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Brooke Hawkins
Belmont University

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Breastfeeding Intention within a Rural Postpartum Population:

Does Education Matter?

Brooke Hawkins, BSN, MSN, NP-C

DNP Student
Belmont University

Scholarly Project Team:
Linda G. Wofford, DNP, CPNP, Advisor
David Wyant, PhD

Purpose: The purpose of this scholarly project was to determine breastfeeding intention in a rural population after receiving education from a certified lactation consultant.

Review of the Literature: The benefits of breastfeeding for both mother and child are clearly stated in the literature. Despite the known benefits, rates of breastfeeding are decreased within rural populations. Previous research suggests education about breastfeeding benefits is beneficial in increasing these rates. In particular, previous studies focused on the contributing factors affecting a mother's decision to breast or formula feed. However, few studies were found strictly evaluating breastfeeding intention after receiving formal breastfeeding education in rural populations in the United States.

Methodology: A quasi-experimental one-group post-test only design was used with rural postpartum women admitted to a rural Labor and Delivery Unit. After receiving breastfeeding education from a certified lactation consultant, participants completed the Iowa Infant Feeding Attitude Scale (IIFAS) to determine an individual's likelihood to breastfeed. The higher the IIFAS score the more likely a woman is to breastfeed. The hypothesis of this project was breastfeeding intention in rural postpartum women will increase after breastfeeding education from a certified lactation consultant.

Results: Sixty-two percent of the participants indicated positive intent to breastfeeding as shown by IIFAS scores. Ultimately, 65% indicated positive breastfeeding intent postpartum. Fisher's exact test and Pearson correlations test were used to analyze the significance between variables. Statistical significance was found between both participant's father of the baby and participant's mother's breastfeeding support and intent to breastfeed.

Implications: Providers delivering prenatal care and lactation consultants could facilitate greater emphasis on breastfeeding education among fathers and maternal grandmothers of the

infant to positively influence breastfeeding intent. The current project can be useful to providers of prenatal and postnatal care when considering how to effectively provide breastfeeding education to individuals in rural populations. Potentially, improved breastfeeding intention could lead to improved breastfeeding rates, which is a known health promoting behavior for mother and infant.

Background and Significance

The practice of breastfeeding an infant is known to be beneficial to both mother and child for health improvement, not only through disease prevention, but also health promotion (Davis, Stichler, & Poelter, 2012). Breastfed children have well-documented decreased rates of Sudden Infant Death Syndrome (SIDS), upper and lower respiratory infections, gastrointestinal infections, childhood leukemia, asthma, ear infections, childhood obesity, diabetes, otitis media, and atopic dermatitis (Jensen, 2012). Additionally, maternal mortality and morbidity including those associated with ovarian and breast cancer, is reduced in women who have practiced breastfeeding (Schafer & Genna, 2015; Ma, Brewer-Asling, & Mangus, 2013; Jensen, 2012). In response to clear benefits of breastfeeding, local, state, and federal programs have improved, developed and implemented programs and initiatives to increase breastfeeding initiation and continuation. An example of program improvement is the Supplemental Nutrition Program for Womens, Infants, and Children (WIC), a program for mothers below 185 percent of the United States Poverty Income Guidelines (United States Department of Agriculture Food and Nutrition Service (USDA), 2015). The WIC program supports and encourages breastfeeding with trained lactation staff, free breast pumps and extensions of WIC enrollment (USDA, 2015). At the federal level, breastfeeding is included in the objectives of Healthy People 2020 with the goal of increasing breastfeeding rates (United States Department of Health and Human Services, 2010). Additionally, in 2014, the Joint Commission included breastfeeding as a core quality measure for hospital systems (2012). Internationally, the World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) established the Baby Friendly Hospital Initiative (BFHI) in 1991, which outlined 10 evidenced-based steps to promote, protect, and support breastfeeding in birth facilities (Hawkins, Stern, Baum, & Gillman, 2014). Birthing

facilities supporting BFHI have shown higher rates of breastfeeding (Flannery, 2014). The BFHI includes 10-steps to support and encourage breastfeeding among mothers (Baby Friendly USA, 2012). See Figure 1.

Despite all the attention breastfeeding has received within the aforementioned initiatives and worldwide organizations, breastfeeding initiation rates are suboptimal in rural populations nationally (Flower, Willoughby, Cadigan, Perrin, & Randolph, 2008; Allen, Perrine, & Scanlon, 2015). Several studies identify the contributing factors and characteristics of populations less apt to choose the practice of breastfeeding. Non-hispanic black women and women from socioeconomically disadvantage areas are less likely to breastfeed as well as mothers who participate in WIC (Hedberg, 2013; Hill, Arnett, & Mauk, 2008; Yunzal-Butler, Joyce, & Racine, 2010; Baumgartel & Spatz, 2013). WIC mothers are 12% percent less likely to practice breastfeeding with this group contributing to 40% of all births in the United States (Yunzal-Butler et al., 2010; Hedberg, 2013). However, recent data suggest an increase in breastfeeding among the WIC population. A study examining 17,067 rural and urban women enrolled in the Kansas WIC program found 74% initiated breastfeeding (Jacobson, Twumasi-Ankrah, Redmond, Ablah, Hines, Johnston, & Collins, 2015).

Several identified barriers to breastfeeding within the low-income populations included support inside and outside the hospital, maternal return to work, race, ethnicity, and younger age (Hedberg, 2013; Rozga, Kerver, & Olson, 2015; Langellier, Chaparro, & Whaley, 2012). Other factors influencing breastfeeding decisions are maternal support, family history of breastfeeding, and assistance with breastfeeding (Flower et al., 2008; Ruffin & Renaud, 2015; Battersby, 2016). In a study examining breastfeeding cessation in low-income mothers, a common reason for cessation was due to maternal feeding preference as formula feeding was seen as more

convenient (Rozga, Kerver, & Olson, 2015). Additionally, breastfeeding during the mother's hospital stay influences breastfeeding duration after discharge (Davis, Stichler, & Poelter, 2012).

Few breastfeeding studies specifically addressing rural populations in the United States have been published (Flower et al., 2008; Allen et al., 2015). Additionally, few studies examining the effects of breastfeeding education on breastfeeding intention and initiation among rural populations exist; however, studies suggest need for breastfeeding education to aid in the increase of breastfeeding rates (Flannery, 2014; Hedberg, 2013; Langellier, Chaparro, & Whaley, 2012; Rishel & Sweeney, 2005). For example, in a study comparing postpartum women from three military treatment facilities, two with a lactation consultant and one without, 98 percent of mothers having interaction with a lactation consultant initiated breastfeeding (Rishel & Sweeney, 2005). Rishel and Sweeney also found mothers 27 years old or younger with education levels less than that of a college degree exhibited decreased breastfeeding initiation rates (2005). The purpose of the current scholarly project was to evaluate breastfeeding intention in rural postpartum women after receiving education from a certified lactation consultant.

Theoretical Framework

Description of Information Motivation Behavioral Skills Model

The Information Motivation Behavioral Skills Model (IMB) was developed by Fisher and Fisher in 1992 in response to acquired immunodeficiency syndrome (AIDS)-related disorders (Fisher & Fisher, 1992). However, this model has been used in behavioral intervention studies across many health behaviors and in chronic disease management (Chang, Choi, Kim, & Song, 2014). The IMB model consists of three constructs including information, motivation, and behavioral skills. See figure 2 for IMB concept model. The three constructs are deemed necessary for an individual to participate in a health behavior and are seen as determinants of

behavioral change. The first construct involving information includes an individual's information about a particular behavior and the influence the information has on decision-making. The second construct, motivation, includes personal and social motivation to participate in the health promoting behavior. Lastly, behavior is directly affected by a combination of information, motivation, and learned skills to manage the change. The individual must have the proper information and increased self-efficacy to participate in health promoting behavior (Chang et al., 2014).

Application and Adjustment of Change Theory within the Scholarly Project

Due to the nature of this scholarly project specifically examining breastfeeding intention after receiving education from a certified lactation consultant immediately postpartum the model must first be altered in order to specifically apply the IMB skills model to breastfeeding intent. Information and motivation are the key components of the IMB model that can be applied to breastfeeding intention. Information must be given to individuals in order for the individual to consider the behavior. When examining breastfeeding intention, mothers exhibit higher rates of breastfeeding intention when prenatal breastfeeding education is given (Feldman-Winter, 2013). This scholarly project provides postpartum women with consistent breastfeeding education through a certified lactation consultant. Motivation, both personal and social, is the second construct to be considered with breastfeeding intention. Studies indicate the influence of others on a mother's intention to breastfeed, especially in the WIC population (Grassley, 2010; Hedberg, 2013). Breastfeeding education would provide motivation from an authoritative figure on the benefits of breastfeeding. If mothers were made aware of the benefits of increased health for their babies and themselves, this knowledge would provide motivation to breastfeed or at

least their intentions to breastfeed. The third construct of skills is not provided within this study but could be an area of future research to examine final behavior.

Project Description and Design

Institutional Review Board

A Belmont University Institutional Review Board application was submitted on September 3, 2016. IRB approval was received October 1, 2016.

Participants

Postpartum women admitted to the Labor and Delivery Unit (LDU) at Tristar Horizon Medical Center (THMC) were recruited for participation between October 1, 2015 and December 31, 2015. Inclusion criteria were as follows: ages between 18 and 45 years old, delivery of an infant 37 weeks gestation or more, and admission to the well-baby newborn nursery, and ability to read and speak English. A convenience sample of 32 participants, ages 19 to 42, was recruited from THMC's Labor and Delivery Unit in Dickson, Tennessee. All 32 participants completed both the PDDA and the IIFAS. Specific participant demographics are presented in Table 1.

Materials

Surveys. The Patient Demographic Data Assessment (PDDA) survey was developed by the project leader to gather data from each potential participant (See Appendix A). Survey questions were developed that considered the findings from previous studies and the specific research questions in this project. The survey included 15 questions (3 short answer and 12 multiple choice) to evaluate the dynamics surrounding breastfeeding intention. The dynamics included specific participant data such as age, race, education, employment, maternal history of breastfeeding, emotional support from family and significant other, marital status, and family

breastfeeding history. Additionally, a question to determine feeding choice of the infant was included. The mother was considered to be breastfeeding if the infant was physically breastfed or milk was collected with a breast pump for the infant. The PDDA is in Appendix A.

