**References:**

1. Crump C, Sundquist J, Winkleby MA, Sundquist K. Gestational age at birth and mortality from infancy into mid-adulthood: a national cohort study. Lancet Child Adolesc Health. 2019;3(6):408-417. doi: 10.1016/S2352-4642(19)30108-7
2. Zhu Z, et al. Mortality and morbidity of infants born extremely Preterm at Tertiary Medical Centers in China from 2010 to 2019. JAMA Netw Open. 2021;3;4(5):e219382. doi: 10.1001/jamanetworkopen.2021.9382.
3. Husby A, Wohlfahrt J, Melbye M. Gestational age at birth and cognitive outcomes in adolescence: population based full sibling cohort study. BMJ. 2023;380:e072779. doi: <https://doi.org/10.1136/bmj-2022-072779>
4. Lemme-Dumit JM, et al. Altered gut Microbiome and Fecal Immune phenotype in early Preterm Infants with Leaky Gut. Front Immunol. 2022; 23:13:815046. doi: 10.3389/fimmu.2022.815046.
5. Ma B, et al. Highly Specialized Carbohydrate Metabolism Capability in Bifidobacterium strains Associated with Intestinal Barrier Maturation in Early Preterm Infants. mBio. 2022; 13(3):e0129922. doi: 10.1128/mbio.01299-22.
6. Healy DB, Ryan CA, Ross RP, Stanton C, Dempsey EM. Clinical implications of preterm infant gut microbiome development. Nat Microbiol. 2022; 7(1):22-33.

doi: 10.1038/s41564-021-01025-4.

