# Obstetrics & Gynaecology Evidence Update

## (May 2019)

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## Systematic Reviews & Meta Analyses:

**Levonorgestrel intrauterine system associated amenorrhea: a systematic review and metaanalysis** [OPEN ACCESS]
Sergison, Jill E; Maldonado, Lauren Y; Gao, Xiaoming; Hubacher, David
American journal of obstetrics and gynecology; May 2019, vol. 220 (no.5) pp.440-448. [ABSTRACT]

**Evaluation of guidelines on the screening and diagnosis of gestational diabetes mellitus: systematic review** [OPEN ACCESS]
Li-Zhen L; Yun X; Xiao-Dong Z; Shu-Bin H; Zi-Lian W; Adrian Sandra D; Bin L; BMJ open; May 2019; vol. 9 (no. 5); p. e023014 [ABSTRACT]

**Effect of levothyroxine supplementation on pregnancy loss and preterm birth in women with subclinical hypothyroidism and thyroid autoimmunity: a systematic review and meta-analysis.** [NHS OPENATHENS REQUIRED]
Rao M; Zeng Z; Zhou F; Wang H; Liu J; Wang R; Wen Y; Yang Z; Su C; Su Z; Zhao S; Tang L
Human reproduction update; May 2019; vol. 25 (no. 3); p. 344-361 [ABSTRACT]

**Management of first-trimester miscarriage: a systematic review and network meta-analysis.** [NHS OPENATHENS REQUIRED]
H Al Wattar B; Murugesu N; Tobias A; Zamora J; Khan KS; Human reproduction update; May 2019; vol. 25 (no. 3); p. 362-374 [ABSTRACT]

**Hands-on versus hands-off techniques for the prevention of perineal trauma during vaginal delivery: a systematic review and meta-analysis of randomized controlled trials.**
Pierce-Williams RAM; Saccone G; Berghella V; The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; May 2019 ; p. 1-201 [ABSTRACT]

**Herbal Medicinal Product Use During Pregnancy and the Postnatal Period: A Systematic Review.** [NHS OPENATHENS LOGIN REQUIRED]
Muñoz Balbontín, Yolanda; Stewart, Derek; Shetty, Ashalatha; Fitton, Catherine A; McLay, James S
Obstetrics and gynecology; May 2019; vol. 133 (no. 5); p. 920-932 [ABSTRACT]
High Impact Journals:

A comparison of vaginal versus buccal misoprostol for cervical ripening in women for labor induction at term (the IMPROVE trial): a triple masked randomized controlled trial
Haas DM; Daggy J; Flannery KM; Dorr ML; Bonsack C; Bhamidipalli SS; Pierson RC; Lathrop A; Towns R; Ngo N; Head A; Morgan S; Quinney SK; : American journal of obstetrics and gynecology; May 2019 [ABSTRACT]

Maternal Glycemic Control in Type 1 Diabetes and the Risk for Preterm Birth: A Population-Based Cohort Study
Ludvigsson JF; Neovius M; Söderling J; Gudbjörnsdottir S; Svensson AM; Franzén S; Stephansson O; Pasternak B Annals of internal medicine; Apr 2019 [ABSTRACT]

Association between Apgar scores of 7 to 9 and neonatal mortality and morbidity: population based cohort study of term infants in Sweden [OPEN ACCESS]
Razaz N; Cnattingius S; Joseph KS; BMJ (Clinical research ed.); ; vol. 365 ; p. I1656 [ABSTRACT]

Association of Gestational Weight Gain With Adverse Maternal and Infant Outcomes
LifeCycle Project-Maternal Obesity and Childhood Outcomes Study Group; JAMA; May 2019; vol. 321 (no. 17); p. 1702-1715 [ABSTRACT]

Management of Preexisting Diabetes in Pregnancy: A Review.
Alexopoulos AS; Blair R; Peters AL; JAMA; ; vol. 321 (no. 18); p. 1811-1819 [ABSTRACT]

Placental growth factor testing to assess women with suspected pre-eclampsia: a multicentre, pragmatic, stepped-wedge cluster-randomised controlled trial.
Duhig KE; Myers J; Seed PT; Sparkes J; Lowe J; Hunter RM; Shennan AH; Chappell LC; PARROT trial group Lancet (London, England); ; vol. 393 (no. 10183); p. 1807-1818 [ABSTRACT]

