

Abatacept (Orencia®)

Selected References

- Balevic SJ, et al. 2024. Abatacept Pharmacokinetics and Exposure Response in Patients Hospitalized With COVID-19: A Secondary Analysis of the ACTIV-1 IM Randomized Clinical Trial. *JAMA Netw Open*. 7(4):e247615.
- Bhimraj A, et al. 2025. 2025 Clinical Practice Guideline Update by the Infectious Diseases Society of America on the Treatment and Management of COVID-19: Pemivibart for Pre-exposure Prophylaxis, Vilobelimab for Critical Illness, and Abatacept or Infliximab for Severe or Critical Illness. *Clin Infect Dis*. 81(Supplement_3):i1-i5.
- Chin A, et al. 2025. Recommendations for the Use of Disease-Modifying Antirheumatic Drugs in Pregnancy and Reproductive Health for Patients With Rheumatic Disease: A Scoping Review. *Arthritis Care Res (Hoboken)*. 77(10):1273-1281.
- Dernoncourt A, et al. 2023. Fetal and neonatal adverse drug reactions associated with biologics taken during pregnancy by women with autoimmune diseases: Insights from an analysis of the World Health Organization pharmacovigilance database (VigiBase®). *BioDrugs*. 37(1):73-87.
- E.R. Squibb and Sons, L.L.C. (Last updated: October 30, 2023). Orencia drug label. Source: National Library of Medicine. Available at <https://dailymed.nlm.nih.gov/dailymed/druginfo.cfm?setid=0836c6ac-ee37-5640-2fed-a3185a0b16eb>. Accessed 31 July 2026.
- Ghalandari N, et al. 2022. Reported congenital malformations after exposure to non-tumour necrosis factor inhibitor biologics: A retrospective comparative study in EudraVigilance. *Br J Clin Pharmacol*. 88(12):5378-5388.
- Kumar M, et al. 2015. Pregnancy outcomes following exposure to abatacept during pregnancy. *Semin Arthritis Rheum*. 45(3):351-356.
- Makol A, et al. 2011. Rheumatoid arthritis and pregnancy: safety considerations in pharmacological management. *Drugs*. 71(15):1973-1987.
- Nadig N, et al. 2025. 2025 Clinical Practice Guideline Update by the Infectious Diseases Society of America on the Treatment and Management of COVID-19: Abatacept. *Clin Infect Dis*. 81(Supplement_3):i17-i21.
- Ojeda-Urbe M, et al. 2013. Exposure to abatacept or rituximab in the first trimester of pregnancy in three women with autoimmune diseases. *Clin Rheumatol*. 32(5):695-700.
- Ostensen M, Förger F. 2011. Treatment with biologics of pregnant patients with rheumatic diseases. *Curr Opin Rheumatol*. 23(3):293-298.
- Partlett R, Roussou E. 2011. The treatment of rheumatoid arthritis during pregnancy. *Rheumatol Int*. 31(4):445-449.
- Pham T, et al. 2012. Abatacept therapy and safety management. *Joint Bone Spine*. 79 Suppl 1:3-84.
- Saito J, et al. 2019. Abatacept concentrations in maternal serum and breast milk during breastfeeding and an infant safety assessment: a case study. *Rheumatology (Oxford)*. 58(9):1692-1694.

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Abatacept (Orencia®)

Selected References:

