Nutritional Needs in Pregnancy: Preventing Birth Defects

Birth defects are abnormal conditions that occur either before or at birth. They are the leading cause of death in children less than one year of age and can result in physical, mental, and medical problems that can last a lifetime. The National Center on Birth Defects and Developmental Disabilities report that 1 in 33 babies are born with a birth defect. Often there is no identifiable reason that a birth defect occurs, however, certain defects can be prevented through nutrition and/or avoidance of harmful chemicals, drugs, or medications.

Congenital Heart Defects

The most common birth defects are congenital heart issues. Every year in the US about 40,000 infants are born with a heart defect. While many heart defects are unexplainable, there are some lifestyle measures women can take to decrease their child’s risk:

- Avoid alcohol and tobacco products throughout your pregnancy. There is NO safe amount.
- Make sure all medicines are safe for use during pregnancy.
- Manage chronic conditions: Uncontrolled diabetes increases the risk of birth defects, including heart issues.
- Maintain a healthy weight before and during pregnancy.
- Get recommended vaccines. Certain infections, including rubella, put your baby at risk for heart conditions. Make sure you have received the full recommended dose of the measles, mumps, and rubella vaccinations.
- Have adequate stores of folic acid: This B vitamin can help reduce the risk of several birth defects. Women need to build up their folic acid stores prior to pregnancy.

Preconception Needs

Preconception health encompasses steps taken prior to conception/pregnancy to get the potential mother’s health on track for the purpose of increasing the likelihood of experiencing a healthy pregnancy and delivery. Considering 50 percent of pregnancies are unplanned, taking note of your health in general is important to achieving best outcomes for a healthy pregnancy and baby.
Many birth defects occur in the first few weeks of pregnancy, often well before a woman realizes she is expecting. All major organs and organ systems have formed in the fetus by the 8th week of pregnancy. This is why it is so important to prepare your body for the task of growing a baby before conception even occurs. A few simple choices can improve your chance of avoiding certain birth defects:

- **Schedule a preconception appointment:** These appointments allow you to sit down with your provider and look at all aspects of your health to determine what areas require improvement.

- **Take a prenatal vitamin with folic acid:** Inadequate stores of folic acid in your body can increase the risk of a brain or spinal cord defect. Look for a vitamin that contains at least 400 micrograms of folic acid and take one every day. Some women may require more folic acid, so discuss your individual needs with a physician. You can also check nutrition labels and choose foods high in folic acid. Good choices include fortified breads and cereals, leafy greens, and orange juice.

- **Learn about nutrition needs in pregnancy:** Let your physician know what your diet looks like so he or she can determine if any changes may be necessary to help with proper growth and development for the future child, such as adding folic acid to your daily intake.

- **Avoid alcohol, tobacco, and street drugs:** Smoking not only exposes your child to harmful chemicals, but it also lowers the amount of oxygen and nourishment that reaches him or her. A lack of the necessary components for growth and development increases the chance that something will go wrong.

- **Check on the safety of any prescribed or over-the-counter medications or supplements:** If you take any medicines because of a chronic condition, work with your provider to determine if you can continue or if you need to try a new medication that is safer for the baby.

- **Get any and all medical conditions in order:** As mentioned earlier, unmanaged diabetes can increase the risk of birth defects. Women with diabetes can have healthy pregnancies and babies if they keep their blood sugar under control before and during pregnancy. Ideally you want to achieve healthy sugar levels for at least three months prior to conceiving. Work with your provider and a registered dietician to develop a plan on how to maintain appropriate blood sugar levels. A comprehensive plan should include nutrition, exercise, scheduled blood sugar checks and, in some cases, medication compliance. Other chronic conditions that can affect the health of a pregnancy include high blood pressure, lupus and metabolic disorders.

- **Learn how to prevent infection:** Sexually transmitted infections can cause certain birth defects. Get tested and treated prior to conceiving to avoid potential complications.

- **Get any necessary immunizations:** Since some immunizations carry some risk if administered during pregnancy, it is best to get all necessary vaccines at least three months prior to conception.

**Pregnancy Needs**

One of the most important steps you can take during your pregnancy is to seek early prenatal care and attend all recommended appointments. These appointments serve several purposes. They allow you to speak directly to your physicians and ask any and all questions you have about the pregnancy. Keep in mind that you do not have to wait until an appointment to ask a question; do not hesitate to call your
provider’s office. The obstetric field does not have regular “business” hours and the answering service can always put you in contact with the physician should an emergency arise.

The other main purpose of prenatal appointments is that your provider can check on you and the baby to make sure everything is progressing as it should. Ultrasounds, blood work, urine tests, blood pressure checks, and belly measurements help the doctor determine if something is potentially wrong. If something comes back abnormal, it allows your physicians to act quickly and appropriately to do further testing or intervene when necessary.

You can help decrease the risk of birth defects by following a few simple steps during pregnancy:

- **Avoid potentially harmful substances**: This includes avoiding exposure to X-rays, radiation, certain cleaning products, lead, mercury, paints and fumes, pesticides and even certain animal byproducts (ex: cat feces). Women can be exposed to potentially dangerous chemicals in the workplace, at home or through interaction with someone who is exposed to these items. If you are concerned about possible exposure to dangerous chemicals, talk to your physician.
- **Listen to dietary precautions**: Along with choosing healthy foods, pregnant women should avoid certain types of foods that increase their risk of food borne illness and infection. Avoid foods that are unpasteurized, raw or undercooked and those that can contain harmful elements (ex: seafood high in mercury). Your physician can advise you on nutrition specifics, both what you should eat and items you should avoid.
- **Continue to manage any chronic conditions**: Make sure your entire healthcare team is on the same page with your disease management plan. If medications are necessary to control your condition and have been cleared as safe, take as directed.

**Genetic Counseling: Weigh your Options**

Genetic counseling and screening exams are a personal choice that you and your partner need to make. Many birth defects are caused by genetic or chromosomal components. You can help your physicians determine your child’s risk by looking at both side’s family history. Knowing if your child is at risk for certain medical conditions can help ensure that the right specialists are in place if you are to need their assistance.

The good news is that scientists are always looking for ways to prevent and treat birth defects. Children born with birth defects are receiving better and better care to help them survive and function as well as possible. If you are told that your child most likely will be born with a birth defect, make arrangements to deliver your baby at the most fully equipped hospital in your area; this way your child receives the best care possible. Many hospitals specializing in high-risk pregnancies offer services that can help you and your family, including a variety of outpatient services that may be necessary down the road.

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Resources


Citations

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Med-Vision for Mommies
Monthly Quiz

1. According to the National Center on Birth Defects and Developmental Disabilities 1 in ___ babies are born with a birth defect.
   a) 33
   b) 5
   c) 125

2. Birth defects are the fifth leading cause of death in children less than one year of age. □ True □ False

3. The most common birth defects are congenital heart issues. □ True □ False

4. List three things that you can do prior to pregnancy to help achieve a healthier pregnancy:
   a) ____________________________________________
   b) ____________________________________________
   c) ____________________________________________

5. ________ can reduce your child’s risk of heart, brain, and spinal cord defects.
   a) Iron
   b) Folic Acid
   c) Potassium