

**EARLY HEAD START**

**NUTRITION ASSESSMENT HANDBOOK  
FOR AGES 0-3 AND PRENATAL**

**SECTION THREE**

**DOMINICAN UNIVERSITY NUTRITION SERVICES**

**Revision: August 23, 2016**

## 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 by continuing to provide 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.

## HEAD START REQUIREMENTS

Head Start Performance Standard require that Early Head Start grantees and delegate agencies **must assist** pregnant women in accessing 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. This includes: risks from smoking and alcohol, labor and delivery, and postpartum recovery including maternal depression. Information must be provided on the benefits of breastfeeding to all pregnant and nursing mothers.

Head Start Performance Standards require that infants' and toddlers' current feeding schedules, and amounts and types of foods be provided. This includes: whether breast milk 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.

## 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).**

More information regarding documentation can be found at the end of this document.

## EARLY HEAD START SERVICES FOR PREGNANT TEENS

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.

## 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: 15 mcg/day (Updated 2010 DRI RDA) | 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.

### **Food Safety Precautions**

Pregnant women are at increased risk of developing a food born illness as they are supporting a fetus and hormonal changes hinder them from fighting illness the same way their bodies are normally able to.

Please refer to the food safety handout for more information and always check with a healthcare provider for additional information and instructions.

Practice good food safety habits:

- Make sure all meats, eggs, and fish are cooked thoroughly.
- Rinse all produce (fruits and vegetables) before eating.
- Avoid cross contamination by keeping raw and cooked foods separate from each other, especially when preparing foods and using cutting boards.
- Wash your hands before cooking, eating, when changing diapers, using the washroom or covering your mouth when coughing or sneezing.

## **Foods to avoid during pregnancy**

Deli meats – Unless steamed, cooked, or heated before eating (like turkey, ham, beef for example) may harbor bacteria that is harmful to a pregnant mother. Heating the meats before putting them in a sandwich is acceptable. Restaurants may heat these up for you upon request.

Deli salads made in store - Salads (such as potato, tuna, egg) may harbor bacteria that is harmful to a pregnant mother. If you make a salad, ensure it is stored correctly to prevent against bacterial growth.

Soft cheeses - May harbor bacteria that is harmful to a pregnant mother.

Raw shellfish - May have bacteria that is harmful to a pregnant mother. Cooking shellfish appropriately is acceptable.

Unpasteurized juice or milk - May harbor bacteria that is harmful to a pregnant mother.

Raw sprouts such as alfalfa - May harbor bacteria that is harmful to a pregnant mother.

Uncooked cookie dough or batter - Has raw eggs that may harbor bacteria that is harmful to a pregnant mother.

## **Fish Safety**

Fish and shellfish are an important part of a healthy diet. They are a great source of protein and heart-healthy omega-3 fatty acids (sometimes referred to as 'fish-oil') for people of all ages. The omega-3 fatty acids are extremely important for the development of the brain. Women who are pregnant should eat at least 8 ounces and up to 12 ounces of a variety of seafood per week for health benefits.

Women who are pregnant must ensure that they are eating food that is prepared safely.

Pregnant women should not eat raw or uncooked seafood. (This includes such foods as sushi, oysters, scallops, oysters or clams.) Pregnant women are also encouraged not to consume uncooked seafood labeled nova-style, lox, kippered, smoked, or jerky.

Please refer to the handout "Fish Safety during Pregnancy" in the EHS handout section for more information on fish.

Please also refer to the US Department of Health and Human Services release on fish facts during pregnancy which can be found here: <http://womenshealth.gov/publications/our-publications/fish-facts.pdf>

## **Additional nutrition concerns**

The Academy of Nutrition and Dietetics suggests that pregnant mothers may safely drink up to 300mg of caffeine a day. (Caffeine is found in coffee, tea, sodas, chocolate and energy drinks.)

Mothers should not consume any alcohol.

Many drugs, including prescription, over the counter (OTC), legal and illegal drugs cross the placenta to the fetus. Pregnant mothers should check with their health care provider before using any medications or supplements.

## Maternal weight

Weight gain during pregnancy is important. The added weight is providing nourishment and building blocks for the developing fetus. The following page breaks down where the weight is distributed.

