Nurturing Health: The Link Between Breastfeeding and Type 2 Diabetes Prevention

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Objectives

01

Examine the shortterm and long-term benefits of breastfeeding for the mother-infant dyad. 02

Explain how breastfeeding can hel prevent T2DM and chronic illness at a physiological level.

03

Employ effective clinical and community-based strategies to protect, promote, and support breastfeeding, with the goal of increasing breastfeeding Benefits of Breastfeeding for Mother-Infant Dyads The World Health Organization declares there is strong evidence for many public health benefits of breastfeeding



Benefits of Breastfeeding – Short Term

Maternal

- Postpartum weight loss
- Stress relief and mood regulation postpartum
- Bonding with infant
- Better Sleep
- Financial Security
- Pregnancy Prevention
- Better Body Satisfaction

Infant

- Immunological impact
- Reduce risk of SIDS
- Bonding, emotional security and psychological development

Nutritional Outcomes for Infants

- Breastmilk provides appropriate, and ever changing, micro- and macronutrients for the infant.
- Infants who are breastfed have lower gross energy intakes than formula-fed infants
- Breastfed infants create the demand and regulate their intake leading to a more intuitive approach to consumption
- Protein specific to human breastmilk are associated with the following functions:
 - Nutrient utilization, synthesis, and assembly
 - Protection of the gut via microbial pathogens
 - Regulate the inflammatory process
 - Promotion of growth through production of growth factors and certain hormones

Maternal Metabolic Impact of Breastfeeding

Pathophysiology of Diabetes

- Involves multiple hormones:
 - Insulin
 - Glucagon
- Normal functions in the body require continuous access to glucose
- Reduction of glucose utilization by absence or resistance of insulin

Metabolic Impact of Breastfeeding

- Breastfeeding initiation results in a metabolic shift
 - Decreased blood lipids
 - Increased insulin sensitivity
 - Mobilization of fat stores
- Lactogenesis requires lipids and glucose for milk production
- Considering Gestational Diabetes conversion to T2DM

Breastfeeding Report Card - 2022

Among infants born in 2019, 83.2% received some breastmilk

At 6 months 55.8% of infants received any breastmilk and 24.9% received breast milk exclusively

Source:

https://cdc.gov/breastfeeding/data/reportc ard.htm



Age of Baby (months)

Percentage of Babies Receiving Any and Exclusive Breast Milk During the First 12 Months, Among Children Born in 2019

Barriers to Breastfeeding

Lack of accurate information, support, and advice

Lactation consultants are few and far between, typically in inpatient or clinical settings and concentration in urban areas making them difficult to access in rural or low-income areas

There are approximately 19,000 lactation consultants in the United States

Reducing Barriers to Breastfeeding Support

Clinical and community-based strategies to protect, promote, and support breastfeeding

Clinical Strategies

Baby-Friendly Hospital Designation

- 10 Steps to Breastfeeding
- Implementation of an Infant Feeding Policy

Reputable, continued training for clinical staff

Designated lactation staff

Prenatal Education

Promote childbirth education and support low-intervention births

Home-Visiting and Virtual Visits

10 Steps to Successful Breastfeeding

- Have a written breastfeeding policy that is routinely communicated to all health care staff.
- Train all health care staff in skills necessary to implement this policy.
- Inform all pregnant women about benefits and management of breastfeeding.
- Help mothers initiate breastfeeding within one hour of birth.
- Show mothers how to breastfeed and maintain lactation, even if separated from their infants.
- Give newborn infants no food or drink other than breast milk, unless medically indicated.
- Practice "rooming in" which allows mothers and infants to remain together 24 hours/day.
- Encourage breastfeeding on demand.
- Give no pacifiers or artificial nipples to breastfeeding infants.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Infant Feeding Policy





Designated Lactation Staff & Flexibility of Delivery of Care

- Clinical lactation evaluation and management by a qualified lactation consultant, can involve an office visit of 60-120 minutes to do a full assessment and provide comprehensive education
- Lactation consultants are a costeffective solution
- Postpartum looks different for all families! Visits may need to take place virtually, or in-home. Text support can also be crucial.

Protection and Success through Education



Community Strategies

Offer in-person & online support opportunities

Provide space for groups to host their meetings

Pursue Grants

Utilize social media for outreach

Educate community members

Partner with WIC: Women, Infants, Children

Celebrate World Breastfeeding Week/Month



Understanding the Influence of Social Media

- Misinformation and Inaccurate Advice
- Comparison and Body Image Issues
- Online Shaming and Bullying
 - Breastfeeding Mothers
 - Validation of Formula Feeding
 Mothers
- Overwhelming Information
- Isolation and Decreased Support



Thank you & Questions

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References

1. Centers for Disease Control and Prevention. (2022, August). Breastfeeding Report Card. <u>https://www.cdc.gov/breastfeeding/pdf/2022-breastfeeding-report-card-h.pdf</u>

2. Centers for Disease Control and Prevention. (2022). National Diabetes Statistics Report. https://www.cdc.gov/diabetes/php/data-research/index.html

3. Committee on Nutrition During Lactation. (1991). Nutrition during lactation. National Academies Press.

4. Gutowski, J. L., Chetwynd, E., & Walker, M. (2014). Containing health care costs: Help in plain sight: International Board Certified Lactation Consultants: Allied health care providers contribute to the solution (3rd ed.). United States Lactation Consultant Association. <a href="https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://www.https://wwww.https://www.https//www.https://wwww.https://www.https://www.https://wwww.https://www.htttps://wwwwww.https://www.https://www.https://www.htttps://www.http

5. Kehinde, J., O'Donnell, C., & Grealish, A. (2023). The effectiveness of prenatal breastfeeding education on breastfeeding uptake postpartum: A systematic review. Midwifery, 118, 103579. doi: 10.1016/j.midw.2022.103579

6. United States Lactation Consultant Association. (2013). Position Paper—Professional Lactation Support Staffing in the Hospital Setting. https://uslca.org/

7. Zhang, C., Liu, S., Bao, Y., Rong, H., & Yan, X. (2017). Blood Lipids and Gestational Diabetes Mellitus: A Meta-Analysis. [Abstract]. National Institutes of Health (.gov). Retrieved August 5, 2024, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8102708/