Academy of Breastfeeding Medicine
Annotated Bibliography:
Protocol on Breastfeeding the Hypotonic Infant

Reference	Content	Level of Evidence*
Aumonier, M E. Cunningham, C C. Breast feeding in infants with Down's syndrome. **Child: Care, Health & Development.** 9(5):247-55, 1983 Sep-Oct.	Mothers of children with Down's syndrome were asked about their experiences with early feeding their children and what problems occurred. Half of the mothers who initially wanted to breastfeed were successful without complications. This study shows that not all children with Down's syndrome have feeding issues.	III
Wolf LS, Glass RP. Feeding and Swallowing Disorders in Infancy - Assessment and Management Tuscon, AZ; Therapy Skill Builders, 1992	Authoritative, evidence-based information on feeding problems, particularly highlighting the high-risk infant. Authors are masters prepared Registered Occupational Therapists [O.T.R.]	III
Labbok, M., Hendershot,G. Does breastfeeding protect against malocclusion? An analysis of the 1981 child health supplement to the national health interview survey. **American Journal of Preventative Medicine** 1987, 3(4): 227-232.	Evidence obtained from multiple time series with or without the intervention. Using data from the 1981 Child Health Supplement to the National Health Interview Survey, the association between breastfeeding and malocclusion was analyzed. Increased duration of breastfeeding was associated with fewer children with malocclusion. This study demonstrates a potential role for breastfeeding and jaw development.	II-3
Owen MJ, Baldwin CD, Swank PR, Pannu AK, Johnson DL, Howie VM. Relation of infant feeding practices, cigarette smoke exposure, and group child care to the onset and duration of otitis media with effusion in the first two years of life. **J Pediatr.** 1993;123 :702 –71	In this study, 698 infants were monitored prospectively for 2 years and assessed by tympanometry for the occurrence of otitis media with effusion. Shorter duration of breastfeeding was associated with an increase in the amount of time the children had an effusion. This study demonstrates the role of breastfeeding in reducing otitis media	II-2
Oddy WH, Sly PD, de Klerk NH, et al. Breast feeding and respiratory morbidity in infancy: a birth cohort study. **Arch Dis Child.** 2003;88 :224 –228	In this study, 2602 children were prospectively assessed for the occurrence of respiratory illness and duration of breastfeeding during the first year of life. Children were significantly more likely to have multiple respiratory infections if breastfeeding was discontinued. The study shows that increased duration of breastfeeding is associated with a decreased prevalence of respiratory infection.	II-2

Duncan B, Ey J, Holberg CJ, Wright AL, Martinez FD, Taussig LM. Exclusive breast-feeding for at least 4 months protects against otitis media. **Pediatrics.** 1993;91 :867 –872.	Evidence obtained from multiple time series with or without the intervention This study retrospectively reviewed the records of 1013 infants in the first year of life, evaluating the duration and exclusiveness of breastfeeding and the occurrence of otitis media. Infants exclusively breastfed for 4 or more months had less acute otitis media than both the children who were not breastfed and those who were supplemented prior to 4 months of age. This study shows that exclusive breastfeeding is protective against otitis media.	II-2
Aniansson G, Alm B, Andersson B, et al. A prospective cohort study on breast-feeding and otitis media in Swedish infants. **Pediatr Infect Dis J.** 1994;13 :183 –188.	In this study, 400 children were examined at 2, 4 and 10 months of age and each episode of otitis media was recorded. The frequency of acute otitis media of upper respiratory infections in breastfed children was significantly decreased when compared to children never breastfed. Children who never breastfed experienced their first episode of acute otitis media significantly earlier than breastfed children. This study demonstrates role for breastfeeding in prevention of acute otitis media.	II-2
Bener A, Denic S, Galadari S. Longer breast-feeding and protection against childhood leukaemia and lymphomas. **Eur J Cancer.** 2001;37 :234 –238	Evidence obtained from well-designed case control analytic study. In this study, the mothers of 117 children, aged 2-14 years, with acute lymphocytic leukemia, Hodgkin's and non-Hodgkin's lymphoma and the mothers of matched controls were interviewed about the duration of breastfeeding. The duration of breastfeeding was shorter in those children with leukemia and lymphoma. Breastfeeding less than 6 months was associated with an increased odds ratio than breastfeeding for longer periods of time. This study demonstrates a potential protective effect of breastfeeding for longer than 6 months on the occurrence of childhood leukemia and lymphoma.	II-2
Davis MK. Review of the evidence for an association between infant feeding and childhood cancer. **Int J Cancer Suppl.** 1998;11 :29 –33	This paper is a meta-analysis of 9 case-control studies. It showed that children never breastfed have an increased chance of developing Hodgkin's disease. This demonstrates the benefit of breastfeeding for greater than 6 months in decreasing the risk of childhood cancer.	II-2
Anderson JW, Johnstone BM, Remley DT. Breast-feeding and cognitive development: a meta-analysis. **Am J Clin Nutr.** 1999;70 :525 –535	This paper is a meta-analysis of 11 case-control studies designed to investigate the differences in cognitive development between breastfed and formula-fed children. Significantly higher levels of cognitive function were seen in breastfed infants in the 6-23 month age group, and in breastfed premature infants. This benefit increased with duration of breastfeeding. This study further emphasizes the important role of breastmilk in childhood cognitive development.	II-2