During the first trimester of pregnancy most women will gain 2-4lbs, and during the remainder of their pregnancy will gain approximately 1lb per week. Weight gain during pregnancy depends on pre-pregnancy weight status which is shown below. These figures were obtained from the National Institute of Health.

<b>BMI</b>	<b>Total Weight Gain</b>
Underweight (BMI less than 18.5)	28-40 pounds
Normal Weight (BMI 18.5-26)	25-35 pounds
Overweight (BMI 26-29)	15-25 pounds
Obese (BMI greater than 29)	15-20 pounds

### Where the weight goes:

Average infant weight	7-8 lbs	Breast enlargement	2-3 lbs
Placenta	2-3 lbs	Enlargement of uterus	2-5 lbs
Amniotic fluid	2-3 lbs	Extra blood	4 lbs
Fat stores	5-9 lbs	Extra fluids	3-6 lbs
<b>Average total weight</b>	<b>30-35 lbs</b>		

### 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  
Breastfeeding difficulties  
Labor and delivery complications  
Pregnancy complications: gestational diabetes, unable to assess and measure fetus

Future obesity  
Future health problems

### **Adolescent weight needs:**

Teenagers require additional nutrition as both the mother (teenager) and the fetus are developing and growing.

It is recommended that adolescents gain from 2- 5 pounds during the first trimester and 0.9- 1.3 pounds per week in the 2nd and 3rd trimester, for a **total of 28 - 40 pounds** during gestation.

### **Pregnancy risk factors which may have special nutrition needs or concerns:**

Adolescent/teen mothers	Alcohol consumption
Anemia or low iron stores	Cancer
Celiac disease	Depression
Diabetes, gestational diabetes	Drug use
Food allergies or intolerances	Gastrointestinal disorders (ex: Chron's disease)
History of eating disorders	History of nutrition related pregnancy complications
HIV/AIDS	Hypo/hyperglycemia
Overweight prior to pregnancy	Preeclampsia (or history of)
Poor access to food	Recent previous pregnancies
Renal disease	Underweight prior to/during pregnancy

### **Maternal depression**

Depression and other mental disorders are not uncommon among pregnant and post-partum women affecting an estimated 13% of all pregnancies. It is important to ensure that mothers are given support and encouragement, including possible referral to social services during this period of their lives. Given the gravity of this condition for pregnant women and families, especially for low income women, it is important for Head Start staff to stay in contact and support mothers.

Please refer to the Early Head Start Home Visitor Pregnancy Policy Pathway for instruction on screening and education.

### **OVERVIEW OF FETAL DEVELOPMENT**

Rapid fetal development occurs in the nine months spent in the 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 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. During this time, the placenta is formed, heartbeat has begun, arms and leg, intestines, gums and teeth begin to develop.

By the end of the embryonic stage of fetal development. 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. Bones begin to harden at this time.

## **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. Women who may or plan to conceive are suggested to take folate supplements.

## **Omega 3 Fatty Acids, EPA, DHA**

Omega 3 and its derivatives are important for the development of the nervous system in the fetus. It has also been researched that adequate intake can decrease the number of preterm deliveries. Omega 3 fatty acids can be obtained by consuming fish that are low in mercury and other heavy metals or by taking supplements as recommended by a healthcare provider.

## **Choline**

This nutrient is important for developing the nervous system in the developing fetus. Two good sources of choline are 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**

Vitamin D is involved with bone development in the developing fetus. It is a common deficiency in women in the United States. It is of particular concern to obese, vegan and darker skinned women. Vitamin D may be obtained through sunlight or limited food sources: certain seafood and fortified foods. A healthcare provider may recommend a Vitamin D supplement to mothers at risk of or lacking in Vitamin D.

## **Iron**

This is a crucial mineral for both the mother and the developing fetus. It is critical to oxygen carrying capacity in the blood. Iron deficiency is a common problem worldwide. Health care professionals may recommend to supplement prior to, during and after pregnancy if warranted.

## **INFANT NUTRITION**

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, there are still discrepancies among geographic, racial, educational, income and marital demographics. Dedicated professionals must take an active role in promoting and supporting lactation. Becoming a breastfeeding advocate requires a thorough understanding of lactation physiology and thorough knowledge of clinical and community resources for support.

