

Nutrition Guide: *Nutrition from pre- conception to the teen years*



Note: The information offered in this booklet is to be used as a guide and is not an official prescription. It is not to replace going to see your doctor for necessary pre-natal and post-natal care. Please be sure to schedule an appointment with your physician, nurse practitioner and dietitian to best evaluate you, your baby and your toddler's specific nutritional needs. This manual is subject to changes based on new research.

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Most people know that good nutrition is important to a healthy mind and body, but what is good nutrition for an adolescent, toddler, or infant? What do you need to eat to ensure your body is ready and equipped to become pregnant? Are you fueling your unborn baby well enough to thrive during pregnancy? Should you breastfeed or is formula better? Are you feeding your infant for optimal growth? Should you use supplements for yourself or your baby? Are you providing your toddler with all the essential vitamins and minerals needed to help ensure proper mental, physical and social skill development so that they can grow into adolescents who are able to concentrate and excel in the classroom and outside the classroom? These are just a handful of the questions that new parents and potential parents face each day.

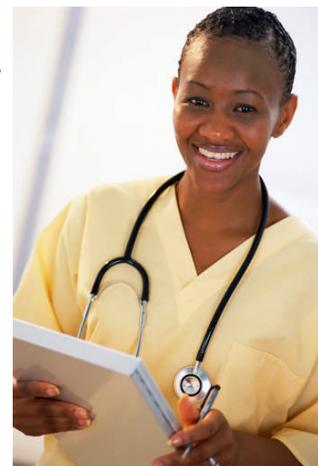
This guide was designed to take the guesswork out of nutrition for you and your child from pre-conception until they leave the nest. Follow the nutritional information from this guide and your “little one” will be

well on their way to optimizing their nutrition for life.

Prime for Pregnancy

That’s right! Before the decision is even made to have a baby, it’s essential to make sure that mom’s body is primed to go through the physical and emotional demands of pregnancy. That’s because mom’s nutritional status will directly affect the well being of the fetus. Too often women wait for a positive pregnancy test to improve their diet, stop drinking alcohol and quitting smoking (1). According to the Center for Disease Control and Prevention (CDC) women in child bearing years (ages 15-44), whether they are having their first child, their fourth or they have no plans of having a child, should screen for preconception care and follow the preconception recommendations. The CDC’s recommendations are:

- 1) Individual responsibility across the lifespan



- 2) Consumer awareness
- 3) Preventive visits
- 4) Interventions for identified risks
- 5) Interconception care
- 6) Pre-pregnancy checkup
- 7) Health insurance coverage for women with low incomes
- 8) Public health programs and strategies
- 9) Research
- 10) Monitoring improvements

Since 1996, progress in the United States to improve pregnancy outcomes, including low birth weight, premature birth, and infant mortality has slowed, in part, because of inconsistent delivery and implementation of interventions before pregnancy to detect, treat, and help women modify behaviors, health conditions, and risk factors that contribute to adverse maternal and infant outcomes. (2) Although not all of the recommendations are related to nutrition, risks such as diabetes, obesity, hypertension and malnourishment are all nutritional instances where there is a risk of a fetus failing to thrive. (1) ***Appropriate screening and treatment can help you prevent any harm to your unborn baby!***

The 2005 Dietary Guidelines for Americans has identified calcium, fiber, magnesium, vitamins E and C, carotenoids and potassium as problem nutrients for Americans, including women of child bearing age (1). Women of child bearing age also need to be sure to consume foods high in iron, such as green leafy vegetables or lean meats such as beef or poultry. Women should also be certain to consume 400 micrograms of folic acid in the diet and from supplements to reduce the risk of neural tube defects.

“Foods high in folate include dark green leafy vegetables such as spinach, collard greens, mustard greens, turnip greens and broccoli. Also high in folate include legumes such as dried beans and peas (black-eyed peas and black, pinto, kidney and navy beans), peanuts, asparagus, orange juice and oranges, avocado and strawberries.” (5)

Choline is another nutrient necessary for the prevention of neural tube defects. (1) Women need 425 milligrams per day and may need more during pregnancy and lactation. Speak to your doctor about supplementing with choline or better yet, choose choose foods that are higher in choline, such as egg yolks and lean beef. Cauliflower, navy beans and peanut butter also contain choline.

Future moms should also supplement daily with a multivitamin and speak with their doctor about the best multivitamin for any existing health conditions. University of North Carolina, Chapel Hill research found that taking multivitamins every day prior to conception reduced the risk of preterm birth by almost half in a group of about 2,000. (1). Babies who are born preterm are at higher risk of needing hospitalization, having long-term health problems and of dying than babies born at the right time. (6)

What about the daily cup of coffee? A 2008 study in the American Journal of Obstetrics and gynecology concluded that consuming 200 milligrams of caffeine or more on a daily basis increased the risk of miscarriage in a group of over 1,000 women. (1) This includes all caffeine, not just coffee. Therefore, tea, soft drinks, energy drinks and caffeine containing foods such as chocolate and coffee flavored ice cream need to be limited.

