



EARLY HEAD START

NUTRITION ASSESSMENT HANDBOOK FOR AGES 0-3 AND PRENATAL

SECTION THREE

DOMINICAN UNIVERSITY NUTRITION SERVICES

I. INTRODUCTION

Pregnancy is a critical period in the lives of families. The prenatal period of growth and development is crucial to optimal child development in the first three years of life and beyond. Research has shown that a healthy pregnancy has a direct influence on the health and development of a newborn child.

From conception to age three, human development occurs more rapidly than at any other time in life. Inadequate prenatal care is associated with a host of health and developmental problems – low birth weight, premature delivery, birth defects, and poor growth. Furthermore, these babies are at an increased risk of learning, social, and behavioral problems.

It is the intention of the Early Head Start program (EHS) to serve pregnant women and their families and to continue providing services for the child and family upon delivery. The goal of serving families in EHS is to provide early, continuous, intensive, and comprehensive child development and family support services.

II. HEAD START REQUIREMENTS

Head Start Performance Standard 1304.40(c)(1-3) requires that Early Head Start grantee and delegate agencies **must assist** pregnant women to access prenatal and postpartum care, through referrals, immediately after enrollment in the program. This care must include early and continuing risk assessments, health promotion and treatment, and mental health interventions and follow-up.

Grantees and delegate agencies **must provide** pregnant women and other family members, as appropriate, with prenatal education on fetal development, including risks from smoking and alcohol; labor and delivery, and postpartum recovery including maternal depression; and information must be provided on the benefits of breastfeeding to all pregnant and nursing mothers.

Head Start Performance Standard 1304.23(a)(3) requires that infants and toddlers current feeding schedules and amounts and types of food provided, including whether breastmilk or formula and baby food is used; meal patterns; new foods introduced; food intolerances and preferences; voiding patterns; and observations related to developmental changes in feeding and nutrition. This information must be shared with parents and updated regularly.

This handbook has been developed to assist staff in meeting these responsibilities. Specific objectives of the manual are to:

- Provide guidance to EHS staff on completing dietary and anthropometric (growth) assessment on all EHS participants.
- Assist staff in interpreting results of dietary, anthropometric and laboratory values.

- Provide information on nutritional needs of EHS participants including those requiring weight management.
- Make available reproducible handouts for use by staff during parent consultations, staff and parent training.

III. DOCUMENTATION

Documentation of services provided is extremely important. Documentation of all nutritional services, referrals and follow-up should be entered into COPA in the referral and case notes screen. **A printout of the referral and case notes must be placed in the health folder of the EHS enrollee (pregnant woman, infant or toddler).**

IV. NORMAL PREGNANCY NUTRITION

The importance of nutrition during pregnancy cannot be overstated. Good and adequate nutrition during pregnancy will help maintain maternal energy requirements, provide a catalyst for the development of new fetal tissues, and build energy reserves for postpartum lactation. A pregnant woman should consume about 300 more calories per day than she did before she became pregnant.

Every diet should include proteins, carbohydrates, vitamins, minerals, and fat. Dietary Reference Intakes (DRIs) are recommended amounts an individual should consume daily of certain nutrients, vitamins, and minerals. During pregnancy, the DRIs are higher for many nutrients. Pregnant women need extra iron to produce more blood to support the growth of the baby and extra folic acid to reduce the risk of neural tube defects. To get these extra nutrients, **a prenatal vitamin supplement is recommended for most women.** These supplements contain the recommended daily vitamins and minerals needed during pregnancy.

PREGNANCY NUTRITIONAL NEEDS

- **Calorie Requirements:**
 - 1st trimester: no change
 - 2nd trimester: + 340 extra per day
 - 3rd trimester: + 452 extra per day
- **Macronutrients**
 - Fats: no specific requirement—choose Omega-3 fatty acids for brain development
 - Protein: + 25 extra grams per day
 - Carbohydrates: 175 g/day (50-65% total kcal)

- **Micronutrients**
 - Iron: 27 mg/day
 - Vitamin C: 80-85 mg/day
 - Vitamin D: 5 mcg/day
 - Vitamin B12: 2.6 mcg/day
 - Vitamin A: 750-770mcg/day
 - Calcium: 1000-1300mg/day
 - Vitamin E: 15 mg/day
 - Zinc: 11-12 mg/day

- **Folic Acid**
 - 600 mcg per day through prenatal vitamins, fortified grains, and orange juice

- **Prenatal Vitamins**
 - Important to take daily. Best to take with food.
 - Contain essential nutrients most likely lacking from diet: vitamin B6, folic acid, vitamin D, iron, zinc and calcium.

MATERNAL WEIGHT

Weight gain during pregnancy helps your baby grow. The extra weight you gain during pregnancy provides nourishment to your developing baby and is also stored energy for breastfeeding your baby after delivery.

Weight gain during pregnancy depends on pre-pregnancy weight status:

BMI	First Trimester	Weekly Weight Gain for Weeks 14 to 40	Total Weight Gain
Underweight (BMI less than 18.5)	5 pounds	Slightly greater than 1 pound per week	28-40 pounds
Normal Weight (BMI 18.5-26)	3.5 pounds	Approximately 1 pound per week	25-35 pounds
Overweight (BMI 26-29)	2 pounds	Approximately 2/3 pound per week	15-25 pounds
Obese (BMI greater than 29)	2 pounds	Approximately 2/3 pound per week	15-20 pounds

Eisenberg, Heidi, and Sharon Mazel. *What to expect: eating well when you're expecting*. Workman Publishing, 2005.

