

Progesterone and Progestins

Selected References:

- Carmichael SL, et al. 2005. Maternal progestin intake and risk of hypospadias. *Archives of Pediatrics & Adolescent Medicine*, 159(10):957-962.
- Check JH, et al. 1986. The risk of fetal anomalies as a result of progesterone therapy during pregnancy. *Fertil Steril*, 45:575-577.
- Committee on Drugs. 2001. The transfer of drugs and other chemicals into human milk. *Pediatrics*, 108(3):776-789.
- American College of Obstetricians and Gynecologists' Committee on Practice Bulletins-Obstetrics. 2021. rPrediction and prevention of spontaneous preterm birth: ACOG Practice Bulletin, Number 234. *Obstet Gynecol*, 138(2):e65-e90.
- Devall AJ, et al. 2021. Progestogens for preventing miscarriage: A network meta-analysis. *Cochrane Database Sys Rev*, 4(4):CD013792.
- Duds I, et al. 2006. Population-based case-control teratogenic study of hydroxyprogesterone treatment during pregnancy. *Congenit Anom (Kyoto)*, 46:194-198.
- Fawzy M, et al. 2008. Treatment options and pregnancy outcome in women with idiopathic recurrent miscarriage: a randomized placebo-controlled study. *Arch Gynecol Obstet*, 278(1):33-38.
- Heinonen OP, et al. 1977. Birth Defects and Drugs in Pregnancy. Littleton, Mass.: John Wright-PSG, pp 389, 391-392, 394, 443, 478, 497.
- Heinonen OP, et al. 1977. Cardiovascular birth defects and antenatal exposure to female sex hormones. *N Engl J Med*, 296:67-60.
- Massai R, et al. 2005. Extended use of a progesterone-releasing vaginal ring in nursing women: a phase II clinical trial. *Contraception*, 72:352-357.
- Michaelis J, et al. 1983. Prospective study of suspected associations between certain drugs administered during early pregnancy and congenital malformations. *Teratology*, 27:57-64.
- Norman JE, et al. 2009. Progesterone for the prevention of preterm birth in twin pregnancy (STOPPIT): a randomised, double-blind, placebo-controlled study and meta-analysis. *Lancet*, 373(9680):2034-2040.
- Practice Committee of the American Society for Reproductive Medicine. 2008. Progesterone supplementation during the luteal phase and in early pregnancy in the treatment of infertility: an educational bulletin. *Fertility and Sterility*, 89(4):789-792.
- Practice Committee of the American Society for Reproductive Medicine. 2012. Evaluation and treatment of recurrent pregnancy loss: a committee opinion. *Fertility and Sterility*, 98(5):1103-1111.
- RamaRao S, et al. 2013. Progesterone vaginal ring: Introducing a contraceptive to meet the needs of breastfeeding women. *Contraception*, 88(5):591-598.
- Roy M, et al. 2020. Progesterone vaginal ring as a new contraceptive option for lactating mothers: Evidence from a multicenter non-randomized comparative clinical trial in India. *Contraception*, 102(3):159-167.
- Silver RI, et al. 1999. In vitro fertilization is associated with an increased risk of hypospadias. *J Urology*, 161(6):1954-1957.

Câu hỏi? Gọi 866.626.6847 | Gửi tin nhắn đến 855.999.3525 | Gửi email hoặc trò chuyện tại [MotherToBaby.org](https://www.MotherToBaby.org).

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, May 1, 2024.

Progesterone and Progestins

Selected References:

- Affendi Raja RA, et al. 2022. Review of recent evidence on the management of heartburn in pregnant and breastfeeding women. *BMC Gastroenterology*, 22:219-229.
- Courtney TP, et al. 1988. Excretion of famotidine in breast milk. *Br J Clin Pharmacol*, 626:639P.
- Garbis H, et al. 2005. Pregnancy outcome after exposure to ranitidine and other H2-blockers. A collaborative study of the European Network of Teratology Information Services. *Reprod Toxicol*, 19:453-458.
- Hagemann, TM, 1998. Gastrointestinal medications and breastfeeding. *Journal of Human Lactation*, 14(3):259-262.
- Kallen B, 1998. Delivery outcome after the use of acid-suppressing drugs in early pregnancy with special reference to omeprazole. *Journal of Obstetrics and Gynecology*, 105:877-881.
- Magee LA, et al. 1996. Safety of first trimester exposure to histamine H2 blockers. A prospective cohort study. *Dig Dis Sci*, 41(6):1145-1149.
- Matok I, et al. 2010. The safety of H (2)-blockers use during pregnancy. *J Clin Pharmacol*, 50(1):81-87.
- Orenstein SR, Shalaby TM, Devandry SN, et al. 2003. Famotidine for infant gastro-oesophageal reflux: A multi-centre, randomized, placebo-controlled, withdrawal trial. *Aliment Pharmacol Ther*, 7(9):1097-107.
- Savarino V, et al. 1988. Famotidine has no significant effect on gonadal function in man. *Gastroenterol Clin Biol*, 12:19-22.
- Wang X, et al. 2011. Pharmacokinetics of famotidine in pregnant women. *Am J Obstet Gynecol.*, 204: 72-73.
- Yitshak-Sade M, et al. 2016. Prenatal exposure to H2 blockers and to proton pump inhibitors and asthma development in offspring. *J Clin Pharmacol*, 56(1):116-123.

