



Infant and Pediatric Formulas: Choices and Indications

Jan Cox, MS RDN



Objectives

- Identify compositional differences of contract formulas for infants and toddlers
- Identify indications for use of specialty formulas for infants and toddlers
- Discuss methods to handle common infant feeding problems

Outline

- Overview of contract infant and pediatric formulas
- Indications for special infant and pediatric formulas
- Case Studies



Benchmark for Infant Nutrition

Breastfeeding is the preferred method of infant feeding to meet optimal growth and development. Benefits are numerous:

- Protein quality and quantity
- Low renal solute load
- Ease of digestion
- Immunologic agents
- Decreased incidence/severity of diarrhea
- Enhanced cognitive development
- Protection against necrotizing enterocolitis

Barriers to Breastfeeding

- Young maternal age
- Lack of prenatal care/education
- Lack of professional knowledge/support
- Lack of support in the workplace
- Formula advertising and availability

Over 80% of infants in the United States are ever breast fed, but ...

Only 44% are exclusively breastfed at 3 months and only 52% are still receiving some breast milk at 6 months.

Breastfeeding in Michigan (WIC) (3/13/2017)

• Initiated/ever breastfed	80.8%	(64.8%)
• Breastfeeding at 4 weeks		(38.8%)
• Breastfeeding at 2 months		(27.5%)
• Breastfeeding at 6 months	51.6%	(10.8%)
... which translates to ...		
• No breast milk ever	19.2%	(35.2%)
• Formula at 4 weeks		(61.2%)
• Formula at 2 months		(72.5%)
• Formula at 6 months	48.4%	(89.2%)

So, in our quest
for a substitute breast (milk),
at least for infants,
what are the options?

Infant Formula Classifications

Standard Formulas

- Cow's Milk Based
 - Standard
 - Partially hydrolyzed protein
 - Prebiotics
 - Rice starch
 - Probiotics
- Soy Protein Based

Specialty Formulas

- Extensively Hydrolyzed Protein
 - Free Amino Acid
 - Lactose-Free
 - Preterm Infant
 - Preterm Discharge
 - Lower Mineral
-
- Human Milk Fortifier

Pediatric Formula Classifications

- Standard Oral
 - 1 kcal/mL
 - 1.5 kcal/mL
 - With or without fiber
- Standard TF
 - With or without fiber
 - Casein based
 - Blenderized foods
 - Reduced calorie
- Special formulas
 - Peptide based
 - Amino acid based
 - Fat modified
 - Clear liquid

Ingredients

- Proteins
- Fats
- Carbohydrates
- Prebiotics/Fibers
- Probiotics

Protein

- Infant formulas
 - Cow's milk—casein and/or whey
 - Soy milk
 - Goat's milk
 - Amino acids
- Pediatric products
 - Cow's milk—casein and/or whey
 - Meat (chicken) and pea protein
 - Amino acids

Protein

The number of amino acids in a protein can be approximated from its molecular weight, measured in daltons, with less than 3kD defining “hypoallergenic”.

- Whole casein – 12-25 kD
- Bovine whey – 14-67 kD
- Partially hydrolyzed - < 5 kD
- Extensively hydrolyzed - < 3 kD
- Amino acids – average 0.1 kD

Fat

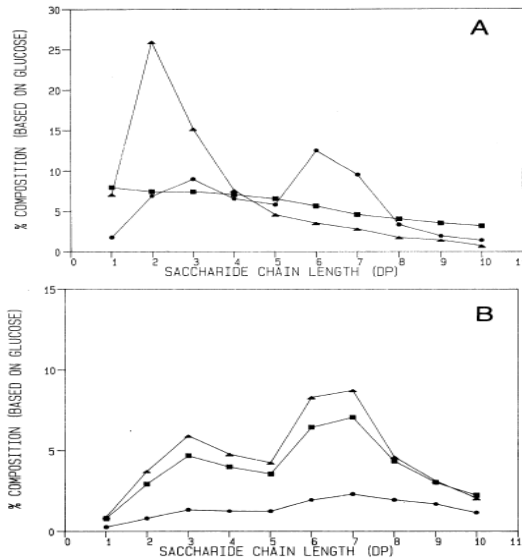
- LCT: corn, palm, soy, high oleic safflower or sunflower, canola, etc.
- DHA (algae) and ARA (fungus)
- MCT: Medium chain triglycerides
 - 8-12 carbon
 - Do not require bile or lipase to be absorbed
- Essential fatty acids: 18 carbon
 - Linoleic acid
 - Linolenic acid

Carbohydrate

- Lactose
 - Natural mammalian carbohydrate
 - Requires lactase, produced at the tips of the microvilli
- Sucrose
- Blenderized pediatric products also contain fruit and/or juice
- Corn derived carbohydrates
 - Complex
 - Simple

Corn Derived Carbohydrates

Brooks JR, Griffin VK. Cereal Chem. 1987. 64:253-257.