It is recommended by the USDA that infants should be breastfed or formula fed exclusively for the first 4-6 months of life. (Please note that the Academy of Pediatrics recommends exclusive breastfeeding for at least 6 months.)

Breast milk provides infants with all nutrients that they require for this period of their life, with the exception of vitamin D as described on page 14 of this document. It is not necessary (unless recommended by a health care provider) for infants to have any additional food or water aside from breast milk or formula.

Early Head Start standards require that sites provide education, support and a positive environment to encourage breastfeeding to all mothers pregnant or not currently pregnant. Despite encouragement, some mothers may choose not to breastfeed for a variety of reasons (cultural, lack of education) or may be unable to breastfeed. It is important to respect the wishes of the mother.

If mothers choose to feed their children formula it is critical to provide mothers with education to ensure that infants are being fed properly. Children may very easily become malnourished if formula is not prepared correctly. Please be sure to read the section on formula for more information.

## **BREASTFEEDING**

### **Health benefits for baby**

All nutrients which the infant needs are supplied in breast milk.

Breast milk is typically easier to digest than formula due to the composition and enzymes.

Antibodies which help promote an infant's immune system are found in breast milk.

Studies have shown that compared to formula fed infants, breastfed babies spend less time in the hospital for illnesses.

Studies have shown that compared to formula fed infants, breastfed babies tend to score higher on IQ tests later in life.

### **Health benefits for the mother**

Weight loss has been shown to occur more rapidly for mothers after birth.

Breastfeeding lowers the risk of breast cancer and may lower the risk of ovarian cancer.

Hormones released during breastfeeding help a mother and baby to relax and bond.

## **Convenience**

Cost savings are appreciated by the family. Some estimates suggest that families save \$1,500 by not purchasing formula in the first year.

Time is saved by not needing to mix and prepare formula, nor is it necessary to carry bottles when out of the home.

A mother can give her baby immediate satisfaction.

Feeding from the breast requires no bottles to prepare or clean.

## **Societal benefits**

Total medical care costs for the nation are lower for fully breastfed infants than never-breastfed infants. As mentioned, breastfed infants typically need fewer sick care visits, prescriptions, and hospitalizations.

Employers benefit from mothers not missing as much work time caring for sick children.

There is less waste due to the lack of formula cans and bottle supplies. This benefits the environment.

## **Nutrition for mothers**

Breastfeeding mothers burn extra calories. It is important to ensure that they are consuming a healthy diet to keep themselves healthy and to produce healthy milk.

Additional Calories Required While Breastfeeding (DRI):

1st six months: +330 extra kcal/day

2nd six months: +400 extra kcal/day

## **Nutrition recommendations for breastfeeding mothers:**

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:**

Caffeine is not likely to cause problems in mothers who limit their consumption.

Alcohol should be avoided, but if you do choose to drink, it is recommended by the USDA to wait at least 4 hours after consuming a single serving of alcohol to breastfeed.

Many drugs, including prescription, over the counter (OTC), legal and illegal drugs cross over into breast milk. Breastfeeding mothers must be counseled to check with their medical provider before using any medications.

## **Common misconceptions about breastfeeding**

Breastfeeding often does not hurt if done correctly. Working with a lactation specialist can help mothers successfully breastfeed their infants.

Infants are rarely born lactose intolerant.

Breasts do not become “saggy” from breastfeeding. A hormonal change occurs during pregnancy which stretches the skin as breasts grow, and results in less elasticity of skin.

It is possible (but may require extensive help of lactation consultant or medical professional) to resume breastfeeding if milk letdown has ceased.

Breastfeeding infants promotes bonding between the mother and the baby. However, if a mother chooses not to breastfeed, the hormonal “bonding” benefits can be obtained by skin-to-skin contact. (i.e., holding a baby bare skinned to the mother or partner’s body)

## **Breastfeeding challenges**

Some mothers may experience difficulties when breastfeeding. Many mothers find that with practice, patience and commitment it becomes much easier over time. Mothers who have breastfed other children should not be surprised or concerned if one infant is easy to breastfeed and another child provides more difficulties. This is normal.

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

## **Father, partner and family support**

Some fathers/partners may feel left out of the breastfeeding experience. It is important to remind all fathers/partners that they play a critical role to the mothers. A supportive family and/or partner can make a huge difference in the success rate of breastfeeding.