Alcohol can delay conception, so should be eliminated from the diet while trying to conceive. Alcohol is also detrimental during the first trimester, especially. All too often, this is a time

when a woman does not even know that they're pregnant. The bottom line: avoid drinking alcohol if you are planning on getting pregnant or are at risk of becoming pregnant.

Pregnancy

Pregnancy is one of the most nutritionally demanding times in a women's life. There is an increased need for many nutrients including protein and carbohydrate. Protein needs increase by 15-25 grams per day! Good choices of protein include low-fat milk, lean meats, nuts, seeds, tofu and soy. A pregnant woman needs at least 175 grams a day of carbohydrate to prevent ketosis which can be very harmful to the fetus. Most B-vitamins, especially Folate, needs focused attention along with iron. Prenatal vitamins prescribed by a physician will cover these additional needs, but nutrient dense foods must be focused on during pregnancy too.



Pregnant women need to avoid drinking, smoking and drugs along with herbal therapies, heavy caffeine use, x-ray exposure, stress, excess vitamin supplementation and activities which can expose you to a bacteria called listeria.

According to the Center for Disease Control and

Prevention, *Listeria monocytogenes* is found in soil and water. Vegetables can become contaminated from the soil or from manure used

The bottom line: Avoid drinking if you are planning on getting pregnant or are at risk of becoming pregnant.

as fertilizer. In addition, animals can carry the bacterium without appearing ill and can contaminate foods of animal origin such as meats and dairy products. The bacterium has been found in a variety of raw foods, such as uncooked meats and vegetables, as well as in processed foods that become contaminated after processing, such as soft cheeses and cold cuts at the deli counter. Unpasteurized (raw) milk or foods made from unpasteurized milk may contain the bacterium too.

Listeria is killed by pasteurization or cooking; however, in certain ready-to-eat foods such as hot dogs and deli meats, contamination may occur after cooking but before packaging.

Diabetics also need to be extra diligent at maintaining blood sugars within healthy ranges during pregnancy. It is important to maintain a diligent food, insulin and blood sugar log and identify foods that greatly increase blood sugars or times of the day when blood sugars may become dangerously low.

Weight gain during pregnancy should be gradual and most of it should be gained in the last three months. The recommendations by physicians are for just a 0-5 pounds of weight gain in the first three months, then about one pound per week weight gain during the remaining months.

Your total weight gain recommendations depend on your pre-pregnancy weight.



If you are underweight, you should gain 28-40 pounds. If you're pre-pregnancy weight is a normal weight, you should gain about 25-35 pounds while overweight individuals should gain 15-25 pounds and obese individuals should gain only 11-20 pounds. Due to many obesity related risks, some physicians are restricting weight gain even further. It must be understood that although hormones trigger many different cravings, a pregnant woman is not "eating for two". Excessive eating and a poor diet during pregnancy can lead to serious health conditions such as gestational diabetes, high blood pressure or toxemia. On the other hand, pregnancy is no time to diet for weight loss. Although "pregorexia" has been a focus of the

media, it's no time to try to lose weight. Cutting back on calories during pregnancy can have grave consequences on the health of you and your baby.

Pre-Pregnancy BMI

Weight Gain (lbs)

Low (Less than 18.5)

28 to 40

Normal (18.5 to 24.9)

25 to 35

High (25 to 29.9)

15 to 25

Obese (Greater than 30)

11-20

Recommended daily intake for pregnant women in their 2nd and 3rd trimesters.

3 Cups milk

6.5 ounce-equivalents of meat & beans

3.5 Cups of vegetables

2 Cups of fruit

8 ounce-equivalents of grain

7 teaspoons of oil

Up to 400 discretionary calories



There are a lot of concerns over fish consumption in pregnant women, with good reason. Mercury can be extremely dangerous to the fetus, but the Omega-3 fatty acids in fish can be extremely beneficial to the fetus's development. Most health agencies recommend that pregnant and breastfeeding mothers eat fatty fish at least two times per week but, no more than 12 ounces total

per week. Avoid swordfish, shark, king mackerel, tile fish, largemouth bass and limit albacore tuna to just 6 ounces per week.

Congratulations!
It's a

The Importance of Proper Nutrition for your baby

Babies will grow faster during their first year of life than at any other time. To support this rapid growth and development, an infant's body demands a lot of energy and nutrients.



Growth Spurts

3-4 Days

2 weeks

4 weeks

6 weeks

3 months

Important nutrients include; calcium, iron, and vitamins A and D. Remember, babies are small; they need fewer total amounts of nutrients than adults do, but pound for pound, a baby needs twice as many of most nutrients than adults.