Breastfeeding intention was measured with the Iowa Infant Feeding Attitude Scale (IIFAS) (see Appendix B), a documented reliable tool (Cronbach's alpha= .85 to .86) for assessing breastfeeding attitudes in which higher scores indicate a strong preference to breastfeed (de la Mora, Russell, Dungy, Losch, & Dusdieker, 1999). Permission to use the IIFAS was secured prior to project initiation. The scale consists of seventeen, 5-point Likert type items with "1" indicating "strong disagreement" and "5" indicating "strong agreement". The numbers chosen by the participants were totaled for all questions. Nine of the questions were designed to be favorable toward formula by de la Mora and colleagues (1999). Accordingly, those nine questions were reversed scored. Varying ranges are used to measure for positive, negative, and neutral intention with IIFAS score totals. Ranges vary from 49 to 69 with 49 and less indicating negative intention, 69 and greater indicating positive intention (de la Mora et al., 1999; Inoue, Binns, Katsuki, & Ouchi, 2012). Consequently, after score calculations, the project leader elected to divide the scores at 64 to aid in statistical analysis as a significant gap in scores was noted between 60 and 64. For the statistical analysis, negative breastfeeding intent was attributed for scores of 60 and less; positive breastfeeding intent was attributed to scores of 64 and higher. No participants scored 61-63.

Education. Participants received breastfeeding education from a certified lactation consultant employed by THMC. Each participant received approximately 10 to 15 minutes of face-to-face breastfeeding education at the participant's bedside. The outline and materials used by the lactation consultant for each educational session can be found in Appendix C.

Methods. Collected data was entered into IBM SPSS Statistics module version 23 where analysis occurred. Chi-Square test and related test (i.e. Fisher's exact test) and Pearson test and related correlations were used to analyze the significance between variables. Chi-square test and Pearson correlations test were used for analysis within SPSS. For example, when asked to conduct Chi-square test SPSS defaults to a Fisher's exact test if a cell size is less than 5. Significant values were those with p values or $<.05$, $<.01$, and $<.1$.

Design

A quasi-experimental design was used. The participants received breastfeeding education and completed 1 post-test (IIFAS) to measure breastfeeding intention, the dependent variable. Additionally, the participant's current feeding choice was considered as a second dependent variable. The IIFAS and current feeding choice provided within-group data of the overall intention to breastfeed in the population. The PDDA survey collected data concerning independent variables such as age, race, education, employment, maternal history of breastfeeding, emotional support from family and significant other, marital status, family breastfeeding history, WIC enrollment, and insurance provider. The independent variables provided between-group evaluation of breastfeeding intention.

Procedures

The lactation consultant informed the project leader after potential participants received 10 to 15 minutes of breastfeeding education. The project leader visited potential participants for voluntary consent to participate with an oral and written invitation, except on weekends when the lactation consultant acted on behalf of the project leader. If the invitation was accepted, the participant was given the PDDA survey for completion and consent to participate along with the IIFAS. The participants were given privacy while completing the surveys. Subsequently, the

PDDA answers were screened for eligibility, the IIFAS was tallied and the scores were entered into IBM SPSS Statistics Module.

Results

Descriptive Statistics

Table 1 provides demographic characteristics of the participants. Among the 32 participants, 20 (62.5%) had positive breastfeeding intention with the remaining 12 (37.5%) having negative breastfeeding intention as indicated by IIFAS scores. Additionally, 11 (34.4%) participants chose to formula feed and 21 (65.5%) chose to breastfeed their infant.

Twenty-six (81.3%) women were enrolled in Medicaid with over half of the participants enrolled in WIC (n=22, 68.8%). Education level was assessed and found that 15 (46.9%) of the participants had a high school diploma or less while 17 (53.1%) had completed some college classes or a college degree. Additionally, 17 (53.1%) of the women were employed with 18 (56.3%) having a family income of \$20,000 per year or less and 14 (43.8%) having an income of \$20,001 or more per year. Fourteen (43.8%) of the 32 participants were single and 22 (68.8%) reported having had previous children. Fifteen (46.9%) of the women formula fed previous infants. Breastfeeding support from the father of the baby and the participant's mother's feeding preference was similar as 20 (62.5%) fathers and 17 (53.1%) participant's mothers supported breastfeeding.

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Chi-square test and Pearson correlations test were used for data analysis. Because some expected cell counts were less than 5, SPSS defaulted to Fisher's exact test to determine significance between positive and negative IIFAS scores (breastfeeding intent). Fisher's exact test was also used to determine significance between current feeding choice and independent variables excluding age and insurance carrier.

Table 2 shows tests between a series of independent variables and intention to breastfeed. Father of the baby's preference for breastfeeding was positively correlated with intention to breastfeed ($p=.023$). Participants who were unemployed also were more likely to intend to breastfeed ($p=.076$) Those women who previously chose to formula feed were less likely to intend to breastfeed ($p=.51$). No other significance was found between breastfeeding intention and other independent variables.

Table 3 show tests between a series of independent variables and the mother's current feeding choice. Father of the baby's preference for breastfeeding was significantly associated with current feeding choice ($p=.001$). Participants who were unemployed were also more likely to decide to breastfeed ($p=.028$). Additionally, participants with mothers who supported breastfeeding were more likely to decide to breastfeed ($p=.000$). No other significance was found between current feeding decision and other independent variables.

In tables 4 through 7 the SPSS Pearson's correlations procedure examined the significance among ungrouped, continuous IIFAS scores with independent variables. The IIFAS scores ranged from 50 to 85. Family history of breastfeeding was excluded from the correlations. Participants with breastfeeding support from the father of the baby ($p=.022$) had a statistically significant association with choosing to breastfeed. As the father's preference for breastfeeding increases the preference to formula feed the current baby goes down. See Table 4. Also,

participants with breastfeeding support from the participant's mother ($p=.000$) had a statistically significant association with choosing to breastfeed. As the IIFAS scores increase the participant's mother's preference for formula feeding the baby decreases. See Table 5.

Additionally, a statistically significant relationship was found between those who were unemployed and those who chose to breastfeed ($p=.018$). See Table 6. As anticipated, participant IIFAS scores and the choice to breastfeed had a statistically significant association ($p=.002$). See Table 7. No other significant associations were found between the other independent variables tested. The independent variables without significance include: WIC enrollment, choice of feeding for first child, help with feeding decision, family history of breastfeeding, and yearly income.

Discussion

This project provides a variety of information regarding breastfeeding intent in rural communities. The sample's characteristics appropriately represent the population in this community as evidenced by the percentage of participants receiving Medicaid. These percentages are consistent with the adjoining prenatal clinic's insurance statistics. Historically WIC enrollment has been associated with decreased rates of breastfeeding (Hedberg, 2013), yet this project indicates 70% of those with positive intention are enrolled in WIC. These results are more comparable to the increased rates found by Jacobson and colleagues (2015). Research also indicates breastfeeding intent is decreased in those who have lower levels of education and lower incomes (Rishel & Sweeney, 2005; Hedberg, 2013; Rozga, Kerver, & Olson, 2015). However, this project suggests education can increase rates as those with lower education levels (55%) and income (60%) show positive breastfeeding intent. Overall the percentages of positive

breastfeeding intent and the choice to breastfeed postpartum, although not statistically significant, are found to be encouraging among this rural population.

The current project results also support existing literature's findings of increased breastfeeding intent among those with social support (Flower et al., 2008; Ruffin & Renaud, 2015; Battersby, 2016). Social support explored in this project was that of the father of the baby and the participant's mother. Both sources of support were found to be statistically significant among those choosing to breastfeed. Positive breastfeeding intent was also found to be statistically significant among those whose father of the baby supported breastfeeding.

Employment has often been found in studies to be a deterrent to breastfeeding due to maternal return to work (Hedberg, 2013; Rozga, Kerver, & Olson, 2015; Langellier, Chaparro, & Whaley, 2012). This project supports previous findings of decreased intent among those who are employed. Within this population, only 47.1% of employed mothers chose to breastfeed their infant after receiving breastfeeding education.

Implications

The purpose of the current project was to determine effects of breastfeeding education on breastfeeding intent among a rural population. Although results of this small project are not found to be statistically significant among all contributing variables, much insight can be gained. Given the positive breastfeeding intent among those receiving support from the baby's father and maternal grandmother, a greater emphasis on breastfeeding education among these individuals could be beneficial in increasing breastfeeding rates in this particular population. Employment status should also be a focus for breastfeeding education as negative intention is increased among those who are employed. Therefore, increased education with specific focus on strategies to continue breastfeeding while returning to work could increase breastfeeding rates.

Although studies indicate decreased breastfeeding among WIC enrollees, the current project findings suggest increased education is helpful in influencing breastfeeding intent (Hedberg, 2013). The findings of the current study support more current research indicating an increase in breastfeeding among the WIC population and perhaps a shift in the culture of WIC (Jabosen et al., 2015). This project does not determine if education received from WIC offices or education received postpartum influences breastfeeding intent. Further research examining differences in lactation consultant education and WIC breastfeeding education together and alone would provide additional insight to increasing breastfeeding rates. The current project can be useful to providers of prenatal and postnatal care when considering how to effectively provide breastfeeding education to individuals in rural populations.

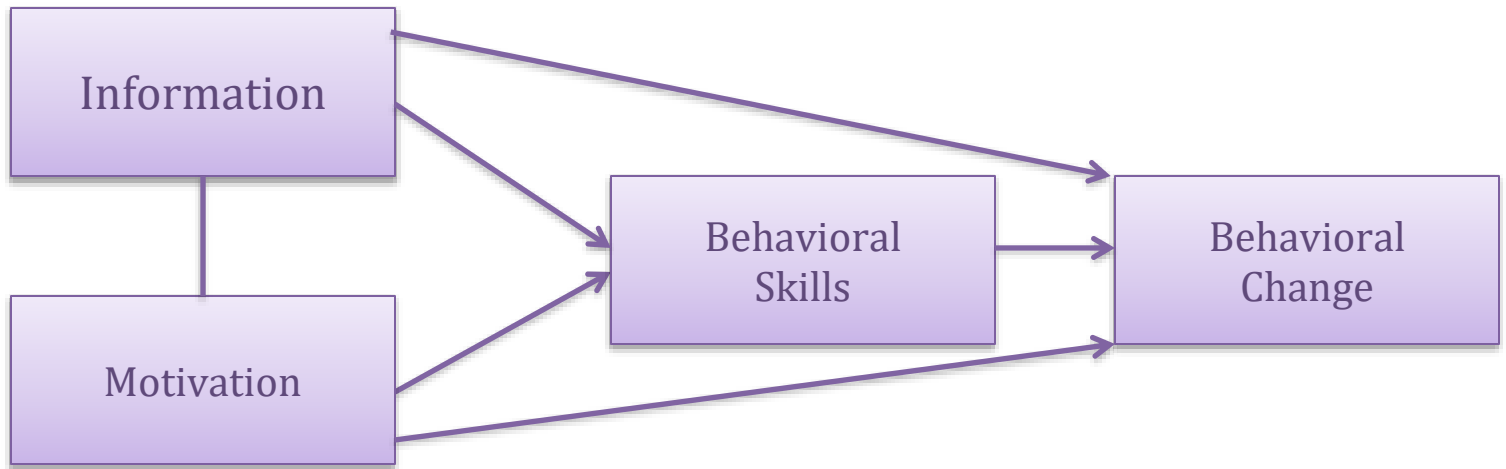
Other recommendations for research are to conduct a similar project with a larger population within different rural hospital settings. Such a project would provide a larger sample with greater variation of sociodemographic characteristics and perhaps greater insight into the effect of breastfeeding education among rural populations.

