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Nourishing a Child – Introducing Foods in the first years.

How to reduce the likelihood of allergies and "atopy" in children

For the first 6-months of life, breast milk is the only food required by most infants. We expect a child's birth weight to double at about 6-months old. Breast milk has essential antibodies that provide powerful immune function to the child as well as balanced nutrients to optimize growth. Children who have been breast-fed in these first 6-months are at lower risk for numerous diseases. Notably, a Finnish study found that exclusively breast-feeding an infant to 6-months of age resulted in significant prevention of allergies in infants of allergic parents. Of course, the mother's diet and nutritional intake is paramount to making healthy breast milk!

Occasionally, a child on breast milk will react to allergens from the mother's diet. Having the mother eliminate the food in question can treat the child effectively. Usually the foods are one or several of the "sinister seven"foods: Cow's dairy protein, soy protein, chocolate, wheat, corn, egg whites and peanuts. [Extras might be potatoes, citrus and coffee].
Introducing an infant to solid foods too early or to allergenic foods too early will increase the susceptibility to allergies in a child. A child does not have a fully developed digestive capacity and cannot effectively digest some foods – especially grains. Therefore, less allergenic foods should be used to nourish the child while reducing the likelihood of allergies.

When not severe, these allergies are usually caused by the delayed-type IgG cells or the IgA cells – that live in all the mucous membranes of the body such as the sinus, lungs and gut. The symptoms can be negligible to severe but these 2 immune cells, while technically involved in the allergic response, are not going to cause life-threatening reactions. These may be better defined as sensitivities. This allows the word "allergy" to be reserved for the more acute and possibly anaphylactic-causing IgE immune reactions. For our discussion here we are referring to sensitivities.

Sensitivity reactions that a child might have to foods:

- Rashes and hives (esp. around mouth and anus)
- Hyperactivity or lethargy
- Runny nose & mucous production
- Frequent infections (esp. ear)
- Allergic shiners
- Stomach aches
- Diarrhea or constipation
- Dyslexia or changes in handwriting or drawing

At no other time in life is nutrition so important to a person. Our goal is not to treat allergies at this young age. Our goal is to provide a nutritional diet that promotes a healthy digestive system, a strong immune system and an intelligent and well-developed nervous system. Following a proper introduction schedule, you will do this while preventing the development of allergies.

What SHOULD infants and children eat?

What foods do infants digest best? A baby does have lactase, not surprising, as an infant needs this enzyme to digest the lactose sugar in breast milk. By 6-months old, the infant has developed pepsin (a protein-digesting enzyme) and hydrochloric acid production in the stomach. Again this is in response to breast milk and the need to break down the milk proteins. Other carbohydrate-digesting enzymes develop much later – some reports say it takes until 24 months; these include amylase, which is required for the digestion of grains. Other undeveloped enzymes might include cellulase, used to digest plant fibers and other enzymes used to break down the skin of legumes or nuts. Therefore, grains, nuts and beans are not early in the food introduction. Meats, fat-rich vegetables, and nutrient rich fatty foods such as egg yolks show up earlier in the infant food introduction.

Remember, the infant has a small capacity to take in a large amount of food, so nutrient "density" of the food is important. Fat is the food product that provides the most nutrition in the smallest package. It is helpful to remember that breast milk from a healthy woman is 50%-60% fat, and cholesterol represent 6 times the amount most adults consume from food! It is not surprising to read about other cultures where cholesterol rich foods like special meat broths and organ meats are delivered to women after childbirth – this fat rich diet helps assure the breast milk will have adequate nutrition for a healthy child and a healthy mother.

With this said, as solid foods become a greater part of the child's diet – nutrient rich fats need to be a regular part of your food preparation. I believe this requires special emphasis as many parents and especially mothers have been pulled into the marketing of "low-fat" foods. For the infant, low fat means "empty calories". Therefore, it may be helpful to use the rule of "50% of calories from fat" to assure the foods are providing the real needs of the child for optimal growth and development. An example of this in practice will be butter and cream added to cooked vegetables and meats.