Research Featured in the News:

A Randomized Trial of Progesterone in Women with Bleeding in Early Pregnancy [OPEN ACCESS]
Coomarasamy A; Devall AJ; Cheed V; Harb H; Middleton LJ; Gallos ID; Williams H; Eapen AK; Roberts T; Ogwulu CC; Goranitis I; Daniels JP; Ahmed A; Bender-Atik R; Bhatia K; Bottomley C; Brewin J; Choudhary M; Crosfill F; Deb S; Duncan WC; Ewer A; Hinshaw K; Holland T; Izzat F; Johns J; Kriedt K; Lumsden MA; Manda P; Norman JE; Nunes N; Overton CE; Quenby S; Rao S; Ross J; Shahid A; Underwood M; Vaithilingam N; Watkins L; Wykes C; Horne A; Jurkovic D; The New England journal of medicine; May 2019; vol. 380 (no. 19); p. 1815-1824 [ABSTRACT]

Prophylactic antibiotics in the prevention of infection after operative vaginal delivery (ANODE): a multicentre randomised controlled trial. [OPEN ACCESS]
Knight M; Chiocchia V; Partlett C; Rivero-Arias O; Hua X; Hinshaw K; Tuffnell D; Linsell L; Juszczak E; ANODE collaborative group; Lancet (London, England); May 2019
New & Updated Cochrane Systematic Reviews:

Pregnancy & Childbirth:

Biochemical tests of placental function versus ultrasound assessment of fetal size for stillbirth and small-for-gestational-age infants
Heazell, A.E.P; Hayes, D.J.L; Whitworth, M; Takwoingi, Y. Bayliss, S.E; Davenport, C.

Techniques for monitoring blood glucose during pregnancy for women with pre-existing diabetes
Leanne V Jones; Amita Ray; Foong Ming Moy; Brian S Buckley

Time-lapse systems for embryo incubation and assessment in assisted reproduction
Sarah Armstrong; Priya Bhide; Vanessa Jordan; Allan Pacey; Jane Majoribanks; Cindy Farquhar

Cochrane Clinical Answers

Can probiotics be administered to pregnant women to help prevent morbidity and mortality in preterm infants?

What are the effects of education and support in promoting initiation of breastfeeding?

Can omega-3 fatty acid addition during pregnancy help improve birth/infant outcomes?

Practice Guidance:

ACOG Practice Bulletin No.211: Critical care in pregnancy – ACOG [NHS OPENATHENS LOGIN REQUIRED]

ACOG Practice Bulletin No.212: Heart Disease – ACOG [NHS OPENATHENS LOGIN REQUIRED]

Fetal anomaly screening: 20 week scan – Public Health England
**News, Briefings & Reports:**

Magnesium sulfate: risk of skeletal adverse effects in the neonate following prolonged use in pregnancy - MHRA

**NHS Behind the Headlines – Media Stories Explained:**

Antibiotics after forceps and ventouse births halve infections in mothers (14 May)

No clear evidence hormone treatment in early pregnancy helps prevent miscarriage (9 May)

**DynaMed Plus Topic Updates:**

Assisted vaginal delivery (instrumental delivery): single dose of prophylactic antibiotics after operative vaginal birth may reduce risk of maternal infection (Lancet 2019 May 13 early online)

Cervical ripening for labor induction with unfavourable cervix: buccal misoprostol is not as effective as vaginal misoprostol for shortening time to delivery and reducing risk of cesarean delivery in women with singleton pregnancy at ≥ 37 weeks gestation (Am J Obstet Gynecol 2019 May 7 early online)

Slow-release misoprostol vaginal insert may not decrease time to vaginal delivery and may increase risk of uterine hyperstimulation compared to oral misoprostol in primiparous women with singleton pregnancy at ≥ 37 weeks gestation (BJOG 2019 Apr 16 early online)

Early bleeding in pregnancy: vaginal progesterone therapy through 16 weeks gestation does not increase rate of live births in women with bleeding in early pregnancy after appearance of intrauterine sac (N Engl J Med 2019 May 9)

Endometriosis: elevated C-reactive protein (CRP) on day 4 after laparoscopic surgery for bowel endometriosis may be associated with septic complications up to 1 month after surgery (BJOG 2019 May 11 early online)

