

# Vickerstaff Health Services Inc.

## FACTSHEET

### FEEDING THE ALLERGIC INFANT: ADDING SOLID FOODS AFTER SIX MONTHS OF AGE

#### GENERAL INFORMATION

When adding solid food to the allergic infant's diet, there are two goals:

1. To increase the chances of the development of *tolerance*.
2. To avoid *sensitization* and the development of allergic reactions.

#### Definitions:

**Allergic sensitization:** Priming of the immune system to respond to an allergen. The response usually results in symptoms of allergy (atopy)

**Tolerance:** Recognition by the immune system that the food components are foreign but safe. The immune system does not respond, there is no adverse effect, and no signs of allergy.

#### IMMUNE MECHANISM LEADING TO TOLERANCE

We need to ensure that as foods are introduced to the developing baby its immune system develops tolerance to them. The precise immunological mechanisms that will lead to tolerance or sensitization are not fully known. However, we do know that the immune system learns that food is “foreign but safe” through a process that depends on exposure to small quantities of the food during the early stages of the infant’s development. We take advantage of this process by exposing the potentially allergic baby to new foods in a very specific manner.

Starting with those foods that are usually the least likely to cause allergy, we introduce each new food separately, beginning with a very small quantity. As the baby tolerates the food (that is, does not show any symptoms of allergy) we gradually increase the quantity until baby tolerates a full serving. We then proceed to another food and introduce it in the same manner.

The following guidelines will assist you through this process.

#### GUIDELINES FOR INTRODUCING FOODS TO THE ALLERGIC BABY

##### *Sequence of introducing foods*

The least allergic foods should be introduced first (refer to **Table 1**)

No foods other than mother’s breast milk (or if breast-feeding is not possible, extensively

hydrolysed casein hydrolysate formula) should be introduced prior to six months of age. A new food can usually be added every week. However, for an exceptionally allergic infant the interval between additions may need to be extended to every second week or even longer. This will depend on the baby's reactions.

Introduction of the most highly allergenic foods should be delayed until after twelve months.

Chocolate, peanuts and nuts should not be introduced until after two years of age; some authorities recommend delaying the introduction of peanuts and nuts until after three years.

Breast feeding should be continued while adding new foods as human milk provides protection.

**Table 1** shows the sequence of introducing foods, starting with those that are least likely to cause allergy. The selected foods are:

Usually acceptable to infants

Easily digested at the specified age of introduction

Foods commonly introduced to babies in most Western countries

### ***Method of introducing foods***

The foods should be introduced first in their pure form, that is, not mixed with any ingredient other than breast milk (or extensively hydrolysed casein hydrolysate formula if breast-feeding is not possible). Cook single food in plain water. Sieve or puree.

Some Heinz Beginner Foods (carrots, green beans, squash, sweet potatoes, peaches, pears, plums) and Gerber □ First Foods (carrots, green and yellow beans, squash, sweet potatoes, peaches, pears) are suitable.

Gerber and Heinz Infant chicken, beef, veal are suitable, but the lamb has citrus added.

Pure grains should be cooked in water and pureed for initial introduction.

Some infant cereals (Pablum) contain other ingredients including milk, malt, and soy, which might cause an adverse reaction. Introduce the pure grain (for example, pureed boiled rice, oatmeal, etc) before giving the pablum.

Once tolerance to the single grain is established, proceed to the complete cereal product (pablum). If the baby shows signs of allergy to the pablum, each additional ingredient in the product can be tested separately if you wish. Otherwise, continue to feed the pure grain, introduce other foods, and wait a few weeks before trying the pablum again.

Most infant cereals contain iron, which can be an important source of this essential mineral during early infant feeding. If the enriched infant cereal is not tolerated by the baby, iron in the form of red meats should be introduced as early as six months of age.

## **PROCEDURE FOR INTRODUCING PURE FOODS TO ALLERGIC INFANTS**

### **Pre-feeding precautions**

- Apply a small amount of a new food to the cheek, and wait for 20 minutes to see if a reddened area appears at the site of application. If redness does appear, this "early warning sign" indicates a probable allergic response to the food. Do not give this food to the baby. Wait a few months

before trying this food again.

- If a reddened area does not appear, apply a little of the food to the outer border of baby's lower lip. If there is no reaction at the site of application after about half an hour, feed the food to baby in the following manner:

## **Day 1.**

**Morning** (breakfast): Feed ½ teaspoon of the new food.

Monitor the child's reaction. Wait four hours.

