

Abstracts

Low-dose aspirin for preventing preeclampsia and its complications: A meta-analysis

In a meta-analysis study of 29 randomized controlled trials (RCTs), effect of LDA (Low-Dose Aspirin) for preventing preeclampsia and its complications were evaluated.

Findings suggest LDA can reduce the incidence of preeclampsia (odds ratio [OR], 0.71; 95% confidence interval [CI], 0.57–0.87), severe preeclampsia (OR, 0.37; 95% CI, 0.23–0.61), preterm birth (OR, 0.81; 95% CI, 0.75–0.88), and intrauterine growth restriction (IUGR) (OR, 0.80; 95% CI, 0.71–0.90).

LDA increases the incidence of placental abruption (OR, 1.35; 95% CI, 1.05–1.73) but not other major complications.

The available evidence suggests that LDA (Low-Dose Aspirin) is effective in preventing preeclampsia, preterm birth, and IUGR in high-risk pregnancies if used before 16 gestational weeks than if used later without posing a major safety risk to mothers or fetuses.

Source: Xu TT, Fan Z, Chun-YD *et al.* Low-dose aspirin for preventing preeclampsia and its complications: A meta-analysis. *The Journal of Clinical Hypertension*, 2015 July. vol. 17, 7; pp567-573. Article first published online: 2 APR 2015. DOI: 10.1111/jch.12541

Caffeine and caffeinated beverage consumption and risk of spontaneous abortion

A prospective cohort study included 5132 Danish women planning pregnancy and enrolled from 2007 to 2010. Participants were women who conceived after entry into the Smart-Gravid cohort and who were aged 18–40, in a stable relationship with a male partner, and did not use fertility treatments to conceive.

Results showed, There were 732 women (14.3%) who were identified as having a SAB.

In the pre-conceptional period, caffeine consumption was not materially associated with SAB risk (HR comparing $e^{>300}$ with <100 mg/day: 1.09; 95% CI: 0.89, 1.33).

In early pregnancy, the HRs for 100–199, 200–299 and $e^{>300}$ mg/day of caffeine consumption were 1.62 (95% CI: 1.19, 2.22), 1.48 (95% CI: 1.03, 2.13) and 1.23 (95% CI: 0.61, 2.46), respectively, compared with that for <100 mg/day. So the authors concluded, pre-conceptional caffeine consumption was not materially associated with an increased risk of SAB (spontaneous abortion), consumption during early pregnancy was associated with a small increased risk of SAB, although the relation was not linear.

Source: Hahn KA, Wise L.A, Rothman K.J. *et al* Caffeine and caffeinated beverage consumption and risk of spontaneous abortion. *Human Reproduction*, 2015, Vol. 0, No. 0 pp. 1–10, doi:10.1093/humrep/dev063.

Caffeine and menopausal symptoms: What is the association?

A comprehensive cross-sectional survey of menopause-related health information was conducted among 2,507 women who presented with menopausal concerns at Mayo Clinic between July 25, 2005 and July 25, 2011. Using the Menopause Health Questionnaire data from 1,806 women who met all inclusion criteria were analyzed. Menopausal symptom ratings were compared between women who used caffeine and women who did not use caffeine using two-sample t test and analysis of covariance, with smoking and menopause status included as covariates. In all cases, two-tailed $P < 0.05$ was considered statistically significant.

Caffeine use was positively associated with mean (SD) vasomotor symptom scores (2.30 [0.91] vs 2.15 [0.94], $P = 0.011$). This finding remained significant after adjustment for menopause status and cigarette smoking ($P = 0.027$). They concluded that caffeine use is associated with greater vasomotor symptom bother in postmenopausal women.

Source: Faubion SS¹, Sood R, Thielen JM, Shuster LT. Caffeine and menopausal symptoms: what is the association? *Menopause*. 2015 Feb;22(2):155-8. doi: 10.1097/GME.0000000000000301.

Immediate compared with delayed cord clamping in the preterm neonate: a randomized controlled trial

A randomized controlled trial comparing immediate with delayed cord clamping among preterm neonates born between 24 and 34 weeks of gestation. The primary study outcome was the need for blood transfusion.

A total of 200 women were randomized, 99 to the delayed and 101 to the immediate clamp group. The groups were similar with respect to baseline characteristics. The mean gestational age at delivery was 30.8 ± 3.1 weeks in the delayed compared with 30.7 ± 2.8 weeks in the immediate clamp group ($P = .64$). There was no statistically significant difference between groups with regard to the need for blood transfusion: 25 of 99 (25.3%) in the delayed cord clamp group received one or more blood transfusion compared with 24 of 101 (23.7%) in the immediate clamp group ($P = .8$).

The rates of various neonatal outcomes including respiratory distress syndrome, periventricular leukomalacia, necrotizing enterocolitis, anemia of prematurity, and neonatal mortality did not differ significantly between the groups. However, the mean initial hemoglobin and hematocrit was significantly higher in the delayed group. In the delayed clamp group, 11.1% of neonates had intraventricular hemorrhage compared with 19.8% in the immediate clamp group ($P = .09$).

Conclusion: Delayed cord clamping for 30 seconds did not decrease the need for blood transfusion among preterm neonates.

Source: *Elimian A¹, Goodman J, Escobedo M, Nightingale L, Knudtson E, Williams M. Immediate compared with delayed cord clamping in the preterm neonate: a randomized controlled trial. Obstet Gynecol. 2014 Dec;124(6):1075-9. doi:10.1097/AOG.0000000000000556.*

Vitamin D and the risk of preeclampsia—a nested case-control study

Low levels of vitamin D status, as measured by 25-hydroxyvitamin D [25(OH)D], are common in pregnant women. In a nested case-control study out of 2496 pregnant women, they identified the 39 women who developed preeclampsia and 120 non-preeclamptic controls.

Blood was sampled in 12th gestational week and analyzed for serum vitamin D. Vitamin D levels were similar in women who developed preeclampsia, 52.2 ± 20.5 nmol/L, and controls, 48.6 ± 20.5 nmol/L, $p = 0.3$. In addition, vitamin D deficiency (< 50 nmol/L) was found in similar proportion of control group (51.7%) as those with severe preeclampsia (41.2%).

Women with vitamin D deficiency were 3 cm shorter than those with normal vitamin D levels ($p = 0.002$). Though data do not support the hypothesis that vitamin D deficiency in early pregnancy is associated with preeclampsia, but it cannot rule out a relation later in gestation.

Source: *Gidlöf S, Silva AT, Gustafsson S, Lindqvist PG. Vitamin D and the risk of preeclampsia—a nested case-control study. Acta Obstet Gynecol Scand. 2015 Aug; 94(8): 904-8. doi: 10.1111/aogs.12658. Epub 2015 May 7.*