

Supplementary Materials

Search methodology

Section 3.1. MeSH terms (PubMed) and search: “pregnancy”[MeSH Terms] OR pregnancy [Text Word], “microbiota”[MeSH Terms] OR “microbiome”[Text Word], “colonization”[All Fields], “growth and development”[Subheading] OR “development” [Text Word]. Filters: Article types: case reports, classical article, clinical study, clinical trial, comparative study, controlled clinical trial, multicenter study, observational study, randomized controlled trial; Publication dates: 2004–2019 (inclusive); Species: humans; Language: English; Age: infants.

Section 3.2. No MeSH terms (PubMed) and search: “Microbiota”[All Fields], AND “Intrapartum antibiotic prophylaxis”[All Fields] OR “neonatal antibiotic therapy”[All Fields]; “Dysbiosis”[All Fields], AND “neonatal antibiotic therapy”[All Fields] OR “Intrapartum antibiotic prophylaxis”[All Fields]. Filters: Article types: case reports, classical article, clinical study, clinical trial, comparative study, controlled clinical trial, multicenter study, observational study, randomized controlled trial; Publication dates: 2004–2019 (inclusive); Species: humans; Language: English; Age: infants.

Section 3.3. MeSH terms (PubMed) and search: (((“dysbiosis”[MeSH Terms] OR “dysbiosis”[All Fields]) OR “dysbioses”[All Fields]) AND (((“microbiota”[MeSH Terms] OR “microbiota”[All Fields]) OR “microbiotas”[All Fields]) OR “microbiota s”[All Fields]) OR “microbiotae”[All Fields])) AND (((((((((((“allergie”[All Fields] OR “hypersensitivity”[MeSH Terms]) OR “hypersensitivity”[All Fields]) OR “allergies”[All Fields] OR “allergy”[All Fields]) OR “allergy and immunology”[MeSH Terms]) OR (“allergy”[All Fields] AND “immunology”[All Fields])) OR “allergy and immunology”[All Fields]) OR (((“disease”[MeSH Terms] OR “disease”[All Fields]) OR “diseases”[All Fields]) OR “disease s”[All Fields]) OR “diseased”[All Fields])) OR (((“food hypersensitivity”[MeSH Terms] OR (“food”[All Fields] AND “hypersensitivity”[All Fields])) OR “food hypersensitivity”[All Fields]) OR (“food”[All Fields] AND “allergy”[All Fields])) OR “food allergy”[All Fields])) OR (((“dermatitis, atopic”[MeSH Terms] OR (“dermatitis”[All Fields] AND “atopic”[All Fields])) OR “atopic dermatitis”[All Fields]) OR (“atopic”[All Fields] AND “dermatitis”[All Fields])) OR (((“asthma”[MeSH Terms] OR “asthma”[All Fields]) OR “asthmas”[All Fields]) OR “asthma s”[All Fields])) AND (“bifidobacterium”[MeSH Terms] OR “bifidobacterium”[All Fields]). Filters: Article types: Full text, Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Systematic Reviews; Publication dates: 2004–2020 (inclusive); Species: humans; Language: English; Ages: Children: birth–18 years, Newborns: birth–1 month, Infants: birth–23 months, Preschool Children: 2–5 years, Children: 6–12 years.

Section 3.4. MeSH terms (PubMed) and search: (((((((“probiotic s”[All Fields] OR “probiotal”[All Fields]) OR “probiotics”[MeSH Terms]) OR “probiotics”[All Fields]) OR “probiotic”[All Fields]) OR (“bifidobacterium”[MeSH Terms] OR “bifidobacterium”[All Fields])) AND (((((((“milk, human”[MeSH Terms] OR (“milk”[All Fields] AND “human”[All Fields])) OR “human milk”[All Fields]) OR (“human”[All Fields] AND “milk”[All Fields])) OR (((((((“breast feeding”[MeSH Terms] OR (“breast”[All Fields] AND “feeding”[All Fields])) OR “breast feeding”[All Fields]) OR “breastfeeding”[All Fields]) OR “breastfeedings”[All Fields]) OR “breastfeeders”[All Fields]))) OR (((((((“milk, human”[MeSH Terms] OR (“milk”[All Fields] AND “human”[All Fields])) OR “human milk”[All Fields]) OR (“breast”[All Fields] AND “milk”[All Fields])) OR “breast milk”[All Fields])) AND (((((((“transfer”[All Fields] OR “transferability”[All Fields]) OR “transferable”[All Fields]) OR “transferred”[All Fields]) OR “transferring”[All Fields]) OR “transferred”[All Fields]) OR “transferring”[All Fields]) OR “transfers”[All Fields]) OR (((((((((((“translocalization”[All Fields] OR “translocalized”[All Fields]) OR “translocants”[All Fields]) OR “translocate”[All Fields]) OR “translocated”[All Fields]) OR “translocates”[All Fields])