- Acs N, et al. 2009. Senna treatment in pregnant women and congenital abnormalities in their offspring- a population-based case-control study. *Reproductive Toxicology* Jul 28(1):100-104.
- Avery GS, et al. 1972. Lactulose: a review of its therapeutic and pharmacologic properties with particular reference to ammonia metabolism and its mode of action in portal systemic encephalopathy. *Drugs* 4:7-48.
- Baldwin WF. 1963. Clinical study of senna administration to nursing mothers: assessment of effects on infant bowel habits. *Canadian Medical Association Journal* 89:566-568.
- Body C, et al. 2016. Gastrointestinal Diseases in Pregnancy: Nausea, Vomiting, Hyperemesis Gravidarum, Gastroesophageal Reflux Disease, Constipation, and Diarrhea. *Gastroenterol Clin North Am.* 45(2):267-83.
- Concini N, et al. 2008. Mineral oil paraffins in human body fat and milk. *Food and Chemical Toxicology* 46(2):544-552.
- Danhof IE. 1982. Pharmacology, toxicology, clinical efficacy, and adverse effects of calcium polycarbophil, an enteral hydrosorptive agent. *Pharmacotherapy* 2:18-28.
- Friedrich C, et al. 2011. Lack of excretion of the active moiety of bisacodyl and sodium picosulfate into human breast milk: an open-label, parallel group, multiple dose study in healthy lactating women. *Drug Metab Pharmacokinet* 26(5):458-464.
- Gattuso JM, Kamm MA. 1994. Adverse effects of drugs used in the management of constipation and diarrhoea. *Drug Safety* 10:47-65.
- Hagemann TM. 1998. Gastrointestinal medications and breastfeeding. *Journal of Human Lactation* 14:259-262.
- Rude RK, Singer FR. 1981. Magnesium deficiency and excess. *Annual Review of Medicine* 32:245-259.
- Samavati R, et al. 2017. Herbal laxatives and antiemetics in pregnancy. *Reprod Toxicol.* 72:153-158. doi: 10.1016/j.reprotox.2017.06.041
- Schindler AM. 1984. Isolated neonatal hypomagnesaemia associated with maternal overuse of stool softener. *Lancet* 2:822.
- The WHO Working Group, Bennet PN (ed). 1988. *Drugs and Human Lactation*. Elsevier, Amsterdam, New York, Oxford, 88-89.
- Trottier M, et al. 2012. Treating constipation during pregnancy. *Canadian Family Physician* 58:836-838.
- Werthmann MW, Jr., Krees SV. 1973. Quantitative excretion of Senokot in human breast milk. *The Medical Annals of the District of Columbia* 42(1):4-5.

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Selected References:

- Amir LH, et al. 2006. A case-control study of mastitis: nasal carriage of *Staphylococcus aureus*. *BMC Family Practice*; 7:57.
- Behari P, et al. 2004. Transmission of methicillin-resistant *Staphylococcus aureus* to preterm infants through breast milk. *Infect Control Hosp Epidemiol*; 25(9):778-780.
- Briggs G. 2005. *Drugs in Pregnancy and Lactation, a reference guide to fetal and neonatal risk*. 7th Ed. Baltimore, MD: Williams & Williams.
- De Rose, et al. 2023. Staphylococcal infections and neonatal skin: data from literature and suggestions for the clinical management from four challenging patients. *Antibiotics*; 12(4):632.
- Elston DM. 2007. Community acquired methicillin-resistant *Staphylococcus aureus*. *J Am Acad Dermatol*; 56(1):1-16.
- Farsimadan M, Motamedifar M. 2020. Bacterial infection of the male reproductive system causing infertility. *J Reprod Immunol*; 142:103183.
- Frank A, et al. 1999. Community-acquired and clindamycin-susceptible methicillin-resistant *Staphylococcus aureus* in children. *Ped Inf Dis J*; 18:993-1000.
- Gastelum DT, et al. 2005. Transmission of community-associated methicillin-resistant *Staphylococcus aureus* from breast milk in the neonatal intensive care unit. *Pediatr Infect Dis J*; 24(12):1122-1124. 2
- Goto H, et al. 2003. Susceptibilities of bacteria isolated from patients with lower respiratory infectious diseases to antibiotics. *Jpn J Antibiot*. 58(3):326-58.
- Inukai K, et al. 2025. Infective endocarditis caused by methicillin-resistant *Staphylococcus epidermidis* in the infant of a mother with diabetes: a case report. *Tokai J Exp Clin Med*; 50(1): 21-24.
- Kawada M, et al. 2003. Transmission of *Staphylococcus aureus* between healthy, lactating mothers and their infants by breastfeeding. *J Hum Lact*; 19(4):411- 417.
- Kriebs JM. 2016. *Staphylococcus Infections in Pregnancy: Maternal and Neonatal Risks*. *J Perinat Neonatal Nurs*; 30(2):115-23.
- Laibl V, et al. 2005. Clinical Presentation of Community-Acquired Methicillin-Resistant *Staphylococcus aureus* in Pregnancy. *Obstet Gynecol*; 106 (3):461- 5.