A: corn syrup solids

▲ DE 33.7

■ DE 24

● DE 17.7

B: maltodextrins

▲ DE 12.4

■ DE 10.9

● DE 4.8

Prebiotics

- **Breast milk content**
 - Galacto- and fructo-oligosaccharides
 - 200 distinctly different structures
 - 5-10 g/L—significant quantities
- **Infant formula**
 - Galacto-oligosaccharides
 - Polydextrose
- **Pediatric formula**
 - Insoluble fiber—pea, soy, oat bran
 - Soluble fiber—FOS, inulin (chicory), oat fiber

Probiotics—live bugs!

Of course, not every live bug, but:

“Live microorganisms which when administered in adequate amounts confer a health benefit on the host.”

Standard Products

- **Infant Products:**
 - Enfamil
 - Gentlease
 - Reguline
 - Enfamil AR
 - Soy
- **Pediatric Products:**
 - Pediasure (oral)
 - Boost Kids (oral)
 - Nutren (TF)
 - Compleat Pediatric (TF)

Cow's Milk - Infant



- Indication: Infants 0-12 months
- Protein: 60:40 whey casein ratio
 - Ratio similar to mature breast milk
 - β -Lactoglobulin not α -Lactalbumin
- Carbohydrate: Lactose
- Prebiotics for normal gut flora
 - GOS – galactooligosaccharides
 - Polydextrose
- DHA/ARA fatty acids
 - Worldwide average levels
 - Supports mental, visual, and immune development

Cow's Milk – Partially Hydrolyzed



- Indication: fussiness and gas
- Protein: partially hydrolyzed
 - Advertised as “easy to digest”
 - 60:40 whey casein ratio
 - Uses soy based enzymes
 - Do not use for milk allergy
 - No claims for allergy prevention
- Carbohydrate
 - Corn syrup solids (80%)
 - Lactose (20%)
 - No prebiotics
- DHA/ARA fatty acids

Cow's Milk – 3 in 1



- Indications: softer stools
- Protein: Partially hydrolyzed
 - Nonfat cow's milk
 - Whey protein concentrate
 - Soy based enzymes
- Carbohydrate:
 - Maltodextrin 50%
 - Lactose 50%
- Prebiotics: GOS/Polydextrose
- DHA/ARA fatty acids

Cow's Milk Based - Rice starch



- Indication: Uncomplicated GER/regurgitation with appropriate positioning and feeding
 - Viscosity 10 times routine formula
 - Flows well through standard nipples
 - Viscosity increases 12 fold in stomach acid
 - Do not concentrate to more than 24 Cal/oz
 - May be useful for some infants as a “thickened liquid” to manage suck/swallow dysfunction per OT/SLP
- Protein: 20:80 whey: casein ratio
- Carbohydrate:
 - Rice starch (29% in powder; 20% in liquid)
 - Lactose (59% in powder; 66% in liquid)
 - Maltodextrin (12% in powder; 14% in liquid)
- Prebiotics: GOS/Polydextrose
- DHA/ARA fatty acids

Soy



- Indications: galactosemia, lactose intolerance, or vegan diet
 - Do not use for preterm infant < 1.8 kg or 4 pounds birth weight
 - No proven benefit for colic or allergy prevention in high risk family
 - Use with caution in cow's milk allergy:
 - IgE : if + milk, 10-14% + soy
 - Non-IgE : if + milk, 30-60% + soy
- Protein: soy
- Carbohydrate: corn syrup solids
- DHA/ARA fatty acids

Allergy/Intolerance: IgE Mediated

- Occur immediately with 1-2 hours
- Cutaneous – urticaria/angioedema: hives
- Gastrointestinal – oral itching/abdominal pain/vomiting diarrhea
- Respiratory – wheeze, laryngeal edema, rhinocongitivitis
- Anaphylaxis (milk = 8-15% of food related fatal or near fatal reactions; soy < 1%)
- 10-14% of milk + may react to soy protein
- 10% of milk + may also react to extensively hydrolyzed protein

Allergy/Intolerance: Mixed

- Atopic dermatitis
 - 40% may be food related
 - Milk + eggs + soy + wheat = 90% allergenic foods
- Gastrointestinal
 - Eosinophilic esophagitis—feeding problems, vomiting, abdominal pain, dysphagia, GER
 - Eosinophilic gastroenteritis—abdominal pain, vomiting, diarrhea, weight loss