Câu hỏi? Gọi 866.626.6847 | Gửi tin nhắn đến 855.999.3525 | Gửi email hoặc trò chuyện tại MotherToBaby.org.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, May 1, 2024.

Progesterone and Progestins

Selected References:

- Anghelache M, et al. 2022. Multiple sclerosis in pregnancy- current neurological considerations. Romanian Journal of Pediatrics, 71(2):55-59.
- Novartis Pharmaceuticals Corporation. 2022. Mayzent Drug Label, Available at: <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=44492772-5aed-4627-bd85-e8e89f308bb3>
- Ruggieri S, et al. 2022. Ponesimod in the treatment of relapsing forms of multiple sclerosis: a update on the emerging clinical data. Degenerative Neurological and Neuromuscular Disease, 12:61-73.
- Sabsabi S, et al. 2023. Clinical evaluation of siponimod for the treatment of secondary progressive multiple sclerosis: pathophysiology, efficacy, safety, patient acceptability, and adherence. Patient Preference and Adherence, 16:1307-1319.

Câu hỏi? Gọi 866.626.6847 | Gửi tin nhắn đến 855.999.3525 | Gửi email hoặc trò chuyện tại MotherToBaby.org.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, May 1, 2024.

Progesterone and Progestins

Selected References:

- Akinosoglou K, et al. 2023. COVID-19 Pharmacotherapy in Pregnancy: A Literature Review of Current Therapeutic Choices. *Viruses*. 15(3): 787.
- Aleissa MM, et al. 2021. New perspectives on antimicrobial agents: Remdesivir treatment for COVID-19. *Antimicrob Agents Chemother*. 38:248-251.
- Al-Kuraishy HM, et al. 2023. Pregnancy and COVID-19: high or low risk of vertical transmission. *Clin Exp Med*. 23(4):957-967.
- Anderson J, et al. 2020. The use of convalescent plasma therapy and remdesivir in the successful management of a critically ill obstetric patient with novel coronavirus 2019 infection: A case report. *Case reports in women's health*, 27, e00221.
- Arbabzadeh T, et al. 2023. Remdesivir in pregnant women with moderate to severe coronavirus disease 2019 (COVID-19): a retrospective cohort study. *Clin Exp Med*. 23(7):3709-3717.
- Budi, DS, et al. 2022. Remdesivir for pregnancy: A systematic review of antiviral therapy for COVID-19. *Heliyon*, 8(1), e08835.
- Bertrand K, et al. 2024. Concentrations of remdesivir and GS-441524 in human milk from lactating individuals diagnosed with COVID-19. *Pediatric research*. 10.1038/s41390-024-03053-2.
- Burwick RM, et al. 2021. Compassionate Use of Remdesivir in Pregnant Women With Severe Coronavirus Disease 2019. *Clin Infect Dis*. 6;73(11):e3996-e4004
- Cheema R, et al. 2023. Protecting Breastfeeding during the COVID-19 Pandemic. *Am J Perinatol*. 40(3):260-266.
- Chen M, et al. 2023. Vaccination and treatment options for SARS-CoV2 infection affecting lactation and breastfeeding. *Seminars in fetal & neonatal medicine*. 28(1) 101425.
- Clinical Solutions: Remdesivir monograph. Revised 5/7/2020. https://www.elsevier.com/_data/assets/pdf_file/0008/996767/Remdesivir-Drug-Monograph_28MAY2020.pdf
- Di Gennaro, et al. 2023. Efficacy and safety of therapies for COVID-19 in pregnancy: a systematic review and meta-analysis. *BMC Infect Dis*. 23(1):776.
- Dornemann J, et al. 2017. First newborn baby to receive experimental therapies survives Ebola virus disease. *J Infect Dis*, 215:171-4.
- FDA's approval of Veklury (remdesivir) for the treatment of COVID-19—the science of safety and effectiveness. 2020. Available at: <https://www.fda.gov/drugs/news-events-human-drugs/fdas-approval-veklury-remdesivir-treatment-covid-19-science-safety-and-effectiveness?msclkid=172b6876c65d11ec832b5913d0d746c5>. Accessed 9 Dec 2024.
- Frauenfelder C, et al. 2020. Infant with SARS-CoV-2 infection causing severe lung disease treated with remdesivir. *Pediatrics*. 146:e20201701.
- Gilead Sciences, Inc. 2022. Remdesivir product labeling. Available at: https://www.gilead.com/-/media/files/pdfs/medicines/covid-19/veklury/veklury_pi.pdf. Accessed 9 Dec 2024.
- Gutierrez R, et al. 2022. Remdesivir use in pregnancy during the SARS-CoV-2 pandemic, *The Journal of Maternal-Fetal & Neonatal Medicine*, 35(25):9445-9451.
- Jorgensen SCJ, 2021. A review of remdesivir for COVID-19 in pregnancy and lactation. *J Antimicrob Chemother*. 77(1):24-30.
- Jorgensen SC, et al. 2022. A review of COVID-19 therapeutics in pregnancy and lactation. *Obstet Med*. 15(4): 225-232.
- Lampejo T. 2021. Remdesivir for the treatment of COVID-19 in pregnancy. *Journal of medical virology*, 93(7), 4114.
- Liu X, et al. 2023. Physiologically-based pharmacokinetic modeling of remdesivir and its metabolites in pregnant

