

Sleep apnea in obese pregnancy women linked to poor maternal and neonatal outcomes

September 20 2012

The newborns of obese pregnant women suffering from obstructive sleep apnea are more likely to be admitted to the neonatal intensive care unit than those born to obese mothers without the sleep disorder, reports a study published online today in the journal *Obstetrics & Gynecology*.

Sleep apnea, which causes repeated awakenings and pauses in breathing during the night, was also associated with higher rates of preeclampsia in the severely overweight [pregnant women](#), the researchers found.

"Our findings show that obstructive sleep apnea can contribute to poor outcomes for both obese mothers and their babies," said the study's lead author Dr. Judette Louis, assistant professor of [obstetrics](#) and gynecology at the University of South Florida. "Its role as a risk factor for adverse pregnancy outcomes independent of obesity should be examined more closely."

Dr. Louis, who holds a joint appointment in the USF College of Public Health's Department of Community and Family Health, conducted the study while a faculty member at Case Western Reserve University's School of Medicine. A specialist in maternal-fetal medicine, she worked with researchers from Case Western Reserve, the USF Health Morsani College of Medicine's Center for Evidence-Based Medicine, and Harvard Medical School. She joined USF in April.

The researchers analyzed data for 175 obese pregnant women enrolled in a prospective observational study, which screened prenatal patients at Cleveland's MetroHealth Medical Center for sleep-related breathing disorders. The women were tested for [obstructive sleep apnea](#) using an in-home portable device at bedtime.

Perinatal and newborn outcomes for 158 live births, including indications for NICU admissions such as respiratory complications, prematurity and congenital defects, were also reviewed.

Among the study findings:

- The prevalence of sleep apnea among study participants was 15.4 percent.
- Compared to the women with no sleep apnea (control group), the group with sleep apnea was heavier and experienced more chronic high blood pressure. This finding was consistent with studies in the general population that have associated sleep-disordered breathing with high blood pressure and weight gain.
- The women with sleep apnea were more likely than the control group to undergo a cesarean delivery and to develop preeclampsia, a medical condition in which high blood pressure in pregnancy is associated with loss of protein in the urine. Preeclampsia remains one of the most common dangerous medical conditions for both moms and babies.
- Despite having similar rates of preterm births, the women with sleep apnea delivered offspring more likely to be admitted to the NICU than did their counterparts without sleep apnea. Many of these admissions were due to respiratory distress. The researchers suggest the higher NICU admission rates may be explained in part by the higher C-section rates among the women with sleep apnea, but more study is needed.

Approximately one in five women are obese when they become pregnant, meaning they have a body mass index of at least 30, according to research from the federal Centers for Disease Control and Prevention. While numerous studies have examined complications associated with obesity in pregnancy – including high blood pressure, gestational diabetes and cesarean deliveries—sleep apnea has been underdiagnosed and understudied in this population of women.

The study authors suggest the best way to decrease obesity-related conditions that lead to poor pregnancy outcomes, including [sleep apnea](#), would be to treat obesity before a woman becomes pregnant, but acknowledge that "losing weight is often difficult."

Dr. Louis said the study also points to the need for better ways to screen and treat this common form of [sleep](#)-disordered breathing during pregnancy.

The study was supported by the Robert Wood Johnson Foundation Physician Faculty Scholars program, the Case Western Reserve/Cleveland Clinic CTSA, and the National Center for Research Resources, NIH.

More information: "Perinatal outcomes associated with obstructive sleep apnea in obese pregnant women," Judette Louis, MD, PhD; Dennis Auckley, MD; Branko Miladinovic, PhD; Anna Shepherd, BSN; Patricia Mencin, BBA; Deepak Kumar, MD; Brian Mercer, MD; and Susan Redline, MD, MPH. *Obstetrics & Gynecology*, 2012;120:1 [DOI: 10.1097/AOG.0b013e31826eb9d8](#)

Provided by University of South Florida

Citation: Sleep apnea in obese pregnancy women linked to poor maternal and neonatal outcomes (2012, September 20) retrieved 24 April 2024 from <https://medicalxpress.com/news/2012-09-apnea-obese-pregnancy-women-linked.html>

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