



## Four-Month Handout

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### Complimentary foods:

The baby is now old enough to consider the addition of spoon fed pureed baby food. Also known as complementary foods and weaning foods, their introduction will begin the very slow but steady reduction in the amount of breast milk or formula consumed per day that should be at its maximum of about 30 oz. per 24 hrs. The introduction is optional at this point and can be withheld until six months (current AAP recommendations) just as reasonably. One of the reasons for introducing spoon foods (weaning foods) is to provide another option for dietary iron other than breast milk and formula. For this reason, the first weaning food is typically an iron fortified infant cereal. These can be mixed with breast milk, formula, water or an infant juice. I mention juice at this point to emphasize that as a nutritional option, as an infant or at any point later in childhood; juice is a calorie dense beverage that can be a principal factor in excess calories, weight gain, and obesity. The drinking of calorie containing, flavored beverages between meals is a learned preference and will not be as appropriate of a choice as water drinking. Establish this pattern early, be consistent and you'll raise children that don't like or want to drink juice. It will **always** be a more appropriate future choice to eat sliced oranges than drink orange juice, to eat sliced apples than to drink apple juice. The list goes on and on. You get the picture, I'm sure.

Moving on, vegetables should precede fruits in the order of introduction with the hopes that they'll dominate fruits over time. You may have more success with vegetables if your infant hasn't first experienced the sweetness of fruits. Introduce one new vegetable each few days. Dietary allergy or intolerance is unlikely with the complex carbs of grains, vegetables or fruits, but that is the rationale for using these foods for a few successive days before moving on to the next one. If a certain vegetable is met with refusal, offer later in the meal, at the next meal, later in the day, try again the next day, the next week and continue to offer until you gain a measure of success. Don't be discouraged;



success is often a function of repeated efforts. If you're trying to "obesity-proof" your child, vegetables are a key part of the recipe. With hunger as leverage and repeated effort, success can be yours. Offer any and all vegetables until you've reached a dozen or more and keep them coming frequently so your child remains receptive. I'd suggest you use fresh and frozen vegetables for source material and if you want to go organic feel free to do so. Make enough at one time that you can freeze them in ice cube trays, remove the cubes for easy storage and daily preparation. If you invest in this, I'm convinced that as the child ages and transitions to table vegetables, if only texture changes and the taste of the vegetables remains the same, your toddler and preschooler's acceptance of vegetables will be more certain. You **can** be the family on the block whose children eat all the healthy foods you choose to serve.

So, remember the comment that breast milk or formula consumption will be at its maximum at four months at about 30 oz. If the baby embraces spoon-feeding after the four-month visit, by six months, consumption will be down to 25 oz., by nine months 15 to 20 oz. and by the first birthday, 12 to 15 oz. Generally, none of this will you have to think about or orchestrate as most babies and families naturally fall into this pattern of consumption. Beyond four to six months of age where you could be using spoon foods, the timing of the feeding of spoon/weaning foods may be used as a tool to influence total daily calorie intake. If you have a baby who's overweight, consider spoon-feeding cereal and vegetables (low calorie foods) before breast milk or formula (high calorie foods). Take your time, small spoonfuls, pause when you can, keep it fun and interesting and you'll likely find that the amount of breast milk/formula being consumed will be reduced. If your baby is struggling to gain weight, generally breast milk/formula should precede the spoon foods so that spoon-feeding does not reduce the volume of breast milk/formula. Altering the calorie concentration of breast milk or formula from the standard calorie density should not be done without specific instructions to do so from a qualified professional.

Now moving on to fruits. You certainly can add some of these during the introduction to



veggies. If you see your baby developing a clear preference for the fruits, be careful with this decision. Somewhat more calorie dense than the vegetables, this food group is interesting to babies, well tolerated and usually transitions easily into a well-accepted food in later life. Relative to vegetables, I'd keep this food somewhat restricted so emphasis remains on grains (cereals) and vegetables.

You certainly can add meat and poultry as a pureed food. Use a braising recipe so the pureeing process is simpler. These animal products are a good protein source and more calorie dense than equal portions of fruits, vegetables, and grains. So if you have a child who is underweight and is reluctant about breast milk or formula (the most calorie dense part of infant diets), animal protein can be a welcome nutritional addition to the diet. The iron in the flesh foods (meat, poultry, and fish) is much more readily absorbed than the iron in infant cereals. The flesh foods are unique in their ability to provide dietary zinc. This is a special area of vulnerability in the breast fed infant because the amount of available zinc in human milk wanes over the months of breast-feeding and may not be an adequate source after six months of life.

Salt is a learned preference and I'd suggest you not start teaching this preference. Other than that, I'd suggest that you cook foods for the baby that represent the same techniques you'll use in later life. If your family cooks with a great deal of spicy hot peppers—jalapeno, habanero, or Thai chili's, perhaps some selectivity will be needed. It's important that pureed baby foods taste, as they will in later life so that your baby has the greatest probability of maintaining a lifelong interest in plant foods—vegetables, fruits and grains. If the parents are not good plant food eaters, this is a time for change. This is yet another time where the adage "do as I do, not do as I say" is appropriate. There is little debating that if the parents don't like and eat plant foods, as a priority there is little to no chance the children in the family will develop these preferences. This teaching and emphasis are well worth the effort. An absence of plant foods in the diet will be associated with constipation, obesity, hypertension, type II diabetes mellitus, gastrointestinal malignancy, and a shortened lifespan.



Remember this is America, land of the restaurant and home of the “take-in”. The busy American lifestyle lends itself to short cuts and certainly, for more than a generation, one of the short cuts has been the absence of work in the kitchen. You **can** compensate for the usual deficit in food choices prepared outside the home. This will require your attention to buying extra vegetables in restaurants and preparing extra vegetables to accompany “take-in”. Clearly the modern grocery has frozen vegetables and washed and “parsed” fresh vegetables that allow the busy family to add vegetables to the “purchased” meal with a minimum of prep work and time investment. Stock your kitchen with these tools, (depending on the product selected) they have a shelf life of days to months and will greatly enhance your efforts to increase your plant product consumption. The limitations in culinary skills mean many families have limited skills in the kitchen and will raise children who mirror that deficit. Culinary arts are a life skill that is needed by both genders. Parents need these skills to teach to children. There are lots of fun resources out there on the web and TV. The Food Channel and Epicurious.com come to mind as examples of each. Learn to be a “foodie” and work to teach your children this life skill and generations in your family will be the beneficiary.

In summary, keep it friendly but remember you’re in control and developing a lifetime of healthy preferences through persistence is an important goal. Most of the spoon foods should be vegetables, grains, fruits and some animal protein. Calories in infant diets will continue to be dominated by breast milk or formula until about nine months when liquid versus spoon-fed calories will be just about equal.