Horwood LJ, Fergusson DM. Breastfeeding and later cognitive and academic outcomes. **Pediatrics.** 1998;101(1)	This study examined cognitive ability and academic achievement in 8 to 18 year olds who had been breastfed in the first year of life and compared them to children who were never breastfed. The population of over 1000 New Zealand children was followed longitudinally after information on feeding practices was obtained in the first year of life. At 8-18 years of age, the population was assessed via a multitude of academic and cognitive testing. Increasing duration of breastfeeding was associated with consistent and statistically significant increases in IQ, math and reading ability and higher academic achievement. This study shows that breastfeeding is associated with increases in child cognitive ability and educational achievement.	II-2
Marino, B., O'Brien, P., Lo Re, H. Oxygen saturation during breast and bottle feeding in infants with congenital heart disease. **Journal of Ped nursing.** 10 (6), 360-364.	Study investigating the relationship between breast or bottle feeding and oxygen saturation in 7 infants with congenital heart disease. Oxygen saturation was measured in each infant during a bottle feeding and a breastfeeding. Results indicated that oxygen saturations were maintained at higher and less variable levels during breastfeeding.	II-2
American Academy of Pediatrics: Section on Breastfeeding Breastfeeding and the Use of Human Milk. **Pediatrics**, Feb 2005; 115: 496 - 506.	This policy statement reviews the most recent research and advances with respect to breastfeeding. It concludes that breastfeeding benefits not only the child, but the mother, families and society and that every child should be breastfed unless medically indicated. It illustrates the importance of breastfeeding for every child.	III
Skotko, B. Mothers of Children with Down Syndrome Reflect on Their Postnatal Support. **Pediatrics** 2005, 115; 64-77. Objective.	This study investigated the way that physicians tell mothers about a post-natal diagnosis of Down Syndrome and the way the mothers reacted to the experience. Surveys from 985 mothers who received a post-natal diagnosis of Down Syndrome for their children were summarized. Most mothers had a negative experience and many reported being frightened and anxious.	III

Pisacane, A. Toscano, E. Pirri, I. Continisio, P. Andria, G. Zoli, B. Strisciuglio, P. Concolino, D. Piccione, M. Lo Giudice, C. Vicari, S. Down syndrome and breastfeeding. **Acta Paediatrica** 92(12):1479-81, 2003 Dec.	This study was a summary of interviews with mothers of 560 children with Down syndrome with regard to their decision about feeding their infant. They were compared to two control groups of healthy children that had previously been investigated with regard to feeding choices. Children with Down syndrome were significantly more frequently bottle-fed (57% vs 15% and 24%, respectively) Only 30% of infants admitted to the neonatal unit were breastfed. Mothers reported not breastfeeding mainly because of the infant's illness (especially if the child was admitted to the NICU), frustration or depression, perceived milk insufficiency, and difficulty with latch. This study demonstrates that children with Down syndrome are less likely to be breastfed.	II-2
Lawrence, R., Lawrence, R. (2005). Breastfeeding: A Guide for the Medical Profession. (6th Edition) St. Louis: Mosby.	Evidence-based information on all aspects of breastfeeding including summaries of basic science and clinical management of lactation.	III
McBride MC, Danner SC Sucking disorders in neurologically impaired infants: assessment and facilitation of breastfeeding. **Clin Perinatol.** 1987 Mar;14(1):109-30	Problems inherent in breastfeeding the neurologically impaired infant are discussed. Support for the mothers of the infants is emphasized. Techniques, including positioning recommendations, are reviewed.	III
Danner, S C. Breastfeeding the neurologically impaired infant. NAACOGS Clinical Issues in Perinatal & Women's Health **Nursing**. 3(4):640-6, 1992.	Support for the mothers of neurologically impaired infants is discussed, as well as addressing the role of the health care team in the care of these infants. Emphasis is placed on the uncertainty of predicting which infants will have problems nursing. Support for the nursing mother is important.	III
Protocol Committee Academy of Breastfeeding Medicine. Montgomery, A., Wight, N., Chantry, C., Howard, C. Clinical Protocol Number 9: Use of galactogogues in initiating or maintaining maternal milk supply. www.bfmed.org. 2004. Academy of Breastfeeding Medicine.	An evidence-based guideline for the use of various means to help increase maternal milk supply.	III
Protocol Committee Academy of Breastfeeding Medicine. Chantry, C., Howard, C. Clinical Protocol Number 4: Hospital guidelines for the use of supplementary feedings in the healthy term breastfed infant. www.bfmed.org. 2002. Academy of Breastfeeding Medicine	This is an evidence –based guideline for the appropriate use of food other than breastmilk in the term infant.	III

Mizuno K, Ueda A. Development of sucking behavior in infants with Down's syndrome. Acta Paediatr 2001; 90:1384-8.	Sucking behavior of 14 bottle-fed infants with Down's syndrome studied at 1, 4, 8 and 12 months of age, and compared to that previously documented in normal infants. Sucking pressure, frequency and duration were measured, as was ultrasound image of tongue peristalsis. Mean pressure, duration and efficiency were lower than normal infants; pressure and efficiency showed substantial development over the first 4 mos. Peristalsis was initially disorganized, but became organized by 8 mos. of age.	II-2