Fathers/partners/boyfriends/family members should be reminded that this is a natural process which is helping the infant develop healthfully. Some cultures may view breastfeeding negatively or may have never learned about the benefits. Head Start staff can help educate family members. (Head Start staff should always support mothers who decide to breastfeed by providing appropriate space and privacy to feed and pump at sites.)

The brochure “Fathers Can Support Breastfeeding” found in the handouts section may help Head Start staff in addressing these topics to fathers/partners/boyfriends or other family members.

## **Laws regarding breastfeeding**

All Head Start sites must provide appropriate space and privacy for mothers who choose to breastfeed. Below highlight relevant laws pertaining to breastfeeding that mothers may wish to know about, particularly if returning to work.

The Right to Breastfeed Act: Public Act 093-0942

A mother may breastfeed her baby in any location, public or private, where the mother is otherwise authorized to be, irrespective of whether the nipple of the mother’s breast is

uncovered during or incidental to the breastfeeding. However, a mother considering whether to breastfeed her baby in a place of worship shall comport her behavior with the norms appropriate in that place of worship.

Public Indecency: Public Act 096-1098

Breastfeeding of infants is not an act of public indecency.

Nursing Mothers in the Workplace Act: Public Act 92-0068

An employer shall provide reasonable unpaid break time each day to an employee who needs to express breast milk for her infant child. The break time must, if possible, run concurrently with any break time already provided to the employee. An employer is not required to provide break time under this Section if to do so would unduly disrupt the employer's operations.

An employer shall make reasonable efforts to provide a room or other location, in close proximity to the work area, other than a toilet stall, where an employee can express her milk in privacy.

Courts Jury Act: Public Act 91-0391

Any mother nursing her child shall, upon request, be excused from jury service.

## **Breastfeeding resources**

The DFSS Head Start program in Chicago is committed to helping every Early Head Start and Head Start site fulfill the needs of the sites for breastfeeding. Information may be obtained below, or please refer to the Lactation Resource Guide found in the handout section.

Your nutrition consultant, community resources, local healthcare clinics and DFSS may provide additional resources for your mothers on lactation support and assistance.

## **DFSS commitment to breastfeeding (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 and given adequate space and privacy to breastfeed at the site. Families will receive accurate information about breastfeeding.

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.

Please refer to the EHS handouts for a sample of a breastfeeding commitment policy that you may adapt to your site.

## **FORMULA FEEDING**

Not all mothers are able to or may choose not to breastfeed. It is important to realize that many factors weigh into this decision and it is crucial that mothers are never judged on how their children are fed. Mothers can benefit from the same emotional benefits as breastfeeding mothers by practicing "skin-to-skin contact" or "kangaroo-care" with their

infants. Partners/fathers can also practice these techniques to help the baby develop and bond with the child.

Formula has been produced to provide infants with all the nutrients that they require to grow. Special formulas are developed for special needs children who may require more or different nutrition. (Such as formulas developed with protein or enzymes added or removed to help the infant digest.)

It is recommended by the USDA that infants should be breastfed or formula fed exclusively for the first 4-6 months of life. (Please note that the Academy of Pediatrics recommends exclusive breastfeeding for at least 6 months.) Formula comprises of all the necessary nutrition and calories for the baby during this time. After this period of time, solid food (cereals, pureed vegetables and fruits) may be added to the infant's diet.

It is important to ensure that proper safety and handling are followed when feeding from a bottle. More information can be found in the bottle sanitation guidelines of this handbook.

When formula is prepared, it should be brought to the correct temperature for the child to consume. This should be done by heating under warm water or bottle warmer. It should never be microwaved. Temperature of formula should always be checked before serving by testing on the wrist. This sensitive area of the body is best used to detect temperature.

#### Proper preparation of formula

It is critical to follow formula preparation instructions. Adding too little formula (adding more water; stretching the formula) to the bottle is extremely dangerous to the infant. Infants are growing rapidly and require all the nutrition and calories that are provided by the formula. Mothers who may wish to save money by preparing a dilute formula risk malnourishing a child. This can lead to death as this practice is causing the child to starve. It is imperative that Head Start staff educate mothers that they do not serve their children dilute formula.

