



Benefits of Breastfeeding and Risk Factors for Difficulties

Breastfeeding Benefits Baby The Dose Response Benefits of Breastfeeding for Infants

EXCLUSIVE Breastfeeding	ANY Breastfeeding
<p>for 6 months</p> <ul style="list-style-type: none"> • 63% ↓ in serious colds, ear and throat infections <p>for more than 4 months:</p> <ul style="list-style-type: none"> • 72% ↓ in risk for hospitalization for lower respiratory tract infections in the first year of life • 74% ↓ in severity of RSV bronchiolitis <p>for 3 months or more</p> <ul style="list-style-type: none"> • Significantly higher intelligence scores <p>for 3-4 months</p> <ul style="list-style-type: none"> • 30% ↓ in incidence of juvenile diabetes • 50% ↓ in risk of ear infections • 27% ↓ in asthma and eczema in a low risk population and 42% ↓ in a high risk population (positive family history allergy) 	<p>↓ in incidence of:</p> <ul style="list-style-type: none"> • ear infection = 23% • nonspecific gut infections = 64% (effect lasts 2 months after stopping breastfeeding) • necrotizing enterocolitis in premis = 58-77% • Type 2 diabetes = 40% (possibly related to breastfeeding's effect on feeding self-regulation) <p>↓ risk of:</p> <ul style="list-style-type: none"> • SIDS associated with breastfeeding = 36% • celiac disease if breastfeeding when gluten-containing foods are introduced = 52% ↑ duration of breastfeeding is associated with a ↓ risk of celiac disease. • childhood inflammatory bowel disease = 31% <p>↓ Obesity:</p> <ul style="list-style-type: none"> • 15-30% ↓ in adolescent and adult obesity rates. <ul style="list-style-type: none"> ○ Breastfed sibs weighed 14 lbs less than formula fed sibs and were less likely to be obese. ○ Each month of breastfeeding was associated with a 4% reduction in risk of being overweight. • ↓ BMI, LDLs, blood pressure later in life, ↑ HDLs, and improved insulin metabolism. <p>Any breastfeeding for more than 6 months:</p> <ul style="list-style-type: none"> • 4 fold ↑ in risk of pneumonia if breastfeeding 4-6 months vs more than 6 months. • 15-20% ↓ risk of childhood leukemia. Breastfeeding less than 6 months also protective, but less so.

Significant Benefits for Premature Babies who Consume Breastmilk

- Lower rates of sepsis infections, necrotizing enterocolitis, retinopathy of prematurity, and metabolic syndrome
- Lower hospital readmissions in the year after NICU discharge
- Quicker full feeding by mouth and better feeding tolerance
- Significantly improved neuro-developmental outcomes are such that all premis, especially under 1.5kg, should get breastmilk. Such outcomes are associated with predominant and not necessarily exclusive breastmilk feeding.
 - Micro-premis who got the greatest proportion of breastmilk had significantly greater mental, motor, and behavior rating scores at 18 and 30 months old.
 - Babies had greater intelligence test results, white matter and total brain volumes.

Benefits for Mothers who Breastfeed

- Less post-partum blood loss and faster shrinking of uterus
- Duration of breastfeeding:
 - Moms exclusively breastfeeding more than 6 months weighed 1.38kg less than those who didn't breastfeed.
 - For each year of breastfeeding
 - 4-12% decreased risk of Type 2 diabetes (if no gestational diabetes)
 - 4.3% reduction in breast cancer
 - 28% decrease in breast and ovarian cancer is associated with a total duration of breastfeeding of more than 12 months
 - Longer total time of breastfeeding is related to a decreased risk of developing rheumatoid arthritis.
- A cumulative lactation history of 12-23 months had a significant reduction in hypertension, hyperlipidemia, cardiovascular disease and diabetes.
- Increased child spacing
- Less post-partum depression



Risk Factors for Lactation Difficulties – Ask for help!