Allergy/Intolerance – Non-IgE

- Food protein induced enterocolitis
 - Profuse vomiting and diarrhea within 2-3 hours
 - Dehydration/lethargy
 - Occult blood loss
 - Fecal smears: leukocytes and eosinophils
 - Failure to thrive/ hypoalbuminemia
 - 45% (range 30-64%) milk + also react to soy
 - 30% of milk + also react to extensively hydrolyzed protein
- GER +/- not sole symptom
- Colic +/- not sole symptom
- Pulmonary (rare) – cough, wheeze, dyspnea, recurrent otitis media, nasal congestion, anorexia

Soy

- **AAP Position Paper—2008**
 - Limited indications for use of soy formula
 - Market share 25% of infant formula prior to AAP statement, and 13% in 2009
- **Use in Michigan WIC Program**
 - 19% of all infants in 2008, down to <7%

Pediatric Standard Products (oral)



- **Pediasure**
 - Milk protein concentrate
 - MCT:LCT 20:80; DHA
 - Corn maltodextrin and sugar
 - Products with fiber: FOS, oat fiber and soy fiber



- **Boost Kids Essentials**
 - Casein and whey protein
 - MCT:LCT 20:80
 - Maltodextrin and sugar
 - Products with fiber: guar gum and soy fiber

Pediatric Standard Products Indications



- **Pediasure**
 - At risk for malnutrition
 - 1.5 kcal/oz for increased nutrient density/fluid restrictions
 - Sole source or supplemental nutrition
- **Boost Kids Essentials**
 - Inadequate oral intake
 - Increased energy needs
 - Malnutrition
 - Weight maintenance
 - Interim sole source nutrition

Pediatric Standard Products (tube feedings)



- **Nutren Junior**
 - Milk and whey protein concentrates
 - MCT:LCT ratio 20:80
 - Maltodextrin and sugar
 - Fiber product contains pea fiber, FOS and inulin (chicory)
- **Compleat Pediatric**
 - Chicken, casein, pea puree
 - MCT:LCT ratio 20:80
 - Corn syrup, peach puree, cranberry juice
 - Fiber: partially hydrolyzed guar gum, fruit and vegetable fiber

Pediatric Standard Products Indications



- Nutren Junior
 - Growth failure
 - Malnutrition
 - Short- or long-term tube feeding
 - Fiber product—bowel management
- Compleat Pediatric
 - Support normal growth
 - May help address feeding intolerance common in children with developmental disabilities
 - Malnutrition
 - Reduced calorie—helps address disproportionate weight gain associated with developmental disabilities

Extensively Hydrolyzed Protein



- Indications: allergy or sensitivity to cow's milk and soy proteins
- Pregestimil – casein hydrolysate
 - Corn syrup solids, corn starch
 - 55% MCT, 45% LCT
- Nutramigen – casein hydrolysate
 - Enflora LGG in powdered product
 - Corn syrup solids, corn starch
 - 100% LCT (palm, soy, coconut, high oleic sunflower)
- Alimentum – casein hydrolysate
 - 70% corn maltodextrin, 30% sucrose
 - 70% sucrose, 30% tapioca (RTF)
 - 33% MCT, 67% LCT

Extensively Hydrolyzed Protein



Other indications:

- **Pregestimil**
 - Fat malabsorption/steatorrhea
 - Intractable diarrhea
 - Cystic Fibrosis
 - Short Bowel Syndrome
 - Severe protein calorie-malnutrition
- **Nutramigen**
 - Colic due to cow's milk allergy
- **Alimentum**
 - Protein maldigestion
 - Fat malabsorption

Extensively Hydrolyzed Protein Pediatric Product Indications



- **PediaSure Peptide (casein/whey)**
 - Malabsorption
 - Maldigestion
 - Other GI conditions
 - **Contains milk and soy**
- **Peptamin Junior (whey)**
 - Impaired GI function
 - Critical illness/trauma
 - Transition from TPN to feedings
 - Cerebral palsy
 - Transplant patients
 - **Not for use in cow's milk allergy**

Extensively Hydrolyzed Protein

Use in infantile colic

- Manufacturers market for use in colic with relief in 24-48 hours.
- “Colic” not proven to be protein sensitivity
- If changed for this reason by health care provider, re-evaluate and re-trial on contract formula around 4-6 months of age.