In most cases, a child who is well fed will have a better chance at fully developing his/her physical and mental potential. A well-fed infant will also have a stronger immune system, which may mean fewer trips to the doctor and better health overall.

Experts agree that during the first year of an infant's life, the most important part of the diet should be human breast milk or infant formula.

DID YOU KNOW?

- Your newborn baby's stomach is about the size of a golf ball!
- Babies usually **double** their birth weight by the time they are 4-6 months old and **triple** it by the time they are one year old!

A to Z: 26 Reasons to Nurse Your Baby

Amenorrhea **B**onding **C**olostrum... the perfect first food
Decreased risk of breast cancer? **E**asy baby care **F**ewer allergies
Good for the whole family
Human milk is specially designed for human babies
Immunities **J**aw development
Kids get more attention when the new baby is breastfed
Laundry is a breeze
Mental development **N**atural **O**xytocin and prolactin
Protection against many diseases **Q**uick weight loss for mother
Rest
Saves money **T**raveling is easy **U**nderstanding the baby's needs
Vitamins and minerals
Working goes smoothly when the nursing relationship is maintained
eXactly what baby needs **Y**ou get to take care of your baby
Zero waste

Did you know breastfed infants are...

- Less likely to suffer from colic and constipation because breast milk is very easy to digest
- Benefit from appropriate jaw, teeth and speech development as well as overall facial development
- Less likely to have food allergies and dental caries
- Less likely to get infections because they get some of Mom's immunity through the early form of breast milk (a yellowish substance called colostrum)
- Less likely to become overweight: Parents who formula feed may urge their infant to finish a bottle, (even when the infant is full) in order not to waste any formula.
- The more you breastfeed or pump, the more milk you will make. If you do not breastfeed or if you wean from breastfeeding to formula feeding, your body will eventually stop making milk.

Breastfeeding is best for Mom too!

- It's convenient; there are no bottles to sterilize or formula to mix. Plus, your breast milk is always the right temperature. This is a huge benefit, especially in the middle of the night.
- Saves money; if you breastfeed for the first year of baby's life, you will have saved over one thousand dollars on the cost of formula!
- Causes the uterus to contract, which helps it to return to its normal size more quickly.
- Burns calories; breastfeeding may help you get back to your pre-pregnancy weight faster.
- May reduce your risk of breast cancer.



***“Breastfeeding does not always come naturally;
It’s a skill to be learned and practiced.”***

If you have a few minor problems getting started, you are **NOT** alone. Fortunately, there are many resources available to help you. Almost all problems women have breastfeeding are solvable!

If breastfeeding is not an option, infant formulas are available in ready-to-feed, liquid concentrate and powder form. When looking at nutritional value, no one form of infant formula is better, so you should choose whichever you prefer. (Ready-to-feed is the easiest to use but costs more.)



Each formula provides comparable nutrients and are usually well tolerated by infants. Other store brand formulas are also available.

Most formulas now contain DHA. DHA is also found in breast milk and has been found to aid in visual development in babies. Formulas or breast milk high in DHA have been linked to improved vision.

Formula Preparation Tips

Although tap water in the United States will contain fluoride, many parts of the world, do not contain fluoride in their water. Remember, fluoride is important in the development of healthy teeth. There are nursery water or fluoride drops that can be added to tap water or use bottled water when the infant develops teeth, usually around 6-7 months of age. Always speak with your doctor or registered dietitian before supplementing your infant’s diet.

Well water and spring water are not recommended for use in formula preparation because of the

potential for hazards. Also, make sure to use a clean bottle and nipple for each feeding. For optimal safety use the dish machine after each use.

Intake may vary for each infant. These are just guidelines and your baby may consume more or less depending on their appetite. Your baby’s appetite and formula intake will increase as he or she grows, particularly during the first six months. It is recommended to feed the baby on demand. As a rule, a baby will eat every three to four hours. If you have a very sleepy newborn, you may have to wake the baby to feed. Babies often spit up a teaspoon or two of formula during or soon after a feeding. Some spitting up is normal.

In addition to fluoride, infants also require iron. Iron helps build healthy red blood cells. These blood cells carry oxygen to all parts of the body. Most of the iron stores a baby is born with are used up by the time they are four months old. Since a baby's body needs to make new red blood cells as he or she grows, it is very important to get enough iron from the diet. Iron-fortified formula should not cause constipation, diarrhea or stomach cramps. We now know that there isn't enough iron in formulas to cause constipation. Studies have shown that constipation in infants fed with iron-fortified formula compared to those who are fed low-iron formulas is the same. As a general rule, problems like constipation, stem from other sources, which should be evaluated before changing formulas.

