

SOCIETY *of* BEHAVIORAL MEDICINE

Better Health Through Behavior Change

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Lifestyle Interventions for Pregnant and Postpartum Women: Impact on Maternal/Fetal Outcomes

Washington, DC - Lifestyle interventions in pregnancy and postpartum offer numerous health benefits to both mothers and their offspring, particularly among women at high risk for gestational diabetes and preeclampsia. There is also rapidly accumulating evidence for the role of physical activity in preventing excessive gestational weight gain and other adverse pregnancy outcomes as well as future chronic illnesses. "With the increased focus on the obesity epidemic in this country and the growing evidence to support the effects of maternal lifestyle factors on fetal programming, this is a critical time to understand the role of physical activity in promoting both immediate and life-long maternal and infant health," said Dr. Danielle Symons Downs, PhD, Associate Professor of Kinesiology and Obstetrics and Gynecology at The Pennsylvania State University.

In a symposium on Friday, April 29 (2:00-3:30 pm), at the Society of Behavioral Medicine's 32nd Annual Meeting and Scientific Sessions, four speakers will review the ongoing clinical trials of lifestyle factors on chronic disease risks among mother-infant dyads as well as their findings. The learning objectives of this symposium are to provide an understanding of (1) the literature on lifestyle interventions in pregnancy and postpartum, (2) theoretical models and methods for implementing interventions with pregnant/postpartum women, (3) the physiological relationship between physical activity and maternal/fetal outcomes and risk factors for cardiovascular disease, and (4) ongoing lifestyle interventions in pregnant/postpartum women with a central focus on the role of physical activity.

The first speaker, Symons Downs, PhD, will discuss the determinants and outcomes of physical activity in pregnancy and present findings from *Active MOMS: A Randomized Physical Activity Intervention for Pregnant Women*. Pregnant women with and without gestational diabetes were randomized to one of three conditions: semi-intensive, structured exercise, minimum-contact, lifestyle physical activity, or standard of care control group from 18 weeks gestation through birth. Preliminary findings from this study show the semi-intensive, structured exercise condition had significantly stronger physical activity motivational determinants (attitude, social support, perceived control, intention) and behaviors (measured with accelerometry, pedometry, and self-report) compared to controls; however, the lifestyle condition did not outperform the controls on most outcomes. The structured group also had lower gestational weight gain and depressive symptoms compared to controls. "These findings suggest that an exercise intervention, delivered in a semi-intensive, structured approach can positively impact pregnant women's physical activity behaviors and motivational determinants as well as provide health benefits," said Dr. Downs.

Dr. Lisa Chasan-Taber, ScD, Associate Professor of Epidemiology, Division of Biostatistics and Epidemiology, School of Public Health and Health Sciences at the University of Massachusetts Amherst will present second on the relationship between physical activity and gestational diabetes and present findings from the *B.A.B.Y. Study: An Exercise Intervention to Prevent Gestational Diabetes*. This study represents one of the first randomized clinical trials of exercise during pregnancy among a sample

including a significant proportion of Hispanic women (60%). Women in the B.A.B.Y. study are randomized to an individually tailored motivationally-matched, 12-week exercise intervention group or to a health and wellness control group in early pregnancy. Preliminary findings from this study illustrate that after 12 weeks, women in the exercise intervention arm experienced a significantly larger increase in sports and exercise (14 minutes per week) as compared to women in the health and wellness arm who experienced a slight decrease. Findings support the feasibility and efficacy of a tailored exercise intervention in increasing exercise in a diverse sample of pregnant women during a time period when activity typically decreases. “Women receive closer medical attention during the pregnancy than at other times in their adult lives, and are often highly motivated to improve their health to benefit themselves and their children. This pregnancy exercise intervention capitalizes upon this teachable moment,” said Dr. Chasan-Taber.

The third speaker, Dr. SeonAe Yeo, PhD, Associate Professor in the School of Nursing at the University of North Carolina at Chapel Hill, will present on the relationship between physical activity and preeclampsia within the context of exercise intervention studies and present findings from the *Regular Exercise Among Women at Risk for Preeclampsia* study as well as provide an overview and expected outcomes from the current ongoing study, *Mothers Moving to a Healthy Future*. In her study sedentary pregnant women with a history of preeclampsia were randomized into either walking exercise (moderate intensity exercise) or stretching exercise (low intensity exercise) from 18 weeks through the birth. “Surprisingly, the low intensity exercise appeared to prevent preeclampsia better than the moderate intensity exercise,” said Dr. Yeo. She also confirmed a natural decline in physical activity levels in the advanced pregnancy period.

Dr. Jenn Leiferman, PhD, Assistant Professor, Community and Behavioral Health, Colorado School of Public Health at the University of Colorado at Denver, is the fourth and final speaker in the symposium and she will describe the impact of physical activity on various perinatal outcomes and presenting findings from the My Baby, My Move study, an 8-week, community-based program that involves both didactic and experiential components. Evidence from the process evaluation suggests the intervention had high adherence, fidelity, and overall participant satisfaction. The program was also effective in changing mediators of physical activity such as behavioral skills and social support, overall minutes per week of moderate intensity physical activity, and delivery outcomes. “These findings suggest that community-based physical activity interventions can positively influence exercise behavior and perinatal health outcomes among previously sedentary pregnant women,” said Dr. Leiferman.

The Society of Behavioral Medicine is a multidisciplinary organization of clinicians, educators, and scientists dedicated to promoting the study of the interactions of behavior with biology and the environment and the application of that knowledge to improve the health and well being of individuals, families, communities, and populations.

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This study was presented during the 2011 Annual Meeting and Scientific Session of the Society of Behavioral Medicine (SBM) from April 27 – 30 in Washington, DC. However, it does not reflect the policies or the opinion of the SBM.

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