- **Where the weight goes:**

Average baby's weight.....	7.5 lbs
Breast enlargement.....	2 lbs
Placenta.....	1.5 lbs
Enlargement of uterus.....	2 lbs
Amniotic fluid	2 lbs
Your extra blood.....	4 lbs
Your body's extra fat.....	7 lbs
Your body's extra fluids.....	4 lbs
Average total weight.....	30 lbs

- **Too little weight gain can contribute to:**

- Preterm delivery
- Low birth weight
- Complications such: as amniotic fluid infections, abruption placenta, premature ruptures of the membranes, damage to the placenta, and placenta previa (abnormal location of the placenta).

- **Too much weight gain:**

- Uncomfortable pregnancy
- Future obesity
- Breastfeeding difficulties
- Future health problems
- Labor and delivery complications
- Pregnancy complications: gestational diabetes, unable to assess and measure fetus

ADOLESCENT WEIGHT NEEDS:

- Teens that are pregnant need to gain more weight than most adult women who are pregnant. The reason for this is because teens need to eat enough for their own growth plus the growth of their baby.
- It is recommended that adolescents gain from 2- 5 pounds during the first trimester and 0.9 to 1.3 pound per week, in the 2nd and 3rd trimester, for a **total of 28 to 40 pounds** during gestation.

Source: Maternal Child Health Program, School of Public Health and Community Medicine, University of Washington

USE HANDOUTS “TIPS FOR PREGNANT MOMS”, “WHAT SHOULD I EAT FOR PREGNANCY”, AND “GET THE “B” ATTITUDE” located in the EHS handouts.

PREGNANCY RISK FACTORS

- **For adolescents:** Higher risk of preterm delivery, low birth weight, C- section, preeclampsia, anemia, and low income
- **For women > 35 years old:** Higher risk of pregnancy and delivery complications as well as slightly higher risk of baby having Down's Syndrome
- **Drugs/Smoking:** Higher risk of SIDS, apnea, poor condition at birth, lowered immune system, ADHD, low birth weight, lowered motor skills, withdrawal symptoms in newborns, and many other possible birth defects
- **Alcohol:** Fetal Alcohol Syndrome, impaired mental development, impaired growth of organ and tissues
- **No known "safe" dose**

EARLY HEAD START SERVICES FOR PREGNANT TEENS

DHHS: Administration for Children and Families <http://www.acf.hhs.gov/programs/ohs/policy/pdf/im2009/ACF-IM-HS-09-04-a1.pdf>

EHS programs that provide services for pregnant teenagers need to consider the particular needs of this population. Teenage girls and their partners are in a unique developmental stage that has implications for how EHS staff might design and deliver services. Recruitment efforts are based on the needs of pregnant teens as identified in the community assessment.

The living arrangements of the teen mother are a primary consideration. Many pregnant teens are living in the same household as their parents. It is important to talk with the teenager to determine their communication and confidentiality preferences. They will guide EHS staff on who is to be included when planning EHS services. EHS staff should be knowledgeable about the issues of working with multigenerational families. For example, the mother or grandmother of the pregnant teen may play an important role in child rearing values and expect to assume a certain amount of responsibility for the care of the new baby. In this case, it would be important for EHS staff to help all the members of the family to clarify roles and expectations for the child's care prior to the birth of the child.

After the birth of the child, EHS staff would work to support the relationship between the teen mother and her newborn while working with the new mother to include the other important extended family relationships in the child's life.

V. MATERNAL DEPRESSION

Pregnancy and the postpartum period are considered an especially vulnerable time for mental health issues. The prevalence of mild to moderate mood disorders in new mothers is not understood to be a relatively common phenomenon, affecting approximately 13% of women (National Women's Health Information Center, 2009). *Zero to Three*

PRENATAL DEPRESSION

Prenatal depression can occur during pregnancy when mothers-to-be experience hormonal and biological changes, stress, and the demands of pregnancy.

Approximately 14-25% of pregnant women have enough depressive symptoms to meet the criteria for a clinical diagnosis. Stroud, L., Niaura, R., Lagasse, L., Lester, B. (March, 2004). *Maternal pre and postnatal depression influences cortisol responses in infants*. Oral presentation to the American Psychosomatic Society annual meeting, Orlando, FL.

Symptoms may include excessive bouts of low mood, tearfulness, irritability, emotional ups and downs, anxiety, and insomnia.

POSTPARTUM BLUES

Is considered “normal” since they are so commonly experienced worldwide.

The blues are experienced by 50 percent to 80 percent of all mothers within the first 10 days after childbirth. Affected mothers may show prolonged or unexplained tearfulness, fatigue, insomnia, anxiety, and feelings of loss or being overwhelmed. Symptoms generally peak at five days after birth and typically resolve within a week or 10 days. Usually, the symptoms are transient and mild and do not interfere with a mother’s caring for her infant. While treatment is generally not necessary, moms and families need information about what is normal, what to expect, and when to get help. *Zero to Three*

POSTPARTUM DEPRESSION

Is a clinically significant condition and requires serious medical attention from a health care provider.

Symptoms include prolonged periods of low mood, irritability, sleep and appetite disturbance, fatigue, loss of interest, inability to feel pleasure in daily life, guilt, decreased concentration, indecisiveness, the feeling of worthlessness, despair, or thoughts about harming herself or her child. This condition is manifested in major depressive episodes lasting two weeks or more and may last for a period of weeks or for longer than a year. An estimated 8 percent to 15 percent of childbearing women experience post partum depression during the first year after childbirth. Research finds that economically poor depressed women can experience depressive symptoms as high as 48%. U.S. Department of Health and Human Services, Administration for Children and Families (2002). *Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start*.