- Leshem E et al. 2012. Transmission of Staphylococcus aureus from mothers to newborns. *Pediatr Infect Dis J*; 31(4):360-3.
- Lazenby GB, et al. 2012. Methicillin-resistant Staphylococcus aureus colonization among women admitted for preterm delivery. *Am J Obstet Gynecol*; 206(4):329.e1-5.
- Maglio D, et al. 2005. Simulation of antibiotic pharmacodynamic exposure for the empiric treatment of nosocomial bloodstream infections: a report from the OPTAMA program. *Clin Ther*; 27(7):1032-42.
- Piva S, Mariella J, et al 2021. Epidemiologic case investigation on the zoonotic transmission of Staphylococcus aureus infection from goat to veterinarians. *Zoonoses Public Health*; 68(6):684-690.
- Price M, et al. 1998. Prevalence of methicillin-resistant Staphylococcus aureus in a dermatology outpatient population. *South Med J*; 91:369-71.
- Salmanov AG, et al. 2021. Bacterial infection causes of pregnancy loss and premature birth in the women in Ukraine. *Wiad Lek*; 74(6):1355-1359.
- Saravolatz L, et al. 1982. Methicillin-resistant Staphylococcus aureus: epidemiologic observations during a community-acquired outbreak. *Ann Intern Med*; 96:11-16.
- Sheffield JS. 2013. Methicillin-resistant Staphylococcus aureus in obstetrics. *Am J Perinatol*; 30(2):125-9.
- The Centers for Disease Control and Prevention (CDC). 2024. About Staph food poisoning. <https://www.cdc.gov/staph-food-poisoning/about/index.html> [Accessed 4/2026].
- The Centers for Disease Control and Prevention (CDC). 2026. Preventing Methicillin-resistant Staphylococcus aureus (MRSA): Prevent MRSA in higher risk settings. [https://www.cdc.gov/mrsa/prevention/index.html#cdc_prevention_when_traveling-prevent-mrsa-in-higher-risk-s](https://www.cdc.gov/mrsa/prevention/index.html#cdc_prevention_when_traveling-prevent-mrsa-in-higher-risk-settings) ettings [Accessed 4/2026].
- The Centers for Disease Control and Prevention (CDC). 2024. Strategies to prevent hospital-onset Staphylococcus aureus bloodstream infections in acute care facilities. <https://www.cdc.gov/staphylococcus-aureus/hcp/prevent-in-acute-care-facilities/index.html> [Accessed 4/2026].
- Tong SY, et al. 2015. Staphylococcus aureus infections: epidemiology, pathophysiology, clinical manifestations, and management. *Clin Microbiol Rev*; 28(3):603-61.
- Younger Meek, American Academy of Pediatrics, et al. 2022. Policy Statement: Breastfeeding and the Use of Human Milk. *Pediatrics*; 150(1):e2022057988.

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Selected References:

- Abraham K, 2021. Maternal and Perinatal Outcomes of Influenza in Pregnancy after Treatment with Oseltamivir. J Glob Infect Dis. 13(1):20-26.
- American College of Obstetricians and Gynecologists (ACOG). 2018. Committee Opinion No. 753: Assessment and treatment of pregnant women with suspected or confirmed influenza. Obstet Gyn, 132(4):e169-e173.
- Antiviral drugs for influenza for 2023-2024. 2023. Med Lett Drugs Ther. 65(1689):177-182.
- Aoki FY, et al. 2013. The use of antiviral drugs for influenza: A foundation document for practitioners. Can J Infect Dis Med Microbiol, 24(Suppl C):1-15.
- Beau A-B, et al. 2014. Safety of oseltamivir during pregnancy: a comparative study using the EFEMERIS database. BJOG; 121(7):895-900.
- Centers for Disease Control and Prevention. 2011. Antiviral agents for the treatment and chemoprophylaxis of influenza. MMWR; 60(No. RR-1):1-25.
- Chambers CD, et al, OTIS Collaborative Research Group. 2019. Oseltamivir use in pregnancy: Risk of birth defects, preterm delivery, and small for gestational age infants. Birth Defects Res; 111(19):1487-1493.
- Chow EJ, et al. Clinical Effectiveness and Safety of Antivirals for Influenza in Pregnancy. Open Forum Infect Dis; 8(6):ofab138.
- Cizeron A, et al. 2021. Low rate of oseltamivir prescription among adults and children with confirmed influenza illness in France during the 2018-19 influenza season. J Antimicrob Chemother; 76(4):1057-1062.
- Dunstan H, et al. 2014. Pregnancy outcome following maternal use of zanamivir or oseltamivir during the 2009 influenza A/H1N1 pandemic: a national prospective surveillance study. BJOG; 121(7):901-906.
- Fodor E, et al. 2023. An Observational Study on the Pharmacokinetics of Oseltamivir in Lactating Influenza Patients. Clin Pharmacol Ther; 115(2):318-323.
- Graner S, et al. 2017. Neuraminidase inhibitors during pregnancy and risk of adverse neonatal outcomes and congenital malformations: population based European register study. BMJ; 356:j629.
- Greer LG, et al. 2010. Maternal and neonatal outcomes after antepartum treatment of influenza with antiviral medications. Obstet Gynecol; 115(4):711-716.
- Greer LG, et al. 2011. Pharmacokinetics of oseltamivir in breast milk and maternal plasma. Am J Obstet Gynecol; 204: 524.e1-4.
- Laibl VR and Sheffield JS. 2005. Influenza and pneumonia in pregnancy. Clinics in Perinatology; 32:727-738.
- Lian J, et al. 2022. Neonatal outcomes after neuraminidase inhibitor use during pregnancy: A meta-analysis of cohort studies. Br J Clin Pharmacol; 88(3):911-918.
- Mancilla-Galindo J, et al. 2021. All-cause mortality among patients treated with repurposed antivirals and antibiotics for COVID-19 in Mexico City: A real-world observational study. EXCLI J; 20:199-222.
- Saito S, et al. 2013. Outcomes of infants exposed to oseltamivir or zanamivir in utero during pandemic (H1N1) 2009. Am J Obstet Gynecol; 209 (2): 130.e1-9.
- Siston A, et al. 2010. Pandemic 2009 influenza A (H1N1) virus illness among pregnant women in the United States. JAMA; 303(15):1517-1525.
- Svensson T, et al. 2011. Birth outcomes among women exposed to neuraminidase inhibitors during pregnancy. Pharmacoepidemiol Drug Saf; 20(10): 1030-1034.
- Tanaka T, et al. 2009. Safety of neuraminidase inhibitors against novel influenza A (H1N1) in pregnant and breastfeeding women. CMAJ; 181(1-2):55-58.

- The Centers for Disease Control and Prevention (CDC). 2025. Treating flu with antiviral drugs. <https://www.cdc.gov/flu/treatment/antiviral-drugs.html>.
- The CDC. 2026. Influenza antiviral medications: Summary for clinicians. <https://www.cdc.gov/flu/hcp/antivirals/summary-clinicians.html> [Accessed April 2026].
- Van Bennekom CM, Kerr SM, Mitchell AA. 2019. Oseltamivir exposure in pregnancy and the risk of specific birth defects. Birth Defects Res; 111(19):1479-1486.
- Wentges-van Holthe N, et al. 2008. Oseltamivir and breastfeeding. Int J Infect Dis; 12:451.
- Wollenhaupt M, et al. 2014. The safety of oseltamivir in pregnancy: an updated review of post-marketing data. Pharmacoepidemiol Drug Saf; 23(10):1035-1042.
- Xie H-Y, et al. 2013. Infant outcomes among pregnant women who used oseltamivir for treatment of influenza during the H1N1 epidemic. Am J Obstet Gynecol; 208:293.e1-7.

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Selected References:

- American College of Obstetricians and Gynecologists. 2020. Prelabor Rupture of Membranes: ACOG Practice Bulletin, Number 217. Obstetrics & Gynecology, 135(3):e80-e97.
- Baklouti S. et al. 2025. Population pharmacokinetic modelling of amoxicillin in human breast milk-a contribution from the ConcePTION project. Br J Clin Pharmacol, doi: 10.1002. Epub ahead of print.
- Benyamini L, et al. 2005. The safety of amoxicillin/clavulanic acid and cefuroxime during lactation. Ther Drug Monit; 27:499-502.
- Berkovitch M, et al. 2004. First-trimester exposure to amoxicillin/clavulanic acid: a prospective controlled study.

Br J Clin Pharmacol; 58:298-302.