women with COVID-19. CPT: Pharmacometrics & systems pharmacology. 12(2) 148-153.

- Molaei E, et al. 2024. Remdesivir: treatment of COVID-19 in special populations. Naunyn Schmiedeberg's Arch Pharmacol. 397(6):3829-3855.
- Mulangu S, et al. 2019. A randomized, controlled trial of Ebola virus disease therapeutics. N Engl J Med., 381:2293-303.
- Naqvi M, et al. 2020. Tocilizumab and Remdesivir in a Pregnant Patient With Coronavirus Disease 2019 (COVID-19), Obstetrics & Gynecology. 136(5):1025-1029.
- Nasrallah, S, et al. 2021. Pharmacological treatment in pregnant women with moderate symptoms of coronavirus disease 2019 (COVID-19) pneumonia. **The Journal of Maternal-Fetal & Neonatal Medicine**, 1-8.
- Pierce-Williams RAM, et al. 2020. Clinical course of severe and critical COVID-19 in hospitalized pregnancies: a US cohort study. Am J Obstet Gynecol MFM; 2(3):100134.
- Sadati E, et al. 2022. Remdesivir in Breastfeeding. Tanaffos. 21(3) 261-262.
- Tavakoli N, et al. 2023. Is it possible to reduce the rate of vertical transmission and improve perinatal outcomes by inclusion of remdesivir in treatment regimen of pregnant women with COVID-19?. BMC Pregnancy Childbirth. 23(1):110.
- Wada YS, et al. 2022. Remdesivir and human milk: A case study. J Hum Lact.

Câu hỏi? Gọi 866.626.6847 | Gửi tin nhắn đến 855.999.3525 | Gửi email hoặc trò chuyện tại [MotherToBaby.org](https://www.MotherToBaby.org).

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, May 1, 2024.

Progesterone and Progestins

Selected References:

- Gilboa SM, et al, and the National Birth Defects Prevention Study. 2009. Use of antihistamine medications during early pregnancy and isolated major malformations. Birth Defects Res A Clin Mol Teratol 85(2): 137-150.
- Hansen C, et al. 2020. Use of antihistamine medications during early pregnancy and selected birth defects: The National Birth Defects Prevention Study, 1997-2011. Birth Defects Res. 112:1234-1252.
- Mazzotta P, et al. 1999. Treating allergic rhinitis in pregnancy. Safety considerations. Drug Saf. 20(4):361-375.

Câu hỏi? Gọi 866.626.6847 | Gửi tin nhắn đến 855.999.3525 | Gửi email hoặc trò chuyện tại [MotherToBaby.org](https://www.MotherToBaby.org).

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, May 1, 2024.