Women experiencing these symptoms need immediate mental health evaluation and treatment.

- **Screening**

Earlier is always better. Screen during pregnancy and in early postpartum periods. Edinburgh Postnatal Depression Scale (EPDS) can be used as a screening tool. It’s a free download and comes in English and Spanish English version:

<http://www.fresno.ucsf.edu/pediatrics/downloads/edinburghscale.pdf>

Spanish version: <http://steppingup.washington.edu/keys/documents/EPDSSpan.pdf>

- **Education**

Discuss the early warning signs at prenatal visits, talk about this in your Health Advisory Committee Meetings and parent education classes.

USE HANDOUT “*IS IT THE BABY BLUES OR SOMETHING ELSE?*”; available the Illinois Department of Health Services located in the Appendix.

RESOURCES

Who to contact for help:

- ✓ **Illinois Department of Human Services Helpline:** 1-800-843-6154
- ✓ **National Institute of Mental Health:** 1-301-496-9576; www.nimh.nih.gov
- ✓ **The National Women’s Health Information Center, Office on Women’s Health, U.S. Department of Health and Human Services:** 1-800-994-9662; www.4women.gov/faq/postpartum.htm

VI. OVERVIEW OF FETAL DEVELOPMENT

A baby undergoes rapid fetal development in the nine months he/she spends in his mother’s womb. A pregnancy is usually measured in 40 weeks of gestation, but many people prefer to measure it in months. The three main stages of fetal development are conception, embryonic development and development of the fetus.

Conception usually occurs around week two of the pregnancy. In the two weeks prior to conception, the body is readying the womb for a potential pregnancy by growing a layer of rich, blood perfused tissue. After conception, which takes place around two weeks, the egg makes its way to the uterus, where it is implanted and begins its rapid growth.

In the first weeks, the cells are multiplying at an exponential rate. Since the major organs are the first to develop (brain and spinal cord) it is critical that the mothers are receiving adequate nutrition during this time.

Embryonic Development is the most critical stage of fetal development. The systems are undergoing important foundational development. The embryonic state of fetal development takes place from conception to approximately the 11th week of pregnancy. At four weeks, cellular division is rapid, with the cells dividing between those that will make up the placenta and those that will make up the baby. By six weeks, the baby’s heartbeat has begun and her arms and legs are developing. At eight weeks, the intestines begin to form and teeth start growing under the gums. By the end of the embryonic stage of fetal development, the embryo has developed

joints and the beginning of the irises. Major organs have begun their development, as well as the central nervous system.

Fetal Development begins after the 11th week, when the baby is called a **fetus**. From the 11th to 16th week, the fetus begins developing distinguishable genitals, hair, nails and vocal chords. The kidneys begin to process bodily fluids, and the liver begins to function as it should. Bones also begin to harden at this time.

Use Handout “Fetal Development: Month-by-Month” located in the Appendix.

MAJOR NUTRIENTS NEEDED FOR THE GROWING FETUS:

Folate- This vitamin is crucial for the developing fetus. It plays a crucial role in the development of the spinal cord. It is important for pregnant women to take prenatal vitamins with folate, as the bioavailability in food (50%) is substantially lower than in supplement form. (100%) The critical time for the spinal cord to develop is 21-27 days after conception. Some women may not know until later in the pregnancy that they are pregnant, so if a woman thinks she wants to conceive, it may benefit her to take folate supplements while trying to conceive.

Omega 3 Fatty Acids, EPA, DHA - Omega 3 and its derivatives are important for the development of nerves in a developing fetus. It has also been researched that adequate intake can decrease the number of preterm deliveries. As nerves are being developed throughout the pregnancy it is important to take supplements throughout, or consume fish that are low in mercury and other heavy metals.

Choline - Important for developing the nervous system in the developing fetus. A good source of choline is eggs and meat.

Vitamin A- Vitamin A is an important nutrient for fetus development, but excessive amounts of retinol can lead to birth defects. Some medications, treatments for acne and wrinkles contain too much Vitamin A and may need to be avoided. A medical provider should be consulted. Beta carotene (like in carrots) has not been associated with birth defects.

Vitamin D - Important for bone development in the developing fetus. It is a common deficiency in women in the United States. It is of particular concern to Black, obese, and vegan women. If working with these populations, it is important to suggest a supplement containing vitamin D, as natural sources tend to be seafood, where consideration of mercury poisoning may be an issue.

Iron - Is a crucial mineral for the mother and the developing fetus. The mother needs to create more blood volume for herself as well as provide nutrients for the fetus. Iron deficiency is a common problem worldwide. Since this nutrient is crucial, and a great risk for deficiency, it is recommended that the mother boost her iron stores prior to pregnancy, and continue to take supplements during pregnancy and while breastfeeding.

VII. BREASTFEEDING NUTRITION

“As a mother one of the best things that only you can do for your baby is to breastfeed. Breastfeeding is more than a lifestyle choice- it’s an important health choice. Any amount of time that you can do it will help both you and your baby. While breastfeeding isn’t the only option for feeding your baby, every mother has the potential to succeed and make it a wonderful experience.” U.S. Department of Health & Human Services, 2009

The benefits of breastfeeding to mothers and infants are well established. Federal breastfeeding promotion efforts and greater understanding of the advantages of breastfeeding have contributed to the resurgence of breastfeeding in the United States since the 1970s.