Figure 1: The *Ten Steps to Successful Breastfeeding*

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

Baby Friendly USA (2012). The Ten Steps To Successful Breastfeeding. Retrieved from <https://www.babyfriendlyusa.org/about-us/baby-friendly-hospital-initiative/the-ten-steps>

Figure 2. IMB Model



Developed and Adapted from:

Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin*, *111*(3), 455-474. doi:10.1037/0033-2909.111.3.455

Table 1. Demographic Characteristics of Participants

Demographic Variables	Total N=32	Percentage
Insurance		
Medicaid	26	81.3%
Private	6	18.8%
WIC enrollee		
Yes	22	68.8%
No	10	31.3%
Education level		
High School or less	15	46.9%
Attended College	17	53.1%
Employed		
Yes	17	53.1%
No	15	46.9%
Income per/yr		
<=\$20,000	18	56.3%
>=\$20,001	14	43.8%
Marital Status		
Single	14	43.8%
Married	18	56.3%
Age		
19 to 23	12	37.5%
24 to 29	14	43.8%
30 to 42	6	18.8%
Previous Child		
Yes	22	68.8%
No	10	31.3%
Previous Feeding Choice		
Formula	15	68.2%
Breast	7	31.8%
Father of Baby Feeding Preference		
Formula	11	35.5%
Breast	20	64.5%
Participants' Mother's Feeding Preference		
Formula	10	37%
Breast	17	63%
Race		
Caucasian	32	100%

Table 2. Contributing Variables to Positive and Negative Breastfeeding Intention

	Total	IIFAS Total <60	IIFAS Total >64	P Value
Education Level	32	12	20	
High School or <	15	4	11	.291
College	17	8	9	
Marital Status	32	12	20	
Single	14	5	9	1.000
Married	18	7	11	
Employed	32	12	20	
Yes	17	9	8	.076#
No	15	3	12	
Yearly Income	32	12	20	
>\$20,000	18	6	12	.718
<\$20,001	14	6	8	
WIC	32	12	20	
Yes	22	8	14	1.000
No	10	4	6	
Previous Feeding Choice	22	7	15	
Formula	15	7	8	.051#
Breastfeeding	7	0	7	
Father of the Baby Feeding Preference	31	11	20	
Formula	11	7	4	.023*
Breastfeeding	20	4	16	
Participants' Mother's Feeding Preference	27	11	16	
Formula	10	6	4	.224
Breastfeeding	17	5	12	

*significant at $p < .05$, #significant at $p < .1$

Table 3. Contributing Variables and Current Feeding Choice

	Total	Formula	Breast	P Value
Education Level	32	11	21	
High School or <	15	5	10	1.000
College	17	6	11	
Marital Status	32	11	21	
Single	14	6	8	.465
Married	18	5	13	
Employed	32	11	21	
Yes	17	9	8	.028*
No	15	2	13	
Yearly Income	32	11	21	
>\$20,000	18	6	12	1.000
<\$20,001	14	5	9	
WIC	32	11	21	
Yes	22	9	13	.425
No	10	2	8	
Previous Feeding Choice	22	7	15	
Formula	15	4	11	.630
Breastfeeding	7	3	4	
Father of the Baby Feeding Preference	31	10	21	
Formula	11	8	3	.001**
Breastfeeding	20	2	18	
Participants' Mother's Feeding Preference	27	10	17	
Formula	10	9	1	.000**
Breastfeeding	17	1	16	

*significant at $p < .05$. **significant at $p < .01$

Table 4. Correlations for Father of the baby feeding preference and current feeding choice

Pearson's Correlation Test	Father of the Baby Feeding Preference	Current Feeding
Father of the baby feeding preference	1	-.410*
Sig. (two-tailed)		.022
Current feeding	-.410*	1
Sig. (two-tailed)	.022	

* correlation significant at the 0.05 level (two-tailed)

Table 5. Correlation of IIFAS and participant's mother's feeding preference

Pearson's Correlation Test	IIFAS Score	Participant's Mother Feeding Preference
IIFAS Score	1	-.736**
Sig. (two-tailed)		.000
Participant's Mother Feeding Preference	-.736**	1
Sig. (two-tailed)	.000	

**correlation significant at the 0.01 level

Table 6. Correlation of IIFAS score and participant employment

Pearson's Correlation Test	IIFAS Score	Employment
IIFAS Score	1	.416*
Sig. (two-tailed)		.018
Employment	.416*	1
Sig. (two-tailed)	.018	

*correlation significant at the 0.05 level

Table 7. Correlations for IIFAS score and current feeding choice

Pearson's Correlation Test	IIFAS Score	Current Feeding
IIFAS Score	1	.534**
Sig. (two-tailed)		.002
Current feeding	.534**	1
Sig. (two-tailed)	.002	

**correlation significant at the 0.01 level

References

- Allen, J. A., Perrine, C. G., & Scanlon, K. S. (2015). Breastfeeding supportive hospital practices in the US differ by county urbanization level. *Journal Of Human Lactation*, 31(3), 440-443. doi:10.1177/0890334415578440
- Baby Friendly USA (2012). The Ten Steps To Successful Breastfeeding. Retrieved from <https://www.babyfriendlyusa.org/about-us/baby-friendly-hospital-initiative/the-ten-steps>
- Battersby, S. (2016). Supporting mothers to sustain breastfeeding. *British Journal of Midwifery*, 24(1), 2-7. doi:10.12968/bjom.2016.24.Sup1.1
- Baumgartel, K. L., & Spatz, D. L. (2013). WIC (The Special Supplemental Nutrition Program for Women, Infants, and Children): Policy versus practice regarding breastfeeding. *Nursing Outlook*, 61(6), 466-470. doi:10.1016/j.outlook.2013.05.010
- Chang, S. J., Choi, S., Kim, S., & Song, M. (2014). Intervention strategies based on information-motivation-behavioral skills model for health behavior change: A systematic review. *Asian Nursing Research*, 8(3), 172-181. doi:10.1016/j.anr.2014.08.002
- de la Mora, A., Russell, D. W., Dungy, C. I., Losch, M., & Dusdieker, L. (1999). The Iowa Infant Feeding Attitude Scale: Analysis of reliability and validity. *Journal of Applied Social Psychology* 29(11), 2362-2380. doi: 10.1111/j.1559-1816.1999.tb00115.x
- Davis, S. K., Stichler, J. F., & Poeltler, D. M. (2012). Increasing exclusive breastfeeding rates in the well-baby population. *Nursing For Women's Health*, 16(6), 460-470. doi:10.1111/j.1751-486X.2012.01774.x

- Feldman-Winter, L. (2013). Evidence-based interventions to support breastfeeding. *Pediatric Clinics Of North America*, 60(1), 169-187. doi:10.1016/j.pcl.2012.09.007
- Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin*, 111(3), 455-474. doi:10.1037/0033-2909.111.3.455
- Flannery, V. (2014). Increasing breastfeeding rates: Evidence-based strategies. *International Journal Of Childbirth Education*, 29(4), 59-62.
- Flower, K., Willoughby, M., Cadigan, R., Perrin, E., & Randolph, G. (2008). Understanding breastfeeding initiation and continuation in rural communities: A combined qualitative/quantitative approach. *Maternal & Child Health Journal*, 12(3), 402-414. doi: DOI 10.1007/s10995-007-0248-6
- Grassley, J. (2010). Adolescent Mothers' Breastfeeding Social Support Needs. *JOGNN: Journal Of Obstetric, Gynecologic & Neonatal Nursing*, 39(6), 713-722. doi:10.1111/j.1552-6909.2010.01181.x
- Hawkins, S. , Stern, A., Baum, C., & Gillman, M. (2014). Compliance with the baby-friendly hospital initiative and impact on breastfeeding rates. *Archives of Disease in Childhood: Fetal and Neonatal Edition*, 99(2), F138-F143. doi: 10.1136/archdischild-2013-304842
- Hedberg, I. C. (2013). Barriers to breastfeeding in the WIC population. *MCN: The American Journal of Maternal Child Nursing*, 38(4), 244-249. doi: 10.1097/NMC.0b013e3182836ca2
- Hill, G., Arnett, D., & Mauk, E. (2008). Breast-feeding intentions among low-income pregnant and lactating women. *American Journal Of Health Behavior*, 32(2), 125-136. <http://dx.doi.org/10.5993/AJHB.32.2.2>

- Inoue, M., Binns, C. W., Katsuki, Y., & Ouchi, M. (2013). Japanese mothers' breastfeeding knowledge and attitudes assessed by the Iowa Infant Feeding Attitudes Scale. *Asia Pacific Journal Of Clinical Nutrition*, 22(2), 261-265. doi:10.6133/apjcn.2013.22.2.08
- Jacobson, L., Twumasi-Ankrah, P., Redmond, M., Ablah, E., Hines, R., Johnston, J., & Collins, T. (2015). Characteristics associated with breastfeeding behaviors among urban versus rural women enrolled in the Kansas WIC program. *Maternal & Child Health Journal*, 19(4), 828-839 12p. doi:10.1007/s10995-014-1580-2
- Jensen, E. (2012). Participation in the supplemental nutrition program for women, infants and children (WIC) and breastfeeding: National, regional, and state level analyses. *Maternal & Child Health Journal*, 16(3), 624-631. doi: 10.1007/s10995-011-0796-7
- Langellier, B., Pia Chaparro, M., & Whaley, S. (2012). Social and institutional factors that affect breastfeeding duration among WIC participants in Los Angeles County, California. *Maternal & Child Health Journal*, 16(9), 1887-1895. doi: 10.1007/s10995-011-0937-z
- Ma, P., Brewer-Asling, M., & Magnus, J. (2013). A case study on the economic impact of optimal breastfeeding. *Maternal & Child Health Journal*, 17(1), 9-13. doi: 10.1007/s10995-011-0942-2
- Rishel, P., & Sweeney, P. (2005). Comparison of breastfeeding rates among women delivering infants in military treatment facilities with and without lactation consultants. *Military Medicine*, 170(5), 435-438.

