

# Early Pregnancy Glucose Screening Is the Preferred Method for Diagnosing Gestational Diabetes Mellitus

G Nahum, H Stanislaw

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## Abstract

To the Editor:

We applaud Kushtagi and Mahto's effort to promote early pregnancy glucose screening as the preferred method for diagnosing gestational diabetes. <sup>1</sup> Their study confirms the results of our previous investigations from 1990 and 2002 regarding the advantages of administering the oral 1-hour 50-gm oral glucose screening test prior to 20 weeks of pregnancy. <sup>2,3</sup>

In our prior studies in the United States, we found that (1) 1<sup>st</sup>-trimester oral 1-hour 50-gm glucose screening test results are highly correlated with 3<sup>rd</sup>-trimester values, <sup>2</sup> and (2) the positive predictive value of an oral 1-hour 50-gm glucose screening test result >135 mg/dl administered between weeks 14-18 of pregnancy is 55% for the diagnosis of gestational diabetes, with an overall mean sensitivity of 84%. <sup>3</sup> In the current study by Kushtagi and Mahto, an early glucose screening test result >140 mg/dl before 20 weeks of pregnancy occurred in 29% of gravidas and resulted in a sensitivity of 78% with a positive predictive value of 44% for gestational diabetes mellitus before the 3<sup>rd</sup>-trimester. In our previous study, we found that only 15% of gravidas had an oral 1-hour 50-gm glucose screening test result >135 mg/dl at 16 ± 2 weeks of pregnancy and that 37% of these early screen-positive women were diagnosed with gestational diabetes by follow-up 3-hour 100-gm glucose tolerance test in advance of the 3<sup>rd</sup> trimester. <sup>3</sup> Of particular importance is that the populations investigated in our two U.S. studies were comprised of women of different racial and ethnic backgrounds (Caucasians, Blacks, Filipinos, Orientals, and Pacific Islanders) than the population studied by Kushtagi and Mahto in India. <sup>2,3</sup> We view the current study as confirmatory of the universal applicability of the

early pregnancy glucose screening approach for identifying gestational diabetes mellitus in gravidas of all racial and ethnic groups.

We agree with the conclusions of Kushtagi and Mahto that (1) screening for gestational diabetes during the 3<sup>rd</sup> trimester of pregnancy is not designed to identify gravidas early with unrecognized glucose intolerance that may have antedated or begun concomitantly with their pregnancy, and (2) glucose screening performed in the first half of pregnancy can help detect glucose abnormalities early in pregnancy, permitting these women to receive intensive antenatal supervision which may result in reduced rates of diabetes-related pregnancy complications.

For more than two decades, scientific evidence has pointed to the advantages of early pregnancy glucose screening for detecting gestational diabetes in women of all racial and ethnic groups. Based on this overwhelming and consistent evidence, we strongly advocate 1<sup>st</sup>-trimester oral 1-hour 50-gm glucose screening for gestational diabetes mellitus in all gravidas.

## CORRESPONDENCE TO

Harold Stanislaw Department of Psychology California State University, Stanislaus One University Circle Turlock, CA 95382 USA HStanislaw@csustan.edu

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**Author Information**

**Gerard G. Nahum, MD**

Adjunct Associate Professor, Department of Obstetrics and Gynecology, Uniformed Services University of the Health Sciences

**Harold Stanislaw, Ph.D**

Professor, Department of Psychology, California State University, Stanislaus