This PowerPoint file is a supplement to the video presentation. Some of the educational content of this program is not available solely through the PowerPoint file. Participants should use all materials to enhance the value of this continuing education program.

Introduction to Breastfeeding: Recommendations, Benefits, and Common Issues

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Definitions:

- Breastfeeding: feeding of an infant or child at the breast
  - Usually with human milk
  - Supplement at breast
- Feeding human milk – either at the breast, with bottle, finger feeding, cup feeding, or spoon feeding

Feeding breast-milk with bottle

Recommendations

- U.S. Surgeon General – Healthy People 2020
  - 81.9% of all new moms begin breastfeeding
  - 46.2% exclusively breastfeeding at 3 months
  - 25.5% exclusively breastfeeding at 6 months
  - 60.6% still breastfeeding when the baby is 6 months
  - 34.1% still breastfeeding at one year
  - 38% employers with worksite support
  - Reduce formula supplementation during first 2 days of life
  - Increase facilities that provide lactation focus

Recommendations

- The American Academy of Pediatrics (AAP), The World Health Organization (WHO), The United Nations Children's Fund (UNICEF), other professional medical and nutritional organizations:
  - Breastfeed exclusively for first 6 months
  - Breastfeed exclusively, then introduce complementary foods at 6 months
  - Encourage continued breastfeeding until child is 2, and thereafter for what is mutually agreed upon between mother and child

The Baby-Friendly Hospital Initiative (BFHI)

- Launched in 1991
- Administered by WHO & UNICEF
- 10 steps to successful breastfeeding
- International Code of Marketing Breast-Milk Substitutes
- Provides assistance to hospitals to promote and encourage breastfeeding

The Baby-Friendly Hospital Initiative (BFHI)

- 20,000+ facilities in 150 countries are designated BFHI
- Accredited by Baby-Friendly USA, INC (BFUSA)
  - “Human milk fed through direct breastfeeding is the optimal way…”
  - Breastfeeding should be protected in the hospital without influence by commercial interest aka formula companies
  - All mothers should be provided with knowledge on the breastfeeding benefits and importance and allowed to make an educated choice about infant feeding

www.babyfriendlyusa.org

10 Steps to Successful Breastfeeding

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff. If you do not know your breastfeeding policy at your workplace, ask
2. Train all healthcare staff in the skills necessary to implement this policy

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

10 Steps to Successful Breastfeeding

3. Inform all pregnant women about the benefits and management of breastfeeding. Many places hire specific lactation professionals. Others rely on the nurses

4. Help mothers initiate breastfeeding within one hour of birth. Research has shown that a natural reflex that helps with suckling at the breast may lessen after the first hour. So unless medically contraindicated, breastfeeding during that first hour is crucial

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

10 Steps to Successful Breastfeeding

5. Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants. This may involve hand expressions, pumping, or going to the neonatal intensive care unit (NICU) and working around medical interventions

6. Give infants no food or drink other than breast-milk, unless medically indicated. This includes sugar water that some hospitals use during a male infant's circumcision

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

10 Steps to Successful Breastfeeding

7. Practice rooming in – allow mothers and infants to remain together 24 hours a day. Unless a medical reason is present the infant should be seen by the medical team in the mother's room, not in the nursery

8. Encourage breastfeeding on demand. A newborn does not need to be on a schedule. The newborn should be dictating when and how long to eat. This is what will establish a milk supply. The only exception is if the infant is not waking to eat due to blood sugar or other issues

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

10 Steps to Successful Breastfeeding

9. Give no pacifiers or artificial nipples to breastfeeding infants. Encourage parents not to introduce this because we cannot look at a newborn infant and know which ones will become nipple confused and which ones won't. Sometimes the artificial nipple confuses the infant on how to correctly suckle at the mother's breast

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

10 Steps to Successful Breastfeeding

10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center. This can include support groups offered at the hospital, non-formal support groups, or La Leche League

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/

International Code of Marketing of Breast-milk Substitutes

1. No advertising of breast-milk substitutes to families
2. No free samples or supplies in the healthcare system
3. No promotion of products through healthcare facilities, including free or low-cost formula
4. No contact between marketing personnel and mothers

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/#international-code

International Code of Marketing of Breast-milk Substitutes

5. No gifts or personal samples to health workers
6. No words or pictures idealizing artificial feeding, including pictures of infants, on the labels or product
7. Information to health workers should be scientific and factual only