Rozga, M. R., Kerver, J. M., & Olson, B. H. (2015). Self-reported reasons for breastfeeding cessation among low-income women enrolled in a peer counseling breastfeeding support program. *Journal Of Human Lactation*, *31*(1), 129-137 9.

doi:10.1177/0890334414548070

Ruffin, S. D., Renaud, M. (2015). Prenatal education, significant other support and demographic determinants of breastfeeding within a rural community. *Online Journal of Rural Nursing & Health Care*, *15*(2), 132-151. doi:10.14574/ojrnhc.v15i2.372

Shaker, I., Scott, J., & Reid, R. (2004). Infant feeding attitudes of expectant parents: Breastfeeding and formula feeding. *Journal Of Advanced Nursing*, *45*(3), 260-268.

doi:10.1046/j.1365-2648.2003.02887.x

Schafer, R. & Genna, C. W. (2015). Physiological breastfeeding: A contemporary approach to breastfeeding initiation. *Journal of Midwifery and Women's Health*, *60*(5), 546-553.

Scott, J., Shaker, I., & Reid, M. (2004). Parental attitudes toward breastfeeding: their association with feeding outcome at hospital discharge. *Birth: Issues In Perinatal Care*, *31*(2), 125-131.

The Joint Commission (2012). Specifications manual for Joint Commission national quality measures. Retrieved from

<https://manual.jointcommission.org/releases/TJC2013A/MIF0170.html>

United States Department of Agriculture Food and Nutrition Services (2015). Women, Infants, and Children. Retrieved from <http://www.fns.usda.gov/wic/about-wic>

United States Department of Health and Human Services (2010). *Healthy People 2020:*

Maternal, Infant, and Child Health. Retrieved from

<http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=26>

Yunzal-Butler, C., Joyce, T., & Racine, A. D. (2010). Maternal smoking and the timing of WIC

enrollment. *Women, Infants, and Children. Maternal & Child Health Journal, 14*(3),

318-331. doi: 10.1007/s10995-009-0452-7

Appendix A
Prenatal Demographic Data Assessment

Please answer the following questions.

1. How old are you?

2. What is your race? (please circle)

White African American Asian Other: _____

3. What is your level of education? (please circle)

Did not complete high school

High School

Some College

Graduated College

4. What is your marital status? (please circle)

Single

Married

Divorced

Widowed

Separated

5. Are you a WIC program participant? (please circle)

Yes No

6. What type of insurance do you have? (please circle)

TnCare Private Insurance No Insurance

7. What is your household income? (please circle)

Less than \$20,000

\$20,000 -\$39,999

\$40,000-\$59,999

\$60,000-\$79,999

\$80,000-\$99,999

\$100,000 or more

8. Are you currently employed, attend school, or both?(please circle)

Employed

Attend School

Both

If employed: Part time or Full time

If attending school, please include course of study

9. When is your Due Date?

How many weeks pregnant are you?

10. Have you had a baby before?

If yes, please answer the following (please circle)

Baby#1

Formula

Breastfed

Breast milk in a bottle

Both

Baby #2

Formula

Breastfed

Breast milk in a bottle

Both

Baby #3

Formula Breastfed Breast milk in a bottle Both

Others:

11. How do you plan to feed your baby? (please circle)

Formula Breastfeed Breastmilk in a bottle Both

12. How does your baby's father or significant other want you to feed the baby?(please circle)

Formula Breastfeed Breastmilk in a bottle Both

13. How does you mother want you to feed the baby? (please circle)

Formula Breastfeed Breastmilk in a bottle Both

14. Has anyone else besides your baby's father, significant other your mother helped you decide how to feed your baby? If so, who?

15. How have other mothers in your family fed their babies? (please circle any or all that apply)

Formula Breastfeed Breastmilk in a bottle Both

**Does this affect your decision to feed your baby?
If yes, explain how**

Appendix B

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Appendix

The Iowa Infant Feeding Attitude Scale

For each of the following statements, please indicate how much you agree or disagree by circling the number that most closely corresponds to your opinion (1 = *strong disagreement* [SD], 2 = *disagreement* [D], 3 = *neutral* [N], 4 = *agreement* [A], 5 = *strong agreement* [SA]). You may choose any number from 1 to 5.

	SD	D	N	A	SA
*1. The nutritional benefits of breast milk last only until the baby is weaned from breast milk.	1	2	3	4	5
*2. Formula-feeding is more convenient than breast-feeding.	1	2	3	4	5
3. Breast-feeding increases mother-infant bonding.	1	2	3	4	5
*4. Breast milk is lacking in iron.	1	2	3	4	5
5. Formula-fed babies are more likely to be overfed than are breast-fed babies.	1	2	3	4	5
*6. Formula-feeding is the better choice if a mother plans to work outside the home	1	2	3	4	5
7. Mothers who formula-feed miss one of the great joys of motherhood.	1	2	3	4	5
*8. Women should not breast-feed in public places such as restaurants.	1	2	3	4	5
9. Babies fed breast milk are healthier than babies who are fed formula.	1	2	3	4	5
*10. Breast-fed babies are more likely to be overfed than formula-fed babies.	1	2	3	4	5
*11. Fathers feel left out if a mother breast-feeds.	1	2	3	4	5
12. Breast milk is the ideal food for babies.	1	2	3	4	5
13. Breast milk is more easily digested than formula.	1	2	3	4	5
*14. Formula is as healthy for an infant as breast milk.	1	2	3	4	5
15. Breast-feeding is more convenient than formula feeding.	1	2	3	4	5
16. Breast milk is less expensive than formula.	1	2	3	4	5
*17. A mother who occasionally drinks alcohol should not breast-feed her baby	1	2	3	4	5

Note. Items marked with asterisks are reverse-scored and the scores for each item are then summed. Higher scores indicate more positive attitudes toward breast feeding.

Appendix C Breastfeeding Education Outline

- I. Key to Successful Breastfeeding
 - a. Skin to skin contact
 - b. Mother-baby rooming in
 - c. Avoid supplementary feedings
 - d. Limit pacifier use
 - e. Ask for help

- II. Infant hunger cues
 - a. Alertness
 - b. Infant's sounds
 - c. Mouthing motions and rooting
 - d. Hand to mouth activity
 - e. Crying

- III. What to expect
 - a. Mother's body changes: breasts, nipples, uterus, and milk supply
 - i. 1st 4 hours after birth
 - ii. 4-24 hours after birth
 - iii. Day 2
 - iv. Day 3
 - v. Day 3-5
 - vi. Day 6+

- IV. Breastfeeding positions and techniques
 - a. Laid-back breastfeeding description
 - b. Baby-led latch-on
 - c. Mother-led latching

- V. Guidelines for nursing
 - a. "Is my baby getting enough"
 - b. Number of times to nurse
 - c. Number of wet diapers and bowel movement
 - d. Size of infant's stomach: day 1 through 1 month
 - e. Infant weight loss
 - f. Signs of hunger
 - g. Signs of fullness
 - h. Signs of good feeding
 - i. Signs of good latch-on
 - j. Information for breastfeeding families
 - i. How family can help the breastfeeding mother
 - ii. Changes in generation to generation feeding practices

- VI. Treatments for breast engorgement
 - a. Reverse pressure softening
 - b. Comfort measures
- VII. Breast milk collection and storage
 - a. Breast pump selection
 - b. Breast milk storage
 - c. Tips for breast to bottle transition

Information for breastfeeding families
Breastfeeding Moms Survival Guide
for the First Two Weeks



Breastfeed every 1 -3 hours

It sounds like a lot, but your baby needs your milk and your breasts need the stimulation to bring an abundant milk supply. Newborns need to be fed around the clock so they get 8-12 feedings each 24 hour period

Wake your baby up well before feedings

A drowsy baby will not feed for long. Undress him to his diaper, rub his tummy and back, talk to him and rock him back and forth if necessary until his eyes open. A good strategy is to put the baby naked (except for a diaper) on your chest skin to skin for 1/2 hour prior to feeds.

Keep your baby sucking through the feeding

If she drifts off to sleep, "bug her" to keep her awake. Massage, cool wash cloths, blowing on her face, and talking to her will keep her going. Look for about 15-20 minutes of vigorous sucking on each breast.

Try baby led latching

Get in a reclining position and place the baby on top of you in any position that is comfortable for you. Allow the baby to locate the breast and latch-on. His head will bob around until he locates the breast. When his chin feels the breast first, he will open wide and latch-on. Try again if you feel any nipple pain.

Read this for more details.

If your breasts get full, have your baby empty them for you by frequent feeding

If that is not enough, you may use a breast pump prior to feedings to get the milk flowing and to shape the nipple, then feed the baby. After feedings, if you are still over-filled, use the breast pump again. Ice is also a good way to slow breastmilk production at this time. And it will feel good!

Look for one wet diaper for each day the baby is old until day 6

Continue with 6 wet diapers and 2-3 stools daily. For example, 3 wet diapers on day three, four on day four and so on. More is fine, but if you are not getting these minimums, call me or your pediatrician for evaluation of your situation and advice.



If you nipples get sore

Try the sandwich hold. Gently squeeze the breast into a "sandwich". Create an oval with your thumb lined up with your baby's nose, your fingers under the breast.

When do I get to sleep?

Sleep when your baby sleeps. Newborns tend to feed a lot at night and sleep more during the day. Around the clock feeds are grueling and you can maximize your sleep by napping when your baby does. Accustom yourself to these quick "cat-naps" to help you feel refreshed. You can also encourage the baby to spend more time awake during the day by feeding and playing with him.

Do as little as possible at night

Feed your baby when he tells you he is hungry. Don't turn on any lights, don't change the diaper (unless it is running out or he has a diaper rash). If your baby "really wakes" up you will be ready to go back to sleep and he will be ready to play.

Find your groove

It will take several weeks for you and your baby to get into a pattern of feedings and nap times. Go with the flow and allow your baby to show you what his natural rhythms are. He will develop a pattern that works for him. Schedules don't tend to work until the baby is a bit older and bigger. You can encourage a more predictable pattern, later.



Information for breastfeeding families

Breast Engorgement



Breastmilk usually "comes in" sometime during the first week after delivery. This means your milk changes from colostrum, or early milk, to mature milk. Your body may make more than your baby needs during this period and it is easy to become overly full.