Cost comparison (per day based on 32 oz/day)

Standard formula (including soy)	\$4-5
Extensively hydrolyzed formula	\$6-10
Amino acid based formula	\$13-15

Free Amino Acid Formulas

• Products

- Elecare Infant (Abbott)
- Puramino (Mead Johnson)
- Neocate (Nutricia)

• Indications

- Multiple food/Severe food allergies
- Eosinophilic gastrointestinal disorders
- Protein maldigestion
- Malabsorption
- Short bowel syndrome
- GERD (Neocate)
- FPIES (Neocate)
- Other conditions requiring amino acid based diet



Free Amino Acid Formulas

Similarities:

- Protein: 1.3-1.5 times standard
- Powdered product only
- Vitamins: Similar to standard



Free Amino Acid Formulas

Differences:

- Fat
 - Elecare Infant: 67% LCT; 33% MCT
 - Puramino: 67% LCT; 33% MCT
 - Neocate: 67% LCT; 33% MCT
- Minerals: Ca, P, Mg
 - Elecare Infant: 1.4-2 x standard
 - Puramino: 1.2 x standard
 - Neocate: 1.3-2 x standard
- Scoop size:
 - Neocate and Puramino: 1 scoop/1 oz water
 - Elecare: standard 1 scoop/2 oz water



Use in Michigan WIC: 2016

- Amino acid based products
 - Frequency: 212
 - Percentage: 0.45%
- Extensively hydrolyzed products
 - Frequency: 414
 - Percentage: 0.9%
- Extensively hydrolyzed with prebiotics
 - Frequency: 1468
 - Percentage: 3.15%

Breast feeding and allergy

- Breastfeed exclusively for at least 4 months if infant is at high risk for atopic disease
- Elimination diets in pregnancy and lactation are not recommended to prevent atopic disease
- Insufficient evidence for elimination diets for mothers of children with atopic disease

Breast feeding and allergy

- Low-allergen maternal diet to reduce signs of colic only in infants younger than 6 weeks of age
- If an infant has a confirmed food allergy, the causal food should be eliminated from maternal diet
- If a breastfeeding mother is avoiding allergenic foods, refer for dietary counseling to prevent deficiency

So, what's lactose free?

- Soy formula
- Extensively hydrolyzed formula
- Amino acid based formula

Is lactose free ever needed?

- Indications
 - Primary lactase deficiency (extremely rare in infants)
 - Secondary lactase insufficiency
- Notes
 - Changing formula to avoid lactose also changes other components
 - Soy formulas not indicated for malabsorption disorders

Fat Modified Products



- Boost Breeze—fat free
 - Clear liquid diet
 - Fat malabsorption
 - Malnutrition
 - Not a complete diet
- Enfaport—fat 84% MCT
 - Chyllothorax
 - LCHAD deficiency
- Ketocal—4:1 ratio fat:CHO + protein
 - Management of intractable seizures
 - Pyruvate dehydrogenase deficiency
 - Glucose type-I transporter deficiency

Fat Modified Products: MCT/LCT

• Pediasure Peptide	60:40
• Peptamin, Jr	60:40
• Pregestimil	55:45
• Pediasure	40:60
• E028 Splash	35:65
• Elecare Infant/Jr	33:67
• Neocate	33:67
• Puramino	33:67
• Nutren, Jr	20:80

Human Milk Fortifier

Indications:

- Premature infants, birth weight less than 2 kg (4 lb 6 oz)—particularly infants less than 1250 grams (2 lb 12 oz) at birth
- Infants with low serum phosphorus levels or osteopenia
- Use as directed (1 packet/25 mL human milk) until infant reaches 3.6 kg (8 lb) or achieves appropriate growth pattern (limit 20 packets/day)
- Not for use in term infants



Human Milk Fortifier Composition

- Cow's milk protein/whey
- Corn Syrup Solids
- LCT and MCT
- Adds 3.25 Cal/packet
- 4 packets/100 mL = 24 Cal/oz
- Additional minerals: calcium, phosphorus, magnesium, zinc, (iron), manganese, copper, sodium and potassium
- Additional vitamins A, D, E, K, B1, B2, niacin, B6, B12, folic acid, biotin, and pantothenic acid



Premature Infant Formula

- Indications
 - Infants < 34 wks, < 1850 g (4 lbs)
 - Up to 2500 (5½ lbs) - 3600 g (8 lbs)
 - Up to 500 mL (16.7 oz)/day
 - Rarely used after discharge
 - Weight less than 1850 g (4 lbs)
 - Osteopenia and less than 3600 g (8 lbs)
- Composition
 - Protein: nonfat milk + whey
 - Carbohydrate: corn syrup solids, lactose
 - Fat: MCT (40-50%), soy oil, other, DHA/ARA



Enriched Formulas

- Indications
 - Infant born < 37 wks, < 2000 g (4 lb 6 oz)
 - Greatest benefit for infants < 1250 g
- Composition
 - 22 kcal/oz per label directions
 - Higher nutrient level/kcal than standard
 - Protein
 - Minerals
 - Vitamins
 - Protein: non-fat milk and whey
 - Fat: as for preterm; MCT 20-25%



Enriched Formulas

- Studies recommend for 9 months corrected age or 12 months chronological age
- Until infant reaches genetic growth potential
 - Note growth delay during hospitalization
 - Note head circumference percentile rank
 - Note parental heights
- Until length/age AND weight/age are at least 10th%ile
- Monitor weight for length – may increase to 95th %ile before catch-up linear growth begins, but weight for length should not exceed 95th %ile



Common Feeding Problems

AKA Non-qualifying Conditions—but conditions which may require our attention anyway!