Babies who do not get enough iron may have the following symptoms:

- Fussiness
- Slow growth
- Frequent illness
- Lack of interest in eating or playing
- Pale skin color
- Increased sleepiness

life threatening, but it could lead to complications such as stressed kidney's, constipation, iron deficiency anemia, food allergies or choking.

Fact vs. Fiction

Myth: A newborn who wants to eat more than every two to three hours isn't being satisfied by formula or breast milk.

Fact: A newborn should *only* be fed breast milk or formula. During periods of rapid growth and development an infant may seem unsatisfied; however, breast milk and formula will support this growth.

Myth: Babies who are hungry at night need additional calories during the day.

Fact: Babies *need* to eat every 2-4 hours (even at night) until they can take in enough breast milk or formula during the day and evening. Rice cereal should not be added to the bottle to help the baby sleep through the night.

The American Academy of Pediatrics recommends all healthy infants, who are not breastfed, should be given iron-fortified formula from birth until one year of age. Low iron or diluted formula does not meet your baby's iron needs and can be dangerous for your baby. Only use if recommended by your pediatrician.

Introducing solid foods

All babies develop at slightly different rates. Go by what your baby can do more than by how old your baby is. Starting solid foods too early may not be



Don't start solid foods too early. Your baby will be ready when he or she's ready.

Age	Volume	Number of feedings/day	Total intake/day
Birth – 1 week	2 – 3 ounces	6 – 10	12 – 30 ounces
1 week – 1 month	4 – 5 ounces	6 – 8	24 – 30 ounces
1 – 3 months	4 – 6 ounces	5 – 6	20 – 36 ounces
3 – 7 months	6 – 8 ounces	4 – 5	24 – 40 ounces
4 – 9 months	6 – 8 ounces	3 – 4	18 – 32 ounces
8 – 12 months	6 – 8 ounces	3	12 – 24 ounces

Your baby will give you signs to let you know when he or she is ready for solid foods. These signs appear somewhere between 5 to 7 months:

- Sit up, alone or with support
- Use their neck muscles to hold their head up straight
- Mouth fingers and toys
- Open their mouth when they see something coming
- Turn head away if they don't want something
- Stay opened up if they do want something
- Keep tongue flat and low so you can put the spoon in
- Close lips over the spoon
- Scrape food from the spoon with lips
- Keep food in the mouth, rather than squeezing it back out onto their chin



Feeding Guide For the First Year

Item	0-4 months	4-6 months	7 months	8 months	9 months	10-12 months
Breast milk/ Formula	5-10 feeds/day 14-39 oz/day	5-6 feeds/day 6-7 oz/feed	4-5 feeds/day 7-8 oz/feed	4-5 feeds/day 7-8 oz/feed	4 feeds/day 6-8 oz/feed	3-4 feeds/day 8 oz/feed
Dry infant cereal with iron		1 T dry infant cereal per 2 oz of breast milk or formula	1 T dry infant cereal per 2 oz of breast milk or formula	1 T dry infant cereal per 2 oz of breast milk or formula	1 T dry infant cereal per 2 oz of breast milk or formula	1 T dry infant cereal per 2 oz of breast milk or formula
Fruits		1-2 T. plain, strained	1-2 T. plain, strained	9-18 T. strained or soft, mashed (1-2 jars)	9-18 T. strained or soft mashed (1-2 jars)	1/4-3/4 c. strained or mashed, cooked
Vegetables		1-2 T. three times/day	1-2 T. three times a day	9-18 T. mashed, soft, bite-size (1-2 jars)	9-18 T. mashed, soft, bite-size (1-2 jars)	1/4-1/2 c. well-cooked, mashed
Meat and protein foods				Try <u>plain</u> yogurt	1/2 oz well cooked, soft or ground table meat	1/2-1 oz finely chopped table meats, fish w/ o bones, mild cheese
Juices, Vitamin C fortified			100 % infant apple juice, 2-4 oz/day	Try 100% citrus juice, 4 oz/day	All 100% fruit juices, 4 oz/day	All 100% fruit juices 2-6 oz from a cup/day
Starches						1/4 cup mashed potatoes, macaroni, and bread
Snacks			Arrowroot cookies, toast, crackers	Arrowroot cookies, toast, crackers, zwieback, plain yogurt	Arrowroot cookies, toast, zwieback, plain yogurt	Same as 9 mo + cottage cheese, ice cream, pudding, and dry cereal
Tips		Make cereal feedings very soupy, thicken slowly, try feeding with a spoon	Start finger foods and use of a cup			Use spoon and cup; working on self feeding

Foods to AVOID during the first year:

EGGS are one of the most common allergy causing foods. The baby's immature stomach cannot digest the larger protein in eggs. This causes the immune system to fight the unknown body. Egg allergies significantly affect your diet since many items have egg protein in them.

HONEY may contain botulism spores, which can cause deadly food poisoning.

