

# Florida Nutrition Training Guide

## Breastfeeding Module

**Florida Department of Health  
Bureau of WIC and Nutrition Services  
Revised March 2001**



# Breastfeeding Module

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# Introduction

The **Breastfeeding Module** consists of 3 components:

1. The module itself.
2. The Workbook, to be completed by the staff member.
3. The evaluation materials for the supervising nutritionist.

# Instructions

1. Read the **Knowledge Objectives** and the **Performance Objectives** (pages 5 and 6).
2. Follow along with this presentation.
3. Stop and complete the **Self-Checks** as they appear and immediately correct any mistakes.

# Instructions (continued)

4. Complete the **Practical Activity** found in your **Workbook**.
5. Arrange for a convenient time to take the **Posttest**.

# Glossary

Review the **Glossary** (pages 8 to 12) and become familiar with **all** of the terms.

## **Example:**

Acute disease. A disease which has severe symptoms and a short course.

# Part 1: Breastfeeding—Normal Infant Feeding and How It Works

## History & Current Trends

- **Breastfeeding is best!**
- Until the early 1900s, breastfeeding was essential to ensuring the survival of humankind.



# History and Current Trends (continued)

**However, infant feeding practices in the United States have changed dramatically due to:**

- Refrigeration
- Pasteurization
- Changing lifestyles
- Changing attitudes toward infant feeding
- The increased availability, promotion, and aggressive marketing of commercial infant formulas.



# History and Current Trends (continued)

- By the 1950s and 1960s, the percentage of babies in the United States who were exclusively bottle fed with infant formula climbed to an estimated 82%.
- In the 1970s and 1980s, the United States experienced a renewed awareness of the importance of breastfeeding.
- Breastfeeding is currently recognized by health care professionals as the superior feeding and nurturing choice for infants, with infant formula being a distant second choice.

# History and Current Trends (continued)

**In December 1997, the American Academy of Pediatrics (AAP) came out with a new, very strong policy statement. It says in part:**

*Human milk is uniquely superior for infant feeding and is species-specific; all substitute feeding options differ markedly from it. Extensive research, especially in recent years, documents diverse and compelling advantages to infants, mothers, families, and society from breastfeeding and the use of human milk for infant feeding. These include health, nutritional, immunological, developmental, psychological, social, economic, and environmental benefits. Human milk is the preferred feeding for all infants, including premature and sick newborns, with rare exceptions.*

# History and Current Trends (continued)

- Since 1991, the national breastfeeding rates in the general population have been increasing while the breastfeeding rates of the WIC population have also been increasing, WIC's breastfeeding rates are lower than those in the general population.
- In 1999, about 55.5% of Florida's WIC mothers breastfed in the hospital, but only 15.7 percent said they were still breastfeeding at six months postpartum. In comparison, nationally 67.2 percent of mothers in the general population were breastfeeding in the hospital and about 30 percent were breastfeeding at 6 months postpartum.

# History and Current Trends (continued)

In the *Healthy People 2010, National Health Promotion and Disease Prevention Objectives*, the breastfeeding objective is to have at least 75% of mothers breastfeeding in the early postpartum period, at least 50% breastfeeding at 6 months postpartum, and 25% breastfeeding at 1 year postpartum.

# History and Current Trends (continued)

International efforts to promote, support, and protect breastfeeding have included the **WHO/UNICEF'S**

## **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 skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.

# History and Current Trends (continued)

## WHO/UNICEF'S Ten Steps (continued)

4. Help mothers initiate breastfeeding within a half hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breastmilk, unless *medically* indicated.
7. Practice rooming-in—allow mothers and infants to remain together—24 hours a day.

# History and Current Trends (continued)

## WHO/UNICEF'S Ten Steps (continued)

8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or health clinic.

# History and Current Trends (continued)

## Appendix B. The World Health Organization (WHO) Code of Marketing Breastmilk Substitutes

1. No advertising of breastmilk substitutes.
2. No free samples of breastmilk substitutes to mothers.
3. No promotion of products through health care facilities.
4. No company personnel to advise mothers.
5. No gifts or personal samples to health workers.
6. No words or pictures idealizing artificial feeding, including pictures of infants, on the labels of the product.
7. Information to health workers should be scientific and factual.



# History and Current Trends (continued)

## WHO Code of Marketing Breastmilk Substitutes (continued)

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

# History and Current Trends (continued)

- It is important that you educate clients about breastfeeding while they are pregnant in order to give them ample time to seriously consider and learn about breastfeeding their babies.
- If a mother chooses not to breastfeed or stops early, her reasons for doing so need to be explored. These reasons may stem from misunderstanding, lack of information, or lack of support.
- Her decision to feed formula needs to be respected; and the support of the health care team should continue, regardless of her infant feeding choices.

# Advantages of Breastfeeding for Baby and Mother

## The Uniqueness of Human Milk

- Breastfeeding is how babies are meant to be fed. Human milk is uniquely suited to the human baby's needs.
- Human milk provides superior health and nourishment over infant formula (artificial baby milk).
- Human milk is designed to promote brain growth and protect against both acute and chronic diseases.
- The **World Health Organization** (WHO) recommends that infants be exclusively breastfed for about the first 6 months of life and continue breastfeeding, along with appropriate solid foods, well into the second year of life.

# Breastfeeding is Good for Babies

## The Role of Human Milk in Preventing Disease

- Breastfeeding plays a significant role in preventing illness in the infant and child.
- Human milk is a living, dynamic substance.
- Its components are constantly changing over 24-hour cycles, and over the weeks and months of breastfeeding, in order to meet the needs of the infant or toddler.
- Infant formula, on the other hand, is only a food. It cannot provide immunological protection against disease. Research shows that artificially fed babies get sicker—and are sick more often—than exclusively breastfed babies.

# Breastfeeding is Good for Babies

## (continued)

### The Role of Human Milk in Preventing Disease

- In breastfed babies, bouts of diarrheal disease and vomiting are rare, are much milder if they do occur, and the babies recuperate much more quickly than artificially-fed babies.
- In contrast, babies fed infant formula are at high risk for infections of the gastrointestinal (GI) tract. In the United States, diarrheal disease accounts for more than 3 million walk-in, pediatric visits each year.
- About 200,000 children are hospitalized each year and about 500 die annually from severe diarrheal disease.

# Breastfeeding is Good for Babies

## (continued)

### The Role of Human Milk in Preventing Disease

- Giving just one ounce of infant formula changes the breastfed baby's *gut flora* and makes the baby more susceptible to illness. Components of human milk produce an environment in the baby's gut which inhibits the growth of harmful bacteria. It takes between 2 to 4 weeks of exclusive breastfeeding for the gut flora to return to normal.
- Infants exclusively breastfed for four or more months have half the number of ear infections than those not breastfed at all.
- Babies who are formula fed are ten times as likely to be hospitalized for any type of bacterial infection, including respiratory tract and ear infections, when compared to those who are exclusively breastfed.

# Breastfeeding is Good for Babies

## (continued)

### The Role of Human Milk in Preventing Disease

- **Colostrum**, the yellowish, transparent early “milk” that is produced in the first few days after giving birth is particularly rich in antibodies. The antibody level in colostrum is at its highest peak about 2 hours after delivery.
- Human milk contains antibodies against certain viruses such as polio, influenza, and against bacteria which cause tetanus, whooping cough, pneumonia, and diphtheria.

# Breastfeeding is Good for Babies

## (continued)

### Food Allergies

- The most common food allergy in infancy is to cow's milk.
- Up to 50% of children sensitive to cow's milk also show soy hypersensitivity.
- Exclusive breastfeeding plays a significant role in reducing the incidence of, or delaying the onset and severity of, allergic reactions in the baby.
- Symptoms of food allergies include vomiting, diarrhea, malabsorption, eczema, ear infections, and asthma.



# Breastfeeding is Good for Babies

## (continued)

An “elimination diet” involves eliminating the suspected food(s) from the mother’s diet one at a time for a period of 10 to 14 days to determine if food(s) are causing problems.

**Common allergies of foods for infants include: wheat, eggs, citrus, and soy products.**

# Nutrient Composition of Human Milk

- The nutrient composition of human milk is perfect.
- The main form of protein in human milk is  **$\alpha$ -lactalbumin (whey)**. It forms soft curds in the stomach that are quickly and easily digested and that supply a continuous flow of nutrients to the baby.
- Casein is the predominant protein in cow's milk and many cow's milk-based infant formulas. Casein forms large curds that are difficult for the baby to digest.
- Human milk contains enzymes which help in the digestion and absorption of nutrients.
- Infant formulas **do not** contain enzymes.

# Nutrient Composition of Human Milk

## (continued)

- The fats in human milk are easily broken down in the infant, providing the baby with a ready source of energy. Human milk contains more cholesterol than infant formulas—this cholesterol is needed for the formation of myelin, which is the covering of nerve and brain cells. This covering is necessary for the development of muscular coordination of the infant during the first year of life.
- The type of iron contained in human milk is very well-absorbed by the infant.
- Approximately 50% of the iron from breastmilk is absorbed by the infant, as compared to a much smaller proportion that is absorbed from iron-fortified infant formula and other foods, such as infant cereals.

