

# New Criteria Will Raise Gestational Diabetes Rate

BY MITCHEL L. ZOLER

EXPERT ANALYSIS FROM A MEETING  
SPONSORED BY THE AMERICAN  
DIABETES ASSOCIATION

NEW YORK – The incidence of gestational diabetes will rise substantially now that the American Diabetes Association has formally adopted new diagnostic criteria, especially in selected regions where pregnant woman may be older or have a higher prevalence of obesity.

Among the 15 geographically diverse communities that participated in the Hyperglycemia and Adverse Pregnancy Outcome (HAPO) study, the results of which led to the new ADA guidelines, the incidence of gestational diabetes ran as high as 24%, in Cleveland, while also reaching a low of 9%, in two communities in Israel.

The overall gestational diabetes incidence rate in HAPO averaged 16%, Dr. Boyd E. Metzger said at the meeting, sponsored by the American Diabetes Association, strikingly above the 7% rate documented as recently as 2005 in a large group of women from southern California (*Diabetes Care* 2008;31:899-904). But Dr. Metzger also expressed optimism that most of the added new cases of gestational diabetes that the new criteria identify will respond to lifestyle management, and that the net result of broader diagnosis and treatment will be a substantially reduced rate of adverse sequelae.

“The mild gestational diabetes that makes up the expanded population should be patients we can successfully manage with less expensive” lifestyle treatment, said Dr. Metzger, a professor of nutrition and metabolism at Northwestern University in Chicago. The increased numbers may also include “a modest increase in those who need drug

treatment.” In general, “a more aggressive approach to diagnosis and treatment should lead to a reduction in complications of gestational diabetes. It would be disappointing if we can’t achieve in the real world what the research study showed,” he said in an interview.

The new gestational diabetes diagnostic criteria received formal adoption from the American Diabetes Association in the group’s annual position statement on Standards of Medical Care in Diabetes, published in January (*Diabetes Care* 2011;34:S11-61). The Standards’ section on the detection and diagnosis of gestational diabetes cited the 2008 HAPO study (*N. Engl. J. Med.* 2008;358:1991-2002) as the basis for the new diagnostic criteria.

DR. METZGER

An initial proposal of the new criteria came from the International Association of Diabetes and Pregnancy Study Groups Consensus Panel last year, which recommended criteria to identify a woman with gestational diabetes if at week 24-28 her fasting plasma glucose was at least 92 mg/dL, or her plasma glucose 1 hour after an oral glucose challenge was at least 180 mg/dL, or her plasma glucose 2 hours after the glucose challenge was at least 153 mg/dL.

The new criteria “are not very different from the old ADA criteria. The biggest single difference is that any one of these criteria diagnoses an abnormal glucose level rather than requiring woman to meet at least two of the criteria,” said Dr. Metzger, lead author for both HAPO and for the IADPSG. This easing to allow diagnosis based on just one criterion “accounts for a lot of the increase in numbers,” he said. In the HAPO findings from more than 23,000 women, the fasting plasma glucose criterion diagnosed 8.3% of the women as having gestational diabetes, the 1-hour

postchallenge plasma glucose level identified an additional 5.7% of women with gestational diabetes, and the 2-hour postchallenge glucose level identified another 2.1% with gestational diabetes, together totaling just over 16% with the diagnosis.

Data documenting the broad range of geographic variation in gestational diabetes incidence appeared in a report presented by a group of HAPO investigators, including Dr. Metzger, last September at the annual meeting of the European Association for the Study of Diabetes in Stockholm.

According to that report, 5 of the 15 HAPO sites had rates of 21%-24%, led by Cleveland with the highest rate and followed by Bellflower, Calif.; Singapore; Bangkok; and Manchester, England. Two different communities contributing data in Israel both had 9% rates, with the remaining eight sites having gestational diabetes rates of 10%-17%.

Having new diagnostic criteria also

raises the question of whether treatment goals will need changing, said Dr. Metzger.

“We would like to get women [diagnosed with gestational diabetes] to a fasting plasma glucose of 90 mg/dL or below. When the diagnostic threshold is 92 mg/dL, if we don’t get them to below then we are not changing their risk,” he said. But “we are not proponents of oral agents” for treating gestational diabetes.

“I don’t have a lot of experience using the new criteria,” he admitted. “We just introduced them [at Northwestern University Medical Center] in January,” after their official endorsement from the ADA, Dr. Metzger said.