- Boissiere-O'Neill T, et al. 2025. Exposure to systemic antimicrobials during pregnancy and risk of miscarriage: a population-based registry study. BJOG; doi: 10.1111/1471-0528.18155. Epub ahead of print.
- Campbell AC, et al. 1991. The excretion of amoxicillin in breastmilk and its effect on the suckling infant. Br J Clin Pharmacol; 31:230.
- Czeizel AE, et al. 2001. Augmentin treatment during pregnancy and the prevalence of congenital abnormalities: a population-based case-control teratologic study. Eur J Obstet Gynecol Reprod Biol; 97:188-192.
- Daniel S, et al. 2019. The safety of amoxicillin and clavulanic acid use in the first trimester of pregnancy. Br J Clin Pharmacol; 85:2856-2863.
- Grantham J, et al. 2002. Association between co-amoxiclav used antenatally with necrotising enterocolitis in the neonate. Am J Obstet Gynecol; 187:S90.
- Jepsen P, et al. 2003. A population-based study of maternal use of amoxicillin and pregnancy outcome in Denmark. Br J Clin Pharmacol; 55:216-221.
- Kafetzis D, et al. 1981. Passage of cephalosporins and amoxicillin into the breast milk. Acta Paediatr Scand; 70:285-288.
- Kenyon SL, et al. 2001. ORACLE Collaborative Group. Broad-spectrum antibiotics for preterm, prelabour rupture of fetal membranes: the ORACLE I randomised trial. ORACLE Collaborative Group. Lancet; 357:979-988.
- Kenyon SL, et al. 2001. ORACLE Collaborative Group. Broad-spectrum antibiotics for spontaneous preterm labour: the ORACLE II randomised trial. ORACLE Collaborative Group. Lancet; 357:989-994.
- Kenyon S, et al. 2002. ORACLE-antibiotics for preterm prelabour rupture of the membranes: short-term and long-term outcomes. Acta Paediatr Suppl; 437:12-15.
- Kenyon S, et al. 2008. Childhood outcomes after prescription of antibiotics to pregnant women with spontaneous preterm labour: 7-year follow-up of the ORACLE II trial. Lancet; 372 (9646):1319-1327.
- Kenyon S, et al. 2013. Preterm Labour, Antibiotics and Cerebral Palsy. Scientific Impact Paper No.33, Royal College of Obstetrics and Gynaecologists.
- Kwasniewski M, et al. 2025. Identification and characterization of anaerobic bacteria in human semen: a retrospective study. Anaerobe, 94:102977.
- Laspro M, et al. 2024. Association of commonly prescribed antepartum medications and incidence of orofacial clefting. Sage Journals, 62(7):1164-1174.
- Lin KJ, et al. 2012. Maternal exposure to amoxicillin and the risk of oral clefts. Epidemiology; 23(5):699-705. Marlow N, et al. 2017. The ORACLE Children Study: educational outcomes at 11 years of age following antenatal prescription of erythromycin or co-amoxiclav. Arch Dis Child Fetal Neonatal Ed; 102(2):F131-F135.
- Meeraus WH, et al. 2015. Association between antibiotic prescribing in pregnancy and cerebral palsy or epilepsy in children born at term: a cohort study using the health improvement network. PLoS ONE; 10(3):e0122034.
- Mercer BM, et al. 1997. Antibiotic therapy for reduction of infant morbidity after preterm premature rupture of the membranes. A randomized controlled trial. JAMA; 278:989-995.
- Merkel TA, et al. 2014. Predicting disease severity of necrotizing enterocolitis: how to identify infants for future novel therapies. J Clin Neonatol; 3(1):1-9.
- Morawiec E, et al. 2022. Semen dysbiosis-just a male problem? Front Cell Infect Microbiol; 12:815786.
- Padberg, S. 2015. Anti-infective Agents. In C Schaefer, P Peters, R Miller (Eds.), Drugs During Pregnancy and Lactation: Treatment Options and Risk Assessment. Pg 116. London: Elsevier.
- Puho EH, et al. 2007. Drug treatment during pregnancy and isolated orofacial clefts in Hungary. Cleft Palate Craniofac J; 44:194-202.
- Trahan J, et al. 2025. Antibiotic regimens for the management of preterm prelabour rupture of membranes: a multicenter retrospective cohort study. J Obstet Gynaecol Can, 47(7):102922.
- Tran A, et al. 2025. First-trimester exposure to macrolides and risk of major congenital malformations compared with amoxicillin: a French nationwide cohort study. PLoS Med, 22(4):e1004576.

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