

Preferences, intolerances, allergies: Matching Formulas to fit the Diagnosis

Oregon WIC November 2012

Reasons for Formula Issuance

- **Preference**
- **Intolerance**
- **Food allergy**

Soy is a Preference

- Soy-based formulas are indicated for:
 - Family food preference to exclude cow's milk from the diet
 - Vegetarian diets
- Soy-based formulas are NOT indicated

for:

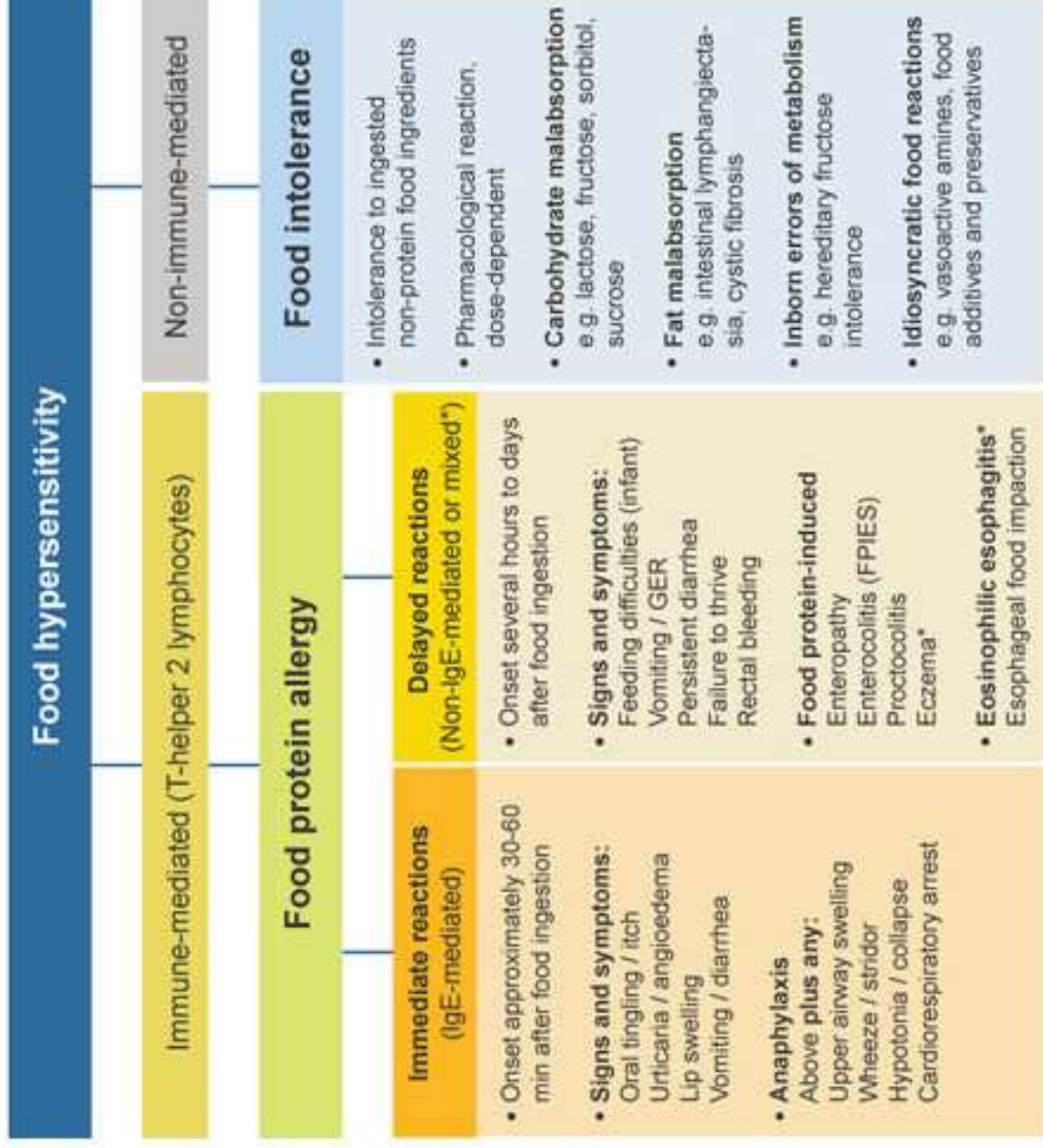
- Premature infants
- Cow's milk protein allergy



Soy Formula & Preterm Infants

- **American Academy of Pediatrics (AAP) does not recommend soy-based formulas for infants born <1800 grams (4 lbs) for the following reasons:**
- **Preterm infants on soy-based formula demonstrated significantly less weight gain, less linear growth and lower serum albumin levels**
- **Risk of osteopenia**