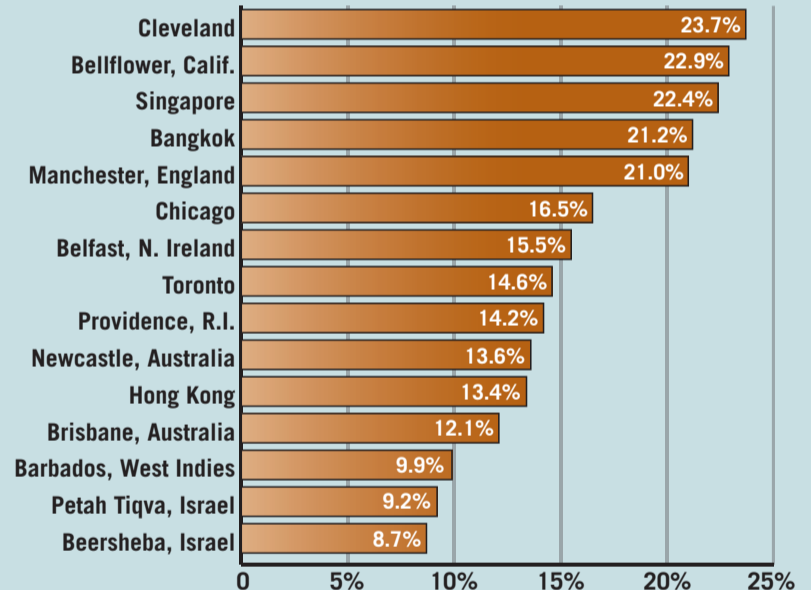
“We don’t yet have the data to make new treatment recommendations. The right treatment targets will need to be defined by results from additional studies.”

Dr. Metzger said that he had no disclosures. ■



**The increased number may also include ‘a modest increase in those who need drug treatment.’**

## Variation in Gestational Diabetes Rates Using New Criteria



Note: Data from the Hyperglycemia and Adverse Pregnancy Outcome (HAPO) study. Source: Presentation by HAPO investigators at the 2010 European Association for the Study of Diabetes, Stockholm

ELSEVIER GLOBAL MEDICAL NEWS

# Structured Exercise Training Lowers HbA<sub>1c</sub> by 0.67%

BY MARY ANN MOON

FROM JAMA

Structured exercise with aerobic, resistance, or combined training was associated with a 0.67% decrease in hemoglobin A<sub>1c</sub> in patients with type 2 diabetes, a meta-analysis has shown.

This compares favorably with the HbA<sub>1c</sub> reductions reported for combination treatment with noninsulin antidiabetic drugs and maximal doses of metformin, said Daniel Umpierre of the Hospital de Clinicas de Porto Alegre (Brazil) and his associates.

The investigators performed a meta-analysis of 47 random-

VITALS

**Major Finding:** Structured aerobic, resistance, or combined exercise training lowers HbA<sub>1c</sub> by an average of 0.67% in patients with type 2 diabetes.

**Data Source:** A meta-analysis of 47 randomized controlled trials involving 8,538 patients with type 2 diabetes.

**Disclosures:** Mr. Umpierre’s associates reported ties to Bristol-Myers Squibb, GlaxoSmithKline, Merck Sharpe & Dohme, Servier, Abbott, Aventis, Bioassist, and Boehringer Ingelheim.

ized controlled trials that assessed the effects of 12 weeks or more of structured aerobic exercise training (848 subjects), structured resistance exercise training (261), combined aerobic and resistance training (404), or unstructured physical activi-

ty (7,025) on HbA<sub>1c</sub> levels.

Structured exercise training was defined as an intervention in which patients engaged in a planned, individualized, and supervised exercise program.

“The general quality of the studies was low, reflecting in-

creased risk of bias in some studies,” the investigators noted.

Eighteen studies demonstrated that structured aerobic exercise training was associated with an absolute reduction of 0.73% in HbA<sub>1c</sub> level. Four studies showed that structured resistance exercise training was associated with an absolute reduction of 0.57%. And seven studies showed that combined aerobic plus resistance exercise training was associated with an absolute reduction of 0.51%.

These benefits were most marked when the exercise was performed for 150 min/wk or more (absolute reduction of

0.89% in HbA<sub>1c</sub>), and less so when it was performed less often (absolute reduction of 0.36% in HbA<sub>1c</sub>). Current guidelines recommend an exercise duration of at least 150 min/wk. Mr. Umpierre and his colleagues said (*JAMA* 2011;305:1790-9).

In contrast, 24 studies of physical activity demonstrated that it was associated with an absolute reduction of 0.43% in HbA<sub>1c</sub>. However, physical activity alone did not reduce HbA<sub>1c</sub>. It was effective only when combined with dietary advice, as shown in 12 studies in which HbA<sub>1c</sub> level declined by 0.58%. ■