



Raising Healthy Children

Want to know the facts behind raising healthy eaters? This research roundup will help you advise parents on what to feed their kids, from day one onward.

Today nearly 32% of American youth are overweight or obese, including some children as young as two! We're beginning to understand that early learning can influence food preferences and eating behaviors, which then influence diet, growth, and health later on.

Journal of American Medical Association. 2014 Feb 26;311(8):806-14. (Ogden CL et al.)

The following tips with links to corresponding research can help set children on a path to a healthy adulthood.

Infancy (Birth – 1 year old)

• Breastfeed Over Bottle Feed

Research shows that for the first six months, babies can get all of the nutrients they need solely from breast milk, and breastfeeding may also protect against childhood obesity.

American Journal of Clinical Nutrition. 2007 Jun;85(6):1578-85. (Toschke AM et al.)

Infants who are breastfed are more likely to accept new foods when they are first introduced since their mother's breast milk contains flavors from the mother's diet. Therefore, these infants become familiar with a wide variety of flavors before they are ever exposed to the actual food. Formula can't offer this variety in flavors, which could explain why formula fed infants tend to have a lower acceptance of new foods when solids are introduced. In particular, breastfed infants accept vegetables more rapidly than formula fed infants. As a result, breastfeeding can help ease infants through the transition from milk to adult foods.



American Journal of Clinical Nutrition. 2014 Mar;99(3):723S-8S. (Birch LL, Doub AE)

A later study shows that infants can self-regulate their intake to match the amount of energy their body needs. Bottle feeding, regardless of whether the bottle contains formula or breast milk, has distinctly different effects on self-regulation than breastfeeding. Infants who bottle feed are more likely to finish the bottle, perhaps because parents encourage it rather than listening to their baby's fullness cues.

Pediatrics. 2010 Jun;125(6):e1386-93. (Li R et al.)

• Avoid High-Protein Formula

Protein is an important nutrient for growing babies, but high protein formulas are not the best approach. In fact, researchers have observed that infants who are fed a high protein formula (2.05 g/100 ml) are at increased risk for childhood obesity. If you decide to use formula, look for low protein varieties to reduce this risk. Also remember to provide pureed meat or iron fortified cereals at 6 months of age to help infants replenish their iron stores. Current recommendations are 13 grams of protein per day for infants and toddlers, which can be met with less than two (2.5 oz) commercial baby food jars of pureed meat.

American Journal of Clinical Nutrition. 2014;99(5):1041-51 (Weber M et al.)



- **Wait to Introduce Cow's Milk until Age One**

Cow's milk has a different composition of macronutrients from breast milk, which makes it hard for the baby to digest this early in life. Research has shown that babies fed cow's milk before 6 months have increased risk for allergies and wheezing.

Academy of Nutrition and Dietetics.

Early Childhood (Ages 2-5)

- **Acknowledge a Division of Responsibility**

According to Ellyn Satter, MS, RD, adults are responsible for presenting healthy food in an appealing way, but the child is responsible for how much and whether they eat. This encourages a positive feeding relationship between parent and child, which can provide lifetime benefits.

The Academy of Nutrition and Dietetics.

Ellyn Satter Institute.

- **Encourage Fruits and Vegetables!**

Fruits and vegetables are so important for developing children, but many don't eat enough of them. 25-30% of infants and toddlers never receive fruit during the day, and 20-25% never have a vegetable on a given day either!

Journal of American Dietetic Association. 2004 Jan;104 (1 Suppl 1):s38-44. (Briefel RR et al.)



- **Avoid Using Food as a Reward**

Many children are told that they can have dessert after they finish their vegetables. Using food as a reward can cause the child's preference to shift to the reward food and to find the vegetables or original food less appealing. Try to use non-food rewards instead, such as extra time outside, reading a book at night, or handing out stickers or gold stars.

The British Journal of Nutrition. 2008 Feb;99 Suppl 1:S15-21. (Wardle J et al.)

- **Watch Out for Juice**

100% fruit juice has a place in a healthy diet when consumed in moderation. However, because of its high sugar content, excessive juice consumption can increase the risk of childhood weight gain. Children ages 1 to 6 should limit juice to 4-6 ounces per day and those 7 to 18 should consume no more than 8-12 ounces daily.

Pediatrics. 2001 May;107(5):1210-3. (Committee on Nutrition)

- **Avoid Pressuring Kids to Eat**

Pressuring kids to eat their vegetables, for example, can have the opposite effect from what parents are trying to achieve. Research shows that pressuring kids to eat more ultimately leads to them eating less, even in later situations when they are not pressured. Pressure to eat a certain food also elicits more negative emotions and responses toward that food.

Appetite. 2006;46(3):318-23. (Galloway AT et al.)



- **Get Kids Involved in the Kitchen**

Kids who help out with meal preparation are more likely to understand where their food comes from which promotes self-efficacy. There are small things even pre-schoolers can help with, such as measuring, adding, or mixing ingredients in a bowl. Strategies to teach children and teens cooking skills enables them to prepare their own meals as they get older so that they don't have to turn to already-prepared meals.

Journal of Nutrition Education and Behavior. 2013 Jul-Aug;45(4):296-303. (Woodruff SJ et al.)

- **Give Kids a Choice**

Choice empowers kids and may increase a child's intake of fruits and vegetables. This doesn't mean you should offer a choice between candy and vegetables! Simply ask your child something like, "Would you rather have corn or peas tonight?" Giving kids a choice, especially with fruit and vegetable options, is shown to increase the amount they eat of these foods.

Public Health Nutrition. 2010 June;13(6):787-96. (Zeinstra GG et al.)

- **Act as a Role Model**

Parents play a pivotal role in their child's food preferences. How can we expect our kids to eat healthy foods if we don't? Fruit and vegetable intake tends to be higher in children whose parents have a higher intake.

The British Journal of Nutrition. 2008 Feb;99 Suppl 1:S22-5. (Scaglioni S et al.)