Despite the resurgence gaps in breastfeeding remain both geographically and among racial groups, educational groups, income groups and by marital status. Dedicated professionals must take an active role in promoting and supporting lactation. Becoming a breastfeeding advocate requires a thorough understanding of lactation physiology and through knowledge of clinical and community resources for support.

Breastmilk is the best food for babies. It is the only food a baby needs during the first 4 to 6 months of life, and it continues to be an important source of nutrients for the first year. Breastmilk contains the right balance of nutrients to meet the baby’s needs and changes over time. It is easy to digest and contains natural substances that help protect babies from illnesses and allergies. Formulas are modeled after Breastmilk because it is the ideal food for infants.

By causing certain hormones to be released into the mother’s body, breastfeeding brings feelings of relaxation and well-being to the mother. Breastfeeding also builds a special closeness between a mother and her baby.

Health Benefits for Baby* *American College of Nurse-Midwives*

- Breast milk is the most complete form of nutrition for infants. A mother's milk has just the right amount of fat, sugar, water, and protein that is needed for a baby's growth and development.

- Most babies find it easier to digest breast milk than they do formulas or breast milk alternatives.
- Breast milk contains antibodies, which help protect infants from illness. Breastfed babies are more able to fight off infection and disease, are sick less often, and require fewer visits to health care providers.
- When you breastfeed, there are no bottles and nipples to sterilize. Human milk straight from the breast is always sterile.

Health Benefits for Mom

- Some of the normal weight gain during pregnancy is done to lay down fat stores for nursing. Nursing uses up those calories, making it easier to lose the weight you put on during pregnancy. It also helps the uterus to get back to its original size and lessens any bleeding a woman may have after giving birth.
- Breastfeeding lowers the risk of breast cancer and may lower the risk of ovarian cancer.

Other Benefits for Baby and Mom:

1. Convenience

- Breastfeeding saves time and money.
- A mother can give her baby immediate satisfaction.
- Breastfeeding requires you to take some quiet relaxed time for yourself and your baby.

2. Emotional Benefits

- Breastfeeding can help you to bond with your baby. Physical contact is important to a newborn and can help them feel more secure, warm and comforted.

3. Societal Benefits

- Total medical care costs for the nation are lower for fully breastfed infants than never-breastfed infants. This is because breastfed infants typically need fewer sick care visits, prescriptions, and hospitalizations.
- Employers benefit because breastfeeding mothers do not miss as much work time caring for sick babies.
- Breastfeeding is better for our environment because there is less waste compared to that produced by formula cans and bottle supplies.

Breastfeeding mothers burn many calories producing Breastmilk. They need to eat a healthy diet in order to produce healthy milk as well as to keep their own bodies healthy.

Addition Calories Required While Breastfeeding (DRI):

- 1st six months: +330 extra kcal/day
- 2nd six months: +400 extra kcal/day

Try to include the following each day while breastfeeding:

- Protein: 3 servings
- Calcium: 5 servings
- Iron-rich foods: 1 or more servings
- Vitamin C: 2 servings
- Green leafy and yellow vegetables/fruits: 3-4 servings
- Other fruits/vegetables: 1 or more servings
- Whole grains and other complex carbohydrates: 3 or more servings
- High fat foods: moderate amounts: not as much as during pregnancy
- Choose Omega-3 rich foods for baby's brain growth
- At least 8 glasses of water, juice, or other non-caffeinated, non-alcoholic beverages
- Prenatal vitamin daily

CAUTION FOR BREASTFEEDING MOTHERS:

MANY DRUGS, INCLUDING PRESCRIPTION, OVER THE COUNTER, LEGAL AND STREET DRUGS CROSS OVER INTO BREASTMILK. BREAST FEEDING MOTHERS MUST BE COUNSELED TO CHECK WITH THEIR MEDICAL PROVIDER BEFORE USING ANY MEDICATIONS. THEY SHOULD AVOID ALCOHOL AND CAFFEINE. USE HANDOUT "TIPS FOR BREASTFEEDING MOMS" and "What Should I Eat for Breastfeeding" located in the Appendix.

VIII. BREASTFEEDING CHALLENGES

Breastfeeding can be challenging at times, especially in the early days. But it is important to remind mother's that they are not alone.

Some of the challenges include, but are not limited to the following:

- Poor Latch
- Sore Nipples
- Engorgement
- Infections
- Low Milk Supply
- Milk Oversupply
- Multiple births
- Babies with Health Problems

While many women are faced with one or more of the challenges listed here, many women do not struggle at all! Also, many women may have certain problems with one baby that they don't have with their second or third babies. It is important to recognize problems and offer solutions and support to continue breastfeeding.

Father's Support

Many Dads feel left out when it comes to breastfeeding. They can't feed the baby themselves and they envy the closeness the mother and baby share when nursing. But, though they may not realize it, fathers play a key role in breastfeeding. Their support often makes the difference in whether a woman sticks with nursing and succeeds or gives up before she really learns how.

USE brochure “*Fathers Can Support Breastfeeding*” located in the Appendix.

Resources

Who to contact for help:

- ✓ **National Breastfeeding Helpline:** 1-800-994-9662 (TDD 888-220-5446)
- ✓ **La Leche League:** 1-800-La-Leche or www.lalecheleague.org
- ✓ **Women, Infants and Children:** 1-800-843-6154 (TTY 866-295-6817)
- ✓ **International Board Certified Lactation Consultant (IBCLC):** www.ilca.org,
- ✓ **HealthConnect One (Doula Services in Chicago):** (312) 243.4772 or www.healthconnectone.org

IX. DFSS BREASTFEEDING COMMITMENT (POLICY)*

*Adapted from Vermont Department of Health

A breastfeeding policy is designed to assist child care providers in supporting breastfeeding mothers and infants and in protecting the health of breastfed infants.

