New Reviews Use Rigorous Methods to Assess Long-Term Effects of Breastfeeding

Both the World Health Organization (WHO) and the Agency for Healthcare Research and Quality (AHRQ) recently published comprehensive reviews of the evidence about associations between breastfeeding and numerous health outcomes (Horta, Bahl, Martines, & Victora, 2007; Ip et al., 2007). Most included studies in these reviews were carried out in developed countries. Both reviews took steps to minimize the self-selection bias in breastfeeding studies, in which randomization is not possible for ethical reasons. This convergence provides an excellent overview of what is known to date about positive health effects of breastfeeding in these settings.

Authors of the WHO monograph analyzed primary studies reporting effects of having breastfed on adult blood pressure, cholesterol, diabetes, overweight/obesity, and intellectual performance. They attempted to control for confounding variables and publication bias. In pooled analyses, blood pressure, total cholesterol, overweight/obesity, and type 2 diabetes were significantly reduced in breastfed individuals, and measures of intelligence were higher.

The AHRQ review assessed both primary studies and systematic reviews/meta-analyses of health effects of breastfeeding in both infants and mothers. Subgroup analyses examined effects of the duration and degree of breastfeeding and the effect of sociodemographic factors on the identified associations. Breastfed infants experienced reduced risk for numerous childhood infectious diseases and conditions, obesity, and sudden infant death syndrome, but relationships between breastfeeding and cognitive performance and cardiovascular health were not supported. For mothers, breastfeeding reduced risk for type 2 diabetes, postpartum depression, and breast and ovarian cancer, but there was no significant relationship with osteoporosis or weight loss.

Due to inherent differences in women who do breastfeed and do not and primary reliance on observational research, it is a challenge to measure effects of breastfeeding. These reviews take steps to strengthen the quality of knowledge in this area by attempting to control for confounding and following systematic review procedures. Together, they identify numerous benefits for babies and mothers through the life course and are important guides for policy, practice, education, and research, with special reference to developed countries.

REFERENCES


From Cochrane Database of Systematic Reviews (CDSR), Issue 2, 2007

New Systematic Reviews

- Advance provision of emergency contraception for pregnancy prevention
- Antenatal phenobarbital for reducing neonatal jaundice after red cell isoimmunization
- Cancer genetic risk assessment for individuals at risk of familial breast cancer
- Chinese medicinal herbs to treat the side-effects of chemotherapy in breast cancer
- Cup feeding versus other forms of supplemental enteral feeding for newborn infants unable to fully breastfeed
- Pain relief in hysterosalpingography
- Preoperative chemotherapy for women with operable breast cancer
- Selective estrogen receptor modulators (SERMs) for uterine leiomyomas
- Specialized antenatal clinics for women with a multiple pregnancy to improve maternal and infant outcomes
- Steroid hormones for contraception in women with sickle cell disease
- Steroidal contraceptives: Effect on carbohydrate metabolism in women without diabetes mellitus
- Treatment of vaginal bleeding irregularities induced by progesterin only contraceptives

Updated Systematic Reviews

- Absorbent products for light urinary incontinence in women
- Antibiotics for asymptomatic bacteriuria in pregnancy
- Antiplatelet agents for preventing pre-eclampsia and its complications
- Fetal pulse oximetry for fetal assessment in labour
- Interventions for preventing and treating pelvic and back pain in pregnancy
- Steroid hormones for contraception in men
- Treatments for iron deficiency anaemia in pregnancy
- Zinc supplementation for improving pregnancy and infant outcome

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From Database of Abstracts of Reviews of Effects (DARE)

Evidence-Based Reviews From Other Sources

Featured review: Chaillet, N., & Dumont, A. (2007). Evidence-based strategies for reducing cesarean section rates: A meta-analysis. Birth, 34, 53-64. The authors performed a meta-analysis of studies of interventions to reduce cesarean birth rates that were published from 1990 through mid-2005. They included studies of various quality designs. Three types of interventions were effective, those using audit and feedback, with community-based continuity of care, and with multifaceted strategies. Multifaceted strategies—including clinical guidelines education, mandatory second opinions, and audit and feedback—achieved the greatest reduction in cesarean rates among the studies. Studies that identified barriers to change were more effective than those that did not. Quality improvement strategies based on active management of labor had mixed effects.

Comment: The U.S. cesarean birth rate has reached a new record high each year since 2000. This review found that rates can be safely reduced through interventions that help providers and systems evaluate and change their practice.

sharing: A systematic review. Archives of Pediatric and Adolescent Medicine, 161, 237-245. The authors conducted a systematic review of studies reporting harms and benefits associated with infant bed sharing. The review examined interaction of smoking with bed sharing for the outcome of Sudden Infant Death Syndrome (SIDS) and the relationship between bed sharing and breastfeeding, bonding, and infant sleep. The 40 included studies were observational and of mixed quality and could not be statistically pooled. All were conducted in developed countries with similar subjects. The available evidence suggests an association between bed sharing and SIDS in smokers, but does not establish a clear association between bed sharing and SIDS in non-smokers. Three reports found reduced SIDS with bed sharing and older age of child. Bed sharing and duration of breastfeeding were positively associated: longer breastfeeding could contribute to bed sharing, or vice versa. No included study measured bonding.

Comment: This is the most comprehensive and up-to-date analysis of benefits and harms of infant bed sharing, but this body of studies has many limitations and better quality research is needed.

Featured review: Raymond, E., Trussell, J., & Polis, C. (2007). Population effect of increased access to emergency contraceptive pills: A systematic review. Obstetrics & Gynecology, 109, 181-188. The authors conducted a systematic review of studies of varying designs and quality that examined the association between access to emergency contraceptive pills (ECP) and rates of ECP utilization and pregnancy. Increased access to ECP was associated with increased usage but not with a significant reduction in the rate of pregnancy. Studies of any design that reported primary data on outcomes of interest were included, and formal statistical meta-analysis was not performed because of important differences in study methods. Contrary to prediction, this analysis of mixed quality studies did not find that increased access to ECP is associated with a reduction in the rate of pregnancy.

Comment: Many view ECP as a strategy for reducing the high U.S. rate of unintended pregnancy. A pooled analysis of well-conducted randomized controlled trials is needed to evaluate impact of ECP on pregnancy rates, and the authors plan a Cochrane Review for this purpose.

Recent Evidence-Based Reviews


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