# More Good News About Human Milk and Breastfeeding

- Human milk contains special substances, such as long-chain fatty acids and hormones which are necessary for proper brain growth and development.
- Not being breastfed increases the risk of an infant dying of Sudden Infant Death Syndrome (SIDS).
- The baby receives psychological and emotional benefits from breastfeeding.
- Suckling at the breast is good for the infant's jaw and facial development and encourages the correct oral and facial development.
- Breastfeeding requires no mixing or preparation. It is not subject to preparation error. It requires neither sterilization of bottles nor a sanitary water supply. Breastfeeding is a clean source of food.
- Breastfeeding reduces the risk of lead poisoning for the infant.

# Breastfeeding Is Good For Mothers

- Breastfeeding reduces a woman's risk of pre-menopausal breast cancer and ovarian cancer.
- Exclusive breastfeeding usually delays the return of ovulation and menstruation for several months.
- A very close bond may be formed between a breastfeeding mother and her breastfeeding baby.
- Most breastfeeding mothers find "feeding time" to be physically and emotionally enjoyable.
- Breastfeeding may also help a mother regain her figure sooner.
- Breastfeeding is convenient once lactation is well established.
- Breastfeeding infants smell better.
- Since breastfeeding plays a significant role in preventing illness in the infant, it is very likely that health care costs for the infant will be substantially less than if that infant was formula fed, and can save a significant amount of money in the first year of life.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 1-13**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# The Physiology of Lactation

## Colostrum Production

- Colostrum is the first milk produced in the breast.
- It is a transparent, thick, sticky liquid, pale to deep yellow in color.
- It is made up of a special combination of nutrients and immunological factors which perfectly meet the nutritional and immunological needs of the newborn infant.

## Successful lactation involves two mechanisms:

1. The **suckling** (sucking at the breast) **stimulation**.
2. The **milk ejection reflex**.

# The Physiology of Lactation (continued)

## Suckling Stimulation

- Stimulus for the start of active milk production is the hormone *prolactin*.
- Immediately after delivery, the estrogen and progesterone hormone levels fall and prolactin levels rise, resulting in the production and secretion of milk. As sucking increases, the stimulation causes prolactin levels to rise sharply, and stimulates milk production.
- This is the concept of “supply and demand” with regard to milk production—the more often the baby breastfeeds, the more breast milk is produced.
- Women who breastfeed 8 or more times per 24 hours have much higher prolactin levels than those women who nurse less frequently.
- Prolactin levels are highest at night.

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# The Physiology of Lactation (continued)

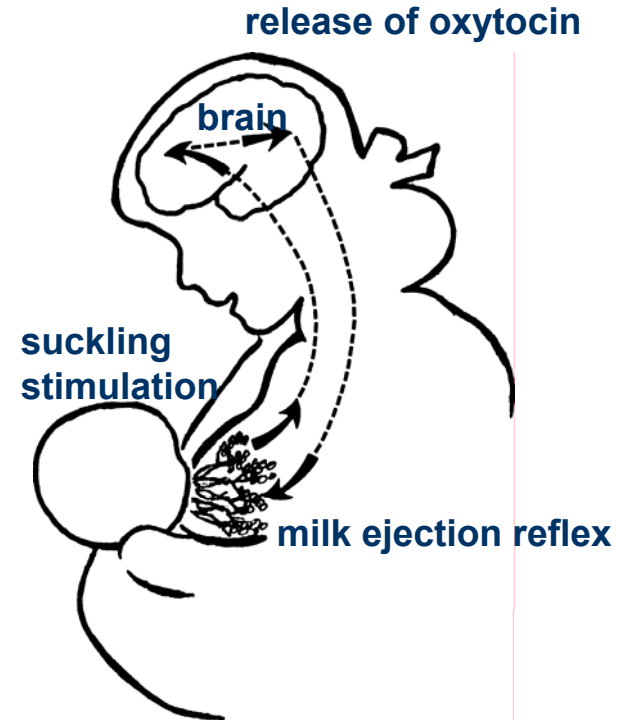
## Milk Ejection Reflex (MER)

- The milk ejection reflex is sometimes referred to as the ***let-down reflex***. It is a reflex that causes the milk-producing cells in the breast to release the milk they have made.
- It is important because it is during this reflex that the baby receives the breastmilk that has been produced and stored in the alveoli between feedings. If this reflex is inhibited, the infant will receive only the small quantity of milk that was stored in the collecting sinuses.

# The Physiology of Lactation (continued)

## During the milk ejection reflex:

- The baby sucks and stimulates the nipple, which causes the hormone oxytocin to be released.
- The oxytocin causes the muscle layer around each milk-producing cell (alveolus) to contract.
- This contraction pushes the rich milk down the ducts, through the collecting sinuses and out the nipple pores, where it is readily withdrawn by the baby.
- Shortly after the mother starts breastfeeding, she *may* actually feel this milk ejection by experiencing a tingling sensation.
- Another sign that the reflex has occurred is when the mother actually hears the gulping or swallowing sound of the baby.
- The first few days after birth, the mother should feel uterine cramping as the milk ejection reflex occurs.



# The Physiology of Lactation (continued)

- Oxytocin release and the milk ejection reflex are sensitive to psychological factors such as a baby's hungry cry, or when the mother picks up the baby to nurse.
- New mothers need a quiet, unstressed environment for breastfeeding.
- In the past, women lived in an extended family environment. Today that situation is not so common and it is important for the breastfeeding mother to have support and encouragement. The mother may need considerable help and instruction from outside sources—you may be the only person reassuring her that breastfeeding is important and that she's doing a good job at it!

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 14-18**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Part 2: Nutrition Needs of the Breastfeeding Woman

## Healthy Eating While Breastfeeding

- Healthy eating habits while breastfeeding are important primarily for the well-being of the mother.
- The breastfeeding woman who does not have a well-balanced diet and does not take in enough calories may experience increased fatigue, have less energy, and be vulnerable to illness (especially mastitis).
- Mother nature appears to protect maternal milk supply and quality even when the mother has an inadequate diet. However, if a mother is chronically, extremely malnourished, the quantity of the breast milk she produces may slightly decrease and some nutrient levels may be affected.

# Healthy Eating While Breastfeeding (continued)

- Breastfeeding women's body sizes and activity levels are different, there is not one ideal calorie intake level for all breastfeeding women.
- The RDAs recommend that breastfeeding women consume an additional average allowance of 500 calories per day.
- Other nutrient increases include those for calcium, magnesium, zinc, folate, and vitamin B-6.
- The breastfeeding adolescent may need additional calories over and above the 500 for other breastfeeding women, because she may not yet have completed her own growth and development.

# Healthy Eating While Breastfeeding (continued)

- More recent research indicated that the energy needs of most lactating women may have been *overestimated* and that current recommendations of 500 calories per day may be too high.
- Research indicates that lactation is associated with an increase in a mother's ability to use energy more efficiently.
- **The bottom line is that each woman's calorie needs should be evaluated individually by the nutritionist.**

# The Food Guide Pyramid for the Breastfeeding Mother

<b>Food Group</b>	<b>Servings Per Day</b>
● Meat, Poultry, Dry Beans, Eggs, & Nuts	2-3
● Milk, Yogurt, & Cheese	3-4
● Fruit	3-4
● Vegetable	4-5
● Bread, Cereal, Rice, & Pasta	9-11

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2,200-2,800  
calories per day



# The Food Guide Pyramid for the Breastfeeding Mother (continued)

- The one basic rule to emphasize with all clients is: **eat a variety of foods from the Pyramid because a variety of foods means a variety of nutrients.**
- Snacks, if chosen wisely, can play an important role in the diet of a breastfeeding woman. In fact, suggest to the woman that she should sometimes have a nutritious, low fat snack ***while breastfeeding her baby***, because eating while breastfeeding has been shown to trigger hormones that can increase milk production.

# Breastfeeding and Weight Loss

- Going on a strict weight loss diet should definitely be discouraged while breastfeeding; rather healthy eating should be encouraged.
- Successful breastfeeding, however, can be combined with a *gradual* weight reduction program. After lactation is well established (usually at least 6 weeks after delivery), gradual weight—through modest caloric restriction—probably will not hamper milk production among well-nourished women. A caloric intake of *at least* 1,800 calories per day is recommended.
- The average rate of weight loss for breastfeeding women is about 1 to 2 pounds per month after the first month postpartum.
- Rapid weight loss (greater than 4½ pounds per month) is not advised for breastfeeding women.

# Fluid Intake

- Most breastfeeding women have an increased thirst. They should listen to their bodies and drink enough to satisfy themselves (drink to thirst).
- Caffeine-containing beverages can have a diuretic effect and are not recommended for breastfeeding women.
- Excess fluid intake could actually lower a woman's milk supply by diluting the milk production hormones in her system.

# Vitamin and Mineral Supplements

- If a breastfeeding woman is consuming a wide variety and sufficient quantity of foods from the Food Guide Pyramid, she does *not* normally need a vitamin/mineral supplement.
- It is important to replenish the body stores of iron. Increasing the intake of iron-rich foods is recommended and the health care provider may prescribe an iron supplement of 30 to 60 milligrams daily for 3 months after delivery if her iron levels are very low.