To prevent engorgement:

- Start early, begin feeding soon after delivery
- Nurse frequently, about 8-12 times per day around the clock
- Make sure your baby latches-on well so he will empty your breasts effectively.
- Keep your baby actively nursing throughout the feeding
- Do not skip feedings or give formula feedings during the first several weeks.

For moderate engorgement:

(Your breasts are as firm as the tip of your nose)

- Apply warmth before feedings to soften the breast and encourage the let-down reflex.
- Stand in the shower and let warm water run over your breasts. This will feel good and encourage leaking.
- Do some gentle breast massage. Make circular motions in small areas with your finger tips and move your hand all around the breast. Then stroke from the outer breast toward the nipple.
- Watch this excellent video of hand expression of breastmilk
<http://newborns.stanford.edu/Breastfeeding/HandExpression.html>
- Apply cold after feedings to reduce the swelling and provide comfort. You can use ice packs or bags of frozen vegetables wrapped in a light towel. Apply for 10 - 20 minutes.

For extreme engorgement:

(Your breasts feel as hard as your forehead)

- Apply cold to the breasts, no heat. This will reduce swelling, slow re-filling of the breasts and provide some comfort.
- Lying on your back helps the excessive fluid in your breasts be reabsorbed by your body.
- Apply cold as previously discussed.
- Cabbage leaves may be applied to the breasts between feedings to reduce swelling. Although this may sound like an unusual treatment, many women have found it effective in relieving the pain and fullness of engorgement. Place the chilled cabbage leaf in your bra for 15-30 minutes 2-3 times per day or until your breasts begin to soften. Not more. More can reduce your milk supply. *Do not use cabbage applications if you are allergic to cabbage or you develop a skin rash.*
- If latch-on is difficult at the beginning of a feeding because of the fullness, you can use hand expression to make your nipples graspable or use a breast pump for a few minutes. Hand expression may work better this time.
- If your baby doesn't empty your breasts sufficiently during feedings or only feeds on one breast, you may use hand expression or a breast pump after feedings for a day or two. It is important to treat engorgement before your breasts become very full and painful. Back pressure on the milk producing cells in your breast can damage them and reduce your over-abundant milk supply.
- If, despite using these methods, you cannot obtain relief, seek help from a lactation consultant or other knowledgeable health care provider.



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REVERSE PRESSURE SOFTENING

K. Jean Cotterman RNC, IBCLC, (mellomom@juno.com)

What is it?

Reverse pressure softening is a new way to soften the circle around your nipple (the are-ola) to make latching and getting your milk out easy while your baby and you are learning. Latching shouldn't be painful. If your areola is soft enough to change shape while feeding, it helps your baby gently extend your nipple deep inside his mouth, so his tongue and jaws can press on milk ducts under the areola.

(These motions differ from those that artificial nipples force a baby to use.)

This new method is not the same as removing milk with your fingers. Don't expect milk to come from your nipple while you soften your areola this way. (But it's OK if some milk does come out.)

When is it helpful?

Try reverse pressure softening in the early days after birth if you begin to notice firmness of the areola, latch pain or breast fullness. (This full feeling is only partly due to milk. Delayed or skipped feedings may also cause the tissue around your milk ducts to hold extra fluid much like a sponge does. This fluid never goes to your baby.) Intravenous (IV) fluids, or drugs such as pitocin may cause even more retained tissue fluid, which often takes 7-14 days to go away. Avoid long pumping sessions and high vacuum settings on breast pumps to prevent extra swelling of the areola itself.

Feel your areola and the tissue deeper inside it. Is it soft and easy to squeeze, like your earlobe or your lip? Or does it feel firmer and harder to compress, like your chin? If so, it's time to try reverse pressure softening just before each time you offer your baby your breast. (Some mothers soften their areola before feeding, for a week or longer, till swelling goes down, baby can be heard swallowing milk regularly, and latching is always painfree without softening first.)

Why does it work?

Reverse pressure softening briefly moves some swelling backward and upward into your breast to soften your areola so it can change shape and extend your nipple. It sends a special signal to the back of your breasts to start moving milk forward (let-down reflex) where your baby's tongue can reach it. It also makes it easy to remove milk with your fingertips or with short periods of slow gentle pumping, combined with gentle forward massage of the upper breast, if you need to remove milk for your baby.

Where should I press?

It is most important to soften the areola in the whole one-inch area all around where it joins your nipple. Soften even more of the areola if you wish. You may also want to soften a place where your baby's chin will be able to move easily against the breast. Reverse pressure softening should cause no discomfort.

How do I do REVERSE PRESSURE SOFTENING?

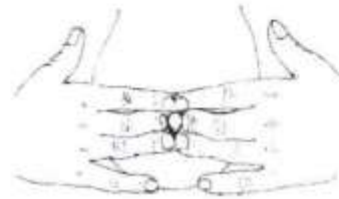
K. Jean Cotterman RNC, IBCLC (mellomom@juno.com)

Illustrations by Kyle Cotterman, Dayton, Ohio

- You (or your helper, from in front, or behind you) choose one of the patterns pictured.
- Place the fingers/thumbs on the circle **touching the nipple**.
- (If swelling is very firm, lie down on your back, and/or ask someone to help by pressing his or her fingers on top of your fingers.)
- Push **gently but firmly** straight inward toward your ribs.
- Hold the pressure **steady** for a period of **1 to 3 full minutes**.
- Relax, breathe easy, sing a lullaby, listen to a favorite song or have someone else watch a clock or set a timer. To see your **areola** better, try using a hand mirror.
- It's OK to repeat the inward pressure again as often as you need. Deep "dimples" may form, lasting long enough for easy latching. Keep testing how soft your **areola** feels.
- You may also press with a soft ring made by cutting off half of an artificial nipple.
- Offer your baby your breast promptly while the circle is soft.



One handed "flower hold"
Fingernails short,
Fingertips curved,
placed where baby's
tongue will go



Two handed, one-step method
Fingernails short,
Fingertips curved,
Each one touching
the side of nipple



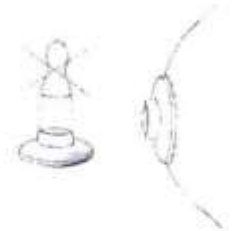
(You may ask
someone to help
press by placing
fingers or thumbs
on top of yours.)



Two step method, two hands,
using 2 or 3 straight fingers
each side, first knuckles
touching nipple. Move ¼ turn,
repeat above & below nipple.



Two step method, two hands,
using straight thumbs, base
of thumbnail even with side
of nipple. Move ¼ turn, repeat,
thumbs above & below nipple



Soft ring method.
Cut off bottom half
of an artificial nipple
to place on areola to
press with fingers

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Information for breastfeeding families

Selecting a Breast Pump



Walk into a baby store and look at the wall of breast pumps. It is hard to make a decision about which one will be effective and comfortable for you! The basic parts of a breast pump will vary from manufacturer to manufacturer. But these are typical.



Flange goes over the breast



Connector



Bottle

Tubing attaches to a motor or electric breast pump. In the case of a manually operated pump, the handle would be located here.

Breast pumps can remove milk from one breast at a time or both breasts simultaneously. Of course, bilateral pumping cuts the time in half. In addition, it stimulates the hormones of lactation better.

Pumps fall into 4 basic categories:

- Hospital grade - Generally rental pumps used while establishing a milk supply if your infant is premature or ill
- Personal use pumps - Generally used by employed mothers at work
- Battery or small electric pumps - Generally used by employed mothers or for occasional use
- Manually operated breast pumps - Best used for occasional use

Selection criteria

- Purpose
- Age and health of infant
- Comfort
- Availability
- Cost
- Ease of use
- Adjustable suction and frequency
- Adjustable breast flange
- Ease of cleaning
- Universal collection container
- Durability
- Versatile power source
- Portability
- Safety

Resources

FDA Breast Pump Website – Basic information on breast pumps

<http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/BreastPumps/default.htm>

Breast Pumps Direct – User review of various breast pumps

http://www.breastpumpsdirect.com/breast-pump-reviews_a/183.htm

Breast Pump Comparisons – User reviews of various breast pumps

<http://www.breastpumpcomparisons.com/first-page/breast-pump-comparisons>

Information for breastfeeding families

Infant Hunger Cues



Babies show several cues in readiness for breastfeeding. Tuning into your baby's cues will make your feeding more successful and satisfying for both your baby and for you.

Your baby does not have to cry to let you know he is hungry. ***Crying is the last hunger cue!***

Awakening

Soft sounds

Mouthing (licking lips, sticking tongue out, licking lips)
Rooting towards the breast (turning the head and opening the mouth)

Hand to mouth activity

Crying beginning softly and gradually growing in intensity



Try to catch your baby's feeding cues early in the cycle – avoid crying – and begin breastfeeding!

Information for breastfeeding families

Five Keys to Successful Breastfeeding



Keep your baby skin to skin until after the first feeding

The first feeding sets the pace for next several feedings. The time right after birth babies are often awake and ready to feed for about an hour. Take advantage of this special time by asking the nurses to delay the eye treatment, weight and routine injections until after the first feeding.

After that, feed when the baby seems hungry, at least 8-12 times each day.



Room in with your baby

Keep your baby with you during your hospital stay so you can learn your baby's cues and feed whenever he seems hungry. Babies typically feed 8-12 times each 24 hour day for the first several weeks



Avoid supplementary feedings

All your baby needs is you! Rarely is there a baby who needs more than the breast in the first 24 hours. Offer the breast often. The fast flow and different feel of a bottle nipple can confuse babies and make subsequent feedings difficult.



Limit the use of pacifiers and swaddling

Anytime your baby seems hungry offer the breast. In-between, continue your skin to skin holding. Later your pediatrician may recommend the use of a pacifier, but not until breastfeeding is well established.

Research shows that babies who are constantly swaddled do not wake up as often for feeding. Frequent feedings in these early days assures that you will bring in an abundant milk supply and your baby will feed adequately.



Ask for help

If things don't seem to be going well, or your breasts become sore, ask to see the lactation consultant in the hospital. She can watch a feeding and give you tips on how to hold your baby at the breast. When you get home, contact a breastfeeding support group, a lactation consultant in the community, or other breastfeeding assistance.

Information for breastfeeding families

Positioning & Latch-on: Mother-led Latching



The way you hold your baby and how he latches on to the breast, are the keys to comfortable feeding for you and full feedings for your baby. Correct positioning and latch-on can prevent many of the common problems mother's encounter when starting to breastfeed.

Mother-led latching is good for any time the baby needs additional assistance, is too sleepy to latch spontaneously or you have sore nipples.