A breastfeeding friendly child care center policy should address a certain standard of care:

- Mothers will be welcome to breastfeed in the center;
- Families will receive accurate information about breastfeeding, and;
- Child care center staff is trained to provide breastfeeding information and support to help mothers continue to breastfeed when they return to work or school.

Sample Childcare Center Breastfeeding Policy

Because breastfeeding has been shown to be the best form of infant nutrition, providing a multitude of health benefits to both infant and mother, and because breastfeeding employees need ongoing support from childcare providers to provide their milk for their babies.

_____ subscribes to the following policy:

(insert facility name)

- 1. Breastfeeding mothers shall be provided a place to breastfeed or express their milk.**
Breastfeeding mothers, including employees, shall be provided a private and sanitary place to breastfeed their babies or express milk. This area will have an electrical outlet, comfortable chair, and nearby access to running water.
- 2. A refrigerator will be made available for storage of expressed breastmilk.**
Breastfeeding mothers and employees may store their expressed breast milk in the center refrigerator. Mothers should provide their own containers, clearly labeled with name and date.
- 3. Sensitivity will be shown to breastfeeding mothers and their babies.**
The childcare center is committed to providing ongoing support to breastfeeding mothers, including providing an opportunity to breastfeed their baby in the morning and evening, and holding off giving a bottle, if possible, when mom is due to arrive. Artificial baby milks (formula) and solid foods will not be provided unless the mother has requested. Babies will be held closely when feeding and bottles will never be propped.
- 4. Staff shall be trained in handling human milk.**
All childcare center staff will be trained in the proper storage and handling of human milk, as well as ways to support breastfeeding mothers. The center will follow guidelines from the American Academy of Pediatrics and Centers for Disease Control in ensuring that breastmilk is properly treated to avoid waste. Special precautions are *not* required in handling human milk.
- 5. Breastfeeding employees shall be provided flexible breaks to accommodate breastfeeding or milk expression.** Breastfeeding employees shall be provided a flexible schedule for breastfeeding or pumping to provide breastmilk for their children. The time allowed would not exceed the normal time allowed to other employees for lunch and breaks. For time above and beyond normal lunch and breaks, sick/annual leave may be used, or the employee can come in a little earlier or leave a little late to make up the time.
- 6. Breastfeeding promotion information will be displayed.**
The center will provide information on breastfeeding, including the names of area resources should questions or problems arise. In addition, positive promotion of breastfeeding will be on display in the center. Contact the WIC Breastfeeding Coordinator to obtain posters showing breastfeeding mothers and their babies.

X. INFANT NUTRITION

An assessment of the infant/toddler's nutritional habits, including growth and laboratory evaluation, helps identify possible nutritional inadequacies. Providing information to parents in ways to improve child's diet can promote good health now and in years to come.

Calorie Requirements (DRI)

- 0-6 months: males: 570 kcal/day; females: 520 kcal/day
- 6-12 months: males: 743 kcal/day; females: 676 kcal/day

Diet Supplements

1. Vitamin D
 - a. All breast-fed babies should be supplemented with 400 IU/d.
2. Iron
 - a. Most full term infants have enough iron stores for six months and therefore supplementation is not needed.
 - b. With the introduction of iron fortified formula and dietary supplementation of iron in cereal, the need for routine testing for anemia at 9-12 months of age, has been questioned.
 - c. Preterm and low birth weight newborns and infants with diets that have inadequate sources of iron should be tested for anemia.

FAILURE TO THRIVE

Adapted from: Am Fam Physician. 2003 Sep 1;68(5):886

Failure to thrive (FTT) is a growth problem in children, especially those younger than two years. A child who fails to thrive is behind in physical growth or size doesn't gain enough weight. There are many possible causes of FTT, such as poor appetite, poor diet, or a medical problem. Young children need a lot of calories to grow. FTT can happen even if a child seems to be eating enough.

Infants and children who fail to thrive have a height, weight, and head circumference that do not match standard growth charts. The person's weight falls lower than third (3rd) percentile or 20% below the ideal weight for their height. The following are delayed or slow to develop:

- Physical skills such as rolling over, sitting, standing and walking
- Mental and social skills
- Secondary sexual characteristics (delayed in adolescents)

It is important to determine whether failure to thrive results from medical problems or factors in the environment, such as abuse or neglect.

FTT is treated two ways. The first way is to treat the problem that is causing your child to be underweight. The second way is to increase the number of calories the child is eating. Infants who are breastfeed can be given extra formula with breast milk. Bottle-fed babies may need to have their amount of formula increased, or the formula may need to be prepared in a special way. Calorie boosters are high-calorie foods such as cheese, peanut butter, regular milk, and cooking oils. These boosters can be added to the food child usually eats, such as mashed potatoes, noodles or crackers. Doctors may recommend using a high-calorie milk drink or giving your child extra vitamins.

SIPPY CUP

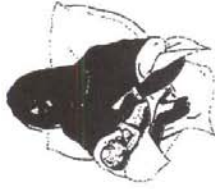
One serious form of decay among young children is baby bottle tooth decay. This condition is caused by frequent and long exposures of an infant's teeth to liquids that contain sugar. Among these liquids are milk (including breast milk), formula, fruit juice and other sweetened drinks.