# Vitamin and Mineral Supplements

## (continued)

- The DRIs recommend that breastfeeding women take 500 micrograms of folic acid per day *in addition to* intake of food folate from a varied diet in order to decrease the risk of a baby being born with a neural tube defect.
- If the mother does not drink milk or eat dairy products, culturally appropriate dietary calcium sources and/or a calcium supplement should be encouraged; 1,000 milligrams per day if 19 years of age or older and 1,300 milligrams per day if the mother is 18 years of age or younger.

# Vitamin D Needs of Breastfeeding Women and their Infants

- Vitamin D is a fat-soluble vitamin that helps maintain the proper levels of calcium and phosphorus in the blood, which results in healthy bone structure. This vitamin can be obtained through sufficient skin exposure to the sun and can be obtained by eating foods containing vitamin D.
- Vitamin D has been found to be present in human milk, in sufficient amounts, to meet the needs of most full-term infants. **However, the mother's diet and the amount of her sun exposure do play a major role in regulating the vitamin D content of her breastmilk.**

# Vitamin D Needs of Breastfeeding Women and their Infants (continued)

## Those individuals at risk for vitamin D deficiency include:

- Exclusively breastfed, dark-skinned children of Asian, Muslim, African-American, Native American, or Middle Eastern ethnicity.
- Women who are vegans or practice a very restricted diet.
- Those women and children who live in areas with heavy air pollution or smog.
- Exclusively breastfed infants who do not get enough sunlight exposure to their skin.
- Women and children who consume little, if any, vitamin D-fortified milk products, and who do not get enough sunlight exposure.

# Vitamin D Needs of Breastfeeding Women and their Infants (continued)

- Adequate exposure to sunlight for infants with fair skin has been determined to be at least 30 minutes per week, with the infant clothed only in a diaper; or 2 hours per week fully clothed and with no hat.
- Darker skinned infants require longer exposure.
- Sunscreens interfere with vitamin D absorption through the skin, so sun exposure must be balanced between the need for some sun and possibly too much sun.
- Sunscreens are not recommended for infants under 6 months of age.
- See the **Infant Nutrition Module** (pages 67 to 68) for the American Academy of Pediatrics guidelines for vitamin D intake that were published in 2003.



# Any Foods to Avoid?

Usually, breastfeeding women do **not** need to avoid eating the foods that they normally eat, as long as these foods are eaten in moderation. Actually, breastfed babies receive a variety of different flavors through mother's milk and this helps to prepare them for the introduction of solid foods.

# Health Advisory for Mercury in Fish

The FDA advises nursing mothers (as well as pregnant women and young children) **not** to eat the following fish: **shark, swordfish, king mackerel, and tilefish.**

These fish contain high levels of methylmercury that can harm a child's nervous system if eaten regularly. FDA advises nursing mothers to select a variety of other kinds of fish and limit their intake of fish to 12 ounces per week, including shellfish, canned fish, smaller ocean fish, or farm-raised fish.

See the "Food for a Healthy Mother and Baby" pamphlet (dated February 2004 or later) for more recent information regarding the health advisory for mercury in fish.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 19-27**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Drugs and Breastfeeding

## Caffeine

- Hyperactivity, fussiness, and colic have been reported in some babies whose mothers are regular, heavy drinkers of caffeine-containing beverages such as coffee, tea, and some soft drinks. When these reactions occur in the baby, the mother should cut back on the amount of caffeine she is consuming.

# Drugs and Breastfeeding (continued)

## Alcohol

- The effect of alcohol on the breastfeeding infant appears to be related to how often the mother drinks and the amount of alcohol she drinks; alcohol enters breastmilk via the mother's bloodstream within 30 to 60 minutes after ingestion.
- Alcohol changes the smell of breastmilk. Infants appear to *not* like the taste.
- Alcohol has a sedative effect.
- Alcohol can interfere with the milk ejection reflex.
- An ***occasional*** alcoholic beverage (no more than 1 drink per day) is not considered harmful.
- Drinking beer does **not** increase a mother's milk supply.

# Drugs and Breastfeeding (continued)

## Tobacco

### Heavy smokers tend to:

- Have decreased milk production.
- Have an inhibited milk ejection reflex.
- Have lower prolactin levels.
- Have lower levels of vitamin C in their milk.
- Stop breastfeeding by 3 months postpartum.

# Drugs and Breastfeeding (continued)

## **Tobacco** (continued)

**Babies of smoking mothers may experience:**

- Nausea
- Vomiting
- Cramping
- Restlessness
- Colic
- Diarrhea
- Rapid heart beat
- Increased risk of Sudden Infant Death Syndrome (SIDS)
- Pneumonia
- Bronchitis

# Drugs and Breastfeeding (continued)

## Tobacco (continued)

Mothers who continue to smoke should be advised to:

- Limit smoking to 10 cigarettes or less/day.
- Use low-nicotine cigarettes.
- Not smoke just before or during breastfeeding.
- Delay feedings as long as possible after smoking.
- Increase intake of vitamin C foods.
- Go outside the home to smoke.
- Not smoke at all in the car.
- Not hold her baby while smoking.



# Drugs and Breastfeeding (continued)

## Prescription, Over-the-Counter, & “Street” Drugs

- Drugs taken by the mother can be passed through breastmilk to the infant.
- Most prescription drugs are compatible with breastfeeding.
- A breastfeeding mother should tell her health care provider that she is breastfeeding so only appropriate medicine is prescribed and only appropriate over-the-counter drugs are taken. As a general rule, women who are breastfeeding should avoid long-acting or extra-strength over-the-counter drugs.
- Street drug use is strongly discouraged and may have severe long-lasting adverse effects on the infant.

# Drugs and Breastfeeding (continued)

## Contraceptives and Breastfeeding

- Barrier methods of birth control (condoms, diaphragm, cervical cap, spermicides) are considered to be the first choice for breastfeeding women.
- Progestin-only methods (Norplant, Depo-Provera and Progestasert intrauterine device) are all considered compatible with breastfeeding.
- The “mini-pill” (progestin-only pill) if taken by the mother while breastfeeding is considered extremely safe for the baby.

# Drugs and Breastfeeding (continued)

## Contraceptives and Breastfeeding (continued)

- It is recommended that progestin-only methods of birth control wait until 6-weeks postpartum.
- Combination oral contraceptives (containing both progestin and estrogen) are not recommended as a good choice.
- A pregnant woman should plan ahead and consult with her health care provider prior to delivery.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 28-33**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Part 3: Practical Aspects of Breastfeeding for the Postpartum Period

## When To Start Breastfeeding

- Breastfeeding should begin as soon as possible after the baby is born.
- The baby needs to remain **skin-to-skin** with its mother and have uninterrupted physical contact with her until, at least, the first breastfeeding has occurred.
- Removing the baby from physical contact with its mother before this first breastfeeding has occurred may interfere with instinctual behaviors which enhance breastfeeding success.

# When To Start Breastfeeding

## (continued)

### **Early and frequent breastfeeding benefits the mother and infant:**

- The infant's suckling reflex is usually most intense during the hour after birth. Early breastfeeding "imprints" the infant to the correct suckling technique.
- The infant begins to receive the immunological and nutritional benefits of colostrum.
- Early and frequent breastfeedings of colostrum encourage the passing of meconium and decrease the risk of the baby developing physiological jaundice.
- Early and frequent breastfeeding decreases newborn weight loss.
- Early breastfeeding may also be psychologically important to the mother and infant, promoting a strong emotional bond.
- Early breastfeeding helps to stabilize the baby's blood sugar levels.

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# When To Start Breastfeeding

(continued)

**Babies and mothers learn to breastfeed most easily when they have a large amount of uninterrupted time together (learnable moments).**

- Encourage “rooming-in” so the baby can stay in the hospital room with the mother 24 hours per day.
- Babies can’t breastfeed if they are not near the breast.

# View Video

- Watch the videotape, ***Delivery: Self-Attachment***, by Geddes Production.

(Note: The phone number to call to order this video is contained in the Breastfeeding References section of the Breastfeeding Module.)



# Positioning of the Baby During Breastfeeding

- Any position is appropriate as long as it ensures comfort for the mother throughout the feeding, does not impair the baby's correct "latch-on," or does not impair the baby's ability to effectively "milk" the breast.
- Incorrect positioning of the baby is the primary cause of maternal sore nipples. It can lead to an inadequate milk supply and poor infant weight gain.

# Positioning of the Baby During Breastfeeding (continued)

Three positions are used most frequently. Pillows should be used by the mother or baby for support and comfort.

- **“Madonna” or “cradle” hold:** The mother is sitting up straight with her back well-supported and the infant is level with the breast. The baby’s head rests on the mother’s wrist or forearm.



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# Positioning of the Baby During Breastfeeding (continued)

- **“Clutch” or “football” hold:** The mother holds the baby’s head in her right hand and supports his body with her right forearm, so that the baby’s body is positioned along her right side and his feet are turned toward her back.



- **“Side-lying” position:** The mother lies on her side using pillows behind her back; under her head; and under her top leg, which is bent forward. The baby is on his side, parallel to the nipple, facing the breast.



# Positioning of the Baby During Breastfeeding (continued)

## “Latch-On”

Breastfeeding is a learned behavior for both mother and baby. Thus during the first few days of breastfeeding, the mother may have to help the baby learn to “latch-on” correctly to prevent sore nipples and encourage efficient suckling on the baby’s part.

