status during pregnancy and feeding intention. Women with births of healthy singleton infants at ≥36 weeks were eligible for postpartum follow-up. Postpartum questionnaires assessed current feeding (monthly), Edinburgh Postnatal Depression Scale (EPDS) at 2 months, and smoking status at 3 months postpartum. We classified EPDS ≥10 as minor depression symptoms and EPDS ≥13 as major depression symptoms. We used Fisher’s Exact tests and multinomial logistic regression to measure the association between depression symptoms, feeding intention, feeding practices, and smoking behavior.

**RESULTS:** Of 3033 women who qualified for postpartum follow-up, data on prenatal and 3-month smoking status was available for 2359, of whom 2020 (85.6%) did not smoke, 137 (5.8%) smoked only postpartum, 15 (0.6%) smoked only in pregnancy, and 187 (7.9%) were smoking at both time points. Smoking patterns were strongly associated with depression symptoms, feeding intention, and breastfeeding continuation (Table). In multivariate analysis, both resuming smoking and continuing smoking at 3 months were independently associated with depression symptoms (p < .0001) and with not breastfeeding at 2 months postpartum (p < .0001).

**CONCLUSION:** Both depression symptoms and not breastfeeding were associated with smoking status at 3 months postpartum. Studies are needed to test the extent to which novel interventions to achieve perinatal smoking cessation can reduce depression symptoms and increase breastfeeding duration.

---

**759** A validated screening tool for sleep-disordered breathing in pregnancy and risk of preeclampsia in a large cohort of gravidae

Alpna Agrawal1, Kathleen Antony2, Kjersti Aagaard3
1University of Texas Health Science Center at Houston, Medical School, Houston, TX, 2Baylor College of Medicine, Houston, TX

**OBJECTIVE:** The primary study aim was to develop a validated short form, sleep disordered breathing (SDB) pregnancy-specific questionnaire (SF-SPQ) in a large, prospective cohort of gravidae. Two screening tools were developed: one that evaluated SDB only (SF-SPQ) and another that included a comorbid condition associated with SDB (SF-SPQ+C). A secondary aim was to examine whether these tools predicted preeclampsia.

**STUDY DESIGN:** The study sample included 1,153 gravidae who completed the Berlin Questionnaire (BQ), an existing SDB screening tool, and had outcomes data. BQ items were evaluated by confirmatory factor analyses (CFA) in Mplus v5.0. Adjusted relative-risks for preeclampsia were estimated in Stata v10.0.

**RESULTS:** Based upon selection criteria and CFA results shown in Figure 1, the SF-SPQ consisted of 4 items: snoring loudly, frequent snoring, cessation of breathing during sleep, and sleeping while driving. The SF-SPQ+C included the aforementioned items and a comorbid condition, pre-pregnancy obesity (BMI >30). For both screening tools, CFA results indicated item factors loadings were significant (P < 0.05) with a good model fit (CFI ≥0.90, TLI ≥0.90, RMSEA ≤0.06). In adjusted regression models, a higher score on the SF-SPQ was associated with preeclampsia among non-obese, obese, and all gravidae. The SF-SPQ+C was associated with preeclampsia among all gravidae (Table 1).

**CONCLUSION:** The SF-SPQ and SF-SPQ+C are validated screening tools for SDB during pregnancy and potentially allow physicians to quickly and effectively screen gravidae at risk for SDB and pre-eclampsia. Unlike previous screening tools which include comorbid conditions a priori, the SF-SPQ demonstrated that SDB items alone were associated with preeclampsia among non-obese gravidae. Additional research is needed to validate these screening tools against polysomnography to confirm SDB diagnosis and to evaluate their efficacy in early detection of preeclampsia.

---

**760** The effect of large for gestational age on neonatal outcomes in the setting of GDM in both the preterm and term neonate

Allyson Guillet1, Antonio Frias1, Aaron Caughey1
1OHSU, Ob/Gyn, Portland, OR

**OBJECTIVE:** To evaluate how large for gestational age, as a potential marker for poor glucose control in GDM, impacts adverse neonatal outcomes in both preterm and term neonates.

**STUDY DESIGN:** A retrospective cohort study of all singleton, non-anomalous neonates born at 28 to 42 weeks’ gestation in California from 2005-2008. The primary predictor examined was the impact of large for gestational age (LGA), stratified by preterm (28-36+6 weeks) and term (37-41+6 weeks) birth. The outcomes included respiratory distress syndrome (RDS), jaundice, hypoglycemia, sepsis, intrapartum fetal demise (IUFD), and neonatal death (NND). Logistic regression analyses were then performed.
Adverse neonatal outcomes in preterm and term births in neonates large for gestational age stratified by the presence and absence of GDM

RESULTS: In the preterm birth cohort, LGA was associated with decreased rates of RDS (OR 0.72, CI 0.60-0.86), jaundice (OR 0.66, CI 0.61-0.73), and sepsis (OR 0.59, CI 0.48-0.71). There was no difference in rates of hypoglycemia (OR 0.75, CI 0.53-1.07), IUFD (OR 0.64, CI 0.35-1.17), or NND (OR 0.69, CI 0.18-2.65). In term births, LGA was associated with increased rates of RDS (OR 1.65, CI 1.30-2.10), jaundice (OR 1.39, CI 1.33-1.46), hypoglycemia (OR 2.50, CI 2.01-3.10), and sepsis (OR 1.89, CI 1.65-2.17). There were no significant differences in rates of IUFD (OR 1.12, CI 0.56-2.23) and NND (OR 2.77, CI 0.96-8.02). These findings were consistent in the non-GDM population (Table 1).