1. Humberg A, et al. Preterm birth and sustained inflammation: consequences for the neonate. Semin Immunopathol. 2020; 42(4):451-468. doi: 10.1007/s00281-020-00803-2.
2. Brody H. The gut microbiome. Nature. 2020; 577(7792):S5. doi: 10.1038/d41586-020-00194-2.Kalbermatter C, Fernandez Trigo N, Christensen S, Ganal-Vonarburg SC.
3. Maternal microbiota, early life colonization and breast milk drive Immune Development in the Newborn. Front Immunol. 2021; 13:12:683022. doi: 10.3389/fimmu.2021.683022.
4. Durda-Masny M, Ciomborowska-Basheer J, Makałowska I, Szwed A. The Mediating Role of the gut microbiota in the physical growth of children. Life (Basel) 2022;20;12(2):152. doi: 10.3390/life12020152.
5. Aguilar-Lopez M, Dinsmoor AM, Ho TTB, Donovan SM. A systematic review of the factors influencing microbial colonization of the preterm infant gut. Gut Microbes. 2021;13:1–33. doi: 10.1080/19490976.2021.1884514.
6. Stewart CJ, et al. Longitudinal development of the gut microbiome and metabolome in preterm neonates with late onset sepsis and healthy controls. Microbiome. 2017;12;5(1):75. doi: 10.1186/s40168-017-0295-1.
7. De Musis C, et al. Inflammatory Bowel Diseases: the role of gut microbiota. Curr Pharm Des. 2020;26(25):2951-2961.doi: 10.2174/1381612826666200420144128.
8. Fu X, Li S, Jiang Y, Hu X, Wu H. Necrotizing Enterocolitis and Intestinal Microbiota: the timing of Disease and Combined Effects of multiple species. Front Pediatr. 2021;9: 657349. doi: [10.3389/fped.2021.657349](https://doi.org/10.3389%2Ffped.2021.657349)
9. Lee CC, et al. Gut dysbiosis, bacterial colonization and translocation, and neonatal Sepsis in very-low-birth-weight Preterm Infants. Front Microbiol. 2021;12:746111. doi: [10.3389/fmicb.2021.746111](https://doi.org/10.3389%2Ffmicb.2021.746111)
10. Li Y et al. In utero human intestine harbors unique metabolome, including bacterial metabolites.JCI Insight;2020;5;5(21):e138751. doi: 10.1172/jci.insight.138751
11. de Goffau MC, et al. Human placenta has no microbiome but can contain potential pathogens. Nature. 2019;572(7769):329-334. doi: 10.1038/s41586-019-145
12. Sharlandjieva V, Beristain AG, Terry J. Assessment of the human placental microbiome in early pregnancy. Front Med (Lausanne). 2023;10:1096262. doi: [10.3389/fmed.2023.1096262](https://doi.org/10.3389%2Ffmed.2023.1096262)
13. [Xiaoyu Chen](https://pubmed.ncbi.nlm.nih.gov/?term=Chen+X&cauthor_id=37407941), [Yongyan Shi](https://pubmed.ncbi.nlm.nih.gov/?term=Shi+Y&cauthor_id=37407941) Determinants of microbial colonization in the premature gut. Mol Med.2023;5;29(1):90. doi: 10.1186/s10020-023-00689-4.
14. Theis KR, Romero R, Winters AD, Jobe AH, Gomez-Lopez N. (2020a) Lack of Evidence for Microbiota in the Placental and Fetal Tissues of Rhesus Macaques. [ASM Journals](https://journals.asm.org/).2020;5(3):1-15. doi: <https://doi.org/10.1128/msphere.00210-20>
15. Perez-Muñoz ME, Arrieta MC, Ramer-Tait AE, Walter J. A critical assessment of the “sterile womb” and “in utero colonization” hypotheses: implications for research on the pioneer infant microbiome. Microbiome. 2017;5:48. DOI 10.1186/s40168-017-0268-4
16. Theis KR, et al. Does the human placenta delivered at term have a microbiota? Results of cultivation, quantitative real-time PCR, 16S rRNA gene sequencing, and metagenomics. Am J Obstet Gynecol. 2019;220:267e261–267e239. doi: 10.1016/j.ajog.2018.10.018.
17. Liu YX, et al. A practical guide to amplicon and metagenomic analysis of microbiome data. Protein Cell. 2021; 12(5):315-330. doi: 10.1007/s13238-020-00724-8.
18. Collado MC, Cernada M, Baüerl C, Vento M, Pérez-Martínez G. Microbial ecology and host-microbiota interactions during early life stages. Gut Microbes. 2012;3(4):352–365. doi: [10.4161/gmic.21215](https://doi.org/10.4161%2Fgmic.21215)
19. Bokulich NA, et al. Antibiotics, birth mode, and diet shape microbiome maturation during early life. Sci Transl Med. 2016;8:343ra382. doi: 10.1126/scitranslmed.aad7121.
20. Arboleya S, Solís G, Fernández N, de los Reyes-Gavilán CG, Gueimonde M. Facultative to strict anaerobes ratio in the preterm infant microbiota: a target for intervention? Gut Microbes. 2012;3(6):583–588. doi: [10.4161/gmic.21942](https://doi.org/10.4161%2Fgmic.21942)
21. Itani T, et al. Establishment and development of the intestinal microbiota of preterm infants in a lebanese tertiary hospital. Anaerobe. 2017;43:4–14. doi: 10.1016/j.anaerobe.2016.11.001.
22. Younge N et al. Fetal exposure to the maternal microbiota in humans and mice. JCI Insight 2019; 3;4(19):e127806. doi: 10.1172/jci.insight.127806.
23. Korpela K, et al. Intestinal microbiota development and gestational age in preterm neonates. Sci Rep. 2018;8:2453. DOI:10.1038/s41598-018-20827-x
24. Drell T, et al. The development of gut microbiota in critically ill extremely low birth weight infants assessed with 16S rRNA gene based sequencing. Gut Microbes. 2014;5:304–12. doi: 10.4161/gmic.28849.
25. Oyedemi OT, Shaw S, Martin JC, Ayeni FA, Scott KP. Changes in the gut microbiota of nigerian infants within the first year of life. PLoS ONE. 2022;17:e0265123. <https://doi.org/10.1371/journal.pone.0265123>
26. Bäckhed F, et al. Dynamics and stabilization of the human gut microbiome during the First Year of Life. Cell Host Microbe. 2015;17:690–703. doi: 10.1016/j.chom.2015.04.004.
27. Chernikova DA, et al. Fetal exposures and perinatal influences on the stool microbiota of premature infants. J Matern Fetal Neona. 2016;29(1):99–105. doi: 10.3109/14767058.2014.987748.
28. Roswall J, et al. Developmental trajectory of the healthy human gut microbiota during the first 5 years of life. Cell Host Microbe. 2021;29(5):765–776e763. doi: 10.1016/j.chom.2021.02.021.
29. Westaway JAF et al.The bacterial gut microbiome of probiotic-treated very-preterm infants: changes from admission to discharge. Pediatric Research.2022;92:142 – 150. doi: 10.1038/s41390-021-01738-6.
30. Chen X, et al. Gut dysbiosis induces the development of pre-eclampsia through bacterial translocation. Gut. 2020;69:513–22. doi: [10.1136/gutjnl-2019-319101](http://dx.doi.org/10.1136/gutjnl-2019-319101)
31. Li P, et al. Association between gut microbiota and preeclampsia-eclampsia: a two-sample mendelian randomization study. BMC Med. 2022;20(1):443. doi:10.1186/s12916-022-02657-x.
32. Valles-Colomer M, et al. The person-to-person transmission landscape of the gut and oral microbiomes. Nature. 2023;614:125–35. doi: 10.1038/s41586-022-05620-1.
33. Su M, et al. Diversified gut microbiota in newborns of mothers with gestational diabetes mellitus. PLoS ONE. 2018;13:e0205695. <https://doi.org/10.1371/journal.pone.0205695>
34. Hasan S, et al. Gut microbiome in gestational diabetes: a cross-sectional study of mothers and offspring 5 years postpartum. Acta Obstet Gynecol Scand. 2018; 97(1):38-46.

doi: 10.1111/aogs.13252.