- Colic or Gastrointestinal Discomfort
- Frequent emesis
- Loose stools

Case Study

Jackie is a 2 week old female born at 40 weeks gestation. Mom presents to your WIC clinic with a description of recurrent, prolonged, unexplained crying episodes and wants to try a different formula before everyone in the house goes crazy!

What do you do?

Colic—What is it?

- In an otherwise healthy, well-fed infant:
 - Recurrent, prolonged, unexplained crying
 - Diminished sooth-ability
 - Increased restlessness
 - Crying >3 hours/day, > 3 days/wk, > 3 wks
 - 20% of all infants regardless of sex, race, socioeconomic status, birth order
 - Begins week 2 to 3 of life
 - Peaks at 6 to 9 weeks
 - Resolves by 12 to 16 weeks

Colic—What causes it?

- “Diagnosis of exclusion”
- Immaturity of the GI system
- Immaturity of the central nervous system
- Difficult infant temperament
- Parent-infant interaction problems
 - Infants cues unclear/difficult to read
 - Parents response may not match infant’s need
- Carbohydrate malabsorption from fruit juice
- Cow’s milk/soy protein allergy or intolerance

Colic—What to do?

- Refer to PCP
- Acknowledge difficulty
- Feeding related questions/coaching
 - Early hunger cues/satiety cues
 - Underfeeding/overfeeding
- Eliminate juice
- Gentlease—partially hydrolyzed protein
- Extensively hydrolyzed protein—retry standard formula at 4-6 months
- Breast feeding: 2 week trial of milk, egg, wheat, nut free diet

Case Study

Theodore is a 3 month old male with a history of vomiting. He vomits within 10 to 20 minutes after nearly every feeding. His growth is within normal limits, in fact his weight is at a higher percentile ranking than either length or head circumference.

What do you do?

Emesis—When is it a problem?

- Normal:
 - “Gentle sloshing” up and out of mouth
 - 1-3 tablespoons per feeding
 - Growth is within normal limits
- Problem:
 - Projectile or forceful vomiting
 - More than 3 tablespoons per feeding
 - Growth falters
 - Bile, blood, or coffee ground appearance
 - Recurrent upper respiratory tract infections
 - Concurrent with diarrhea

Emesis—What causes it?

- Position of gastroesophageal junction
- Gastroesophageal reflux
 - Up to 67% of infants up to 4 months
 - Resolves by 7 to 10 months
- Illness: food borne, gastroenteritis, etc.
- Allergy: with diarrhea, growth faltering
- Intestinal obstruction
 - Pyloric stenosis
 - Intussusception
 - Intestinal volvulus

Emesis—What to do?

- Refer to PCP, especially if growth falters
- If growth is not affected:
 - Coach hunger/satiety cues
 - Encourage smaller more frequent feedings
 - Check seal on nipple for air swallowing
 - Burp frequently
 - Avoid jostling after feedings
- Consider a trial of Enfamil AR

Case Study

Monica is a 7 month old infant who just finished a course of antibiotics for an ear infection after an acute episode of gastroenteritis. She continues to have up to six, loose, sometimes watery stools a day. Mom is exhausted from washing and sanitizing everything!

What do you do?

Diarrhea—What is it?

Stools that are:

- Frequent in number
- Large in volume
- Loose to watery in consistency

Diarrhea—What causes it?

- Carbohydrate malabsorption
 - Watery stools, gassy, cramping
 - Stool pH < 6 (acidic)
 - Dehydration sometimes present
- Fat malabsorption
 - Large, bulky, oily, foul smelling stools
 - Pale, white, or grey colored stools
 - Usually poor weight gain
- Protein allergy—usually accompanied by other symptoms: vomiting, atopic dermatitis, wheezing, bloody stool

Diarrhea—What to do?

- Refer to PCP
- Carbohydrate:
 - Gentlease—20% lactose
 - Prosobee—no lactose
 - Retry standard formula after 2 weeks
- Fat: medical condition specific
- Protein allergy:
 - Extensively hydrolyzed protein formula
 - Amino acid based formula
 - Maternal elimination of offending allergen



In Summary

- Identify compositional differences of contract formulas
- Identify indications for use of specialty formulas
- Discuss methods to handle common infant feeding problems

Michigan WIC Formula Update

Kevin Sarb, RDN, MS, MBA

Michigan WIC Formula Update

This presentation has been pre-recorded. Please address questions to:

Kevin Sarb

sarbk@Michigan.gov

517-241-4404

Abbott

Elecare Jr

- ⚙ Introduction of two new flavors has been delayed. No new date has been announced