# Positioning of the Baby During Breastfeeding (continued)

- **“C hold or Cup-hold”**: The breast is being offered to the baby should be supported between the mother’s thumb and hand, with her 4 fingers underneath the breast. No part of the areola should be covered by her fingers.
- The baby should be allowed to finish each breast in his own time.
- When the baby indicates he is full by ceasing suckling and loosening his clasp on the areola, the mother can insert her finger between his gums to prevent him from clamping down as the breast is removed from his mouth.

# View Artwork and Video

- View artwork on page 48 of the Breastfeeding Module.
- Watch the videotape, ***Breastfeeding Your Baby–Positioning Solutions***, by Medela, Inc. in which three key elements: proper positioning; breast support; and latching on are clearly explained.

(Note: The phone number to call to order this video is contained in the Breastfeeding References section of the Breastfeeding Module.)

Pages 48-49 in Module

# The Appearance of Human Breastmilk

## Mature breastmilk is produced in two forms:

- The **foremilk** which is produced between feedings and has a lower fat content; it appears thin and watery and often has a bluish cast which is due to the presence of a certain type of protein in the milk.
- The **hind milk** which is produced during the feeding, has a much higher fat content and has a rich, milky appearance. This hind milk is very important for the baby's weight gain. It is very important that the baby breastfeed until the breast is well-softened and the baby comes off the breast on his own.

# The Appearance of Human Breastmilk (continued)

- The fat concentration of breastmilk also appears to be maximized by increasing nursing frequency.
- Evening breastfeedings are also particularly important as the fat concentration in breastmilk is higher from 4 o'clock in the afternoon until midnight.



# Ensuring a Good Milk Supply

- **Unrestricted breastfeeding** is when the baby is put to the breast whenever he gives breastfeeding cues, cries, or fusses. These type of nursings usually result in ten or more feedings a day.
- **Token breastfeeding** means breastfeeding with rules and regulations. The clock determines both the frequency and length of the feedings. Unlimited suckling is not allowed. Supplementary bottles, early solids, and pacifier use are common. Complete weaning usually occurs by three months, or earlier. Unfortunately, many women in the United States practice token breastfeeding and so have a very short-term breastfeeding experience.

**Unrestricted breastfeeding behaviors will help mothers have a greater milk supply and breastfeed more successfully.**

Pages 49-50 in Module

# Ensuring a Good Milk Supply (continued)

## Supply and Demand Concept

- It is important that the new mother understand the concept of “supply and demand” with regard to milk production; that is the more frequently the baby effectively suckles, the more milk the breast will produce.

# Feeding Cues

**Encourage mothers to watch their infants for signs or cues indicating hunger and to put them to the breast when they see those signs. Signs of hunger include:**

- The baby starts to make rapid eye movements under the eyelids.
- The baby starts to lift his arms above his head while sleeping and squirm around.
- The baby sucks on his lips or tongue.
- The baby puts his hand up to, or in, his mouth.
- The baby starts to make little noises or grunts.
- The baby “roots” or turns his head toward his mother.

# Feeding Cues (continued)

## Crying is a Late Cue

- **Crying may also be a sign of hunger, however, it may be that the mother has missed the earlier cues of hunger.**
- **Babies who are crying and upset may have a more difficult time latching on and nursing.**
- **It is normal for infants to have fussy times, an infant who cries may not be hungry, but may need to be held and comforted at the breast.**

# Feeding Cues (continued)

## Sleepy Infants

Some newborn infants are “sleepy.” They sleep for long periods of time, or they are not easy to awaken every 2 to 3 hours for their feedings. Some sleepy newborns fall asleep before a feeding or after suckling for just a short while at the breast.

### **A mother can try the following to stimulate her sleepy baby:**

- un-swaddle the baby, stripping the baby down to diapers and a tee-shirt;
- give the baby a great deal of skin-to-skin contact with the mother;
- play and talk to the baby;
- give the baby a gentle massage;
- undress and dress the baby; or
- change the baby’s diaper.

# Frequency and Duration of Feedings

## Frequency

- The baby can and should be nursed whenever he wants to nurse.
- The average breastfed infant will probably want to be put to the breast and will need to be nursed as often as **every 1 to 3 hours during the first few weeks of life.**
- Many new mothers *think* they don't have enough milk when, in fact, they do. Human milk is very dilute and it digests very rapidly. In addition, the newborn baby's stomach is very small.

Page 51 in Module

# Frequency and Duration of Feedings (continued)

## Frequency (continued)

- Mothers also worry about insufficient milk because they often have a Western cultural expectation that the new baby will be fed, then put down in a separate “nest” away from the mother, and be content and quiet for several hours. This is a very unrealistic expectation. New babies, whether or not they are breastfed, often need to be “in arms” almost constantly.
- A “good baby” could be a baby who is lethargic and who sleeps so much that he is under-fed and at risk for dehydration and malnutrition.

# Frequency and Duration of Feedings (continued)

## Duration

- A baby should be encouraged to breastfeed on the first breast until he comes off the breast on his own; usually 10 to 15 minutes so he gets plenty of the hind milk.
- Then the mother should offer the second breast.
- Mothers should look for signs of satiety rather than become a “clock” watcher; sometimes babies want a “snack” and sometimes they want a big meal.



# How To Know If the Baby Is Getting Enough Milk?

- The baby should make frequent, audible swallowing and gulping sounds for at least ten minutes at the breast.
- The frequency and amount of wet diapers and stools is an indicator.
- Regularly check the weight gain of the infant.
- The baby should not lose more than about 7 percent of his birth weight after birth.
- The baby should regain his birth weight by about 2 weeks of age and should gain 4 to 7 ounces per week thereafter.

# How To Know If the Baby Is Getting Enough Milk? (continued)

**Wet Diapers and Stools** The breastfeeding mother can be reassured that her baby is getting plenty of milk, as long as she can answer “yes” to the following:

- **Day 1 to 2:** the baby has one or two very wet diapers, and passes at least one meconium stool the first day and 2 stools the second day.
- **Day 3 to 4:** the baby has at least 6 pale urine, very wet diapers per day (24 hours). The appearance of dark yellow, scant urine, or visible urate crystals after 3 to 4 days of life strongly suggest that the infant is not getting enough milk. By **day 3**, the baby has at least two or three large stools per day and the stools are beginning to turn yellow/orange in color, and about four stools by **day 4**. Page 52 in Module

# Wet Diapers and Stools (continued)

- **Day 5:** the baby has at least six pale urine, very wet diapers per day (24 hours). The baby will usually have four or five sizable yellow/orange breastfed baby stools (each about the size of a half-dollar coin).
- **Day 6 to approximately 4 to 6 weeks of life:** the baby has at least six pale urine, very wet diapers per day. (A “very wet” diaper can be demonstrated by pouring one-quarter of a cup of water into a cloth or disposable diaper and let the caregiver feel how wet and heavy it is.) There usually are three to five stools every day; however as the breastfed baby gets older and his system becomes more efficient in absorbing breastmilk, he may have only one stool every several days. This does not mean he is constipated.

# Warning Signs of Dehydration in the Baby

One indication of possible dehydration is a baby with only two wet diapers or less by the third day. Warning signs of dehydration, which indicate that the baby needs more fluid right away, are:

- Listlessness
- Weak cry
- Dry mouth
- Dry eyes
- The fontanel (soft spot) on the head is sunken
- Fever
- Baby's skin, when pinched, doesn't return to normal and remains pinched

**The mother should consult the health care provider immediately, if any of the above signs are present.**

**Page 53 in Module**

# Bottles and Pacifiers

- **Pregnant women should be advised to avoid giving their babies bottles and using pacifiers after the baby's birth and for at least the first few weeks of life.** Giving supplemental bottles of either glucose water or infant formula or using a pacifier in the early days and weeks has been shown to be strongly related to breastfeeding failure.
- Use of pacifiers and bottles may teach the baby to suck incorrectly and may lead to rejection of the breast, maternal sore nipples, and/or poor infant weight gain.
- When a baby uses a pacifier, he will be using up calories while sucking, but will not be taking in any calories.

# Unnecessary Supplementation

- Supplementation should be actively discouraged, unless it is medically necessary.
- Mixed feeding of breastmilk and formula does not offer the same quality and quantity of benefits to mother or baby as does exclusive breastfeeding.

# Unnecessary Supplementation

(continued)

If the mother requests infant formula as a supplement to breastfeeding, the following steps should be followed:

1. The mother should be counseled by the nutritionist before any food package changes can be made.
2. The mother should be referred to the breastfeeding educator for counseling on breastfeeding. If the breastfeeding educator is not available, the nutritionist should:
  - ✓ Address the mother's concerns which have led her to request infant formula.
  - ✓ Educate the mother on the potential consequences of infant formula supplementation.
  - ✓ Educate the mother on the financial implications of bottle feeding.
3. If the baby is given a formula food package, give as small a package as possible. Powdered formula is preferred because the mother can mix one bottle at a time.

Page 54 in Module

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 34-43**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.



# New Mothers Need Help

- A “doula” is a woman who usually has specialized training in providing emotional assistance and support during childbirth, and who continues to provide emotional support and guidance—and perhaps household help—during the postpartum time.