PEANUT BUTTER should be avoided because of its difficulty for infants to chew and swallow. It may also cause a severe allergic reaction. Peanut Butter may be introduced once the infant has teeth.

COW and GOAT MILK cannot be tolerated by an infant's kidneys. The high amount of protein in them can cause a lifelong allergy if provided too early.

*Infant's who are exclusively breastfed, or those with dark skin, need daily vitamin D supplementation. 400 International Units per day is the usual recommendation, but always speak to your pediatrician or registered dietitian before supplementing your baby.

Nutrition For Toddlers (Ages 1-5)

The years between one and five are a period of slowing growth velocity, decreased appetite and the development of motor skills and independence. All of these affect your child's diet and feeding regimen. Self-feeding is important even though they may not be able to handle a utensil or have good hand-eye coordination

Toddlers may seem to eat little and often do vary greatly in the amount that they eat on a day to day

basis. They may accept foods one day and reject the same food the following day. They often will not eat a full meal but only two or three foods. It is not uncommon for them to get easily distracted, protest eating various foods and even forget all about eating.

It is the parent's responsibility to provide proper, balanced food choices and to allow exploration and independence. It is the child's responsibility to choose how much to eat. Toddlers do not like new food but they will learn to like it. It may take 7-12 introductions before your toddler makes a decision about liking or not liking a particular food. It is also important to provide your toddler with planned and structured mealtimes. Adults, parents, or caregivers are responsible for what,



when, and where children are fed. Children are responsible for whether they eat or not and how much they eat.

Manage their eating with respect to both amounts and types of foods. Meals and snacks are an important part of the day. Children will eat what they need and will learn to eat new foods.

- Take time to help children relax and prepare to eat
- Sit down to eat with children and have a good time
- Help children learn to behave well at meals and snack times
- Pick and choose from the food caregivers make available
- Eat as little or as much of the food they want
- Offer familiar and popular foods along with unfamiliar foods
- Let children eat what they like and also try out new foods



Some days children eat a lot; other days, not so much. But they know how much they need. So don't limit the amount of food children choose to eat, but certainly don't force an unwilling toddler to eat a certain amount of food or force them to eat certain foods. This will only discourage them from trying new foods in the future.

Scheduled meals and snacks are important to assure the child receives adequate calories, protein, vitamins and minerals. The amounts consumed at any one setting may appear rather small, but their stomach is significantly smaller than an adult. Although they will eat more often than an adult, avoid catering to your toddler but remember to respect your child's food preferences. He or she may like foods that you don't like.

Keep in mind the serving size for your child. Often, parents provide an adult serving size and require a child to clean their plate. This becomes an issue leading to stressful mealtimes. It is better to provide

smaller portions and allow them to have more if wanted.

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Average Growth Rate for Ages 1 to 4 years

Typical Servings and Serving Sizes for the Toddler Years

Age	1-2 years	2-3 years	4 years
Average weight gain per year (in pounds)	5.5 - 6.6	4.4	4.4 - 8.8
Average height gain per year (in inches)	3.9 - 4.7	2.8 - 3.5	2.4 - 3.1

Food Groups and Number of Daily Servings	Age 12-23 months Serving Sizes	Age 2-4 years Serving Sizes	Age 4-6 years Serving Sizes
Milk and Milk Products 4 servings	4-6 oz whole milk and milk products; ¹ / ₃ oz cheese	4-6 oz 2% milk and milk products ² / ₃ oz cheese	4-8 oz skim milk and milk products; 1 ounce cheese
Meat and other Protein Foods 2 servings	¹ / ₂ - 1oz meat/eggs or ¹ / ₄ cup beans	¹ / ₂ - 1 ¹ / ₂ oz meat/eggs or ¹ / ₄ cup beans; 1 Tablespoon peanut butter after the age of 3 years	1 - 2 oz meat/eggs or ¹ / ₄ - ¹ / ₂ cup beans; 1-2 Tablespoons peanut butter
Breads, Cereals, and Starches 4 or more servings	¹ / ₂ - 1 slice bread ¹ / ₄ - ¹ / ₂ cup cereal, rice and pasta	³ / ₄ - 1 slice bread ¹ / ₃ - ³ / ₄ cup cereal, rice and pasta	1 - 2 slices bread ¹ / ₂ - 1 cup cereal, rice and pasta
Fruits and Vegetables 4 or more servings	1-2 Tablespoons 3oz juice (1 serving/day)	2-4 Tablespoons 4oz juice (1 serving/day)	4 or more Tablespoons 4oz juice (1 serving/day)
Fats and Oils 3 servings	Do not limit	1 - 3 Tablespoons	1 - 3 Tablespoons
Miscellaneous (jams, jelly, soft drinks, candy, sweets) Use within reason	Use small amount	Use small amount	Use small amount

Children up to the age of two years need additional fat to aid in brain development and to meet calorie needs for growth. Provide whole milk, whole fat products and do not limit fat choices. Children two years and older should not continue the use of whole milk or whole fat products. They can be served 2% milk or lower if your pediatrician recommends. Despite the need for whole fat products, healthy choices can also be offered to those toddlers under two to assist in laying the foundation for good life-long nutrition. When preparing food, cook food that is moderate, not low, in fat and use meat, poultry, fish and beans. Do choose lean red meats, but do not restrict red meats that are higher in fat.