- ⚙ Chocolate

- ⚙ Banana

Pediasure Peptide 1.0 and 1.5

- ⚙ Reformulation

- ⚙ MCT:LCT Ratio changing from 50:50 to 60:40

- ⚙ Vitamin D, IU changing from

- Pediasure Peptide 1.0 - 125 IU/8 oz (1.0) to 237 IU/8 oz

- Pediasure Peptide 1.5 - 188 IU/8 oz (1.5) to 237 IU/8 oz

Mead Johnson

Label graphics to change on all Michigan WIC Authorized infant formulas

- ⚙ Will be reflected on next printing of Infant Formula insert
- ⚙ Owl removed
- ⚙ Reguline label color will change from peach to teal



Product	Ship Date
Enfamil Infant® 12.5 oz Powder	Mid-May
Enfamil Gentlease.® 12.4 oz Powder	Mid-May
Enfamil A.R.® 12.9 oz Powder	Delayed Early August
Enfamil® Reguline™ 12.4 oz Powder	Delayed Mid-September
ProSobee® 12.9 oz Powder	Delayed Mid-September

Nestle

Peptamen Jr HP

- ⚙ New product - will consider at the next formula review
 - ⚙ 1.2 kcal/ml
 - ⚙ 16 % of calories from protein (Peptamen Jr has 12 %)
- ⚙ For critically ill children ages 1-13 with higher protein and energy needs

Nutricia

Neocate Syneo Infant

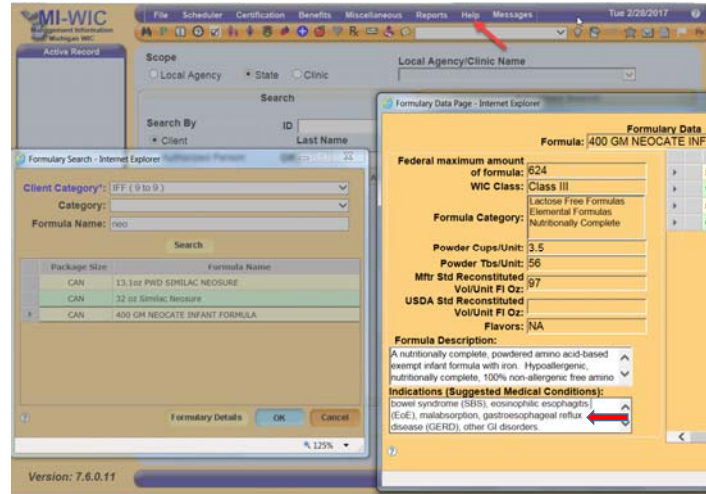
- ⚙ New product - Will consider at the next formula review
- ⚙ Syneo is a blend of
 - Short and long-chain fructooligosaccharides (prebiotic)
 - *Bifidobacterium breve* M-16V (probiotic)
- ⚙ Only amino acid product with pre- and probiotics

Formula Indications

- ⚙ Indications for formulas
 - ⚙ When uncertain, always best to check Formula Help in MI-WIC to determine if formula requested is indicated for qualifying condition

Formula Indications

Neocate Infant is the only infant formula with a GERD indication



Exceptions to the rule

The following formulas can be approved with GERD as the qualifying condition:

- ⚙ Nutramigen
- ⚙ Similac Alimentum
 - ⚙ Justification – most symptoms resolve with these formulas
 - Consultation with experts in the field and supporting literature*:
 - Majority of infants with milk protein allergy (sensitivity) symptoms resolve with an extensively hydrolyzed formula
 - The rest will need an amino acid formula
- ⚙ Similac Alimentum can be approved when medical provider requests RTF:
 - ⚙ Corn free manufactured in RTF only
 - ⚙ Medical provider should address on MDF – “suspected corn allergy”

*Orenstein S, McGowan J. Efficacy of conservative therapy as taught in the primary care setting for symptoms suggesting infant gastroesophageal reflux. J Pediatr 2008;152:310-4

Failure to Thrive

- ⚙ Often Failure to Thrive checked as a qualifying condition for a special formula.
- ⚙ After assessment, in consultation with the medical provider (MP), the CPA/RD has two options – approve or deny.
- ⚙ Although some special formulas are overprescribed, err on the side of caution
 - ⚙ A discussion with the MP could shed light on the client’s condition.
- ⚙ MP may not realize that for an 8 oz formula, issuing the maximum would result in 3.6 bottles per day. The MP may be willing to agree on 1 or 2 bottles per day.