Getting comfortable

Choose a comfortable chair or sofa with good support for your back. Use a footstool to bring your knees up so your lap is slightly inclined and the pressure is off the small of your back. Position pillows where ever needed to support your arms and relax your shoulders.

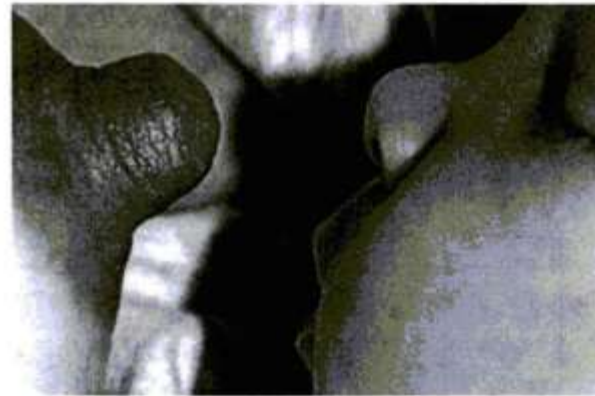


Look for a straight line from the baby's ear to the shoulder to the hips. His head

Positioning your baby

With any position you choose to hold your baby, turn your baby completely onto his side, "tummy to tummy", so his mouth is directly in front of the breast and he does not need to turn his head at all to get to the nipple.

Position your baby with his nose to your nipple. He has to "reach up" slightly to grasp the nipple. His chin should touch the breast first, then grasp the nipple.



Place your baby's lower arm around your waist. This will draw him close to you. Look for a straight line from your baby's ears, to shoulders, to hips. His legs should curl around your waist.

Basic positions for breastfeeding

Beginner's Positions
(first few days or weeks)
Cross Cradle Hold
Football Hold

Advanced Positions
(after the latch-on is easy and quick)
Cradle Hold
Side-Lying

The cross-cradle hold is one of the preferred positions for the early days of breastfeeding. You will have good control of the position of your baby's head when you place your hand behind your baby's ears. Roll the baby to face you "belly to belly".



The football hold (clutch hold) is good for mothers who have had a cesarean delivery because the weight of the baby is not on the abdomen. Tuck the baby under your arm with pillow support to place the baby at breast height. Tuck a pillow or rolled receiving blanket under your wrist for support.

Place your baby's head in the bend of your arm or on your forearm and support his body with your arm in the **cradle hold**. Roll the baby towards you "belly to belly".



Side lying is great for getting a bit of rest while your baby nurses or if you want to avoid sitting up because of soreness. Notice the pillow support under your head and your back and the baby's back, and between your legs. Roll the baby towards you "belly to belly".



The Cradle hold is great for after the baby is nursing easily and the latch-on is easy. It is the most common position and you will often see this in pictures of breastfeeding mothers. Please wait to use this position until your baby latches easily.



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Information for breastfeeding families

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Baby-led latching is good for the first feeding and for all feedings after that when the baby is awake and willing to participate.

Getting comfortable

Choose a bed or sofa where you can lean back about half way or more, whatever is comfortable for you.

Positioning your baby

Position the baby between your breasts and allow your baby to wake skin-to-skin. Holding your newborn skin-to-skin is one of the best ways to make breastfeeding easy!

Be Patient

Your baby will gradually realize where he is and that food is nearby! He will slowly begin to move towards the breast. Provide support and assistance if it seems necessary, but avoid directing the baby. Your baby will locate the nipple and latch on with minimal assistance from you. Let your baby lead the way.



This baby located the breast and latched on independent



Importance of Skin to Skin contact

Babies tend to feed best when they have direct contact with mother, in skin-to-skin contact. Not only does it keep baby warm, the smells and feel of the breast encourage locating the breast and feeding.

Mix & Match Techniques

You may find that the sandwich hold would help your baby get a deeper latch-on the breast. Place thumb near the baby's nose and fingers on the opposite side of the breast, and gently compress the breast into a "sandwich". Listen for swallows to assure that your baby is drinking milk.

Feel free to use any of the Mother-led Latching techniques from the handout "Mother-led Latching" if they seem to work better at the time.

If you find breastfeeding painful or your baby is not gaining weight (3/4 to 1 oz per day), please seek the help of a lactation consultant to give you personalized guidance.

Although breastfeeding is natural, it is a learning process for both you and your baby. Allow yourself several weeks to perfect these techniques.

At any time that you are unsure that you are feeding correctly, seek the help of a lactation consultant or other knowledgeable health care provider. Once breastfeeding is fully established, it can be one of the most rewarding experiences of new motherhood.



Sandwich hold

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Biological (Baby-Led) Latch-On



Mom allows baby to come to the breast. Nipple points to baby's nose. The nipple/areola is soft and compressible. When mom sees baby's tongue out and down, she encourages baby to **PLANT** the chin.



Baby latches on, using his tongue to gather in the nipple. Baby's tongue stays over his lower lip. Nipple goes in just under baby's top lip. Mom may use her thumb or finger to **tuck** nipple under baby's lip



Mom removes finger, places hand under baby's back but does not push. **Nipple is pain-free!** Mom allows baby to nurse until baby comes off breast or pain occurs.



Basic Points For Latch-On

1. Soften areola with reverse pressure and/or hand-expression, at least 1 inch behind the nipple.
2. Mom gets in a comfortable position, leaning back about 30 degree angle (no lower than 15 degrees, no higher than 70.) Her arms and back should be supported with pillows. Mom should angle her body in such a way she can see the nipple easily. This could be reclining more or turning slightly one way or the other. Use sofa, recliner or bed.
3. Place baby on mom's chest, between breasts. Mom should feel as if baby is resting on her body, not as if she must hold baby in place.
4. Let baby begin to search for the nipple – he may begin by "pecking", bobbing his head up and down. Eventually he will lean over towards one or the other nipple. If baby crawls below the breast, pick him up and start latching above the breast.
5. As baby nears the nipple, mom may tilt the nipple up to encourage him to sweep the nipple into his mouth with his tongue. Mom releases the nipple as soon as baby gets his tongue under and top lip over the nipple.
6. Mom brings arm nearest the baby's head underneath her breast and supports his body to keep him in alignment. Her other arm or hand may support baby's head or baby's bottom. It's OK for baby's nose to touch the breast.
7. If the nipple begins to hurt, try pulling baby's bottom lower. Make sure his body is lined up with bottom, chin and relaxed. If baby pinches nipple when let-down happens, try leaning back more.
8. When baby lets go of the nipple, burp. If first breast is softer, start the process again on the other breast at the end of the time the feeding; just concentrate on breast being drained.
9. If baby falls asleep quickly or stops drinking, use the breast "squeeze" or move him to the other breast every 15-20 minutes.

If baby does not latch by himself, place him in a similar position, on his side, facing your breast and HELD in place, keeping the nipple pointed up to the top of his mouth.

What is Laid-back Breastfeeding?

Laid-back breastfeeding is about using positions that tap into your baby's natural reflexes. It's sometimes called "biological nurturing".

Your baby is born with the ability to move towards his food source - your breasts. You can tap into this instinct by using certain positions when feeding. This helps you both, because breastfeeding is less about you learning a skill and more about your baby leading the feed.

So, how's it done? At the beginning of a feed, lie back on a comfy sofa or bed. Don't lie flat on your back, but prop yourself into a semi-reclining position with pillows and cushions. You want the whole of your back, shoulders and neck supported. You should be resting on your sacrum, the bony part at the back of your pelvis which is just above your tailbone.

When you're comfortable, place your baby on his front on your body. If you've had a vaginal birth, position your baby so that his feet are near your thighs and his head is near your breasts. It's particularly important that your baby's thighs, and the tops and the soles of his feet are in contact with you or whatever you're lying on as he adjusts his position. Bringing your knees up may help.

Your baby may push with his feet and wriggle his thighs as he moves toward your breast. He uses his senses to look for your breast and bob his head to find your nipple. He may turn his head as his mouth opens wide over your nipple and brings in a good mouthful of nipple and breast. As he latches on to your breast, his sucking reflex kicks in.

Although it may be easiest to start off with your baby feet-down, you can place your baby at any angle. Whatever works best for you is fine - there are as many positions as there are points of a dial on a clock. If you imagine your nipple as the centre of the dial, you can see how your baby can approach it from any direction, as long as he has enough support on you or the bedclothes, pillows or cushions.

After a caesarean birth, you could place your baby across your shoulder to feed, so that his feet are kept well clear of your wound.

Because you're fully supported, your arms and hands are free to nudge your baby towards your breast. You can more easily adjust the pillows so that you can lie back fully supported as your baby feeds. You can melt into the bed or sofa, while your baby moulds into your curves.

You can try bringing your baby to you for a feed while he is still sleeping. See a sleeping baby latching on in [this video](#).

Straight after the birth, you and your baby may be lying together skin-to-skin. At other times, laid-back breastfeeding works well if you're both lightly dressed, provided you're both warm enough.

Laid-back breastfeeding works well if you're sore from childbirth, have a caesarean wound or have shoulder or neck pain. It may also prevent or reduce nipple pain.