For toddlers, just like infants, there is a need for attention to specific nutrients. Some of the more common nutrients include iron, vitamin D, calcium, and fiber.

Iron- Iron deficiency anemia is common during these years because of the increase in the consumption of cow's milk and other low iron foods. Often from the first birthday until at least two years of age, toddlers drink too much milk and juice, neither of which contain enough iron. Furthermore, large amounts of fluids sometimes cause a decrease in solid food intake.

Choose these foods to help ensure enough iron:

- Iron from meat, fish and poultry is better absorbed than iron from plants.
- Include foods high in Vitamin C, such as citrus fruits, melons, dark green leafy vegetables and potatoes with your meals.

These foods may help the body absorb more iron.

- Choose iron enriched or fortified breads, cereals and pastas

Vitamin D - Vitamin D is important in the formation of bones. The body creates some Vitamin D from sun exposure, but we can also acquire vitamin D from fortified foods like milk. Although it's very important to obtain vitamin D from the sun, it is still important to use sunscreen on your toddler to prevent harm from the sun's rays. Enough vitamin D should still be produced despite the use of sunscreen. Keep in

mind, sunscreen should not be used on children younger than six months of age. Be sure to speak with your doctor or registered dietitian before supplementing your child with Vitamin D or any supplements.



Calcium -

Calcium is one of the major building blocks for bone and teeth. Calcium is found in dairy products, such as milk, yogurt and cheese. There are also some non-dairy sources of calcium such as green leafy vegetables like broccoli, spinach and collards. Excess amounts of calcium do not provide stronger bones; it does not stay in the body.

Fiber – Fiber is an important part of all diets, including that of your toddler. Fiber helps with digestive health and fibrous foods contain

important nutrients. Fiber is found in whole fruits, vegetables, whole grain breads, cereals and pastas. While it is important to make sure your toddler has adequate fiber intake, it is also necessary to provide enough water so your toddler does not have hard or painful bowel movements.

Oftentimes parents provide a multivitamin to make sure their child is getting enough nutrients. Be careful, as sometimes multivitamins taste very good, similar to candy, and children may consume more than what is recommended. This will cause intake of vitamins or minerals in amounts that may cause harm. If you provide a multivitamin, place the container high, out of your child's reach and provide at a set time every day.

Clinically diagnosed food allergies are not as common as most people believe. It is important to recognize potential symptoms and discuss them with your pediatrician and dietitian. These are some of the more common symptoms associated with food allergies:

- Wheezing and difficulty breathing
- Itchy skin rashes (including hives)
- Nausea or vomiting
- Abdominal pain or diarrhea
- Swelling around the mouth and in the throat

These symptoms can develop within minutes or hours after your child ingests the food he or she is allergic to. Nasal symptoms by themselves, such as congestion or a runny nose, are usually not related to food allergies.

Symptoms of food allergies may be mild or severe, depending on how much of the food your child has eaten and how allergic he or she is to the food. A severe reaction can include anaphylaxis (difficulty breathing, swelling in the

mouth and throat, decreased blood pressure, shock and could potentially lead to death).

More common than food allergies are food intolerances. Symptoms of a food intolerance

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can include vomiting, diarrhea and skin rashes. A common food intolerance is lactose intolerance, which occurs because of a deficiency of the enzyme lactase. Lactase, in adequate amounts, breaks down lactose (the sugar found in milk) in the digestive tract. Children who do not produce this enzyme or who have a decreased amount of it, develop symptoms after drinking lactose containing food products, such as cow's milk, ice cream and cheese. However, because this reaction does not involve the immune system, it is not a real food allergy. If you notice that your child develops symptoms after being exposed to certain foods, then you should limit or avoid those foods.

The most common foods that may cause allergies include:

- Peanuts, tree nuts (walnuts, pecans, etc)
- Eggs (especially egg whites)
- Fish
- Milk
- Shellfish
- Soy
- Wheat

If you begin to notice food allergy or intolerance symptoms when your child ingests certain foods, be sure to keep a food diary for a few weeks. Record what foods your child has been eating, especially new foods, and if or when symptoms develop. The food diary may help you figure out what your child is allergic or intolerant to.



In addition to intolerances, some food's shapes and sizes can be dangerous to their health. The American Academy of Pediatrics recommends that children younger than four not be fed any round, firm food unless it is cut into small pieces no larger than one-half inch. Remember: that children under the age of four do not have a full set of teeth and cannot chew as well as older children or adults, so large chunks of food can lodge in their throat and cause choking.