Adverse reactions to foods



Source: CMR 2010

GER= Gastroesophageal reflux; FPIES= food protein induced enterocolitis syndrome

Food Intolerance

- Lactose intolerance is a food intolerance, not a food allergy
- Formula that addresses lactose intolerance:



Similac Sensitive, reduced lactose formula

Food Allergy response in the body

- **Skin**
- **Gastrointestinal**
- **Respiratory**

Allergies: Skin

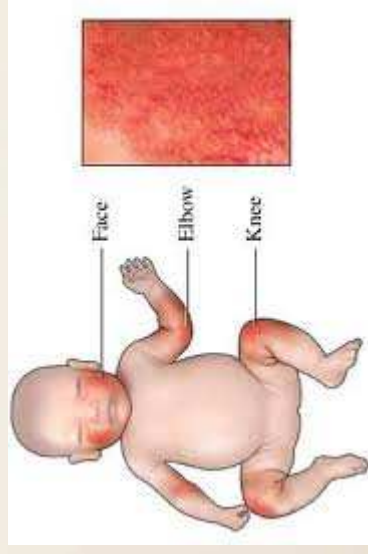
- Hives, eczema-- outward signs of food allergies



Urticaria (hives)



Atopic dermatitis (eczema)

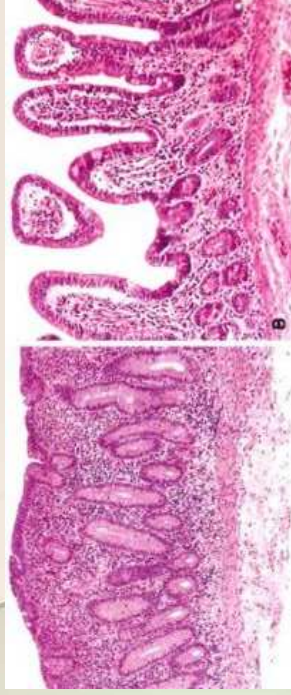


Allergies: Gastrointestinal

- Stool irregularities
- Gastroesophageal reflux disease (GERD)
- Eosinophilic esophagitis
- Enteropathy/severe colitis
- Celiac disease
- Food protein-induced enterocolitis
- Food protein-induced enterocolitis syndrome (FPIES)
- Food protein-induced proctocolitis (FPIP)



enterocolitis



Celiac disease



Ulcerative colitis

Allergies: Respiratory

- Bronchospasm
- Asthma
- Heiner's syndrome
(very rare, pulmonary bleeding after ingesting milk)

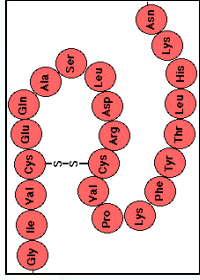


Allergens in Infant formula

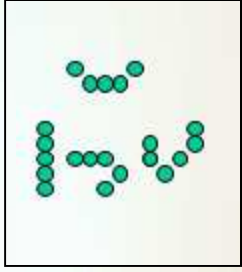
Most Allergenic



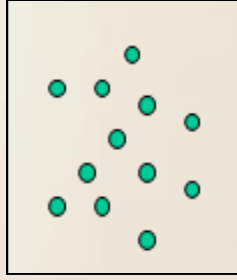
Least Allergenic



All standard infant formulas (cow-based and soy-based) are made of intact protein chains that can trigger allergic reactions



Hydrolysate formulas break the protein chain into pieces, peptides. Helps with tolerance, may still trigger an allergic reaction

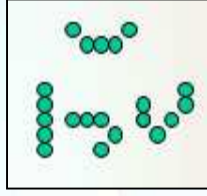


Amino acid-based formulas are made from individual non-allergenic amino acids

Hypoallergenic Infant Formulas

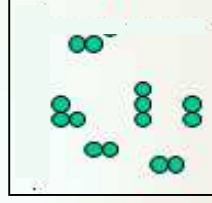
More Allergenic

Partial Hydrolysate:



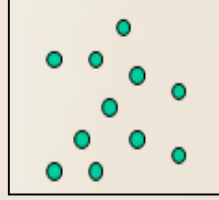
Good Start Gentle 100% whey

Extensive Hydrolysate:



Mead Johnson: Nutramigen, Pregestimil Abbott: Alimentum

Amino acid-based



Nutricia: Neocate infant
Abbott: Elecare
Mead Johnson: PurAmino
(formerly Nutramigen AA)

Least Allergenic

Specialized infant formulas comparison to child medical formulas

Hydrolyzed infant formulas



Pregestimil



Nutramigen



Alimentum

Hydrolyzed whey protein child formulas



PediaSure Peptide



Peptamen Junior

Amino acid base infant formulas



Neocate infant



Elecare



PurAmino
(Nutramigen AA)

Amino acid based child formulas



Neocate Junior



Elecare Jr



Splash