If no adverse reaction is apparent, proceed:

**Afternoon** (lunch): Feed 1 teaspoon of the same food.

Monitor the child's reaction. Wait four hours.

If no adverse reaction is apparent, proceed:

**Evening** (supper): Feed 2 teaspoons of the same food.

Monitor the child's reaction. Be alert for any changes in sleeping patterns (restlessness, crying, difficulty settling down to sleep), which might indicate a reaction to the new food.

## **Day 2.**

**Do not feed any of the new food.** Monitor the child's reactions during the day.

Look for delayed reactions to the food eaten yesterday.

## **Day 3.**

If no adverse reactions have appeared, test the same food as on Day 1 (eliminating the cheek and lip test), but use larger quantities at each feeding:

**Morning** (breakfast): Feed 2 Tablespoons of the food.

Monitor baby's reactions as on Day 1.

If no adverse reaction is apparent:

**Afternoon** (lunch): Feed ¼ cup of the same food.

Monitor baby's reactions.

If no adverse reaction is apparent:

**Evening** (supper): Feed as much of the food as baby wants.

Monitor baby's reactions.

## **Day 4.**

Monitor baby's reactions as described for Day 2.

If no adverse reactions occur, the food may be considered "safe" and can be included in the infant's diet.

If the child has an **adverse reaction** to the food at any time, discontinue the food immediately and do not test the same food again for about 2 months. Wait *at least 48 hours after the symptoms have subsided* before testing a new food.

If the food is **tolerated**, include it in the child's diet. Some authorities believe that by including the food in the child's diet at least once every 4 days, tolerance to the food will be maintained. Including large doses frequently every day, on the other hand, is thought to risk sensitizing the baby to develop an allergic reaction to the food. Moderation is the best strategy.

#### **Adverse reactions to look for:**

If baby obviously rejects the food by grimacing or spitting it out forcibly, she/he may be responding to an unpleasant sensation due to an allergic reaction inside the mouth. Discontinue the food.

If baby takes the food, but a visible reaction appears around the mouth (reddening, red patches, hives), or hives (itchy, flat, red patches) appear anywhere on the body, discontinue the food.

If baby shows obvious signs of abdominal discomfort (increased crying, drawing up of the legs, abdominal bloating), itching, or irritability, it is a clear sign of an adverse reaction. Discontinue the food.

Abdominal reactions may be followed by spitting up, vomiting, diarrhea. These are all strong adverse reactions and the food must be discontinued.

Delayed reactions (occurring 6-8 hours or longer after eating the food) often include respiratory symptoms (stuffy nose, frequent sneezing, persistent coughing, wheezing), or skin reactions (exacerbation of eczema, hives).

**CAREFUL, WELL SPACED, WELL OBSERVED FOOD INTRODUCTION IS  
ABSOLUTELY WORTH THE EFFORT.**

TABLE 1

SEQUENCE OF ADDING SOLID FOODS FOR THE ALLERGIC BABY

Age of Introduction	Grains and Cereals	Vegetables	Fruits and Fruit Juices	Meat and Alternates	Milk and Milk Products	Nuts, seeds, other
<b>Six to nine months</b>	Rice Millet       Tapioca Arrowroot	<i>All cooked</i> Yam Sweet potato Squash (all types) Carrot Parsnip Beets Broccoli Potato Green beans Cabbage	<i>All cooked</i> Pear Peach Banana Apricot Nectarine Blueberry Rhubarb	<i>All cooked</i>  Lamb Turkey	Breast milk  If absolutely necessary: Casein hydrolysate formula	None
<b>Nine to twelve months</b>	Barley Rye Oats Buckwheat	Asparagus Avocado Cauliflower Brussels sprouts	Plum Prune Pineapple Grape Apple Cranberry Raisins	Chicken Veal Beef	Breast milk or  Casein hydrolysate formula	None except vegetable oils in infant formulas
<b>Twelve to twenty-four months</b>	Corn Wheat  Other grains	Green pea Spinach Tomato Celery Cucumber Lettuce Onion Garlic Lima beans Broad beans Soy Other legumes Raw vegetables	Citrus fruits (orange, lemon, lime, grapefruit) Strawberry Raspberry Other berries Melons Mango Fig Date Cherry Any raw fruits	Ham Pork Fish Egg	Yoghurt (plain)  Whole milk White cheese Cottage cheese	Flax seed  Seed oils:  Canola Safflower Sunflower
<b>After two years</b>	All	All	All	Shellfish	All others including ice cream	*Peanut Nuts Chocolate Sesame seed Other seeds

\* Some authorities recommend not introducing peanuts until after 3 years of age