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COMPARISON OF LOW-DENSITY LIPOPROTEIN (LDL) PARTICLE SIZE AMONG AMERICAN AND PERUVIAN PREGNANT WOMEN. \*C Qiu, M A Austin, M A Williams (Swedish Medical Center, Seattle, WA, 98122)

A predominance of small, dense LDL particles may be important in the etiology of preeclampsia. We investigated the extent to which, if at all, LDL particle size and relevant covariates may differ for American and Peruvian pregnant women. Gradient gel electrophoresis was used to measure LDL particle size using intrapartum plasma from 96 Americans and 100 Peruvians. All participants were free of diabetes and hypertension. Genotyping for the hepatic-lipase (HL) gene polymorphism (-514C/T) was also conducted. Compared with Americans, Peruvians tended to be younger and multipara. These two groups did not differ with regards to pre-pregnancy obesity and gestational age at delivery. 90% Peruvians were Mestizo and 70% Americans were non-Hispanic White. In general, Peruvians had significantly smaller average LDL particle size ( $264.1 \pm 0.7$  versus  $272.7 \pm 0.6\text{\AA}$ ). LDL particle size was positively correlated with HDL ( $\gamma = 0.30$  vs.  $0.28$ ) and negatively with triglyceride ( $\gamma = -0.40$  vs.  $-0.21$ ) in both groups. Peruvians had significantly lower HDL ( $40.2 \pm 1.3$  vs.  $56.3 \pm 1.3\text{mg/dl}$ ) and higher triglyceride ( $248.2 \pm 8.2$  vs.  $178.2 \pm 6.5\text{mg/dl}$ ). Among Peruvians, HL-514T/T genotype was associated with a 3.6-fold increase in having a predominance of large, buoyant LDL particles (95% CI 0.8–15.7). Limited variation in LDL subclass phenotypes limited this analysis in Americans. In multivariable models, maternal age, parity, triglyceride and HL-514T/T had explained 24% variation of LDL particle size in Peruvians. However, the same model explained 8% in Americans. These findings suggest considerable heterogeneity of maternal LDL particle size across populations. Additional studies are needed to identify genetic and environmental reasons for this heterogeneity.

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SEXUAL PRACTICES AND RISK FACTORS FOR SEXUALLY TRANSMITTED INFECTIONS (STIS) AMONG MEN IN KISUMU, KENYA. \*C L Mattson, R C Bailey, S Moses, K Agot, J O Ndinya-Achola (University of Illinois at Chicago, Chicago, IL, 60612)

To investigate sexual practices and risk factors for STIs among men (18–24 years), we analyzed in-depth, lifetime sexual histories of 1245 participants of a randomized controlled trial of male circumcision (MC) to reduce HIV-1 incidence in Kisumu, Kenya. Sexual histories, collected by trained interviewers at the baseline visit, obtained detailed information on up to 12 partnerships. Men were tested for syphilis, trichomoniasis, gonorrhea and chlamydia. The median number of lifetime partners was 5 (range 1–100). 488 men (39%) reported sexual debut before age 15, 39% reported sex with a woman the same day they had met, and 18.9% reported that such sex was unprotected. 66% reported ever having unprotected sex with a casual partner and 5% reported ever having unprotected sex with a commercial sex worker. 108 men (9%) were diagnosed with an STI: 59 (4%) had chlamydia, 28 (2%) had gonorrhea, 23 (2%) had trichomoniasis and 10 (1%) had syphilis. Factors associated with an STI were: older age, higher income, being married, exchanging blood with another person, reporting previous diagnosis and/or treatment of an STI, number of sexual partners, and having unprotected sex with a woman where money or gifts were always exchanged for sex. In multivariable analysis, significant predictors of an STI were being 21–24 years old (odds ratio (OR) = 1.86, 95% confidence interval (CI) 1.2–2.9), high earnings (OR = 1.6, 95% CI 1.0–2.3), exchanging blood with another person (OR = 3.7, 95% CI 1.3–10.7) and prior treatment for an STI (OR = 2.7, 95% CI: 1.8–4.2).

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INTRAUTERINE GROWTH STANDARDS FOR NEWBORNS OF CAUCASIAN, CHINESE, AND SOUTH ASIAN DESCENT. \*P Janssen, P Thiessen, M Klein, M Whitfield, Y MacNab, S Cullis-Kuhl (Departments of Health Care and Epidemiology, Family Practice, and Pediatrics, University of British Columbia, Vancouver, British Columbia, Canada)

Objective: We have devised new intrauterine growth charts based on precise morphometric measurements of newborns whose parents were both of Caucasian, Chinese, or South Asian ethnicity. Ethnicity and sex-specific norms were developed in order to minimize the misclassification as abnormal, of normal but constitutionally small or large babies. Methodology: Weight, length and head circumference were measured on 2695 babies born to healthy non-smoking mothers in British Columbia whose gestational age between 37 and 41 completed weeks was confirmed by ultrasound prior to 20 weeks gestation. Weight was measured on a digital scale, length by stadiometer, and head circumference by firm plastic tape measures. Means and 95% confidence intervals for morphometric measures were graphed to compare differences between newborns grouped first by ethnicity and then by sex. Ethnicity and sex-specific graphs were constructed using means and standard deviations. Results: Distributions of weight, length, and head circumference, stratified by sex, were significantly different among ethnic groups. Conclusions: Important differences among weight, length, and head circumferences are reported among babies of different ethnicities in addition to differences between sexes. Use of sex and ethnicity-specific growth charts may prevent the misclassification of newborns as intrauterine growth-restricted or large-for-gestational age.

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OCCUPATIONAL FACTORS AND RISK OF PRETERM DELIVERY IN PARTICIPANTS OF THE NURSES' HEALTH STUDY II. \*C C Lawson, E A Whelan, E N Hibert, B Grajewski, D Spiegelman, J W Rich-Edwards (National Institute for Occupational Safety and Health, Cincinnati OH 45226)

Nurses work in a unique occupational environment that can require rotating and night shifts, long hours, prolonged standing, heavy lifting, and exposure to chemicals and x-ray radiation. We examined first-trimester exposures among participants of the Nurses' Health Study II, a prospective cohort established in 1989. In 2001, detailed information on specific exposures during pregnancy was collected from participants for the most recent pregnancy since 1993. Among 6,838 live births, 576 (8%) were born preterm (<37 weeks gestation). Log binomial regression was used to estimate the relative risk (RR) for preterm delivery. The final model included age, parity, work schedule, physical factors, and exposures to chemicals and x-rays. Working part-time ( $\leq 20$  hours a week) was associated with a lower risk for preterm delivery, compared to women who worked 20–40 hours a week [RR = 0.7, 95% confidence interval (CI) = 0.6–0.9]. Long working hours (41 or more per week) was not associated (RR = 1.0, 95% CI = 0.8–1.2). No association with preterm delivery was seen for working rotating shifts, night work, or heavy lifting. Standing nine or more hours per day was associated with a modest increased risk, compared with standing four to eight hours per day (RR = 1.2, 95% CI = 0.97–1.5). Exposure to sterilizing agents for five or more hours per day was associated with an increased risk compared to less than one hour per day (RR = 1.9, 05% CI = 1.0–3.3), however the results are based on few exposed cases of preterm delivery. These data suggest that physically demanding work and work schedule are not strong predictors of preterm labor, consistent with most previous studies.



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