1. Sun Z, et al. Revealing the importance of prenatal gut microbiome in offspring neurodevelopment in humans. EBioMedicine. 2023;90:104491. DOI:  [10.1016/j.ebiom.2023.104491](http://dx.doi.org/10.1016/j.ebiom.2023.104491)
2. Ferretti P, et al. Mother-to-infant Microbial Transmission from different body Sites Shapes the developing infant gut Microbiome. Cell Host Microbe. 2018; 11;24(1):133-145.e5.

doi: 10.1016/j.chom.2018.06.005.

1. Valles-Colomer, M. et al. Variation and transmission of the human gut microbiota across multiple familial generations. Nat. Microbiol. 2022;7:7-96.<https://doi.org/10.1038/s41564-021-01021-8>
2. Morelli L, Capurso L. (2012) FAO/WHO guidelines on probiotics: 10 years later. J Clin Gastroenterol: S1–2. doi: 10.1097/MCG.0b013e318269fdd5.
3. Koutsoumanis K, et al. Update of the list of QPS-recommended biological agents intentionally added to food or feed as notified to EFSA 15: suitability of taxonomic units notified to EFSA until September 2021. Efsa j. 2022;20:e07045.  <https://doi.org/10.2903/j.efsa.2022.7045>
4. Tanaka K et al. (2019) Poor Bifidobacterial Colonization Is Associated with Late Provision of Colostrum and Improved with Probiotic Supplementation in Low Birth Weight Infants. *Nutrients* 11. doi: [10.3390/nu11040839](https://doi.org/10.3390%2Fnu11040839)
5. Oncel MY, et al. Lactobacillus Reuteri for the prevention of necrotising enterocolitis in very low birthweight infants: a randomised controlled trial. Arch Dis Child Fetal Neonatal Ed. 2014;99(2):F110–115. doi: 10.1136/archdischild-2013-304745.
6. Sun J, et al. Effects of Probiotics on Necrotizing Enterocolitis, Sepsis, Intraventricular Hemorrhage, mortality, length of Hospital Stay, and Weight Gain in very Preterm Infants: a Meta-analysis. Adv Nutr. 2017;8(5):749–63. doi: 10.3945/an.116.014605.
7. Costeloe K, Hardy P, Juszczak E, Wilks M, Millar MR. Bifidobacterium breve BBG-001 in very preterm infants: a randomised controlled phase 3 trial. Lancet. 2016;387:649–60. doi: 10.1016/S0140-6736(15)01027-2.
8. Millar M, et al. The Microbiome of Infants recruited to a Randomised Placebo-controlled Probiotic Trial (PiPS Trial). EBioMedicine. 2017;20:255–62. doi: 10.1016/j.ebiom.2017.05.019.
9. Horigome A, et al. Colonization of supplemented Bifidobacterium breve M-16V in low Birth Weight Infants and its Effects on their gut microbiota weeks post-administration. Front Microbiol. 2021;12:610080. doi: 10.3389/fmicb.2021.610080.
10. Li Y, et al. Effects of bifidobacterium breve supplementation on intestinal flora of low birth weight infants. Pediatr Int. 2004;46:509–15. doi: 10.1111/j.1442-200x.2004.01953.x
11. Chi C et al. Early Gut Microbiota Colonisation of Premature Infants Fed with Breastmilk or Formula with or without Probiotics: A Cohort Study. *Nutrients*.2019; 14;13(11):4068. doi: 10.3390/nu13114068.
12. Nguyen M, et al. Impact of Probiotic B. infantis EVC001 feeding in premature infants on the gut Microbiome, Nosocomially Acquired Antibiotic Resistance, and enteric inflammation. Front Pediatr. 2021;9:618009. doi: 10.3389/fped.2021.618009.
13. Plummer EL, et al. Gut microbiota of preterm infants supplemented with probiotics: sub-study of the ProPrems trial. BMC Microbiol. 2018;18:184. doi: 10.1186/s12866-018-1326-1.
14. Plummer EL et al.The effect of probiotic supplementation on the gut microbiota of preterm infants. J Med Microbiol.2021;70(8): 001403.. doi: [10.1099/jmm.0.001403](https://doi.org/10.1099%2Fjmm.0.001403)