OR “translocating”[All Fields] OR “translocation, genetic”[MeSH Terms] OR (“translocation”[All Fields] AND “genetic”[All Fields]) OR “genetic translocation”[All Fields] OR “translocation”[All Fields] OR “protein transport”[MeSH Terms] OR (“protein”[All Fields] AND “transport”[All Fields]) OR “protein transport”[All Fields] OR “translocations”[All Fields] OR “translocational”[All Fields] OR “translocator”[All Fields] OR “translocators”[All Fields]). Filters: Article type: Full text, Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Systematic Reviews; Publication dates: 2004–2020 (inclusive); Species: humans; Language: English; Ages: Children: birth–18 years, Newborns: birth–1 month, Infants: birth–23 months, Preschool Children: 2–5 years, Children: 6–12 years..

Section 3.5. MeSH terms (PubMed) and search: ((((((“probiotic s”[All Fields] OR “probiotal”[All Fields] OR “probiotics”[MeSH Terms] OR “probiotics”[All Fields] OR “probiotic”[All Fields] AND ((((((“food hypersensitivity”[MeSH Terms] OR (“food”[All Fields] AND “hypersensitivity”[All Fields])) OR “food hypersensitivity”[All Fields] OR (“food”[All Fields] AND “allergy”[All Fields])) OR “food allergy”[All Fields] OR (“food hypersensitivity”[MeSH Terms] OR (“food”[All Fields] AND “hypersensitivity”[All Fields])) OR “food hypersensitivity”[All Fields]))) AND (“lactobacillus”[MeSH Terms] OR “lactobacillus”[All Fields] OR (“bifidobacterium”[MeSH Terms] OR “bifidobacterium”[All Fields])). Filters: Article types: Full-text, Randomized Controlled Trial, Publication dates: 2004–2019 (inclusive); Species: humans; Language: English; Ages: infants (birth–23 months and newborns: birth–1 month).

Section 3.6. MeSH terms (PubMed) and search: ((((((“probiotic s”[All Fields] OR “probiotal”[All Fields] OR “probiotics”[MeSH Terms] OR “probiotics”[All Fields] OR “probiotic”[All Fields] AND ((((((“asthma”[MeSH Terms] OR “asthma”[All Fields] OR “asthmas”[All Fields] OR “asthma s”[All Fields] OR ((((((“respiratory sounds”[MeSH Terms] OR (“respiratory”[All Fields] AND “sounds”[All Fields])) OR “respiratory sounds”[All Fields] OR “wheeze”[All Fields] OR “wheezes”[All Fields] OR “wheezing”[All Fields] OR “wheezed”[All Fields])) OR (“rhinitis”[MeSH Terms] OR “rhinitis”[All Fields] OR “rhinitides”[All Fields]))) AND (((((((((((((((“prevent”[All Fields] OR “preventability”[All Fields] OR “preventable”[All Fields] OR “preventative”[All Fields] OR “preventatively”[All Fields] OR “preventatives”[All Fields] OR “prevented”[All Fields] OR “preventing”[All Fields] OR “prevention and control”[MeSH Subheading] OR (“prevention”[All Fields] AND “control”[All Fields])) OR “prevention and control”[All Fields] OR “prevention”[All Fields] OR “prevention s”[All Fields] OR “preventions”[All Fields] OR “preventive”[All Fields] OR “preventively”[All Fields] OR “preventives”[All Fields] OR “prevents”[All Fields])). Filters: Article types: Full-text, Randomized Controlled Trial, Publication dates: 2009–2019 (inclusive); Species: humans; Language: English.

Section 3.7. MeSH terms (PubMed) and search: “Probiotics”[MeSH Terms] OR “paraprobiotics”[Text Word], AND “preterm infant”[MeSH Terms] OR “preterm neonate”[MeSH Terms]. Filters: Article type: case reports, classical article, clinical study, clinical trial, comparative study, controlled clinical trial, journal article, multicenter study, observational study, randomized controlled trial); Publication dates: 2004–2019 (inclusive); Species: humans; Languages: English; Ages: infants (birth–23 months and newborns: birth–1 month).

Section 3.8. MeSH terms (PubMed) and search: (“Probiotics”[Majr] AND “Safety”[Mesh]) AND (“Pregnancy”[Mesh:NoExp] OR “Infant, Newborn”[Mesh]) OR (“Probiotics”[Majr] AND “Safety”[Mesh]) AND (“Pregnancy”[Mesh:NoExp] OR “Infant, Newborn”[Mesh])[All Fields] NOT medline[sb]). Filters: Article type: case reports, classical article, clinical study, clinical trial, comparative study, controlled clinical trial, journal article, multicenter study, observational study,

randomized controlled trial); Publication dates: 2009–2019 (inclusive); Species: humans; Languages: English, Spanish; Ages: adults (19–44 years) and newborns (birth–1 month)