CONCLUSION: In the preterm population, neonates who are LGA have significantly lower rates of RDS, jaundice, and sepsis. The opposite finding is true in term LGA neonates who have significantly higher rates of RDS, jaundice, hypoglycemia, and sepsis. It is unclear at which gestational age LGA becomes associated with worse outcomes for neonates born to women with GDM. This observation is potentially a result of longer exposure of the fetus to poor glucose control in a mother with GDM.

761 Maternal magnesium supplementation reduces placental infarction and apoptosis in a rat model of intrauterine growth restriction
Amanda Roman1, Madhu Gupta2, Chrystalle Carreon3, Nisha Nanda1, Xiangying Xue2, Alex Williamson3, Burton Rochelson4, Christine Metz2
1Thomas Jefferson University, Division of Maternal Fetal Medicine, Obstetrics and Gynecology, Philadelphia, NY, 2Feinstein Institute for Medical Research, Hofstra North Shore-LIJ School of Medicine, Manhasset, NY, 3Hofstra North Shore-LIJ School of Medicine, Department of Pathology & Laboratory Medicine, Manhasset, NY, 4Hofstra North Shore-LIJ School of Medicine, Division of Maternal-Fetal Medicine, Obstetrics and Gynecology, Manhasset, NY

OBJECTIVE: Intrauterine growth restriction (IUGR) is associated with placental insufficiency and infarction. Our previous studies using a rat model of IUGR by bilateral uterine artery ligation (BL) showed that maternal magnesium supplementation significantly reduced IUGR by 64% when assessed 24 hours after. Therefore, we sought to investigate whether oral maternal magnesium (MgCl2) supplementation attenuates placental parenchymal infarctions and apoptosis using the same rat model.

STUDY DESIGN: Pregnant female Wistar rats (12 weeks old, GD18) were anesthetized and underwent either bilateral uterine artery ligation (BL; N=6), sham surgery (without ligation; N=6) or BL with oral MgCl2 supplementation (MBL; N=5). Dams were euthanized 24 hours later (GD19). Placentas (PL) collected from live pups were fixed in formalin and stained with H&E and scored for infarcts by a blinded pathologist, placenta were also stained for apoptosis with terminal deoxyribonucleotidyl transferase dUTP nick end labeling (TUNEL) by blinded observer. Data were analyzed by ANOVA with Bonferroni post hoc test.

RESULTS: Placental infarcts involving 15-75% of total parenchyma were identified in 11/12 (92%) of BL-PL vs 10% in 1/6 SH-PL (P<0.05). Maternal MgCl2 supplementation significantly decreased percentage (10%) and number of infarcts in MBL-PL (1/6) (P<0.05) (Figure 1, top row). BL promoted placental apoptosis vs SH (P<0.05) and MBL had significantly less apoptosis than BL evidenced by TUNEL staining (Figure 1, bottom row and Figure 2).

CONCLUSION: Using a model of BL-induced IUGR where magnesium supplementation reduces IUGR, we found significantly reduced BL-induced placental infarcts and apoptosis.

762 Cesarean delivery rates in relation to the institute of medicine recommended gestational weight gains
Amos Grunebaum1, Joachim Dudenhausen1, Daniel Skupski1
1New York Weill Cornell, Ob Gyn, New York, NY

OBJECTIVE: When the Institute of Medicine (IOM) published guidelines for recommended gestational weight gains (RGWG) they acknowledged that while consequences on cesarean delivery rates (CDR) of GWG above recommended ranges of appear well substantiated, there was insufficient evidence on CDR below RGWG. Therefore, the objective of this study was to calculate CDR in relation to RGWG.

STUDY DESIGN: Data are based on 100% of single 39-40 weeks nulliparous births from 2011-2012 in residents of US states and D.C. that implemented the 2003 revision of birth certificates as of 1/1/2011, representing about 85% of US births. Cesarean delivery rates were calculated for each BMI group and for those staying below, within, and above RGWG.

RESULTS: The study population consisted of 1,248,163 single deliveries of nulliparous women at 39 and 40 weeks. The total cesarean delivery rate (CDR) was 29.7%. CDR increased with higher prepregnancy BMI and higher weight gains increase CDR and that lower CDR than those who complied with RGWG (p<0.01). CDR were significantly lower CDR than those who complied with RGWG (p<0.01).

CONCLUSION: This is the first study of recently added US birth certificate data to compare US CDR with the IOM recommended gestational weight gains. Our study confirms that higher prepregnancy BMI and higher weight gains increase CDR and that lower prepregnancy BMI and RGWG reduce CDR. Those below RGWG had significantly lower CDR than those who were in compliance with RGWG. Lowering cesarean delivery rates can prevent certain adverse outcomes, and our study suggests that a decrease in total CDR can be achieved if patients stayed below RGWG instead of complying with
学霸图书馆

www.xuebalib.com

本文献由“学霸图书馆-文献云下载”收集自网络，仅供学习交流使用。

学霸图书馆（www.xuebalib.com）是一个“整合众多图书馆数据库资源，提供一站式文献检索和下载服务”的24小时在线不限IP图书馆。

图书馆致力于便利、促进学习与科研，提供最强文献下载服务。

图书馆导航：

图书馆首页 文献云下载 图书馆入口 外文数据库大全 疑难文献辅助工具