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What to Expect: The First week of Breastfeeding

<u>Mom's Body</u>	<u>1st 4 Hours after Birth</u>	<u>4-24 Hours</u>	<u>Day 2</u>	<u>Day 3-5</u>	<u>Day 6-7</u>
<u>Breast</u>	Soft, with no change after feeding.	Soft, with no change after feeding.	Soft, with no change after feeding.	Firmer, less firm after feeding.	Firm, so feeding
<u>Nipples</u>	May feel tender, no cracks, blisters or bruising.	May feel tender, no cracks, blisters or bruising.	May feel tender, no cracks, blisters or bruising.	May feel tender, no cracks, blisters or bruising.	Less ten cracks, or bruis
<u>Uterus</u>	Possible cramping, especially while nursing baby.	Possible cramping, especially while nursing baby.	Possible cramping, especially while nursing baby.	Possible cramping, especially while nursing baby.	Less cra
<u>Milk Supply</u>	May be able to express drops of colostrum, which can range from clear to milky, or yellow.	Colostrum averages about one teaspoon a feeding and is packed with protein, nutrients and antibodies to meet all baby's needs.	Colostrum continues and increases slowly at each feeding to match baby's increasing stomach capacity.	Transitional milk should be coming in on Days 3-5; Baby's swallows become more audible as your supply increases. If milk is not in by day 5 call for	Transit milk ch mature around days al you ma notice differe

<u>Baby's Behavior</u>	<u>1st 4 Hours after Birth</u>	<u>4-24 Hours</u>	<u>Day 2</u>	<u>Day 3-5</u>	<u>Day 6-10</u>
<u>Baby's Activity</u>	Baby is most likely alert and awake the first two hours after birth, then may go into a deep sleep for 2-5 hours.	Mostly likely very sleepy during this time and may need to be awakened to feed every 4-5 hours. Skin to skin contact is encouraged.	Baby should be less sleepy and more interested in nursing from this time forward. Non-demanding babies should be awakened if four hours have passed since last nursing.	Should arouse by self for feedings. May cluster feed (several feedings close together).	Should arouse for feedings and after feeding continue to nurse with growth spurts. First spurt is usually within the first 2 weeks of age.
<u>At the Breast</u>	Enjoy your first feeding and take time to bond with baby skin to skin. Most newborns will self latch if given time.	The first weeks are all about learning. Pay close attention to positioning and latching. This will be easier with practice.	Some moms experience nipple tenderness in the beginning, but this should not last throughout the feeding. Ask for help as needed.	Massage, hand expression or pumping for a few minutes prior to feeding will help if your breast is too firm for Baby to latch. You may also try warm moist heat to your breast before feeding and cool packs between feeding.	Continued frequent nursing will encourage engorgement. Also continue to warm and cool as needed. Nipple tenderness should resolve with engorgement resolving.
<u>Baby's Feedings</u>	Try to feed your Baby within the first hour of delivery; this is the best time for bonding. Skin to skin contact is important for newborns to assist in regulation of body temperature, blood sugar and to establish good healthy skin "flora" from Mom and even Dads.	Offer your breast every 3 hours or when baby shows signs of hunger. Remember Babies are very sleepy today; some Babies will not eat this frequently in the first 24 hours. This is normal and does not require supplementation for the healthy newborn.	Offer your breast every 3-4 hours or when Baby shows feeding cues. Signs of hunger include: rooting, sucking, smacking and/or hands to mouth. Crying is a late hunger cue. Feedings may last a few suckles to 40 minutes in duration.	From today forward Baby should be feeding more often, about 8-12 feedings in a 24 hour period. Allow Baby to feed on demand. Feedings may last from 10- 40 minutes. Always allow Baby to finish first breast before moving to the next breast.	Baby will breastfeed anywhere from 1-3 hours. Feeding frequency around 8-12 with occasional cluster feedings (1-2 hours). Feeding occurs during naps and during spurts.
<u>Wet Diapers</u>	Your Baby may urinate at delivery.	Your Baby should have at least one wet diaper today.	Your Baby should have at least 2 wet diapers today.	Your Baby should have 3 or more wet diapers.	Your Baby should have at least five to six wet diapers. Urine should be colorless to pale yellow in color.
<u>Stool Diapers</u>	Your Baby may have a bowel movement at delivery.	Your Baby should have at least one dark tarry stool today (meconium).	Bowel movements will still be dark in color, but should be less tarry. Baby should have at least 2 BM's today.	Bowel movements should be increasing, becoming looser and lighter in color.	Once milk is coming in, stools should be yellow and seedy. Milk stools are usually soft and explosive.





Day one

Size of a Cherry

5-7 ml/ 1/2 Tsp

Day Three

Size of a Walnut

22-27 ml/ .75-1oz

One Week

Size of an Apricot

45-60 ml/ 1.5-2 oz

One Month

Size of a large egg

80-150 ml/ 2.5-

Latch-on

Compress your areola slightly to make a "nipple sandwich" for the baby. This will allow the baby to get a deeper latch-on. Make sure your fingers are well behind the edges of the areola (1 to 1 ½ " from the base of the nipple). Allow your baby's head to lean back slightly so his chin touches the breast first.



An easy way to remember how to hold your hand is to keep your thumb by your baby's nose and your fingers by the baby's chin. That way you will automatically rotate your hand to match the baby's positioning.

Touch your nipple to the philtrum (the skin between his nose and lips). Your baby will open wide and you can bring him on to the breast. If he doesn't, tickle the philtrum and wait until he opens WIDE (like a yawn) and his tongue comes forward. He should get the nipple and a "big mouthful" of the areola (the dark brown part of the breast) in his mouth. Bring the baby to the breast, not the breast to the baby!

Listen for swallowing every 3 to 5 sucks (May not be apparent until your milk comes in). Once your milk is in you will notice swallowing with every suck.

Let the baby nurse for 15-20 minutes on each breast or 20-30 on one breast. 8 - 12 feedings each 24 hours is normal for a newborn. Refer

Check your latch-on

Your baby's *chin* should touch the breast, his nose should be free.

Worried that your baby can't breathe while at the breast? Don't! If the baby truly can't breathe, he will let go. Usually, babies can breathe easily even when pressed close to the breast because they can breathe around the "corners" of their noses. Do not press on the breast to make a breathing passage for the baby to breathe. This can distort the shape of the nipple in the baby's mouth and contribute to soreness as well as limit the drainage from the area of the breast above your fingers. If necessary, pull the baby's hips in closer to the breast. This should free up his nose.

Some mothers describe pain as their baby latches-on that eases as the milk begins to flow. This will subside over time, as your baby adapts to breastfeeding. If it persists, remove your baby from the breast and re-attach him. The angle of your baby's lips at the breast should be greater than 140 degrees or greater.



Most of the areola is in your baby's mouth and both upper and lower lips are flanged (rolled out). You feel deep pulling sensation as the baby nurses. It should not be sharp pain or more than a moment during the latch-on.

If you need to remove your baby from the breast, slip your finger between his lips and



Information for breastfeeding families

Is My Baby Getting Enough?

Often, a new parent's biggest concern is about how much and how often the baby breastfeeds.

Here are some guidelines to help you know if your baby is getting enough:

✓ Your newborn baby should nurse 8 - 12 times in 24 hours during the first 2 - 3 weeks. As your baby gets older he will become more efficient and feedings may be less frequent.

✓ Some feedings may be close together, even an hour or so apart. Other feedings will be less frequent. Feedings do not need to be evenly spaced and are often irregular in the newborn baby. Wake your baby if he doesn't awaken to feed within 3 hours during the day. Night time feedings can be less frequent.

Typical patterns for wet diapers is

- 1 wet diaper on day one
- 2 wet diapers on day two
- 3 wet diapers on day three
- 4 wet diapers on day four
- 5 wet diapers on day five
- 6 wet diapers on day six and from then on.

Look for light yellow to clear urine.

Typical patterns for stools is several per day

- Day 1 Meconium (dark & tarry)
 - Day 2 Brownish
 - Day 3 Brownish yellow
 - Day 4 Dark yellow, soft
 - Day 5 Yellow, semi-liquid
- Some newborns stool after every feeding. Stools taper off and may not even occur every day as your baby gets older.

Babies generally lose a little weight in the first few days after birth and then begin to gain. This is normal pattern. Ten percent is considered the maximum acceptable weight loss. Have your baby's weight checked a couple of times during the first 2 weeks, especially if you are concerned that your baby is not eating enough. A check of his weight is the only sure way to determine adequate intake. Once your baby has regained his birth weight, at about 2 weeks, you can relax and let your baby set the pace for the feedings.

Sometimes, babies seem to take a good feeding at the breast but wake within a few minutes wanting more. Offer the breast again. It will likely be a short feed "top off" feeding and your baby will drop off to sleep.

Is My Baby Getting Enough?

Signs of hunger

Rooting
Mouthing movements
Tense appearance
Grunting, other sounds
Hand-to-mouth activity
Kicking, waving arms
Crying

Signs of a good latch-on

Relatively comfortable, latch-on pain subsides quickly
Lips at the breast at least 140° angle or greater
All or most of the areola in the baby's mouth with more areola covered from the area near his chin (asymmetrical latch-on)
Lips flanged (rolled out)

Signs the Baby is Full

Drowsiness, sleepiness
Baby comes off the breast spontaneously
Relaxed appearance
Hands and shoulders are relaxed
Sleeps for a period of time before arousing to feed again

Signs of a good feeding

Easy latch-on, stays latched-on
Swallowing you can hear
Noticing that the breasts are softer after feedings
Feeling strong, deep, "pulling", sucking
Seeing milk in your baby's mouth
Leaking from the other breast or feeling of a "let-down" reflex
15 - 20 minutes vigorous sucking on each breast or 20 - 30 minutes on one side
Wide jaw movements and consistent sucking

Please see the advice of a Lactation Consultant or a physician if:

1. Your baby has not begun to gain weight by his fifth day after birth or has not regained his birth weight by 2 weeks
2. Your baby is not voiding at least 6 - 8 times per day
3. Your baby is not having several stools per day

These signs can indicate inadequate feedings and can become a serious concern if not corrected quickly. You may wish to keep a written record of when your baby voids, stools and feeds for a few days so you can accurately report this to your health care provider. Please seek help if your problem does not resolve quickly.



Information for breastfeeding families

Help From Friends and Family



New mothers need help and support in the early days of breastfeeding. Partners, husbands, grandparents, siblings and friends all can play a critical role in meeting the needs of a new mother. Everyone needs to be on the same "wave length" when offering help and suggestion. Be aware of differences in culture and changes in parenting philosophy from generation to generation.

How to Help

What Has Changed

Bring the baby to mom for feedings

More breastfeeding, limited infant formula

Change diapers

Feed 8-12 times or more times each day when the baby shows feeding cues. No feeding schedules.

Watch for feeding cues

Burp the baby

Respond to the baby quickly. No "crying it out"

Hold the baby skin to skin

Walk, rock, swing and cuddle the baby

Minimal pacifier use

Take care of household duties

Less babysitting, bring baby along

Make sure mom has some help for the first 6 weeks or so

Continue breastfeeding while employed by using a breast pump at work

Bathe the baby

Take care of the other children

Offer encouragement

Be there!