#### Women Infant and Children (WIC) Information

Mothers who receive formula from WIC should be educated and reminded that WIC formula is not intended to cover all the formula needs of her child. This formula is intended to help the mother supplement throughout the month.

WIC provides supplemental nutrition, education, and health care referrals for pregnant women, new mothers and children up to age 5 years.

Many women who are enrolled in a Head Start program are also eligible to receive assistance from a WIC center.

Information on Chicago area WIC centers can be found by calling the Chicago Department of Public Health (312)-747-9140 or by visiting this website:

[http://www.cityofchicago.org/city/en/depts/cdph/provdrs/clinic/svcs/apply\\_for\\_wic\\_.html](http://www.cityofchicago.org/city/en/depts/cdph/provdrs/clinic/svcs/apply_for_wic_.html)

Information on the Illinois WIC program can be found at this website:

<http://www.dhs.state.il.us/page.aspx?item=30513>

## 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 a 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

### Dietary Supplements

#### Vitamin D:

All breastfed babies should be supplemented with 400 IU/d. *American Academy of Pediatrics*  
For more information, please be sure to work with your healthcare provider.

#### Iron:

Most full term infants have enough iron stores for six months and generally supplementation is not needed.

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 and 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 the third (3rd) percentile or 20% below the ideal weight for their height. The following may be 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. Children who are suspected to be failing to thrive should be under the supervision of a health care provider. The health care team will try to determine the underlying cause and work to treat conditions that contribute to the FTT.

Infants may also be recommended to boost the amount of calories that they intake. Under the supervision of a nutritionist or healthcare provider, potential ways to increase calories would be to mix formula into breast milk or change the concentration or preparation of formula. For older children it may be appropriate to add high calorie foods such as cheese, peanut butter, whole milk, fats and oils.

Health care providers may recommend using a high-calorie supplement drink or giving extra vitamins.

## Introducing Solid Foods

Solid foods are food items which are not breast milk or formula. Infants may begin to eat solid food when they are 4-6 months old or when they start to exhibit the following behaviors:

Sit up by themselves  
Suckle a spoon

Hold their heads up  
Teethe and gum on objects

Infants are not intended to eat solid foods before this time because they are not developmentally ready to. Their digestive tracts are not suited to eat the same foods as adults. Feeding solid foods too early can cause GI upset and may be related to developing allergies. (Studies are not clear yet on what causes allergies in children.)

Food that adults eat is flavorful and delicious. Baby food may be considered “bland” or “unsavory”. Infants have very sensitive mouths, tongues and GI tracts. They are not suited to eat heavily spiced, salted, sugary or intense food. This is the time to allow the child to develop a taste for “healthy” foods such as vegetables and fruit. Bland is very acceptable for infants. They have been accustomed to breast milk and formula until this point.

## Allergies and intolerances

The prevalence of allergies is increasing in the United States. According to the National Institute of Health, 1 in 20 children under the age of 5 have at least one food allergy. It is not well understood why there is a recent increase in the food allergies in children and adults.

Food allergies and food intolerances are not the same condition. A food allergy is an immune response that occurs in the body. The body views the substance as a threat and a cascade of immune responses occur. An allergy can be very dangerous and even fatal. *An example of a food allergy is a child who drinks a sip of milk and elicits immune responses such as a rash, hives or swelling of the mouth. This child cannot tolerate any amounts of this food.*

A food intolerance occurs when a food is unable to be digested. A food intolerance can lead to uncomfortable GI responses, but this is not typically a dangerous or life-threatening condition. *An example of a food intolerance would be a child with a lactose intolerance who drinks 2 cups of milk and leads to GI upset of flatulence and diarrhea. This child can tolerate small amounts of this food with no concerns.*

While there is no known cause, there is strong evidence that genetics play a major role in the prevalence of allergies. It is unknown whether early or late introduction to foods triggers allergies. Despite the uncertainty it is important for care givers to prevent any potential food allergy occurrences by introducing food safely and looking out for signs of allergy.

Children suspected of a food allergy or intolerance should be checked out by a health care specialist. Head Start will not recognize food allergies unless documentation has been provided by the physician.