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/#international-code

International Code of Marketing of Breast-milk Substitutes

8. All information on artificial feeding, including labels, should explain the benefits of breastfeeding and the costs and hazards associated with artificial feeding
9. Unsuitable products should not be promoted for babies
10. All products should be of high quality and take account of the climate and storage conditions of the country where they are used

https://www.babyfriendlyusa.org/for-facilities/practice-guidelines/10-steps-and-international-code/#international-code

Breast-milk Facts

- Made for human baby
  - Ideal balance of nutrients
  - Easily digestible
- Changes with needs of baby
- Growth factors that mature the infant gut

Breast-milk Facts

- Mother's immunities and antibodies
- Formula and breast-milk contain water, protein, carbohydrates, DHA/RHA, fat, vitamins, and minerals
- Formula lacks enzymes, growth factors, anti-parasites, anti-allergens, anti-viruses, hormones, and antibodies that breast-milk contains
- There are still undiscovered properties of breast-milk that are still being researched

Benefits of Breastfeeding/Risks of Formula Feeding

- Infant (immediate/long term)
- Preterm infant
- Mother (immediate/long term)
- Societal (health/financial/environment)

Benefit/Risk for Children – Immediate

Most research evidence for the short-term health benefits, such as reduced infection, is strong

- Breastfed infants have lower mortality rates (Sankar et al, 2015)
- Breastfed infants have lower prevalence of lower respiratory tract infections in infants less than 6 months of age
- Breastfeeding decreases risk of acute otitis media, atopic dermatitis, gastrointestinal infections, hospitalization due to incidences of lower respiratory tract diseases and asthma, and risk for sudden infant death syndrome (SIDS) (Hauck, Thompson, Tanabe, Moone, and Vennemann, 2011; Ip et al., 2007)

Benefit/Risk for Children – Immediate

Most research evidence for the short-term health benefits, such as reduced infection, is strong

- Breastfed infants have lower risk of meningitis
- Breastfeeding has been found to have analgesic effects, as evidenced by reduced heart and metabolic rates, suggesting reduced sensitivity to pain (Blass, 1994; Blass, 1996; Carbajal, Veerapen, Couderc, Jugie, and Ville, 2003; Gribble 2006)
- Gray, Miller, Philipp, and Blass (2002) found that breastfeeding an infant while blood was being attained substantially reduced crying and grimacing and prevented the tachycardia that can happen during infant blood collection

Benefit/Risk for Children – Long Term

Longer term effects must be taken with caution. While there is a lot of excellent research, it is not possible to account for all confounding facts. So at this time this is what we currently know regarding benefits of breastfeeding

- Breastfed infants have higher outcomes in IQ and cognitive development (breastfed for longer than 6 months) (Horta, Loret de Mola, and Victoria 2015)
- Breastfeeding reduces the risk of obesity into adulthood (formula-fed infants are 33% more likely to become obese children)
- Breastfeeding may also decrease a child’s risk of later developing certain types of leukemia (Ip and colleagues)

Benefit/Risk for Children – Long Term

Longer term effects must be taken with caution. While there is a lot of excellent research, it is not possible to account for all confounding facts. So at this time this is what we currently know regarding benefits of breastfeeding

- Breastfed infants have some protection against asthma
- Formula-fed infants have an increased risk of type 1 (adolescents and adults) & 2 diabetes (in adults)
- Formula-fed infants have a slightly higher risk of elevated systolic blood pressure
- Bottle-fed infants, especially those given formula, have a higher incidence rate of cavities and need for braces

Health Benefits for Breastfed Premature Infants

- Significantly shortens length of hospital stay
- Reduces hospital costs
- Accelerates brainstem maturation
- Reduces incidence of necrotizing enterocolitis in low birth weight infants in NICU

Benefits of Breastfeeding for Mothers – Immediate

- Lose weight quicker
- Reduced risk of postpartum bleeding and quicker recovery
- Delays menstrual cycle
  - Average 4 months, up to 2 years
  - Method of birth control, but not 100% effective

Benefits of Breastfeeding for Mothers – Long Term

- Reduced rates of ovarian and pre-menopausal breast cancers (a cancer study found that women who had breastfed had a reduced risk of dying over a following decade)
- Reduced type 2 diabetes
- Reduced heart disease, hypertension, hyperlipidemia (dose response)

