health Consensus Development Conference: Diagnosing Gestational Diabetes Mellitus Conference. March 4-6, 2013. <http://prevention.nih.gov/cdp/conferences/2013/gdm/resources.aspx>. Accessed March 27, 2013.
3. Academy of Nutrition and Dietetics. Nutrition Care Manual. Gestational Diabetes. [http://www.nutritioncaremanual.org/topic.cfm?ncm\\_heading=Nutrition%20Care&ncm\\_toc\\_id=18188](http://www.nutritioncaremanual.org/topic.cfm?ncm_heading=Nutrition%20Care&ncm_toc_id=18188). Accessed March 27, 2013.
4. Academy of Nutrition and Dietetics. Evidence Analysis Library (EAL): Gestational Diabetes Evidenced-Based Nutrition Practice Guideline, Chicago (IL): American Dietetic Association, 2008. <http://andevidencelibrary.com/topic.cfm?cat=3719>. Accessed March 27, 2013.

## Academy Resources

Evidence-Based Practice Toolkits: Gestational Diabetes Toolkit. <https://andevidencelibrary.com/store.cfm?category=1>.

Academy of Nutrition and Dietetics Webinar: Gestational Diabetes: Moving from Evidence-Based Guidelines to Practical Application. <http://www.eatright.org/cpd/audio/>.

## General Resources

National Research Council. *Weight Gain during Pregnancy: Reexamining the Guidelines*. Washington, DC: National Academies Press; 2009. [http://www.nap.edu/catalog.php?record\\_id=12584](http://www.nap.edu/catalog.php?record_id=12584). Accessed March 27, 2013.

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American Diabetes Association. 2013 Clinical Practice Recommendations. *Diabetes Care.* 2013; 36(suppl 1):S1-S110. [http://care.diabetesjournals.org/content/36/Supplement\\_1](http://care.diabetesjournals.org/content/36/Supplement_1). Accessed March 27, 2013.

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