### Signs of potential food allergies

- Red splotches on the body: often it can be seen on the face around the mouth and on the hands of infants
- Hives, itchiness, skin rash
- Swelling of the lips, face, tongue, throat or other parts of the body
- Wheezing, nasal congestion or trouble breathing
- Abdominal pain, diarrhea, nausea or vomiting

## Introducing new foods one at a time

Foods should be introduced to children one new food at a time. This means that a child will be served peas for the first time today along with foods already being served. The child will not be served peas and carrots for the first time at the same meal. It is recommended to wait at least 3 days before introducing a new food. This child may try carrots in three days for the first time. The benefit to this process is that if an allergy occurs, it is easy to isolate what the problem food is and prevent any fatal food allergies from occurring.

## GENERAL GUIDELINE BY AGE TO INTRODUCING SOLID FOOD

Birth:	8 - 9 months:
breast milk	strained meats (plain)
iron-fortified formula	egg yolk
4 - 6 Months:	pureed legumes (beans, peas and lentils)
infant cereal (plain, from spoon) offered in this order:	10 – 12 Months:
rice	finger foods
oatmeal	toast squares
barley	cooked vegetables (strips or slices)
6 - 7 Months:	peeled, soft fruit without seeds (wedges or slices)
vegetables (unsalted, strained)	small, tender pieces of meat
fruits (unsweetened, strained)	food from the family table (feeds self)
7 - 9 months:	vegetables, fruit, cereal, pasta, noodles, bread, beans, fish, meats, chicken, cheese, whole egg
other infant cereals	may continue breastfeeding
wheat, mixed grains	weaned from the bottle
high protein	whole milk (cow's milk)
mashed vegetables and fruits	
mild cheese, cottage cheese	

### Things to remember when introducing solid foods

Solid foods should not be given to children before 4 months of age. Digestive tracts of infants are developing and may not be able to digest the food. Breast milk or formula should be the only nutrition served to infants unless directed otherwise by a healthcare provider.

Site staff should frequently communicate with parents on what foods the child is consuming.

It is recommended that water not be offered to infants until they begin taking in solid food. Breast milk and formula contain appropriate water content for the infant. There are some circumstances where a health care provider will recommend water and these directions should be followed.

Juices are never to be served in Head Start and Early Head Start programs.

Cow's milk should not be given to infants before one year of age.

Honey should not be served to infants.

Staff should be aware and trained properly on choking hazard prevention for infants, toddlers and children.

## TODDLER NUTRITION

Toddlers who are beyond the age of 12 months, or when developmentally appropriate, will follow the Early Head Start meal pattern guidelines. Detailed information about types of food service, standards and guidelines shall be found in the Food Service Requirements available on the DFSS website. These guidelines are updated yearly.

These basic guidelines will be followed:

- Nutrition requirements for Early Head Start shall be followed.
- Meal patterns and serving sizes shall be followed.
- Menus for Head Start and Early Head Start programs shall be approved by a registered dietitian, licensed nutritionist or by those with a master's in public health.
- Family style meals shall be followed by children who are able to participate and feed themselves.
- Children will be encouraged to feed themselves, try new foods and allowed the opportunity to make decisions of what they will and will not eat.
- All adults within the Head Start site will provide a good example by role modeling good behavior. No adult should ever discourage a child from participating or consuming a food. (Unless for religious or documented food allergy/intolerance.)

Early Head Start has some guidelines specific to the nature of young children. These can be found in detail within the Head Start Performance Below lists some of these guidelines.

- Infants' gums shall be wiped during the program day.
- Children who are able shall brush their own teeth.
- Menus appropriate to age shall be followed.
- Sites will keep parents continuously updated on the nutrition intake of infants during the day and keep up to date on the nutrition needs of the children.
- A refrigerator will be easily accessible to the children's' room.
- Staff will wash hands before feeding an infant.
- Infants shall be held while feeding; never laid down.
- Staff will hold infants and engage in eye contact and positive communication while feeding.
- Infants and toddlers will be fed on demand.
- Formula preparation will be followed per manufacturer or health care provider instructions.
- Food served to toddlers and infants from jars will be served to the infant from a distinct plate or bowl. This is to prevent any contamination to the jar if remaining food is saved for the next meal.
- Infants will be burped after feeding.
- Proper feeding utensils, cups, dishes, chairs and tables will be utilized when serving all children in Early Head Start.
- No Styrofoam cups, dishes or bowls shall be used (choking hazard).