Putting a baby to bed for a nap or at night with a bottle other than water can cause serious and rapid tooth decay. Sweet liquid pools around the child's teeth giving plaque bacteria an opportunity to produce acids that attack tooth enamel. If you must give the baby a bottle as a comforter at bedtime, it should contain only water. If your child won't fall asleep without the bottle and its usual beverage, gradually dilute the bottle's contents with water over a period of two to three weeks.

After each feeding, wipe the baby's gums and teeth with a damp washcloth or gauze pad to remove plaque. The easiest way to do this is to sit down, place the child's head in your lap or lay the child on a dressing table or the floor. Whatever position you use, be sure you can see into the child's mouth easily.

Sippy cups should be used as a training tool from the bottle to a cup and should be discontinued by the first birthday. If a child uses a sippy cup throughout the day, fill the sippy cup with water only (except at mealtimes). By filling the sippy cup with liquids that contain sugar (including milk, fruit juice, sports drinks, etc.) and allowing a child to drink from it throughout the day, it soaks the child's teeth in cavity causing bacteria.

[See the following page for the Infant Daily Food Requirements Guide.](#)



Infant Daily Food Requirements *

	Birth to 3 weeks	3 weeks to 2 months	2-3 months	4-5 months	6-7 months	8-9 months	10 - 12 months
Formula	2 1/4 oz per feeding or 16-24 oz total	4-6 oz per feeding or 21-24 oz total	5-7 oz per feeding or 24-32 oz total	5-7 oz per feeding or 25-36 oz total	6-8 oz per feeding or 24-32 oz total	6-8 oz per feeding or 24-32 oz total	6-8 oz per feeding or 16-24 oz total
Cereal				2-5 Tbsp total	3-5 Tbsp total	4-5 Tbsp or more total	4-5 Tbsp or more total
Vegetables					1-3 Tbsp total	1/2 - 1 jar** (1/4 - 1/2 cup) total	1-2 jars (1/2 - 1 cup) total
Fruits					1-3 Tbsp total	1/2 - 1 jar** (1/4 - 1/2 cup) total	1-2 jars (1/2 - 1 cup) total
Meats						2-4 Tbsp total	1/2 jar or more (1/4 cup or more) total

These feeding recommendations are to be used as guidelines only. Food needs to vary with each infant.

** Jar size equals 4.5 ounces.

Sanitizing Procedure

POLICY: Staff will wash, rinse, sanitize and air dry bottles, nipples, rings, covers and pacifiers using appropriate procedures to ensure the health and well being of each child.

PROCEDURE FOR SANITIZING BOTTLES, NIPPLES, RINGS, COVERS AND PACIFIERS:

1. Remove the tape or label from the bottle and place in sink designated for dish washing or container labeled for used bottles. Bottles will be washed in morning, midday, and afternoon.
2. Wash bottles, rings, nipples, covers and pacifiers in sink designated for dishwashing using warm water and soap. Rinse all in clean water.
3. Place bottles, rings, nipples, covers and pacifiers in an approved commercial sanitizer for heat sanitation. Minimum water temperature of 171 degree F is required. If a commercial heat sanitizer is not available, bottles, nipples, rings and covers will be sanitized by placing in water that is at a full, rolling boil for 1-2 minutes.
4. After removing bottles, rings, nipples, covers and pacifiers from the commercial heat sanitizer or boiling water, allow them to air dry in a clean dish rack before using or storing.
5. Store bottles, rings, nipples, covers and pacifiers in labeled and covered containers in a cupboard.
6. When the nipples, pacifiers or bottles become worn in appearance, dispose and replace.

Breast Milk / Formula Handling & Storage

*Adapted from Community Action Partnerships of North Alabama

POLICY:

Early Head Start 1304.23(e)(2) complies with food safety and sanitation measures to ensure the proper storage and handling of breast milk and infant formula, to prevent spoilage, to minimize bacteria growth, and to ensure that each infant receives his or her own mother's milk or the correct brand of formula.

PROCEDURE:

- ✓ Infants 0-1 will be held while feeding and are fed on demand.
- ✓ Introduce food as appropriate using USDA guidelines and Parent input.
- ✓ Document food intake on the form located in the appendix.
- ✓ The infant meal pattern must be followed until the child has their first birthday.
- ✓ A Lactation Specialist will be available to assist with resources as needed to ensure proper breastfeeding.

The Caregiver will:

1. Sanitize all items (bottles, rings, caps, nipples) according to the bottle sanitizing policy.
2. If items are washed by hand, place items on a sanitized rack to dry.
3. Wash hands with warm soapy water before removing items from the dishwasher or drying rack.
4. Reassemble bottles by placing nipple upside down in bottle, twisting ring on firmly, and placing cap over the top seal.
5. Place label around bottom & store in refrigerator until ready to use.
6. Label the bottle, on the tape, with the following information:
 - * Child's name
 - * Date and time milk was pumped/poured
 - * Specify if breast milk/formula/milk
7. ***If bottles belong to a child**, the caregiver will rinse, place in a zip-lock bag with the child's name & date on the bag, and send home daily.

Storage:

- ✓ Breast milk must be brought from home daily in a labeled, plastic bag.
- ✓ Training will be provided to mothers on the proper preparation, handling, and storage of milk.
- ✓ **DO NOT REFREEZE MILK AFTER IT HAS BEEN THAWED**
- ✓ Discard remaining breast milk left in the bottle after feeding the infant to prevent bacterial contamination.