Caregivers should also be aware of older children's actions. Many choking incidents occur when older brothers or sisters give dangerous foods, toys or small objects to a younger child.

Foods to Avoid giving to children younger than four years old:

- Hot dogs; sausages
- Grapes
- Globes of peanut butter
- Raisins
- Raw vegetables
- Nuts and seeds
- Chewing gum
- Chunks of meat or cheese
- Hard, gooey or sticky candy

To prevent choking, parents and caregivers can take steps to reduce the risk by keep a watchful eye on children who are eating and playing, keep dangerous toys, foods and household items out of the reach of young children, and learn how to provide early treatment for children who are choking. The American Academy of Pediatrics recommends parents to supervise young children during mealtime and teach children to chew their food thoroughly. Children should be sitting, not lying down or in motion, while eating. Eating "on the run" can also increase the risk of choking.

Preadolescence (Ages 6-12)

Children aged 6-12 years old fall into two categories:

- Middle childhood from 5-10 years
- Preadolescence from 10-12:

Growth and independence are most prevalent during this time. Growth is often steady, but still occurring at a rate of about seven pounds and 2.5 inches per year. (3) Because of this continuance in growth, children from ages six to eleven need to increase calories slightly with the same emphasis on healthy foods as when they were toddlers. Growth spurts will normally coincide with increased appetite. It's important

to monitor growth changes during this time as both obesity and early signs of an eating disorder may develop. Teaching healthy eating and promoting a healthy lifestyle is still of much importance as children establish more autonomy and independence.

Influences are occurring more so outside the home by teachers, coaches, and friends. This age group tends to have a better ability at expressing their likes and dislikes of foods as most parents are already all too familiar with. Still, it is a time for experimenting as taste buds are not fully developed entirely and food preferences can be that much more prevalent for favorites such as macaroni and cheese, soft drinks and candy. But do not despair;

there is still opportunity to educate and convince your child that there is more to healthy eating than carrots and broccoli. With that being said, parents and caregivers must still be aware that this is a an age range where toddler-like health issues can still be an issue and more serious issues can



Recommended serving sizes and servings each day for children ages 6-12

Food Group	Serving size	Age 6	Age 8	Age 12
Grains	Ounce	5	5	6-7
Vegetables	Cup	1.5	2	2.5-3
Fruits	Cup	1.5	1.5	2
Milk	Cup	2	3	3
Meat & beans	Ounce	4	5	5.5-6
Oils	Teaspoon	4	5	6
Discretionary	~165	~130	~265	~165

arise. Some potential health issues and diseases that tend to occur during these years include constipation, iron deficiency anemia, dental caries (cavities), diabetes, overweight or obesity and additional stresses from school and a need for excellent performance in school. Starting your child with a nutritious breakfast everyday is a nice place to start. Research shows that children



who eat breakfast tend to perform better in school and maintain a healthier weight.

For fats and oils, substitute saturated fats with healthier alternatives such as baked fish, nuts, avocados and liquid oils, including canola and olive oils. The Discretionary column can be used to include healthy snack options: turkey with whole grain bread cut into squares or a fruit salad of pineapple and banana with added almonds. Snacks can be a great opportunity for creativity. It is best to avoid the pitfall of including too many foods higher in calories, fat or sugar such as whole milk,

cheese, sausage, and biscuits. Additionally, it's important not to use these foods as rewards. It can send a conflicting message. Keep in mind also, that discretionary calories are often already present in meals, added during food preparation. These additional calories can



include butter, gravy and sauces. Be aware of this and emphasize healthier snack options for better balance and energy. Read labels carefully to avoid high-fructose corn syrup and fully- or partially-hydrogenated oil (trans-fats). These are used to enhance flavor and shelf life. They can also add unnecessary calories to common foods including sweetened beverages, pastries, cereals, popcorn, ice cream, breads, sauces and salad dressings to name a few.

Another helpful recommendation to assist your youngster is to get them involved with meal preparation. Getting your child in the kitchen and teaching them the value of preparing and cooking a meal is a great way to teach independence

and develop self-esteem. It may start with simply asking them to choose a meal from a cook book and have them select the items from the grocery store. Teaching your child responsibility gives them a greater appreciation for what it takes to put meal time together. Children involved in meal preparation are less likely to have any comments of disdain if the meal is not to their liking. The benefits also filter into teaching safety while in the kitchen. An added bonus? Maybe you can get extra sleep come Saturday morning!

In addition to laying a foundation for your child’s growth and eating behaviors, physical activity is also imperative for a healthy lifestyle. Children in this age group should aim for 60 minutes or more of physical activity everyday. While it’s important for your child to enjoy the activities they choose to do, it’s also a great opportunity to introduce new ideas and activities that you can both enjoy, such as biking, rollerblading, dancing, walking on the beach or having a catch. Physical activity will help your child prevent weight gain and improve their social and technical skills.