MATERNAL		INFANT
History/social factors <ul style="list-style-type: none"> • First baby • Early intention to both breastfeed and bottle or formula feed and to use pacifiers • Early intention to return to work or school • History of previous breastfeeding problems or breastfeeding infant with slow weight gain • History of infertility • Significant medical problems (untreated hypothyroidism, diabetes, cystic fibrosis) • Maternal age (teen mother or advanced age) • Psychosocial problems (depression, poor, or negative support of breastfeeding) • Perinatal complications (hemorrhage, hypertension, infection) • Plans to use hormonal contraceptives before breastfeeding is well established • Perceived inadequate milk supply • Maternal meds (inappropriate advice about compatibility with breastfeeding is common) 	Anatomic/physiologic factors <ul style="list-style-type: none"> • Lack of noticeable breast enlargement during pregnancy • Flat or inverted nipples • Variation in breast appearance (hypoplastic, tubular, marked asymmetry) • Any previous breast surgery, including plastics procedures • Previous breast abscess • Maternal obesity (BMI > 29) • Extremely/persistently sore nipples • Failure of lactogenesis stage 2 (milk did not noticeably “come in.” Can be difficult to evaluate prior to discharge before 24–48 hours.) • Mother unable to hand express colostrum • Discharge from hospital using a nipple shield or other “appliance” 	Medical/anatomic/physiologic factors <ul style="list-style-type: none"> • Low birth weight or premature (<37weeks) • Multiples • Difficulty latching on to one or both breasts • Ineffective or unsustained suckling • Oral anatomic abnormalities (cleft lip/palate, micrognathia, macroglossia, tight frenulum) • Medical problems (jaundice, hypoglycemia, infection, respiratory distress) • Neurologic problems (genetic syndromes, hypotonia, hypertonia) • Persistently sleepy infant • Excessive infant weight loss <p style="text-align: center;">Environmental factors</p> <ul style="list-style-type: none"> • Mother–baby separation or breast pump dependency • Formula supplementation • Effective breastfeeding not established by hospital discharge • Early discharge from the hospital (<48 hours of age) • Early pacifier use

Adapted with permission from Pediatr Clin North Am 2001;48:285, and AAP and ACOG: Breastfeeding Handbook for Physicians 2006, pp. 82–83.

Maternal Medications and Breastfeeding

- Do not breastfeed if mother is taking **amphetamines, chemotherapy agents, ergotamines and statins.**
- Temporarily cease breastfeeding after maternal exposure to **diagnostic radioactive compounds.**
Guidelines are provided by the US Nuclear Regulatory Commission.
- **Psychotropic drugs** which are least likely to be problematic are
 - Tricyclic antidepressants (amitriptyline [Elavil]; clomipramine [Anaphranil])
 - SSRIs (paroxetine[Paxil]; sertraline [Zoloft].)
- If an infant has **G6PD**, the nursing mother should avoid fava beans, nitrofurantoin, primaquine and phenazopyridine to minimize the risk of hemolysis in the infant.

Contraindications to Breastfeeding

Do not put baby to the breast, however expressed breastmilk CAN be given to the baby	No breastfeeding and no expressed breastmilk	HIV
<ul style="list-style-type: none"> • Active tuberculosis (Resume at breast when not infectious, ie after treated 2 weeks.) • Active Herpes Simplex Virus on breast • A mom who develops varicella 5 days before through 2 days after delivery should be separated from infant. 	<ul style="list-style-type: none"> • Infant galactosemia • HTLV I or II • Untreated brucellosis. 	<p style="text-align: center;"><u>Industrialized world</u> No breastfeeding or expressed breastmilk</p> <hr/> <p style="text-align: center;"><u>Developing world</u> Benefits of breastfeeding outweighs the risk of acquiring HIV from breastmilk. Six months of exclusive breastfeeding PLUS 6 months of antiretroviral drugs significantly decreases postnatal acquisition of HIV-1.</p>

OK to Breastfeed with Caution

- Mom is **CMV** positive and baby is full term.
- Nursing mother in a supervised **methadone maintenance program.** Must be negative for HIV and illicit drugs.
- **Occasional alcohol intake**, not to exceed 0.5 grams of alcohol per kg body weight. (60kg mother → 2oz liquor, 8oz wine, or 2 beers.)
There is no need to “pump and dump” if the mother waits 2 hours after 1 drink before nursing, as there would be minimal concentrations of alcohol in the breastmilk by then. Alcohol does not increase supply but blunts the prolactin response to suckling. It slows the baby’s motor development.
- **Smoking** increases the incidence of respiratory allergy, SIDS, low supply and poor gain. Second hand smoke exposure should be avoided.