# Help Needed (continued)

## **Suggestions to help the expectant mother prepare for her new role as mother:**

- Have an experienced, caring person help the new mother.
- Have the baby sleep in a basket or bassinet next to the mother's bed.
- Encourage the mother to “wear” her baby close to her by carrying her baby in a cloth baby sling, carrier, or wrap.
- Encourage the mother to learn all she can about breastfeeding before the baby is born.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 44-46**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Common Postpartum Concerns for the Breastfeeding Mother

## Breast Care

- Breastfeed frequently.
- Let the baby finish breastfeeding on the first breast and then offer the second breast at each feeding.
- Begin a new feeding session by giving the baby the breast that was used last in the previous feeding session.
- Vary the breastfeeding positions.

# Care of the Nipples

- Don't use soap or alcohol on nipples or on the areola area.
- If using nursing pads, use 100% cotton pads and change the pads *immediately* when wet.
- During the first 1 to 2 weeks postpartum, hand express a small amount of colostrum/breast milk and rub it into nipple area after each feeding.
- During the first 1 to 2 weeks postpartum, allow nipples to air-dry approximately 10 minutes after each feeding.

# Care of the Nipples (continued)

- Don't use creams or ointments on the nipples (except for ultra-purified medical grade lanolin).
- Be sure that the baby is positioned correctly and comfortably at the breast during feeding.
- Make sure the baby is “latched on” to the breast properly.
- When removing the baby from the breast, the mother should gently break the suction by inserting her finger between the baby's gums.

# Relief for Sore Nipples

## Before feedings

- Relax and become comfortable.
- Hand-express a small amount of breastmilk.

## During feedings:

- Nurse very frequently (every 1 to 2<sup>1</sup>/<sub>2</sub> hours) for 10 to 15 minutes on each side.
- Offer the breast that is least sore first.
- At each feeding, use a different position with the baby.

# Relief for Sore Nipples (continued)

## After feedings:

- Follow the steps listed under “Care of the Nipples” on slides 93 and 94.
- Sparingly apply an *ultra-purified* medical grade form of lanolin to the nipples.
- If problems continue and nipples become cracked or blistered, *immediately* see the breastfeeding educator in the agency. **Pain is not normal and breastfeeding shouldn't hurt.**



# Breast Fullness versus Engorgement

- Between the 2<sup>nd</sup> and 6<sup>th</sup> day after the baby is born, the mother's milk volume increases, creating a swelling of the breast tissue and increased blood supply which commonly causes some breast fullness, heaviness, and tenderness. This is normal and usually subsides within 24 to 48 hours.

# Breast Fullness versus Engorgement

## (continued)

**On the other hand, if one or more of the following is/are present, the breasts may swell from overfullness:**

- Breastfeedings are delayed or the baby is not breastfed as often as needed.
- The amount of time spent at each feeding is too short.
- The baby is **not** positioned correctly at the breast.
- The baby is **not** sucking strongly.

# Breast Fullness versus Engorgement

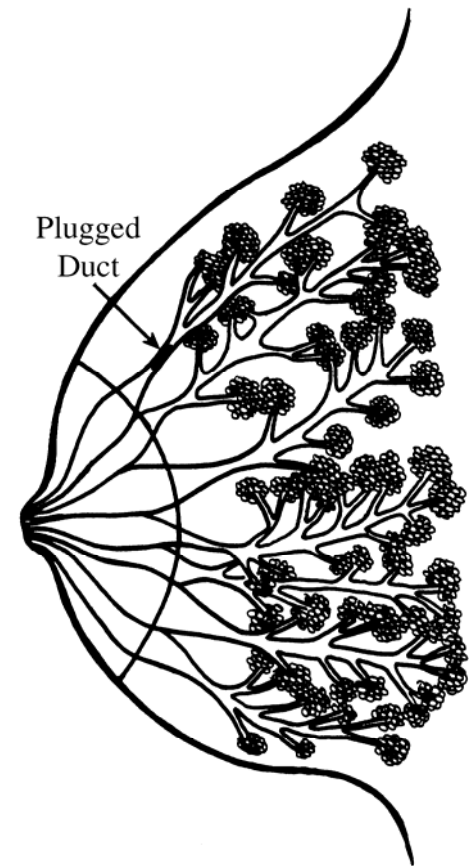
## (continued)

- This may cause the breasts to become extremely hard, painful, and warm to the touch; the nipples may flatten and the areola may become distended; this is referred to as *pathological engorgement* and must be treated promptly.
- If treated promptly, most of the engorgement usually goes down within 12 to 48 hours. Proper treatment is described following the discussion about plugged ducts.

# Plugged or Blocked Ducts

Plugged or blocked ducts result in a localized tender spot in the breast and/or a lump in the breast. This may occur for a variety of reasons, such as:

- Inadequate milk removal from the breast.
- Feedings that are delayed.
- Skipped breastfeeding sessions.
- Breastfeeding on the same side each time.
- Poor positioning of the baby on the breast.
- Weaning from the breast that is done too rapidly.
- Pressure on one area of the breast that comes from sleeping in a particular position and/or wearing clothing or a bra that is tight.



# Plugged or Blocked Ducts

## (continued)

### To Relieve Engorgement or Plugged Ducts:

- Apply hot, wet compresses to the breasts, or totally immerse the breasts in warm water for about 5 minutes prior to feeding. Or, the woman could stand in a shower and let warm water run over her breasts
- Massage the breasts gently from the affected areas down toward the nipple.
- Hand-express some milk to soften the areola area.
- Breastfeed frequently (every 1 to 3 hours). Gently massage the breast while nursing. Avoid routine use of supplemental water, infant formula, or a pacifier.
- Change breastfeeding positions often.
- Between feedings, apply ice packs to the breast for about 20 minutes to reduce swelling. Before applying the ice pack, always place a thin towel or cloth on the breasts to protect the skin.

Note: View artwork on page 60 of the Breastfeeding Module.

Page 60 in Module

# Mastitis

- **Mastitis** is an infection of the soft tissue of the breast that surrounds the milk ducts. It is sometimes caused by a plugged milk duct that was left untreated. Mastitis is characterized by a reddened area and extreme tenderness of the breast; fever and chills; and a “flu-like” feeling.
- Mastitis does not cause an infection of the breastmilk, therefore it is very safe to continue to nurse the baby. In fact, sudden weaning or temporarily stopping breastfeeding will slow the healing process and may lead to further problems.
- When a mother is suspected of having mastitis, she must be referred to her health care provider for treatment and to the breastfeeding educator in the local agency for counseling.

# Mastitis (continued)

**In addition to seeing the health care provider, the woman should:**

- Rest, drink plenty of fluids and increase her intake of foods and juices high in vitamin C.
- Continue to nurse frequently on the affected side; she should use a breast pump if the baby is unwilling or unable to feed well on that side.
- Use breast massage on the affected side to help it drain better.
- Use different positions during nursing to help drain all parts of the breast.
- Ask the health care provider if she can use a medication such as ibuprofen to reduce the inflammation.

Page 61 in Module

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 47-51**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.



# Low Milk Production

**The mothers who cannot make enough milk to fully sustain their babies are divided into two groups:**

- There is a failure to establish a full milk supply from the beginning despite optimal breastfeeding initiation and management—*these cases are extremely rare.*

*Or*

- The breasts enlarge during pregnancy, postpartum milk production begins, and the breasts fill with milk initially. Then problems in breastfeeding technique, management, or infant problems lead to infrequent or incomplete milk removal which leads to a poor milk supply.

# Low Milk Production (continued)

- Either cause of low milk supply could potentially lead to dehydration and inadequate caloric intake by the infant.
- An infant exhibiting any signs of dehydration, should be immediately referred to and assessed by the health care provider.

# Low Milk Production (continued)

**Other situations that could lead to poor milk supply include:**

- **Delayed initiation of breastfeeding after delivery.**
- **Infrequent breastfeeding in the first few days after birth.**
- **Excessively brief feedings.**
- **Infant “latch-on” problems.**
- **Reluctant nursing babies who have difficulty sustaining suckling.**

# Low Milk Production (continued)

- **Small for gestational age, premature, ill, or jaundiced infants who do not suckle effectively.**
- **Use of pacifiers or supplemental bottles.**
- **Use of a nipple shield.**
- **Maternal use of combination birth control pills (estrogen/progestin).**

**To prevent these problems, early close contact between mother and baby after birth is necessary. If problems exist, refer immediately to the health care provider.**

# View Video

- Watch the videotape, ***A Healthier Baby***, by Childbirth Graphics.

(Note: The phone number to call to order this video is contained in the Breastfeeding References section of the Breastfeeding Module.)

# ☑ Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 52-55**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Breastfeeding Mothers Who Return to Work or School

- It is desirable for the new mother, if possible, to take *at least* 4 to 6 weeks of maternity leave, since it takes at least 4 to 6 weeks for lactation to become firmly established and for the mother to recuperate from childbirth.

# Breastfeeding Mothers Who Return to Work or School (continued)

**Become familiar with the “Family and Medical Leave Act” which became law in 1993 and reads as follows:**

- This act mandates employers of 50 or more persons to provide a minimum of 12 weeks of unpaid leave per year to attend to personal or family illness, newborn or adoptive child care, or family emergencies.
- Employees must have worked a minimum number of hours in the previous year and be working a minimum number of hours weekly to qualify.
- Employers may require use of other forms of accumulated leave before granting unpaid leave under this act.
- Employees are guaranteed the same or a similar job upon return.
- No special provisions for breastfeeding mothers are made in the act, and breastfeeding itself is usually not sufficient grounds to ask for leave. However, mothers are able to lengthen their maternity leave through this legislation.