Recommended serving sizes and servings each day for teenagers based on MyPyramid
(Based on 30-60 minutes of physical activity each day. Larger portion is for boys.)

Food Group	Serving size	Age 13	Age 16	Age 18
Grains	Ounce	6-7	6-10	6-10
Vegetables	Cup	2.5-3	2.5-3.5	2.5-3.5
Fruits	Cup	2	2-2.5	2-2.5
Milk	Cup	3	3	3
Meat & beans	Ounce	5.5-6	5.5-7	5.5-7
Oils	Teaspoon	6	6-8	6-8
Discretionary	~165	~265-290	~265-425	~265-425

Teenagers (Ages 13-18)

The teenage years are a trying time for both parents and child. It is a time that is extremely important for physical development. It’s also a time when peer pressures can influence food and diet behaviors. Many teenagers deal with issues such as eating disorders, fad diets, consuming non-

Many teenagers deal with issues such as eating disorders, fad diets, consuming non-nutritious foods regularly, such as fast food and soft drinks and convenience food such as donuts and chips.

nutritious foods regularly, such as fast food, soft drinks and convenience food such as donuts and chips. In addition, many teenagers drink limited amounts of bone strengthening milk. More

Additional Healthy Options For Teenagers

- Keep a box of graham crackers or low-fat vanilla wafers in your locker for a handy sweet treat
- Low-fat yogurt, string cheese, or a carton of nonfat milk are quick protein sources to help get you through a “sluggish” afternoon
- Try the salad bar to get a variety of fruits and vegetables in your lunch
- No time for breakfast? Fill a baggie with cereal
- Carrot or celery sticks and dip are good for ready-to-go snacks

specific to young women, is the lack of iron-rich food consumption which can lead to anemia. The teenage years are also a time when physical appearance and social acceptance can trump health, leading to poor food choices, eating disorders to help control weight, alcohol and drug use. Teenagers are also more susceptible to falling for erroneous advertising leading to experimentation with potentially dangerous supplementation for everything from muscle building to weight loss to acne remedies. On a side note, there is no known relationship between food and acne.

Unfortunately, for health conscious parents, it is also a time when parents have limited control over their teenager’s diet. Teenagers may leave early in the morning and not return until evening or later, depending on their age and employment status. But don’t despair,





with good planning you can set your teenager up for nutritional success.

Here are some tips to help set teens up for a nutritious day. First, stock your refrigerator with low-fat milk, vegetable juice or 100% fruit juice instead of soda, sports drinks or sweetened drinks. Get into the habit of adding kidney beans or garbanzo beans to salads at lunch and dinner for protein power without the saturated fat. Educate your teen about the benefits of the vitamins and minerals in fruit and vegetables and their ability to promote beautiful hair, nails, skin and eyes. If your teen is at school, practice and work for most of the day and evening, pack peanut butter and jelly on whole wheat bread, pretzels, nuts, seeds and low-fat popcorn for nutritious snacks.

Similar to all age groups, obesity is a concern with American teenagers too. Obesity prevalence has doubled in this age group over the past few decades, so it's imperative to find a balance between good nutrition, that provides all the necessary nutrients to help promote optimal growth, yet not over-feeding your teen which will add to the ever growing teenage obesity epidemic. Although the teenage years can be frustrating for teenagers to gain their peer's acceptance via their appearance, performance in sports and school and experimenting with risky behaviors, they can be well on their way to a healthy body and mind with proper nutrition and diligent planning.

This time is just as difficult for parents, with constant power struggles and dealing with the idea that their "baby" has grown up, but parents must persevere even more so during this period. By communicating with their child about peer pressures and the potential hazards that can coincide with poor body image. As difficult as it may be at times, it is important for parents to recognize potentially harmful behaviors of their teenager and speak to their doctor about anything that may seem wrong.

Note: The information offered in this booklet is to be used as a guide and is not an official prescription. It is not to replace going to see your doctor for necessary pre-natal and post-natal care. Please be sure to schedule an appointment with your physician, nurse practitioner and dietitian to best evaluate you, your baby and your toddler's specific nutritional needs. This manual is subject to changes based on new research. Additional pre-natal and post-natal information can be obtained from:

- United States Department of Agriculture, www.MyPyramid.gov
- Institute of Medicine, www.iom.edu
- American Academy of Pediatrics, www.aap.org
- Centers for Disease Control and Prevention, www.cdc.gov
- Women, Infants and Children, www.fns.usda.gov/wic/

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6. March of Dimes: www.marchofdimes.com/pnhec/188_1080.asp
7. http://teamnutrition.usda.gov/Resources/mpk_poster2.pd