Grains – when they are added, should be soaked for 12-24 hours prior to cooking, this strategy should be implemented with oats, rice, millet, barley, etc. Traditional sourdough bread accomplishes this through the soaking in the bread-making process, therefore "real" sourdough bread can be considered between 9-12 moths old.

Sweets and sugars can be added after one year old but desserts should only be one or two times per week at most.

From 3 years old to pre-teen

This is a period of physical growth. The actual needs do not vary much beyond adult except the quantity of food will vary from day to day and the child's taste is developing. Children are not capable of the reasoning that sounds something like this "If you eat this you'll be healthier." This requires an abstract thinking closer to an 18-19 year old. So in short – You the parent are 100% in the driver's seat.

Procuring food, preparing food, smelling and tasting food, cleaning up and re-cycling or composting leftovers are all part of the nourishment web. Integrate children in to all parts of this process. Having a few food staples that are prepared in the home will help drive home this "soup to nuts" approach to diet and nutrition for your family.

If children are excessively hungry between meals – they are probably not getting adequate fats at the early meals in the day. Fats are the most important of food components for proper function of the learning processes in children. Animal fats and the most nutrient rich but all saturated fats can be used as efficient energy many hours after a meal.

Teenage Years

Kids are going to start feeding themselves – but remember, abstract thought is not intact, so they're not going to eat because it is "healthier" or eat in a way that will help them at some arbitrary point in the future. So the patterns you have set in the pre-teen years are all-important.

Tom Cowen perhaps rightfully simplified the teenage nutritional needs by stating:

> Boys need to eat meat. It is not unusual to need to feed a teenage boy some sort of meat three times per day. As long as the meat is of the best quality, this will actually foster a robust muscle development. Boys will have much less interest in satisfying their nutritional needs outside the home if they're served plenty of meat supplemented with grains, vegetables and salads.
>
> For girls the equivalent food is fat, especially cream and butter. These are necessary for hormonal development, functioning like meat for boys, helping to meet their cravings and to stop them from looking outside the home for food.

Enjoy!

---Dr. Richard Maurer

Schedule for Introducing Solid Foods
(Provided breast-feeding continues to about 12-months or longer)

6-9 months: Hypoallergenic pureed, cooked and mashed foods 1-2 Tbs./day.
Vegetables should be mixed with cultured butter, animal fats, olive oil, and coconut oil and/or crème fraiche.

- *Egg yolks from chickens on pasture or with enhanced DHA content in their feed*
- Carrots, yams, squash – these foods can be seen a vehicles for healthy fats while providing some carbohydrate and nutrients.
- Avocados – Rich in stable monounsaturated fats
- Broccoli and Cauliflower – cook well and mash with fats
- Raw fruits such as: melon, papaya, banana (bananas & papaya contain enzymes)
- Cooked fruits such as: Apricots, peaches, pears, apples, and berries – again with cream

9 months: Higher zinc foods for the immune and digestive system; 2-4 Tbs./day.
Foods are more complex and difficult to digest.

- Potatoes, peas, string beans, parsnips – most every vegetable can be added by this time
- Fermented vegetables – a spoonful or sauerkraut, lacto fermented carrots or beets – this helps develop the enzymes necessary for complex digestion
- Whole milk yogurt, whole milk kefir, bone and meat broths.
- Oatmeal, rice, millet, and barley: non-gluten grains, assure the butter, cultured cream, etc. Grains should be soaked to provide adequate digestion Rice is best here!

12 months: A more complex food set – food might completely replace food for calories
Meats & Fish: Chicken & turkey (organic or pastured), lamb & beef (grass-fed), fish (coldwater wild caught), wild game meats
Raw milk, clabbered milk, raw milk cheeses, cheese from sheep goat and cow's milk
Egg whites may be added now with the yolk
Goats Milk (fresh)
Liver can be shaved into foods on a regular basis. Keep organic liver in the freezer and use it in a grater to instantly add essential nutrients.

18 months-24 months: This is where the most complex foods may be added; provided digestion appears strong the child is vital.
Salad greens
Raw tahini, sunflower seeds, raw almond butter
Beans
Rye & wheat
Citrus

Note: Peanut is not until about 4-years of age. Shellfish may also be delayed to 2-4 years