# Breastfeeding Mothers Who Return to Work or School (continued)

- Mothers who can take a maternity leave of 6 *months* will have the easiest time, because solid foods will be introduced at around 6 months, making the infant less dependent on breast milk for his nutritional needs; also at 6 months the baby can learn how to drink from a cup, thus eliminating the need for bottles.

# Breastfeeding Mothers Who Return to Work or School (continued)

If the mother must return before the infant is six months old she will need to do one of the following:

- Learn how to hand-express or pump her breast milk for later use by the baby.
- Nurse her baby as often as possible when she and her baby are together.

The baby can be given both breast milk and infant formula supplements or only infant formula supplements.

# Breastfeeding Mothers Who Return to Work or School (continued)

**Two weeks prior to returning to work or school, the mother should:**

- Decide what and how the baby will be fed by the caregiver while the mother is away at work or school.
- If a bottle is chosen, the baby should be given one bottle per day.
- Learn to efficiently hand-express milk and/or use a hand pump or electric breast pump.
- Select clothes that are practical for pumping and/or nursing.
- Select a child care provider who is supportive of the mother's breastfeeding efforts.
- Inform her employer of her plan to continue breastfeeding in order that they can work out the details of how to fit it into her work schedule.

# Breastfeeding Mothers Who Return to Work or School (continued)

## Once the mother begins work or school, she should:

- Try to start back to work on a Thursday (if she works Monday to Friday).
- Start back part-time, if possible.
- Go to the baby or have the baby brought to her at any of her lunch or dinner breaks, if possible.
- Breastfeed just before leaving for work or school and as soon as she returns from work or school.
- Ask the caregiver not to feed the baby within one hour of the mother's expected return.
- Express or pump breasts frequently if she is planning to save the milk for the baby.
- Breastfeed frequently at night and on days off from work to help maintain her supply.

# Breastfeeding Mothers Who Return to Work or School (continued)

- It is important to get the father's or grandmother's commitment to breastfeeding since they will probably be needed to help with an older child or to prepare meals while the mother focuses on the infant's needs.
- Breastfeeding can be a special way for the mother and baby to maintain and strengthen close emotional bonds.
- Remind mothers that their young infants can be easily weaned, and that any breastfeeding is very valuable to both mother and infant, regardless of how long or short a time it is done.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 56-60**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Expressing Breastmilk

**There are several methods that can be used to express breastmilk:**

- Hand (or manual) expression.
- Use of a hand (or manual) breast pump or mid-size electric pump.
- Use of a “piston-drive” electric breast pump.

# Expressing Breastmilk (continued)

## Hand (Manual) Expression

### Preparation:

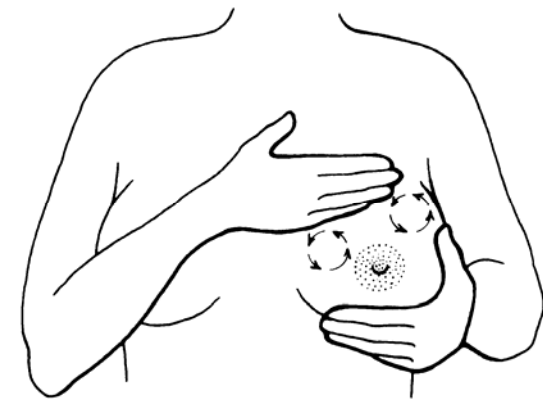
- A container for catching the milk should be selected. A good choice is a wide-mouth cup.
- Wash these containers in hot, soapy water with a bottle brush, thoroughly rinse, and air dry.
- The mother should wash her hands in hot, soapy water and rinse off her breasts and nipples in warm water.



# Expressing Breastmilk (continued)

## Breast Massage

- Massaging one's breasts before manual milk expression helps move the milk down through the milk ducts and stimulates the milk ejection reflex.
- To properly massage the breast, the mother should apply gentle pressure to it with her fingers, moving them in small circular motions to cover all parts of the breast. She should start at the outer edges of the breast and work toward the nipple, making three concentric spirals around the breast.



# Expressing Breastmilk (continued)

## Actual Expression of Milk

- Position the thumb and first 2 fingers about 1 to 1½ inches behind the nipple.
- Press back toward the ribcage.
- Gently squeeze the thumb and fingers together, and then roll the thumb and fingers together at the same time.
- Repeat steps 1, 2, 3, in a rhythmic motion.
- Rotate the thumb and finger positions around the areola in order to fully “milk” the breast. Massage the breast and nipple during the process of milk expression.

**Some mothers find it difficult to express their milk; so it is important that mothers understand that they should never judge their overall milk production by what they are able to express.**

# Expressing Breastmilk (continued)

## Storing Expressed Breastmilk

- After expressing and collecting her milk, the mother should store it either in the refrigerator or in a cooler.
- A sterilized glass baby bottle is the preferred choice.
- Other options are sterilized, hard plastic bottles.
- Soft, disposable polyethylene store bags, made especially for storing breastmilk, are another choice.
- Freshly expressed breastmilk can be stored for up to 5 days in the back of a regular, cold refrigerator (0° to 4°C or 32° to 39°F).

# Expressing Breastmilk (continued)

- Breastmilk can be safely frozen in the back of a self-contained freezer compartment of a refrigerator for 3 to 4 months.
- If a deep freezer is used, the temperature should be maintained at  $-20^{\circ}\text{C}$  ( $0^{\circ}\text{F}$ ) and can be stored there for up to 12 months.
- Make sure the bag or bottle of frozen breastmilk is dated.
- When freezing breastmilk, any container/bottle being used **should not be filled to the top** because the milk will expand during the freezing process.
- Only enough breastmilk for just one feeding should be put in each bottle.
- For storing breastmilk that has been expressed at work or school, many mothers put their bottle of expressed milk in a wide-mouthed Thermos® bottle packed with ice, or in a small portable cooler.

# Expressing Breastmilk (continued)

## To thaw frozen breastmilk:

- The container should be moved to the refrigerator compartment a few hours before it is needed.
- The bottle needs to be completely thawed and warmed before use. Warm by putting under tap water that is approximately body temperature. Gently shake before use.
- Thawed milk should never be refrozen.
- **Never** place breastmilk in a microwave or heat it on a regular stove. This may destroy both the vitamin C and some of the immune components of the breastmilk; also may create “hot spots” that could scald the infant’s mouth.

# Expressing Breastmilk (continued)

## How Much Expressed Breastmilk to Leave for the Baby?

A baby will usually need approximately 2.5 ounces of milk per pound of body weight in a 24-hour period

- 0-2 months      2 to 5 ounces per feeding
- 2-4 months      4 to 6 ounces per feeding
- 4-6 months      5 to 7 ounces per feeding

# Weaning

**Weaning can be “baby-led” or “mother-led.”**

In “**baby-led**” weaning, the toddler becomes disinterested and desires to breastfeed less often. This is the preferred way because it enables the mother to meet the child’s needs at the child’s own pace. This usually occurs between 8-12 months of age. As the older baby or toddler gradually weans, the protein, fat, iron, and immunological components in the milk increase in concentration. *Equally as important*, babies and toddlers nurse for comfort and it makes them feel happy and fulfills many emotional needs.

# Weaning (continued)

**In “mother-led” weaning**, the mother makes the decision to reduce or discontinue breastfeeding and to initiate either partial or complete weaning; this method should be gradual and slow, eliminating one feeding every 3-5 days, starting with the infant’s less favorite feeding. This will reduce the baby’s emotional distress and the mother will not experience excessive physical discomfort.

**Older infants can be weaned to a cup, eliminating the bottle.** If under one year of age, iron-fortified formula should be used.



## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 61-69**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Situations That Need Not Interfere With Successful Breastfeeding

## Small Breast Size

Breast size has no relation to a mother's ability to breastfeed; the size of the breast is determined by the amount of fatty tissue in the mammary gland and this fatty tissue is not at all involved in the process of making or releasing milk.

# Flat or Inverted Nipples

**Flat or inverted nipples** should not normally be an obstacle to successful initiation of breastfeeding if things are handled optimally in the immediate postpartum period. Remind the mother that her baby is supposed to be breastfeeding, not nipple sucking.



**Common  
Nipple**



**Flat  
Nipple**



**Inverted  
Nipple**

# Flat or Inverted Nipples

## (continued)

Suggestions for the mother who has flat or inverted nipples:

- The mother should request ahead of time to keep the baby skin-to-skin until the first breastfeeding is successfully accomplished after the baby's birth.
- She should ensure that the baby doesn't get any bottles or pacifiers in the hospital.
- She should request help from a knowledgeable breastfeeding educator about how to optimally position the baby at the breast.

# Flat or Inverted Nipples

## (continued)

The use of **Breast Shells** in the prenatal period has sometimes been recommended to help treat and correct inverted nipples. If the mother asks about breast shells and wants to try them, then the following should be recommended:

- About 6 weeks before her due date, the mother should wear the breast shells under her bra for short periods of time, gradually working up to 8-10 hours a day.
- She should wear the shells between feedings after the baby is born, if necessary, to keep the nipples protruding.
- She should use shells that have multiple air holes to allow air circulation around the nipples.