Notes from Dad to Mom

- ✓ Treat me like I know what I a doing, teach me when I don't
- ✓ Look at me like you used to
- ✓ Let me help when you are tired
- ✓ Arrange to spend some alone time with me
- ✓ Do something special for me
- ✓ Do care activities together until I feel comfortable
- ✓ Take my advice
- ✓ Be agreeable with my family
- ✓ Encourage me to be part of the special relationship you have with the baby
- ✓ Call me "Dad"
- ✓ Ask me what my concerns are and listen
- ✓ Ask for help if you need it

Advice for grandparent
<http://www.parentingsupport.com/index.php/2011/09/07/8-ways-grandparents-can-offer-support-to-a-new-family>

Notes from Mom to Dad

- ✓ Take the baby for awhile and give me a break
- ✓ Tell me I am doing a good job
- ✓ Be my "breastfeeding coach"
- ✓ Plan something special for the two of us
- ✓ Give me a massage
- ✓ Send me flowers
- ✓ Limit my visitors
- ✓ Make dinner or breakfast in bed
- ✓ Be agreeable with my family
- ✓ Don't question purchases to make breastfeeding easier/more comfortable
- ✓ Wash the pump kit
- ✓ Do some of the housework
- ✓ Plan time so I can sleep
- ✓ Call me "Mother"
- ✓ Just listen and offer support
- ✓ Be our advocate for nursing
- ✓ Bring the baby to me for nighttime feedings
- ✓ Feed my pumped breastmilk at some feedings
- ✓ Get involved in our baby's care
- ✓ Ask for help if you need it
- ✓ Talk proudly to your friends about breastfeeding



Information for breastfeeding families

Hands-on Pumping



Using a breast pump is important if your baby is ill, premature or unable to breastfeed for any reason. You will obtain more milk from the pumping session if you use breast massage at the same time. You will have more milk to save for feedings and your milk supply will increase.

Hands on pumping routine:

- Begin breast pumping within 6 hours of delivery
- Use a hospital grade breast pump with a double pump kit 8 times or more per 24 hours
 - Does not need to be a regular schedule, do when ever convenient
- Assure the flanges are appropriate size
 - Nipple moves freely in and out during suction cycle
 - Breasts are emptied completely, no areas of lumps
 - No pain while pumping
 - No white ring around areola
- Wear a bra or bustier that will hold the flanges in place while you pump so your hands can be free for massaging
- Start with slow massage to stimulate let-down
- Apply the breast pump and use the maximum suction level that is comfortable, not painful
- Watch the sprays of milk and adjust hand position to where milk flows the most easily
- When the sprays of milk subside, switch to single pumping so you can be more vigorous with the massage
- When the sprays of milk subside again, turn off the pump and hand massage into the pump flange. Some mothers can double their output this way. This is hind milk so the richest milk for the baby.
- Pay special attention to the outer margins of the breast



Watch this video while you are pumping!

<http://newborns.stanford.edu/Breastfeeding/MaxProduction.html>

Purpose: Is your infant premature, ill or do you need to be separated from your infant for any reason? Select a Hospital grade pump. If you will be working and away from your baby for 8 or more hours, select a personal use pump. If you will be using your pump occasionally, a battery, small electric or manually operated pump will be fine.

Age and health of infant: If your infant is a newborn and your milk supply is not well established, choose a hospital grade or personal use pump.

Comfort: Select a pump that has adjustable suction levels and flanges so you can adjust them to your comfort.

Availability: Breast pumps may be available at your hospital, from your lactation consultant or at your local baby store.

Cost: Pumps range in price from about \$35 to over \$300. Rental pumps range from \$1 to \$5 per day depending on the length of the rental agreement. Purchase or rent the best pump you can afford, it will make a difference!

Ease of use: The pump should come with clear instructions and be easy to figure out. If it is very complicated, you won't end up using it.

Adjustable suction and cycle frequency: You want your pump to mimic the typical suction patterns of a baby at the breast. Therefore the suction range should be adjustable up to about 240 mm Hg and cycle about 48-50 times per minute. Breast pump packages are not labeled with this information at this time.

Durability: What kind of a guarantee does the pump have? Is it likely that you can use it for this baby and for another baby or two?

Adjustable breast flange: Many pumps come with a standard size flange that fits most women. However, if you have very small or very large nipples, you may need a flange that fits you. You can tell the flange fits you if it completely supports the areola and does not pull any areola into the flange indicating it may be too large. You can tell if the flange is too tight if the nipple is tight in the nipple tunnel, hurts or does not empty the breast completely.

Ease of cleaning: Check the small parts. Is it likely that small, but essential, parts could slip down the drain and be lost? Is the pump easy to reassemble? The pump should be washed with soap and water after each use.

Universal collection container: Most pumps will accept any standard baby bottle and it is convenient to be able to mix and match with any bottles you have handy. Others require their own particular size.

Versatile power source: It is useful that an electric pump can be plugged in, but also could be operated on batteries at other times. In the case of a power outage, you should be able to operate it manually.

Portability: Where will you use your pump? Will there be times you will need to quickly put it in your purse or wear it as a backpack? Or will you always be sitting in a designated pumping room?

Safety: If it is operated by electricity, the pump should be rated by the Underwriters Laboratory as safe. Check to assure it will automatically cut off suction levels above 240 mm Hg which could damage the breast tissue.

Selected Major Pump Manufacturers

Medela <http://www.medela.us/>

Ameda <http://www.ameda.com/>

Hygeia <http://www.hygeiababy.com/>

Bailey <http://www.baileymed.com/>

Simplisse <http://www.simplisse.com/>

Information for breastfeeding families

Storage and Handling of Breastmilk



Working mothers or others who are pumping breastmilk for their infants should store the milk in the cleanest and safest way. It can be stored in any clean container: plastic, glass or nurser bags. Recommendations for storage temperatures and times vary greatly from one authority to another. We are recommending guidelines based on research and common sense.

Room Temperature

Freshly pumped breastmilk can be kept at room temperature for 4 hours. If it will need to be kept longer, please refrigerate. Milk that has been previously chilled should be kept at room temperature for no longer than an hour or so.

Refrigerated

Breastmilk may be stored in a refrigerator 4-8 days. If you think that you may not use it within that time period, freeze it. If you find you have milk that has almost reached its expiration date in the refrigerator, you may freeze it for later use.

Frozen

Breastmilk may be stored in a freezer for up to 3 months and in a deep freeze for up to 12 months. The freezer is cold enough if it keeps your ice cream solid. That will be about 0° F or -20° C. It should be placed in a part of the freezer that will not be subject to changes in temperature as the door is opened and closed. If plastic nurser bags are used, they should be doubled or protected from being bumped and torn in the freezer.



Layering Breastmilk

You may add "new" milk to previously chilled or frozen milk. Chill the "new" milk prior to adding it to the container of milk. The expiration date of that

It is best to freeze milk in feeding sized quantities. If you are just starting to pump, you may not yet have an idea of what will be the right size for your baby. Freeze in 2-3 oz quantities to start. You don't want to thaw out more milk than your baby will take in 2-3 hours. You can always get more if necessary, but you will be dismayed if you have to discard pumped breastmilk. After you have some experience with how much your baby takes from a bottle, you can freeze milk in that quantity.

Thawed

Breastmilk can be thawed in lukewarm water in just a few minutes. Then it can be warmed to serving temperature in the same manner. Never make it warmer than body temperature. Never use a microwave to thaw or warm breastmilk. Discard any milk left in a bottle after a feeding. Thawed breastmilk must be discarded after 24 hours. Do not re-freeze it.



Transporting

Chill any milk that you pump at work either in a refrigerator or a portable cooler bag. A cooler bag can be used to transport the milk home.

Information for breastfeeding families

Helping a Breastfed Baby Accept a Bottle



Occasionally a baby who is being breastfed will refuse to accept a bottle nipple. This can be especially disconcerting if the mother works outside the home, or needs to be away for more than the interval between feedings. Try these suggestions!

Don't wait too long

Sometime between 4-6 weeks is a good time to introduce a bottle. Sooner may interfere with the establishment of good breastfeeding. Waiting too long may result in a baby who refuses the bottle.

Have someone else give the bottle

Many nursing babies won't take a bottle from their mother. The baby can smell her and knows that there is something better at hand. Have someone else give the bottle and the mother may have to leave the room, or even leave the house.

Sometimes an experienced grandmother or day care provider will have success transitioning the baby to the bottle when the parents have been unsuccessful.

Try different holding positions

Some babies take a bottle better cuddled in the nursing position. Others do better in a totally different position. Try propping the baby in your lap with his back to your chest. The baby will see the room while drinking the bottle (don't forget eye contact later); or prop the baby on your slanted forelegs, like in an infant seat, and give the bottle while looking at him.

Give lots of lap time

Using a bottle should not reduce the amount

Allow the baby time to adjust

Gently stimulate the baby's mouth with the nipple and allow the baby time to become familiar with it.

Try letting the baby play with it like a toy at other than feeding times. Let the baby get familiar with it on his own terms!

Try motion

Sit in a rocking chair or gently sway back and forth.

Try different fluids in the bottle

Some babies prefer breastmilk in the bottle. Some prefer that the bottle contain something other than breastmilk. Sometimes 1/2 and 1/2 will work.

Try different times

Anticipate feeding times and try when the baby is not too hungry. Or try when the baby is hungry and might be willing to accept anything. Try putting the bottle in the baby's mouth when he is drowsy or sleeping.

Warm it up or cool it down

Try warming the fluid in the bottle and warming the nipple to body temperature. A warm nipple feels not too different from the warm breast.

Put it in the refrigerator to chill it down (teething babies like this)

Try different nipples

Features to look for in bottle nipples

- Size of the base (wide, medium or narrow)
- Length of the shank (short, medium, long)
- Flow rate (slow or newborn, medium, rapid)



Wide base



Medium base



Narrow base



Keep trying a variety of strategies eventually something will work!

Try medium base, long shank nipple with a slow flow first for an average size newborn. For an older or larger baby try a wide base nipple with a slow flow. They are usually the best for going back and forth from breast to bottle. Give a variety of nipple shapes and materials a try. And be sure to get the baby's jaws over the base of the medium or wide base nipple. This is similar to the positioning of the nipple and areola. The baby should be able to go back and forth from breast to bottle more easily when the nipple is used properly. Refer to the handout on Paced Bottle Feeding.

If the flow seems too slow and the baby becomes frustrated, try enlarging the holes in the nipple with a hot needle or purchasing nipples rated for a faster flow. If the flow is too fast, the baby will have a panicked look on his face, cough and sputter, and milk may leak from his lips. Obtain a slower flow nipple. Ideally the bottle feeding will take the same amount of time as a typical breastfeeding. Feeding may be 10 – 30 minutes depending on the age of the baby.

An alternative bottle is the Adiri. It's unusual shape and feel may be just the trick for some babies.

Offer a cup

You can skip the bottle and go directly to a cup. Even preemie babies have successfully used a cup, so any baby can learn this. Use a small cup, shot glass, egg cup, soft plastic bowl, medicine cup, spoon or anything similar. There are specially made feeders if you can't find a suitable item around the house. Many manufacturers make feeding cups and spoons. Explore what is on the market and follow the manufacturer's directions.

When offering cups to infants, allow the baby to pace the feeding. Do not pour milk into the baby's mouth! Place the cup on the lip with the fluid just at the rim of the cup. The baby's tongue will come forward and sip or lap the milk.