## **Family style dining**

Family style dining, or family style meals is a standard of Head Start and Early Head Start. When children are old enough to serve themselves and sit at a table on their own they shall engage in family style meal service. Below lists the basics of family style meals. For more information please reference the handouts in the Head Start section or ask your dietitian for training on family style meals.

- All children and teachers shall enjoy meals together at the same table.
- Seating, dishes, cups, serving dishes, serving tongs/spoons and eating utensils will be appropriately sized for children to handle with ease.
- All food will be placed in serving dishes in the middle of the table prior to the meal. Serving dishes will remain on the table for the duration of the meal.
- Children shall serve themselves. (Children who require assistance, difficult foods that are too heavy or hot to serve, pouring milk into cups, etc. may be assisted by an adult as appropriate.)
- Children will be encouraged, never forced, to try new foods.
- Adults will enjoy the meal with the children and provide a pleasant experience for the children.
- Children should (as developmentally appropriate) be involved in setup and cleanup of the meals.
- Foods should be served at appropriate temperatures to avoid harm or burns to children when serving or eating foods.

## Food Requirements 0-12 months

*Health Requirements for Child Day Care Centers in the Chicago Licensing Standards*

Age	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 ¼ oz – 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 Tbsp. or more total	4 Tbsp. or more total
Vegetables					1-3 Tbsp. Total	½ - 1 jar (1/4-1/2 cup) total	1-2 jars (1/2-1 cup) total
Fruits					1-3 Tbsp total	½-1 jar (1/4-1/2 cup) total	1-2 jars (1/2-1 cup) total
Meats						2-4 Tbsp total	½ jar or more (1/4 cup or more) total

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

\*\* *Jar size equals 4.5 ounces.*

## Food Requirements 1-3 years

*Early Head Start Meal pattern and serving sizes from the Chicago Licensing Standards, also found in the Food Services Requirements*

Breakfast	Lunch	Snack (Choose any 2 groups*)
Milk 1/2 cup	Milk 1/2 cup	Milk 1/2 cup
Grain 0.5 oz.	Grain 0.5 oz.	Grain 0.5 oz.
Fruit (or vegetable) 1/4 cup	Fruit 1/4 cup	Fruit 1/2 cup
	Vegetables (two distinct) 1/4 cup total	Vegetable 1/2 cup
	Protein 1oz	Protein 0.5oz

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\*Snack may not serve a fruit and a vegetable as different components.

## DENTAL HEALTH

Tooth decay is a condition that parents should be educated about. Baby bottle tooth decay 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. Sugary liquid pools around the child's teeth giving plaque bacteria an opportunity to produce acids that attack tooth enamel. If the child requires a bottle to be used as a comforter at bedtime it should contain only water. If the child will not 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, the child's gums and teeth should be wiped 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 the childcare provider's lap or lay the child on a dressing table or the floor. The child care provider should be able to easily see into the child's mouth.

By the time children have acquired the skills to participate in their own tooth brushing, with assistance if required from the caregiver, children should be brushing their teeth. Caregivers should be attentive and careful during the tooth brushing process to avoid hurting the child.

When toothpaste is used during the routine daily dental hygiene process, it is important that the caregiver work with the child to make sure that toothpaste is spit out completely and the child is not swallowing toothpaste. Caregivers should encourage children to rinse out their mouths with water and spit out toothpaste.

Center based sites which have children old enough to be brushing their teeth should be sure to follow all toothbrush and dental hygiene policies per Head Start guidelines as found in the performance standards.

Sippy cups should be used as a training tool to move 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). A sippy cup with sugary liquids (including milk, fruit juice, sports drinks, etc.) that the child is allowed to drink from throughout the day soaks the child's teeth in cavity causing bacteria.

Head Start and Early Head Start programs may never serve juice to children.

## Bottle Sanitation, Preparation, Feeding, and Storage Procedures

### Infant/Toddler Feeding Instructions

#### 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 mothers who breastfeed, with an atmosphere that is comfortably suited for maximum bonding.