***INFANT-TODDLER FEEDING INSTRUCTIONS**

*Adapted from Community Action Partnerships of North Alabama

POLICY:

The Early Head Start program will promote child wellness by providing nutrition services that supplement and complement those of the home and community. This will be achieved through ongoing communication between the caregivers and families, concerning nutrition-related assessment data, family eating patterns, feeding schedules, and eating preferences. A place at the center will be provided for mother who breastfeed, with an atmosphere that is comfortably suited for maximum bonding.

1304.21(6)(3)(i)-(ii); 1304.23(a)(3); 1304.23(b)(iv); 1304.23(c)(4-5); 1304.40(f)(3)

PROCEDURE:

- ✓ At enrollment, the Caregiver/Family Service Manager will complete **Infant-Toddler Feeding Instructions** form with the parent. Remember that both signatures and dates are required.
- ✓ Continue to complete this form on the same schedule as the EPSDT exams.
- ✓ File this form in the child's classroom file.

GUIDELINES:

1. Infants will be held while being fed, bottles will not be propped. Do not lay infant down to sleep with a bottle.
2. Warm the bottle when the baby demands, not before.
3. Infants will be offered drinking water several times a day.
4. Older infants, who are able to sit, will be placed in a highchair/ tables to eat with assistance.
5. Toddlers will sit in a chair when they are developmentally able.
6. Toddlers will be encouraged to experiment with self-feeding with hands and/or spoon.
7. All food will be fed or eaten from a dish, not a jar.
8. Unbreakable dishes and bottles will be used.
9. Food will not be used as a punishment or a reward. No child will be forced to eat.
10. **Weaning** will begin upon parental request and/or when the toddler is determined ready by the physician and/or parent. The toddler will become familiar with drinking from the sippy cup prior to discarding the bottle.
11. **When special food or formula is required, notify the Nutrition Resource Specialist 3 – 5 days in advance.**

BOTTLE PREPARATION AND FEEDING PROCEDURE

*Adapted from Umatilla-Morrow Early Head Start

POLICY: Bottles and formula will be prepared in a kitchen that is licensed or has been approved by the state or county sanitation inspector. Breast milk and/or formula will be fed to children less than one year of age. Formula will be ready-to-feed or prepared from powder or concentrate according to the manufacturer's directions. Staff members with food handler's cards will prepare the bottles. Staff will be trained in bottle preparation procedure, sanitation, and hand washing. Separate staff will be designated for bottle preparation and diaper changing in separate locations. Bottles will be labeled with the child's name and date prepared and stored in the refrigerator. Unused bottles may be stored for 24 hours. Formula/breast milk remaining in a bottle after a feeding will be disposed of and each bottle will be rinsed, washed, sanitized and air dried.

Parents will be encouraged to prepare bottles using the proper procedures when they are in the center to ensure that the child is receiving the greatest benefits from the formula as possible.

PROCEDURE:

1. Select bottles made of polyethylene or polypropylene (recycling symbols 1, 2 or 5).
2. Wash hands thoroughly with warm water and soap. Dry hands using paper towels.
3. Check the expiration date on the can of formula. Discard formula if it is past the expiration date.
4. Wash the top of the can with soap and warm water. The can should be clean and dry before opening. If using powdered formula, date side of the can with date first opened. The powder in the can must be used within one month of the date first opened.
5. Shake the can of ready-to-feed or concentrated formula, and then open the can.
6. Pour the appropriate amount of ready-to-feed formula into a sanitized bottle. If using powdered or concentrated formula, follow the directions on the back of the can.
7. Place the sanitized nipple, ring and cover (if for later use) on the bottle.
8. Label the bottle with the child's name and the date that the bottle was prepared. If several children at a site are on the same formula, the bottle may be labeled with the date and name of the formula. The intended child's name should be added to the label as the bottle is taken out of the refrigerator and warmed in preparation for feeding to the child. It is recommended to compile a list of

children's names and the formulas they are on and have it available for staff to refer to.

9. Bottles (use lids) will be stored in the refrigerator at 40 degrees F or below. Unused formula bottles will be disposed of after 24 hours.
10. Never return a bottle to the refrigerator if it has been used to feed a child. Instead, dispose of the unused formula/breast milk and wash, rinse, sanitize and air dry the bottle, nipple, ring and cover.
11. If there is ready-to-feed formula left over in the can after bottles have been filled or a large quantity formula was prepared at one time, store the formula in a glass or food safe plastic container with a cover and label it with the date and time the can was opened or the formula prepared. Dispose of this formula after 24 hours.

THE FOLLOWING LIST IS A GENERAL GUIDELINE FOR OFFERING CERTAIN FOODS TO AN INFANT AT SUGGESTED TIMES.

Birth:

- breast milk
- iron-fortified formula

4 - 6 Months:

- infant cereal (plain, from spoon) offered in this order:
 - rice
 - oatmeal
 - barley

6 - 7 Months:

- vegetables (unsalted, strained)
 - carrots
 - squash
 - green beans
 - green peas
- fruits (unsweetened, strained)
 - applesauce
 - banana
 - peaches
 - pears

7 - 9 months:

- other infant cereals
 - wheat
 - mixed grains
 - high protein

- Fruit juices should only be offered in sippy cups (not bottles). They should be 100% unsweetened, pasteurized juices, and not fruit drinks. They can be diluted to half strength but the total amount of full strength juice should be limited to 4 to 6 ounces a day.
 - apple
 - cherry
 - grape
 - orange
- mashed vegetables and fruits
- mild cheese
- cottage cheese

8 - 9 months:

