



Position Paper

Preconception Nutrition

Good nutrition is an essential component of attaining a healthy pregnancy and birth outcome. Currently, women of child-bearing age do not typically receive information about proper nutrition until they are already pregnant, during the prenatal period or after delivery.

Though it is important for women to receive information about nutrition during the prenatal and postnatal period, achieving proper nutrition prior to conception provides numerous health benefits to both the mother and infant.

It is the position of the Georgia Department of Human Resources that women of child-bearing age should achieve and maintain good nutritional status prior to conception to help minimize health risks to both mothers and infants.

Many women may not be aware of the importance of preconception nutrition or have access to information. Health care providers should be knowledgeable about sound nutrition and nutrition-related guidelines and take the initiative to discuss this information during preconception counseling with women of child-bearing age.

Recommendations:

Achieve and Maintain a Healthy Weight

A woman's weight at conception can influence her pregnancy and delivery as well as the infant's health (3). Body Mass Index (BMI), defined as weight (kg)/height (m²), is one method of determining a woman's weight status.

- **Overweight**

In 2002, over half (53%) of women in Georgia were overweight or obese (16). Women who are overweight (BMI ≥ 25) or obese (BMI ≥ 30) before conception are at increased risk of several adverse pregnancy outcomes including preterm delivery, gestational diabetes, preeclampsia, macrosomia, neonatal death, and fetal death (1,3, 5, 11). Furthermore, women who are obese before conception tend to gain and retain more weight during pregnancy than recommended by the Institute of Medicine (6). After delivery, overweight and obese women have more difficulty initiating and maintaining breastfeeding than do women of normal weight (1, 10,12,13).

It is important to identify women who are overweight or obese as early as possible, and refer them to a registered dietitian who can help them lose weight

safely before conception. It is **not** recommended that women lose weight during pregnancy.

- **Underweight**

Women who are severely underweight (BMI <18.5) are also at increased risk for a number of adverse pregnancy outcomes, including low birth weight, preterm birth, and intrauterine growth retardation (2, 4). Women identified by health care providers as underweight before they become pregnant should be referred to a registered dietitian to receive guidance on how to increase their weight.

Optimize Nutrition Intake through a Balanced Diet

Women should consume a balanced diet rich in fruits and vegetables, low-fat dairy products, whole grains and high-protein foods (see 2005 Dietary Guidelines for Americans at www.mypyramid.gov for more information). A balanced diet will ensure that women acquire the recommended daily requirements for vitamins and minerals, and also adequate nutrient stores for pregnancy. Women with a low income should be referred to the local food bank, and/or other relevant food assistance programs in their community.

Consume a Diet Rich in Folic Acid or Take a Folic Acid Supplement

Folic acid is an especially important nutrient for women of child-bearing age. Taking a folic acid supplement before conception as part of a healthy diet reduces the risk of neural-tube defects (NTD) such as spina bifida. The recommended daily intake for all women of child-bearing age is at least 400 micrograms (mcg), or 0.4 milligrams (mg). Though it is ideal that all women of child-bearing age take folic acid daily, it is essential that women trying to get pregnant begin supplementation immediately. Food sources of folic acid include enriched grain products such as breakfast cereals, bread, pasta, and rice, and natural sources such as dark green leafy greens and legumes. Health care providers may recommend a higher level of folic acid intake for women with a family history of NTD, or women who have had a previous pregnancy affected by a NTD (1,18).

Prepare Food Safely

Preparing food safely is as important as eating the right things. Consuming food contaminated with methylmercury or toxoplasma may cause harm to a fetus.

To avoid the harmful effects of these food-borne illnesses, women should be advised to follow recommendations of the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) before and during pregnancy (<http://www.cfsan.fda.gov/pregnancy.html>) (19):

- Methylmercury:
 - Do not eat Shark, Swordfish, King Mackerel, or Tilefish because they contain high levels of mercury.
 - Eat up to 12 ounces (2 average meals) a week of a variety of fish and shellfish that are lower in mercury.

- Check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas. If no advice is available, eat up to 6 ounces (one average meal) per week of fish you catch from local waters, but don't consume any other fish during that week.
- Toxoplasmosis:
 - Wash hands with soap and warm water *after* touching soil, sand, raw meat, cat litter, or unwashed vegetables.
 - Wash all cutting boards and knives thoroughly with soap and hot water *after* each use.
 - Thoroughly wash and/or peel all fruits and vegetables before eating them.
 - Separate raw meat from other foods in grocery shopping cart, refrigerator, and while preparing and handling foods at home.
 - Cook meat thoroughly. The internal temperature of the meat should reach 160° F (71° C). Use a food thermometer to check.
 - Don't sample meat until it's cooked.
 - Avoid drinking untreated water, particularly when traveling in less-developed countries.

Be Knowledgeable about the Benefits of Initiating and Maintaining Exclusive Breastfeeding

The *American Academy of Family Physicians*, *American Academy of Pediatrics*, and *American College of Obstetricians and Gynecologists*, recommend that all babies, with rare exceptions, be breastfed and/or receive expressed human milk exclusively for the first 6 months of life (7,15,17). As part of preconception counseling, women should receive information on the benefits of breastfeeding for mother and infant. Benefits include: decreased severity or incidence of allergies, reduced risk of overweight and obesity, increased bonding, decreased postpartum recovery time, and cost and time savings. Discussing breastfeeding information before pregnancy allows women to explore concerns, fears and myths that may inhibit successful breastfeeding (8).

Receiving encouragement to breastfeed from a health care provider, as well as from family members will increase the likelihood that a woman will initiate breastfeeding and maintain breastfeeding for a longer period of time (7).

Assess Consumption of Alcohol and Caffeine **Alcohol**

In Georgia in 2003, 8.7% of women of child-bearing age (18-44 years) reported binge* drinking in the past month (20). Women should be informed that consumption of alcohol for those who may become pregnant should be avoided, as a safe level of alcohol consumption has not been established at any stage during pregnancy.

*Binge alcohol use is defined as having five or more drinks on at least one occasion during the past month.

Caffeine

Some evidence suggests that caffeine consumption may delay conception as well as affect iron and calcium absorption (1). Common sources of caffeine include coffee, colas, chocolate, tea and some prescription or over the counter drugs.

Be Physically Active

Incorporating physical activity into a daily routine has many benefits such as: contributing to weight management, decreasing stress, improving birth outcomes, and reducing risk of chronic diseases. Women planning on becoming pregnant should engage in moderate-intensity physical activity of 30 minutes or more on 5 or more days of the week, beginning at least 3 months before conception. Women should consult their health care provider before starting an exercise program (14).

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