Benefits of Breastfeeding for Mothers – Long Term

- Reduce risk for long-term obesity
- Emotional
  - More confident
  - Less anxious
  - Reduction in postnatal depression (dose dependent)
- Reduced incidence of osteoporosis

Benefits for Society – Economic

- Private and government insurance pay $3.6 billion a year to treat diseases preventable by breastfeeding. Medical facilities' costs range from hundreds in doctor's visits for one child to billions in hospital stays for all non-breastfed children in the U.S.
- $2 million is spent yearly on processing, packaging, and transporting formula
- 550 million formula cans added to landfills yearly:
  - 86,000 tons of metal
  - 800,000 pounds of paper packaging

Benefits for Society – Economic

- Formula cost per year:
  - For individual families: $1,000-$2,300
  - For U.S. families: $2 Billion
  - For government: $578 Million
- If 90% of U.S. families would follow the Healthy People 2020 recommendations, $13 billion a year would be saved by all involved (Bartick & Reinhold, 2010; Committee, 2002)

Demographic-Associated Breastfeeding Rates

- Lower socioeconomic status (SES) – women are less likely to initiate and maintain breastfeeding whereas higher SES women are more likely to initiate and breastfeed longer (C.L. Dennis, 2002; McLeod et al., 2002; Singh et al., 2007; Visness & Kennedy, 1997)
- Education level – less than high school education have lowest initiation rates, whereas the higher education level, the greater initiation of breastfeeding and maintaining breastfeeding relationships (Ryan et al., 2006)
  - Ideas about breastfeeding
  - Difficulty returning to school and continuing breastfeeding

Demographic-Associated Breastfeeding Rates

- Maternal age – women older than 25 had increase in initiation, those less than 20 are least likely (C.L. Dennis, 2002; Ryan et al., 2006; Visness & Kennedy, 1997)
- Depression
- Ethnicity – Asians have higher likelihood of initiating breastfeeding, immigrants are more likely to initiate and continue breastfeeding, African American women have the lowest initiation rates, White, Hispanic-immigrant and African-immigrant women have the longest breastfeeding durations whereas Hispanic Americans and African Americans have lower duration rates (Chezem et al., 2004; Kimbro, 2006; Ryan et al., 2006)

Demographic-Associated Breastfeeding Rates

- Job status – holding a professional-level occupation (which is more likely to have longer maternity leave), working part-time, and stay-at-home mothers are more likely to initiate and maintain breastfeeding, whereas working full-time (especially in manufacturing occupations) have lower initiation rates, and manual and administrative workers have lower duration rates. Having to work during pregnancy also contributes to lower duration of breastfeeding (C.L. Dennis, 2002; Fein & Roe, 1998; Ryan et al., 2006; Visness & Kennedy, 1997),

Demographic-Associated Breastfeeding Rates

- Cultural barriers – women living in the western region of the U.S. have higher breastfeeding initiation rates, whereas those living in East South Central U.S. have the lowest initiation rates. Women living in the Pacific and Mountain portions of the U.S. breastfeed longer than other parts of the U.S. (Ryan et al., 2006; Visness & Kennedy, 1997)
- Past sexual abuse

Factors That Increase Breastfeeding Initiation Rates

- Having social support including friends who breastfed and a supportive partner (C.L. Dennis, 2002; Fein & Roe, 1998; Kimbro, 2006)
- Were breastfed as an infant (Fein & Roe, 1998)
- Uncomplicated pregnancy (Fein & Roe, 1998)
- Intending to breastfeed (Heath et al., 2002; McLeod et al., 2002)
- Being married (C.L. Dennis, 2002; Kimbro, 2006; Singh et al., 2007; Visness & Kennedy, 1997)

Factors That Increase Breastfeeding Initiation Rates

- Not a Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) recipient (Ryan et al., 2006)
- Infants born at normal birth weight/full term (C.L. Dennis, 2002; Ryan et al., 2006; Visness & Kennedy, 1997)
- Being a non-smoker and not living with a smoker (C.L. Dennis, 2002)
- Having attended prenatal education classes (C.L. Dennis, 2002)
- Having previous breastfeeding experience (C.L. Dennis, 2002)