- strained meats (plain)
 - chicken
 - lamb
 - veal
 - beef
 - liver
 - ham
- egg yolk
- pureed legumes (beans, peas and lentils)

10 – 12 Months:

- finger foods
 - toast squares
 - cooked vegetables (strips or slices)
 - peeled, soft fruit without seeds (wedges or slices)
 - small, tender pieces of meat
- food from the family table (feeds self)
 - vegetables
 - fruit
 - cereal
 - pasta, noodles
 - bread
 - beans
 - fish, meats, chicken
 - cheese
 - whole egg
- may continue breastfeeding
- weaned from the bottle
- able to drink whole cow's milk at 12 months

Sources:

http://www.clemson.edu/extension/hgic/food/nutrition/nutrition/life_stages/hgic4100.html

<http://pedclerk.bsd.uchicago.edu/infantNutrition.html>

XI. NUTRITIONAL NEEDS ASSESSMENT

Instructions on Completing Prenatal and Postpartum Risk Assessment

Use the forms **Early Head Start Prenatal and/or Postpartum Risk Assessment** to complete the following sections. These forms can be found in the appendix section of this handbook.

Prenatal Assessment

Upon enrollment staff will complete the **prenatal risk assessment** by interviewing the pregnant mother. When possible, referrals are to be arranged for prenatal care (medical homes), dental homes and family needs. **Documentation is required for all attempted referrals.** EHS will provide or assist the pregnant mom with transportation to prenatal appointments. Staff will assist the pregnant mother in enrolling in an insurance program if she does not have any.

Staff will build a relationship with the pregnant mom while sharing prenatal information such as nutrition, breastfeeding, smoking, alcohol, fetal development, postpartum care, child development, and depression.

Pregnant mother and staff involved in the interview must sign and date the form. By signing, the pregnant mother gives Head Start permission to obtain additional information from the medical/dental provider.

The Family Service Manager will monitor and track to ensure that health concerns are noted and signatures are on the forms.

Health staff will follow-up with the Family Service Manager on any and all health concerns noted at the 2 week post partum visit.

Postpartum Assessment

When the pregnant mother delivers, the Family Service Manager and Health Staff will follow up with mother and baby, within 2 weeks of delivery. The **Postpartum Health History** will be completed at this visit. New mother will obtain an **EPSDT Physical** form from the pediatrician at the baby's well baby visit. When possible, referrals are to be arranged for postnatal care (medical homes), dental homes and family needs. **Documentation is required for all attempted referrals.** Staff will build a relationship with the pregnant mom while sharing prenatal information such as nutrition, breastfeeding, smoking, alcohol, fetal development, postpartum care, child development, and depression.

Instructions for Completing CYS 3171- Nutrition Needs Assessment (Infants and Toddlers)

Use the form **CYS 3171** (Rev. September, 2007) **Child/Family Nutrition Needs Assessment (Infant and Toddlers)** to complete the following sections. This form can be found in the Appendix Section of this handbook.

Infants: 0-12 months

Upon enrollment complete Section A for infants. Enter the **number of times** the infant is fed within a 24 hour period and then **enter the amount** of milk/formula, in ounces, consumed in a 24 hour period. Check the appropriate box for the type of food consumed then check the appropriate box to indicate the method of feeding.

If the infant is eating solid food(s), check other and write the solid food(s) the child is eating in the space provided. If other method of feeding is used check other and then specify in the space provided. List any fluids other than formula that is being given to infant (juice, soda, water) in the space provided.

Toddlers: 12-36 months

Upon enrollment complete Section B for toddlers. Enter the **number of times** the child eats in a day. Then enter the age at which the child began eating solid foods, drinking from a cup and feeding themselves. Write down any of the child's food likes and dislikes.

Part 1: Child and Family Eating Habits

Numbers 1 through 11 requests specific information about child and family eating habits. These questions help to identify the nutrition needs of participating families and should be used in planning your nutrition education program for parents and children.

Part 2: Food Frequency

This section contains a food frequency section which records daily food intake. Compare the answers in the food frequency section to the corresponding line in the recommended column. If the number of servings consumed daily from the food frequency section is less than the number of recommended servings place a (✓) in the follow-up column which indicates a need for follow-up. For numbers 7 through 10 **if the intake is greater than 1 follow-up** is needed.

Please note that the servings listed in the recommended amount are minimum numbers to maintain good health. Some children may require more than the minimum number of servings to be healthy. The minimum number of servings from the fruit/vegetable group is four (4). This may be met by any combination of foods in groups 4 and 5.

References

Brown, Judith. *Nutrition Through the Life Cycle*. 3rd ed. 2007.

Eisenberg, Heidi, and Sharon Mazel. *What to expect: eating well when you're expecting*. Workman Publishing, 2005.

Feeding Your Infant. Clemson University.

<http://www.clemson.edu/extension/hgic/food/nutrition/nutrition/life_stages/hgic4100.html>.

Murkoff, Heidi, and Sharon Mazel. *What to Expect When You're Expecting*. Workman Pub Co, 2008.

Rees, Jane. "Pregnancy in Adolescence." *Maternal Child Health Program School of Public Health and Community Medicine*. University of Washington, 07/20/2008.

http://faculty.washington.edu/jrees/websymp/pregnancy_intro.html

Schwab, Joel. "Infant Nutrition." *Pritzker School of Medicine*. The University of Chicago.

<<http://pedclerk.bsd.uchicago.edu/infantNutrition.html>>.

First edition-Dominican University Head Start Nutrition Services
March, 2011