- 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.
- When special food or formula is required, appropriate paperwork must be provided by the healthcare provider as indicated on the ISBE website.
- Infants 0-1 will be held while feeding and are fed on demand.
- Introduce food as appropriate using USDA guidelines and parent input. You may reference the section on infant nutrition for more information.
- The infant meal pattern must be followed until the child has their first birthday.
- Document food intake on daily care sheet.

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

#### BOTTLE PREPARATION AND FEEDING PROCEDURE

\* Adapted from the Illinois Department of Human Services

1. Infants must be fed "on demand." Flexible feeding schedules must be maintained. No less than the daily food requirement for children less than one year of age will be offered unless otherwise indicated in writing by a physician, in consultation with the parents.
2. Wash hands using IMSHS Hand Washing Procedures.
3. Inspect sanitized bottle and nipple for cleanliness and child's name. Programs should purchase enough bottles (at least three [3] per infant) to ensure a sterilized one is always available. Purchase and use only non-polycarbonate (#5) plastic or tempered glass bottles. Also, ensure that nipples (bottle and pacifier) are clear silicone, not plastic or latex (PVC #3.) Sanitize bottles by washing in a dishwasher or by boiling for five minutes or more just before refilling.
4. Identify the child's formula or breast milk. (No other foods than these, except water, will be placed in a bottle for infant feeding.)

5. Bottles should be labeled with child's name and time of preparation.
6. Prepare formula according to manufacturers' instructions. If the formula needs to be reconstituted (i.e., is not ready-to-feed), use distilled water only. (If bottles are pre-filled, they will be refrigerated until immediately before feeding.)
7. Warm the bottle in a bowl of hot water until formula or milk is lukewarm. (Never use a microwave oven for this purpose. The use of bottle warmers is also discouraged.) Wipe the outside of the bottle with a clean cloth when it is removed from the hot water. Always check the temperature of bottle contents before feeding the child.
8. Wipe the child's teeth and/or gums with a dampened gauze pad when he is finished feeding
9. Babies must always be held when being bottle fed. Hold the child in a comfortable position until she or he has completed feeding. Allow the child as much time as needed to feed. Burp the baby occasionally during the feeding to bring up air swallowed while sucking. When a child is able to sit up and hold his own bottle, she or he may be placed in a high chair for feeding. Never leave a child unattended while in the high chair. Always use a non-glass bottle when children feed themselves. Never feed a child in a crib, prop a bottle or allow a child to walk around with a bottle.
10. When the child has stopped taking the bottle, put on a disposable glove, cover your finger with the dampened gauze pad and gently wipe the baby's teeth and/or gums. Then return the child to play or crib area.
11. Destroy the remainder of fluids in the bottle.
12. Wash the bottle and nipple thoroughly with soap and water, rinse well. Place bottle and nipples in a receptacle to be returned to the kitchen for sterilizing. (*See sanitation above*)
13. Document feeding time and amount consumed on the Daily Infant Activity Record.
14. Wash hands well using the IMSHS Hand Washing Procedures.
15. STORAGE: Opened containers of unmixed concentrate, formula prepared from powder or concentrate and open containers of ready-to-feed formula must be labeled to identify the contents, dated and refrigerated. Containers and/or bottles of breast milk and individual bottles of prepared formula must also be labeled with the child's name. Prepared formula not used within 24 hours must be discarded. Breast milk may be stored up to 48 hours in the refrigerator or up to two weeks in the freezer before discarding.

An easy to reference guide on bottle sanitation, preparation and cleaning can be found in the handouts section. Many sites choose to post this in the areas of their site where bottles are prepared for easy reference.

## 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 handouts section and in the EHS Home Visitor Pregnancy Pathway.

#### 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.

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 postpartum 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:

#### 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.

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US Department of Health and Human Services, Office on Women's Health: Fish Facts a Print and Go Guide. Reviewed originally by Rafael Perez-Escamilla, 8/22/2011

Health Requirements for Child Day Care Centers in the Chicago Licensing Standards or by viewing the document at this website:  
[http://www.cityofchicago.org/content/dam/city/depts/cdph/environmental\\_health\\_and\\_food/HEALTHREQUIREMENTSFORCHILDCARECENTERS2012.pdf](http://www.cityofchicago.org/content/dam/city/depts/cdph/environmental_health_and_food/HEALTHREQUIREMENTSFORCHILDCARECENTERS2012.pdf)