Factors That Decrease Breastfeeding Initiation Rates

- Feeling embarrassed about breastfeeding (Arlotti et al., 1998; Fein & Roe, 1998)
- Experiencing a delay in holding infant after birth (Fein & Roe, 1998),
- Smoking cigarettes (Fein & Roe, 1998; Singh et al., 2007)
- Having a physician as opposed to a midwife (Fein & Roe, 1998)
- Higher parity for previous non-breastfeeders (Fein & Roe, 1998; Kimbro, 2006)

Factors That Decrease Breastfeeding Initiation Rates

- Free formula provided by formula companies, hospitals, and WIC (Tuttle, 2002)
- Infant is born low birth weight (Ryan et al., 2006)
- Being on WIC was strongest deterrent to continued breastfeeding and those on WIC were twice as likely to stop breastfeeding before 6 months (Ryan et al., 2006; Visness & Kennedy, 1997)
- Maternal perception that the father preferred to give formula (Arlotti et al., 1998)
- Concern about amount of milk the infant would actually receive (Arlotti et al., 1998)

Factors That Increase Breastfeeding Duration Rates

- Having previously breastfed (Clifford et al., 2006; C.-L. Dennis, 2002; Fein & Roe, 1998; Visness & Kennedy, 1997)
- High maternal confidence (O'Campo et al., 1992)
- Positive behavioral beliefs, normative beliefs, and social learning (C.-L. Dennis, 2002; O'Campo et al., 1992)

Factors That Increase Breastfeeding Duration Rates

- Intent to exclusively breastfeed, delayed introduction to formula, breastfeeding support groups, and pumps available at the worksite (Whaley, Meehan, Lange, Slusser, & Jenks, 2002)
- Two-parent household (C.L. Dennis, 2002; Singh et al., 2007)
- Attending prenatal class (Clifford et al., 2006)
- Social support (Clifford et al., 2006)

Factors That Decrease Breastfeeding Duration Rates

- Most common reason for quitting during the first 6 weeks postpartum was not enough milk (Amir & Cwikel, 2005; Chezem et al., 2004; Schwartz et al., 2002)
- Latch-on or suckling problems (Chezem et al., 2004)
- Medical reasons such as mastitis and breast pain (Schwartz et al., 2002)
- Planned and actual returning to work (Chezem et al., 2004; Clifford et al., 2006; Thomas-Jackson et al., 2008)
- Extended postpartum hospital stay (Fein & Roe, 1998)

Factors That Decrease Breastfeeding Duration Rates

- Smoking cigarettes or living with a smoker (Clifford et al., 2006; Singh et al., 2007; Whichelow, 1979)
- Taking oral contraceptives (Whichelow, 1979)
- Participating in WIC (Visness & Kennedy, 1997)
- Free formula provided by formula companies, hospitals, and WIC (Tuttle, 2002)

Factors That Decrease Breastfeeding Duration Rates

- Higher parity (Clifford et al., 2006), however Schwartz and colleagues (2002) found parity to not be associated with duration
- Anxiety (Clifford et al., 2006)
- Depression (Clifford et al., 2006)

Common Issues for Lactation Professionals

- Poor latch – most common
- Poor positioning – most common
- Weak suck – term often used but not common

Common Issues for Lactation Professionals

- Nipple or breast problems
    - Breast surgeries
        - Augmentation
        - Reduction
    - Nipple shape inverted, flat
    - Nipple size large, small
    - Sore nipples
        - Cracked
        - Bleeding

Common Issues for Lactation Professionals

- Multiple babies

Common Issues for Lactation Professionals

- Return to work
- Low milk supply
  - Based on supply and demand
  - Medications and herbals
  - Latch and positioning
  - Rarely not enough milk glands

Improve Breastfeeding

- Policies
  - Federal
  - State
  - Workplace

Improve Breastfeeding

- Practices
  - Professional lactation help
  - Support groups
  - Feed often enough
  - Feed long enough
  - Medications

Improve Breastfeeding

- Practices
  - Herbal supplements
  - Use of hospital-grade breast pump
  - Supplemental nursing system (SNS)
  - Co-sleeping/bed-sharing *controversial*

For questions or request on further lactation topics you can contact me at shera.jackson@ttu.edu

Introduction to Breastfeeding: Recommendations, Benefits, and Common Issues

If you have any questions about the program you have just watched, you may call us at: (800) 424-4888 or fax (806) 743-2233. Direct your inquiries to Customer Service. Be sure to include the program number, title, and speaker.

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