Hemostatic sealant for hemostasis might increase antral follicle count in affected ovaries compared to electrocoagulation in women having laparoscopic cystectomy (BJOG 2019 Apr 30 early online)

Endometriosis (postpartum): single dose of prophylactic antibiotics after operative vaginal birth may reduce risk of maternal infection, but not risk of endometritis (Lancet 2019 May 13 early online)

Hypertensive disorders of pregnancy: preeclampsia associated with increased risk of chronic kidney disorders, especially within 5 years of latest pregnancy (BMJ 2019 Apr 29)

Early elective delivery may increase neonatal morbidity compared to expectant care in women with severe preeclampsia between 24 and 34 weeks gestation (Cochrane Database Syst Rev 2018 Oct 5)

Antihypertensive drugs may reduce risk of severe hypertension without increasing maternal side effects in pregnant women with mild-to-moderate hypertension (Cochrane Database Syst Rev 2018 Oct 1)
Implantable contraceptive devices: immediate postpartum levonorgestrel contraceptive implant use does not appear to impact infant growth from birth to 6 months, onset of lactogenesis, or breastfeeding continuation at 3 or 6 months compared to delayed postpartum insertion (Contraception 2019 Feb)

Labor induction: discontinuation of oxytocin after establishment of active labor may reduce risk of cesarean delivery and uterine tachysystole combined with abnormal fetal heart rate in women with singleton pregnancy at ≥ 35 weeks gestation (Cochrane Database Syst Rev 2018 Aug 20)

Malaria in pregnancy: In pregnant women without HIV infection, intermittent prophylaxis with dihydroartemisinin-piperaquine and sulfadoxine-pyrimethamine may have similar rates of adverse birth outcomes, but dihydroartemisinin-piperaquine associated with reduced symptomatic malaria and increased asymptomatic QT prolongation (Lancet 2019 Apr 6)

Nutrition in pregnancy: calcium supplementation < 1 g/day during pregnancy may reduce risk of preeclampsia (Cochrane Database Syst Rev 2018 Oct 1)

Postpartum hemorrhage: method used for estimating blood loss during third stage of labor may not affect maternal outcomes in women having vaginal delivery (Cochrane Database Syst Rev 2018 Sep 13)

Perineal trauma and repair in labor and delivery: three-dimensional introital and transperineal ultrasound may have moderate sensitivity for detecting anal sphincter defect after repair of obstetric anal sphincter injury (Am J Obstet Gynecol 2019 Apr 11 early online)

Placenta accreta: prophylactic abdominal aortic balloon occlusion (AABO) of pelvic vessels during placenta removal may reduce blood loss and risk of hysterectomy in women with placenta accreta having cesarean section (BMC Pregnancy Childbirth 2019 Jan 15)

Postpartum management: Addition of intimate partner violence (IPV) prevention program to nurse home visitation program does not appear to improve quality of life or reduce IPV for socially and economically disadvantaged women with first pregnancy (JAMA 2019 Apr 23)

Preterm labor: Structured decision aid may not reduce decisional conflict or increase preparedness for decision making in women facing extremely premature delivery (J Pediatr 2019 Apr 2 early online)

Routine prenatal care: Supervised exercise for physical conditioning during pregnancy may not reduce gestational weight gain, but may promote postpartum weight loss (Ultrasound Obstet Gynecol 2019 May)

Surgical management of pelvic prolapse: Surgical repair of pelvic organ prolapse using armed anterior vaginal mesh decreases prolapse recurrence, but may increase de novo postoperative SUI compared to native tissue repair in women without history of SUI (Cochrane Database Syst Rev 2018 Aug 19)

Addition of midurethral sling (MUS) to surgical repair of pelvic organ prolapse may reduce postoperative stress urinary incontinence (SUI) in women with or without history of symptomatic SUI (Cochrane Database Syst Rev 2018 Aug 19)

Treatment of infertility in women: Oral dydrogesterone may be as effective as micronized vaginal progesterone gel for pregnancy rate at 12 weeks gestation in women having in vitro fertilization (Hum Reprod 2018 Dec 1)

Weight gain in pregnancy: Risk of adverse maternal and neonatal outcomes appears to vary by gestational weight gain and prepregnancy BMI (JAMA 2019 May 7)