



Ask Bassett

Pediatric Nutrition with Phoebe Reese, FNP-C

Q. How can the eating habits of a pregnant mother affect the child's development later?

A. The answer to this question is surprisingly complex and scientists are discovering new connections all the time. We have long known that a mother's pre pregnancy weight and weight gain during pregnancy influence both her child's birth weight and later predisposition for obesity. Babies born to obese mothers, or normal weight mothers who gain more than the recommended amount of weight during pregnancy, are more likely to be heavier at birth and have a greater risk of childhood obesity. In addition, babies born to obese mothers have a greater risk of certain birth defects. New research shows an interesting connection between maternal diet and baby's food preferences in infancy and toddlerhood. The more variety in a mother's prenatal diet, the wider variety of foods the child will accept or like.



Some of the most interesting emerging research in this area is called epigenetics. This field studies how environmental factors, such as maternal diet, affect the behavior or expression of a developing baby's genes. Yes, what mom eats can affect baby's gene expression! Studies in mice show that supplementing the mother's diet with various nutrients can overcome the offspring's predisposition for obesity, diabetes, cancer and even hair color. The B vitamin choline, as well as omega-3 fatty acids, affects the expression of genes in the brain, improving memory. Vitamin D is thought to affect gene expression related to asthma and wheezing in childhood, with mothers who are deficient giving birth to children with higher likelihood of these afflictions. However, taking too much of certain nutrients, or taking them at the wrong time during fetal development, can have detrimental effects. Therefore, the best approach is to eat a well balanced diet throughout pregnancy, including lots of fruits and vegetables, leafy greens, eggs, fish, nuts, beans, whole soy products and moderate amounts of dairy.

Q. What are the warning signs that a child may be malnourished, and how can you tell what your child should weigh?

A. In this country, malnourishment is almost nonexistent. In terms of the three macronutrients - fat, protein, and carbohydrates - the majority of American children are eating more than enough. Our diets are high in calories and macronutrients, but poor in what are called micronutrients. These include vitamins, minerals and phyto chemicals, such as antioxidants, found in plants. Parents should focus on including plenty of fruits and vegetables in their children's diet – at least 5 servings

daily. If you are concerned that your child is underweight, you should talk to his health care provider, who can objectively compare his weight and body mass index (BMI) to the guidelines for his age.

Q. We were all taught the “basic food groups”. Has recent thinking changed at all?

A. Yes, the newest incarnation of the “four food groups” is called *My Plate*, and is based on the government’s 2010 Dietary Guidelines for Americans. The premise is to provide people with a more visual representation of what to eat at each meal. According to *My Plate*, you should try to fill half your child’s plate with fruit and vegetables, one quarter with whole grains, and one quarter with protein. Dairy is represented by a glass next to the plate. In line with current dietary research, these 2010 guidelines place more emphasis than previous guidelines on eating vegetables, fruits, grains, beans, nuts and seeds, and less emphasis on eating meat and dairy. In fact, the *My Plate* diagram mentions a portion of *protein*, rather than meat, alluding to the fact that protein can be found in sources other than meat, such as beans, nuts and seeds. The 2015 guidelines currently in development appear to recommend a research-based shift even further toward a primarily plant-based diet, with smaller portions of meat and dairy. For more precise information on how much of each type of food your child should eat for his age, go to ChooseMyPlate.gov.

Q. How effective are children’s vitamins to proper nutrition; do you recommend them?

A. Children who eat a balanced diet, with plenty of fruit and vegetables, and get regular sun exposure or vitamin D fortified foods, do not need a multivitamin. Many children, however, do not eat a well balanced diet and could benefit from a multivitamin supplement. Most over-the-counter children’s multivitamins come in doses safe to use in addition to diet, and may be helpful if your child eats a limited variety of foods.

Q. Does sugar in a child’s diet really make them “hyper”?

A. This is a common belief, but numerous scientific studies show otherwise. The groups of children in the studies who were given doses of sugar showed no observable changes in behavior as compared to the control groups. Nonetheless, children should consume very limited quantities of sugar as it is associated with obesity, diabetes and dental decay. The American Heart Association recommends no more than 6 teaspoons of added sugars daily for women and 9 teaspoons for men, with recommendations for children of even less. For comparison, one can of soda contains 10 teaspoons of sugar.

Q. If there was one food that you would not feed your own child, what would that be?

A. No foods are completely off-limits in my family, as I do not feel this is an effective approach to teaching healthy behaviors. The best way to get your children to follow a healthy lifestyle is to model one yourself. If parents are eating right and exercising regularly, children will follow suit. That being said, one food that I do try to limit is processed meats. These include hotdogs, sausages, bacon, and luncheon meats, which have been shown to greatly increase risk of colorectal cancer. Many parents are unaware of this cancer risk lurking their children’s hotdogs and turkey sandwiches. One serving of processed meat daily increases colon cancer risk almost 40%.

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