If a woman has truly inverted nipples and is having latch-on problems, sometimes an electric breast pump can help pull the nipples out, depending on the severity of the inverted nipples. Refer mothers with inverted nipples to your breastfeeding educator or a certified lactation consultant.



**Breast Shell**

# Cesarean (Abdominal) Delivery

A woman who has her baby by **cesarean section (C-section)** will probably stay an extra couple of days in the hospital and may require more rest than other new mothers. She should begin to breastfeed after the effects of any general anesthesia have worn off, or in the recovery room if she had a regional anesthetic.

# Premature Birth

**Premature birth** is a common reason for hospitalizing an infant beyond the normal hospital stay and often is responsible for a lengthy separation between the mother and her infant.

- Breastmilk of a mother who delivers prematurely is different from the breastmilk of a mother who delivers a full-term infant. This milk contains higher concentrations of protein, sodium, and chloride.
- This breastmilk can prevent *necrotizing enterocolitis (NEC)*, a serious complication of prematurity which affects the intestines and can be fatal.

# Twins or Multiple Births

Breastfeeding twins is much more efficient than having to prepare and store many bottles of infant formula. These mothers have no problem producing enough milk to satisfy the needs of two infants as long as they consume enough calories and follow the same basic guidelines for single births. There are also mothers who have successfully breastfed triplets and quadruplets.

Refer the breastfeeding mother of twins or multiples to the nutritionist and breastfeeding educator for further support and counseling. Also, refer her to any local support groups for parents of twins or multiples.



# Chronic Medical Conditions in the Mother

- Heart disease, diabetes, and other chronic medical conditions are not by themselves contraindications to breastfeeding.
- Diabetic mothers who breastfeed often feel at their best and require less insulin than before.
- Mothers with different types of disabilities often choose to breastfeed.
- Mothers who are carriers of the hepatitis B virus may breastfeed if the baby has received the appropriate vaccine.
- Breastfeeding may **not** be appropriate in cases where the risks of any required maternal medications outweigh the risks connected with feeding formula to the baby. Most medications are compatible with breastfeeding. If the mother is on medication, her health care provider should be consulted about its possible effects on breastfeeding.

# Breastfeeding During Pregnancy

- Breastfeeding during pregnancy is not unusual. If a pregnant woman chooses to do this, it is important that she practice good nutrition habits to support both the older breastfed child and the developing fetus.
- If the woman experiences frequent contractions while breastfeeding and has risk factors that predispose her to premature delivery, she should be advised to consult her health care provider about continuing to breastfeed.
- Most pregnant women who are breastfeeding, experience a drastic drop in their milk production by mid-pregnancy. This, combined with the changing make-up and taste of the milk, often causes the older child to become less interested in breastfeeding.

# Tandem Nursing

When a mother continues nursing an older baby or toddler and nurses a younger baby at the same time, this is referred to as *tandem nursing*; in this case, the mother should make sure the younger baby always gets nursed first.

# Drugs in Breastmilk

- A few medications are passed into breastmilk in a sufficient quantity to be harmful to the infant, including: anticoagulants, unusual antibiotics, antimicrobials, radioactive substances, and certain other drugs.
- A mother who is a suspected user of “street” drugs such as cocaine, crack/cocaine, marijuana, etc., should be referred to the nutritionist who will refer her to her health care provider.

# Serious Infectious Disease in the Mother

- The issue of serious infectious disease and breastfeeding is sometimes very complicated. If the client has a serious infectious disease, refer her to her health care provider.
- All pregnant women should know their HIV status and should ask their health care provider for an HIV test. In the United States, it is recommended that women with HIV or AIDS not breastfeed as the virus can be passed to their baby through breastmilk.

# Metabolic Disorders

- An infant with inherited metabolic disorders such as galactosemia and tyrosinemia is unable to drink milk products of **any** kind. In these cases special formula is required. For example: if an infant has phenylketonuria (PKU), he can be breastfed, but only in combination with a phenylalanine-free formula.

# Deep-Seated Aversions

- If a woman has a deep-seated aversion to breastfeeding and even after receiving breastfeeding facts she still has a negative attitude, then she may not be suited to breastfeed. If the woman prefers to bottle feed, she should be supported in her decision.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 70-75**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.



# Part 4: Counseling-Motivating Women to Breastfeed

**Although breastfeeding is superior, many women choose to formula feed their infants. In particular, many clients in the WIC population choose formula feeding over breastfeeding.**

**As a WIC staff member, it is important to understand the factors that attract women to breastfeeding, but also to understand those reasons why women choose not to breastfeed.**

# Five Major Barriers to Breastfeeding

**Research conducted by Best Start revealed five common factors that negatively affect decisions to breastfeed. They are:**

1. Lack of confidence
2. Embarrassment
3. Fear of loss of freedom
4. Concerns about “too strict” health and dietary requirements
5. Influence of family and friends

# Barrier 1 – Lack of Confidence

- A woman's **lack of confidence** is the biggest obstacle to overcome and can translate into fears about childbirth and doubts about whether or not she will be a good mother. Her lack of confidence may also cause her to believe that she will not be able to produce an adequate supply of milk.
- Many women do not understand the mechanics of human milk production. Thus, they are easily influenced by stories from other mothers whose milk “dried up” or who “supposedly” couldn't satisfy their baby's nutritional needs.

# The Three-Step Counseling Plan

- One proven way to help women overcome their lack of confidence (and also overcome the other four barriers mentioned earlier) is by using carefully structured counseling techniques. There is a three-step counseling plan which has been shown to be effective in changing women's attitudes and in motivating them to breastfeed.
- Here are the three steps:
  1. Elicit the client's concerns.
  2. Acknowledge the client's feelings and concerns and reassure her that these feelings are normal.
  3. Educate the client with carefully targeted messages that address her specific concerns.

Pages 78-79 in Module

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 76-80**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Barrier 2 – Embarrassment

- Research done by the Best Start program indicated that almost all the respondents viewed their breasts as sexual organs and associated them with their ability to attract and please men, thus creating an anxiety about breastfeeding in front of others.
- The research showed that women would be willing to breastfeed in public if they could learn simple cover-up techniques.
- Teens are extremely sensitive about what others might think.
- Others reject breastfeeding due to deep-seated emotional or religious reasons.

# Overcoming Embarrassment Using the Three-Step Plan

- Listen and learn about the woman's feelings.
- Reassure the woman by letting her know she is not alone.
- Educate her on discreet breastfeeding techniques.

# Barrier 3 – Fear of Loss of Freedom

- Women worry that the requirements placed on them by breastfeeding will contribute to a loss of freedom.
- Younger mothers are especially concerned breastfeeding will prevent them from having time for themselves or their friends; or that breastfeeding will tie them to the house and restrict their social activities.
- Some mothers are also fearful that bonding which accompanies breastfeeding will “spoil” their babies. They think this will make it harder to leave their babies with a sitter.
- Many women do not think they can manage breastfeeding along with going back to school or work.



# Overcoming Fear of Loss of Freedom

- Most women will not directly admit that breastfeeding seems to be too much of a sacrifice to them; instead they will explain their preference for bottle feeding in terms of the commitments they have: school, work, or other outside activities.
- It is important to explain to the expectant mother that many new mothers have mixed feelings about the sacrifices and responsibilities of motherhood.
- The widespread misconception that breastfeeding spoils a baby and will make the baby cling to the mother should be discussed and the mother should be told that research shows that breastfeeding, like holding and cuddling, only makes a baby feel more secure.

# Overcoming Fear of Loss of Freedom (continued)

- A crying baby is not a spoiled baby. Crying is the only way a baby has to express a need. When the mother holds and caresses the baby, the baby gets the message that somebody cares. It establishes a solid foundation of trust and security that in turn instills more confidence and independence as the child grows older.
- The mother needs to be reassured that there are no rules when it comes to breastfeeding and that it can be adapted to any lifestyle.
- Breastfeeding does not have to interfere with social commitments. Teach the mother how to express and store breastmilk and how she can both breastfeed and offer infant formula.

# Barrier 4 – Concerns about “Too Strict” Health and Dietary Requirements

- Many women are under the mistaken impression that they must maintain very high standards of health and must follow a strict dietary regimen while breastfeeding.
- Some women worry that they will not be relaxed enough and fear this will affect both the quality and quantity of their milk.
- The mother should be reassured that breastfeeding does not require “above average” will power at mealtime or an athlete’s health status.
- Breastfeeding women generally feel hungrier and thirstier—so eating to fulfill these needs will probably be enough to ensure that her milk will contain all the necessary nutrients to promote the normal development and growth of the baby.

# Concerns about “Too Strict” Health and Dietary Requirements (continued)

- Other misconceptions include the thought that fast foods and occasional junk foods will “ruin” human milk, and that spicy foods cause problems.
- Always stress moderation when discussing alcohol, smoking, and caffeine.
- Reassure mothers that even if they feel “hyper” or experience anxiety that the composition of the milk will not change and prevent breastfeeding.

# Barrier 5 – Influence of Family and Friends

- Family members can be important sources of information. The baby's father, the woman's mother, and the woman's maternal grandmother exert the strongest influence on the woman's decision to breastfeed.
- It is important that the breastfeeding woman have a support network during the first few weeks after delivery.
- Many communities have established hotline and “buddy systems” to make it easier for the women to obtain the information and encouragement that is so essential for successful breastfeeding.