Failure to Thrive

- ⚙ What you can do if unsure of the appropriateness of the formula:
 - ⚙ Consult with the MP
 - ⚙ Issue one or two months of formula and bring back child for a weight check
- ⚙ What you should not do:
 - ⚙ Change “maximum” to 1 or 2 bottles per day without consulting MP
 - ⚙ Change expiration date (unless the cert end date occurs prior to expiration date)
 - ⚙ Make a decision based on cost
- ⚙ This same thought process can be used for any special formula

WIC Policy 7.02 p.3 – Ready To Feed

Ready-to-feed (premix) formula can be selected under special conditions.

- a) Documented unsanitary or restricted water supply
- b) Poor refrigeration
- c) Infant's caretaker having difficulty in correctly diluting powder or liquid concentrate formula
- d) Product manufactured in ready-to-feed form only

WIC Policy 7.03 p. 2

Fully formula fed (IFF) and partially breastfed infants (IBP) 6 through 11 months of age, whose medical condition prevents them from consuming supplemental foods, may receive Class I, II, and III formulas at the same maximum monthly allowance as infants 4 through 5 months of age.

- ⊗ This would be in lieu of receiving supplemental foods
- ⊗ Medical documentation required

WIC Policy 7.03 p.6/7 – Special Instructions

Special instructions:

- i. Clients receiving Class III formula will be designated as high risk.
- ii. Electrolyte or oral rehydration solutions, e.g. Pedialyte, shall not be provided to WIC clients by the WIC Program.
- iii. Similac NeoSure, and Enfamil Enfacare are available only to **premature or low birth weight infants** who have reached four (4) pounds, until catch up growth is complete or until 9 months to 1 year adjusted age.
- iv. Similac Special Care 24 with Iron and Enfamil Premature 24 CAL are available to premature infants until the infant reaches a body weight of eight (8) pounds.
- v. Enfaport, Elecare Infant, Neocate Infant, and Similac PM 60/40, may be assigned up to one year adjusted age for premature infants only.

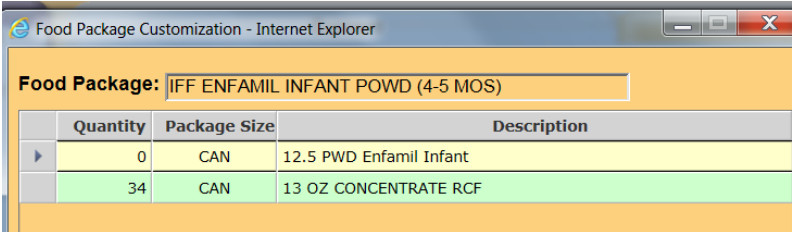
Special Formulas without Formula Packages

The following formulas do not have a defined infant formula (food) package:

- ⊗ Enfamil Premature 24 Cal
- ⊗ Similac Special Care 24
- ⊗ RCF
- ⊗ Similac PM 60/40

Special Formulas without Formula Packages

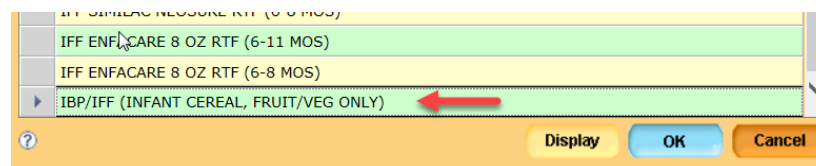
- ⚙ In order to assign a formula for which no formula package exists, the following process should be followed:
 - ⚙ Infant 0 - 5 months – customize any formula package
 - ⚙ Enter quantity of “zero” for the formula in the package
 - ⚙ Search for the formula, highlight row and click “OK”
 - ⚙ Click “Assign”



Quantity	Package Size	Description
0	CAN	12.5 PWD Enfamil Infant
34	CAN	13 OZ CONCENTRATE RCF

Special Formulas without Formula Packages

- ⚙ Infant 6 - 11 months
 - ⚙ Assign IBP/IFF (INFANT CEREAL, FRUIT/VEG ONLY) package, then customize
 - ⚙ Search and select requested formula



Sourcing Special Formulas

- ⚙ Unique formulas seldom issued require assistance from the LA/CPA to help client redeem through vendor pharmacy
- ⚙ National Distribution Code (NDC) is best way to determine if pharmacy can order, especially if there are a variety of flavors
- ⚙ Contact pharmacy and ask pharmacist/pharmacy tech if they can order formula using NDC code rather than formula name – less chance of error
 - ⚙ Many pharmacies, including Walmart and Meijer, use McKesson as their medical distributor
 - ⚙ Kroger and CVS utilize Cardinal as their medical distributor
- ⚙ When clients report difficulty finding a pharmacy able to order special formula:
 - ⚙ Run Report/Participation/Formula Usage Report to find other clients redeeming the formula
 - ⚙ Look up in EPPIC using family ID (with a W at the end) to find vendor able to provide product
 - ⚙ Call DuJour line for assistance if necessary

Special Formula/Food
Request form

Special Formula/Food Request Form

Section 1

The diagnosis should be “specified.”