# Influence of Family and Friends

## (continued)

- Breastfeeding support groups, peer counselors, and the La Leche League are valuable resources for the new mother.
- Tell mothers about the ways a mother can make sure that her baby is getting enough milk and discuss milk production and the “supply and demand” concept.
- Emphasize that it is normal for the baby to breastfeed 10 to 12 times in 24 hours and counting wet diapers on a daily basis helps the mother to make sure her baby is getting enough milk.

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 81-93**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Factors That Attract Women to Breastfeeding

- **Now for the surprising news:** Most of the same women from the Best Start research study who expressed their doubts and fears about breastfeeding, are, nevertheless, interested in breastfeeding.
- **Why the interest?** Because the women want to give their babies the healthiest and the best start they can. And most of them know that breastfeeding will help them fulfill these aspirations.



# Factors That Attract Women to Breastfeeding (continued)

## The Bonding Experience

- Women are especially interested in the bonding that occurs between them and their babies during breastfeeding.
- “Lactation” time is a special time that encourages warmth and a unique closeness. Those quiet, relaxing moments they spend cuddling their babies become the enjoyable memories that last a lifetime and make motherhood so worthwhile.
- This special close and loving relationship is the ultimate attraction to breastfeeding.

# Factors That Attract Women to Breastfeeding (continued)

## The Bonding Experience (continued)

- Teens express many of the same aspirations as older women. They have an intense desire to have someone to love, and to have that love returned.
- An appealing feature of breastfeeding to a teen mother is that it enables her to have a unique relationship with her baby that no other family member can replace.
- The teen mother may feel that breastfeeding can prevent her baby from becoming too attached to others who care for the baby while she is at work or school.

# Factors That Attract Women to Breastfeeding (continued)

## How to Promote the Bonding Experience

- It is important to note that promotional efforts which focus on the bonding experience can backfire if bonding is explained in such a way that it becomes associated with attachment and dependency. It is also counterproductive to claim to women that breastfeeding will make them better mothers.
- A more constructive compromise is to concentrate, instead, on the warmth and unique closeness that women experience as a result of their commitment to breastfeeding. Emphasize what a special joy it is to give their babies something that no one else can provide in the same way.

# Factors That Attract Women to Breastfeeding (continued)

## Other Benefits That Attract Women To Breastfeeding

- Superior nutrition and immunological protection that is offered to the infant.
- Even short-term breastfeeding offers significant emotional and health benefits to the infant.
- Quick recovery from childbirth.
- Gradual weight loss.
- Convenience.
- Economic savings.

Note: Convenience and economic savings are benefits that were rarely mentioned by the women in the Best Start study as the major reasons for breastfeeding.

# View Video

- Watch the videotape, ***Best Start's Three-Step Counseling Strategy***.

(Note: The phone number to call to order this video is contained in the Breastfeeding References section of the Breastfeeding Module.)

## Self-Check

- Go to the **Workbook** for the **Breastfeeding Module** and complete **Self-Check Questions 94-96**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.

# Part 5: Creating a Breastfeeding-Friendly Agency

## Breastfeeding Policy in the Local Agency

- Every county health department or WIC local agency in Florida should have a written breastfeeding promotion and support policy.
- It is important that policies be written down and all staff members be familiar with them. This prevents misunderstanding and is a constant reminder to do the things that need to be done to reach the goal.

# Local Agency Office Environment

- First impressions are important and we have a wonderful opportunity to promote breastfeeding.
- Breastfeeding promotion needs to happen each time the client is in the agency.
- If the message is given often, enthusiastically, and in good taste, the client will know that you promote and support breastfeeding.



# Local Agency Office Environment (continued)

## Waiting area should include:

- Attractive and culturally appropriate breastfeeding posters and pictures.
- Breastfeeding pamphlets.
- Magazines that promote breastfeeding such as the La Leche League's *New Beginnings*.
- No infant formula samples or promotional materials provided by infant formula companies.
- An area where women can discreetly and comfortably breastfeed.
- A bulletin board with pictures of WIC breastfeeding mothers and their babies.

# Local Agency Office Environment (continued)

**In addition to items similar to those in the waiting area, the counseling and/or education areas should have:**

- A doll to demonstrate positioning.
- Breast pumps, breastfeeding accessories, etc. available if necessary.
- An area where a woman can breastfeed discreetly.
- Comfortable chairs and footstools for breastfeeding.
- Pillows to assist with positioning the breastfeeding baby correctly.
- A lending library of breastfeeding videos and books.
- Lists of breastfeeding support groups and resources.

# WIC Agency Environment

## (continued)

### **WIC check distribution areas should have:**

- Attractive and culturally appropriate breastfeeding posters and pictures.
- Poster and information about the exclusive breastfeeding food package.
- No cans of infant formula displayed.
- No cups, pens, pencils, notepads, calendars, etc. with formula company logos.

# Everyone Needs to be on the Breastfeeding Team

- Everyone needs to be an effective supporter and promoter; even those who have not breastfed!
- Learn as much about breastfeeding as you can!
- Frequent and short breastfeeding promotion messages are effective.

# Learning Sessions

- Breastfeeding can be promoted and supported in infant feeding classes, parenting classes, and mother-to-mother breastfeeding groups.
- A woman who has successfully breastfed can be very convincing to other women.
- It is wise to encourage partners, mothers, and grandmothers to participate in the sessions.
- Some women may never have seen a baby being breastfed and the breastfeeding client can answer questions and actually show women in the group how to breastfeed discreetly.
- Be prepared for some negative comments and difficult questions.
- Short, snappy, clever, and to-the-point messages are effective.

# Breastfeeding Counseling

- Many agencies schedule their breastfeeding women to come into clinic as soon as possible following delivery.
- Many try to call these women at home or at the hospital shortly after the baby is born.
- Staff should avoid asking: “Are you bottle feeding or breastfeeding the baby?”

## **Some better ways to ask about breastfeeding might be:**

- How is breastfeeding going?
- You’re breastfeeding, right? I thought so; your baby looks good!
- Do you have any questions about breastfeeding?
- Congratulations! You’re giving your baby a wonderful start.
- You’re so special. Doesn’t it feel great to know you are providing your baby everything he needs?
- You are doing a great job! Your baby is so healthy!

**Pages 95-97 in Module**

# Ways Staff Can Support and Promote Breastfeeding

- Give praise to breastfeeding women as you screen them and distribute their checks.
- Do not stare at clients who are breastfeeding. Instead, smile!
- Do not make negative comments about breastfeeding.
- Make sure cans of infant formula are out of sight.

# Be Sensitive to Cultural Practices

- Understand that counseling breastfeeding women often takes more time than counseling a bottle feeding woman.
- Be culturally sensitive! Some groups believe the colostrum is “bad” and must not be given to the baby. Others believe that a frightening event or a fight with a family member will “spoil” the milk.
- For these women, suggest expressing the milk, throwing it away, and then nursing the baby with the “real” milk.
- Suggest that the “real” milk will come in faster if the baby breastfeeds more often.



# Where to Find Breastfeeding Information in Your Agency

## Breastfeeding Staff

- Every local WIC agency has a breastfeeding coordinator, and many agencies have trained other staff to be breastfeeding educators.
- Some local agencies employ or contract with certified lactation consultants who are breastfeeding specialists who have specialized training to deal with the more complicated breastfeeding problems.

# Breastfeeding Resources

**Local agencies have resources for all staff to use. Some of the most useful breastfeeding materials are:**

- *Best Start's Three-Step Counseling Strategy.*
- *The Breastfeeding Answer Book* by La Leche League International.
- *Counseling the Nursing Mother, a Reference Handbook for Health Care Providers and Lay Counselors*, by Lauwers and Woessner.
- *Breastfeeding: A Guide for the Medical Profession*, by Ruth Lawrence.
- *Drugs in Pregnancy & Lactation*, by Briggs, Freeman, and Yaffe.

Pages 98-99 in Module

# Identifying Positive and Negative Breastfeeding Messages

- Infant formula companies are in the business to sell formula and to make a profit! Many hospitals give “Going Home Packets” to even new mother that include samples of infant formula and coupons for future purchases of infant formula.
- A hospital’s breastfeeding policy determines the individual level of support that the new mother will receive.
- More and more hospitals are working to become a WHO/UNICEF Baby Friendly Hospital that ensures the best environment for women to breastfeed successfully.

# Working To Change Attitudes of Family and Friends

- The attitude of a woman's family members and friends about infant feeding can influence the choice the woman makes about the initiation of breastfeeding.
- Attitudes and behaviors change *slowly*.
- Take every opportunity to promote breastfeeding.

# Breastfeeding “Champions” in Your Community

- Lactation educators and consultants are good resources; as well as La Leche League International (LLLI).
- WIC Breastfeeding Peer Counselors are women who help other mothers have a successful breastfeeding experience.
- The peers often fill the role of the traditional family support system.
- The peer counselor’s role is to guide, inform, and support the mother in her decision to breastfeed.

# Self-Check

- Go to the **Workbook** for the Breastfeeding Module and complete **Self-Check Questions 97-103**.
- Immediately check your answers against the **Answer Key** in your **Workbook**.
- Go to the **Practical Activity** for the **Performance Objectives** and complete.
- Arrange for a time with the supervising nutritionist for the **Posttest**.