	1. QUALIFYING MEDICAL CONDITION(S):
<input type="checkbox"/>	Premature birth < 37 weeks gestation
<input type="checkbox"/>	Failure to thrive
<input type="checkbox"/>	Severe food allergies (specify) _____
<input type="checkbox"/>	Immune system disorder (specify) _____
<input type="checkbox"/>	Metabolic disorder/inborn errors of metabolism (specify) _____
<input type="checkbox"/>	Medical condition that impairs nutrition status (specify) _____
<input type="checkbox"/>	Gastrointestinal disorder/malabsorption syndromes (specify) _____



Special Formula/Food Request Form

Qualifying condition meets requirement?

1. QUALIFYING MEDICAL CONDITION(S):
<input type="checkbox"/> Premature birth < 37 weeks gestation
<input type="checkbox"/> Failure to thrive
<input type="checkbox"/> Severe food allergies (specify) _____
<input type="checkbox"/> Immune system disorder (specify) _____
<input type="checkbox"/> Metabolic disorder/inborn errors of metabolism (specify) _____
<input checked="" type="checkbox"/> Medical condition that impairs nutrition status (specify) <u>Cystic Fibrosis</u>
<input type="checkbox"/> Gastrointestinal disorder/malabsorption syndromes (specify) _____

Special Formula/Food Request Form

Medical Condition	
<input type="checkbox"/>	AIDS
<input type="checkbox"/>	Arthritis, Juvenile Rheumatoid
<input type="checkbox"/>	Asthma, Moderate or Severe Persistent
<input type="checkbox"/>	Bronchitis
<input type="checkbox"/>	Cancer
<input type="checkbox"/>	Cardiorespiratory Diseases
<input type="checkbox"/>	Celiac Disease
<input type="checkbox"/>	Cerebral Palsy
<input type="checkbox"/>	Cleft Lip or Palate
<input type="checkbox"/>	Crohn's Disease
<input checked="" type="checkbox"/>	Cystic Fibrosis
<input type="checkbox"/>	Developmental, Sensory, or Motor Disabilities

Current

Nutrition and Health Summary

High Risk

Date	Detailed Description
	Receives ongoing preventive health care including screenings and immunizations.
	Achieves a normal growth pattern.
	Remains free from nutrition or food-related illness, complications, or injury.

Medical conditions

Date	Detailed Description
4/26/2017	Cystic Fibrosis (360.02)

Special Formula/Food Request Form

Clients receiving a Class III formula should be designated as High Risk

Nutrition and Health Summary

High Risk

Formula: 14.1 oz Pwd Elecare Jr

Client Name	Client ID	Client Category	Reauth Date	Cert End Date	Phone Number	High Risk
		C2	07/29/2017	08/08/2017	(616)-238-2772	Y

Special Formula/Food Request Form

Section 2

2. FORMULA: _____

Select Amount Requested: _____ Ounces/day or Maximum Allowable*

*Up to the WIC maximum allowable may be provided. Maximum allowable may not meet patient's full need.
A list of Michigan Authorized Formulas is available at: www.michigan.gov/wic. click on Medical Providers

Indications (Suggested Medical Conditions):

hydrolysate formulas. It is nutritional therapy for severe food allergies, eosinophilic gastrointestinal disorders, short-bowel syndrome, and malabsorptive

Special Formula/Food Request Form

Section 3

3. SUPPLEMENTAL WIC FOODS: (CHECK ONE; MUST BE COMPLETED FOR ALL FORMULA REQUESTS)

All (issue all allowed age appropriate WIC Foods starting at six months)

Restriction (check foods to be OMITTED):

Infant (6-12 months)	Child (1-5 years) and Woman	Special Instructions/Comments:
<input type="checkbox"/> All (issue formula only)	<input type="checkbox"/> All (issue formula only)	_____
<input type="checkbox"/> Infant cereal	<input type="checkbox"/> Milk	_____
<input type="checkbox"/> Infant fruits/vegetables	<input type="checkbox"/> Yogurt	_____
	<input type="checkbox"/> Cheese	_____
	<input type="checkbox"/> Eggs	_____
	<input type="checkbox"/> Legumes	_____
	<input type="checkbox"/> Peanut butter	_____
	<input type="checkbox"/> Breakfast cereal	_____
	<input type="checkbox"/> Bread, rice, tortilla, oatmeal, pasta	_____
	<input type="checkbox"/> Fresh fruits/vegetables	_____
	<input type="checkbox"/> 100% fruit/vegetable juice	_____
	<input type="checkbox"/> Canned fish (women only)	_____

Special Formula/Food Request Form

☼ Food Package reflects Request Form?

3. SUPPLEMENTAL WIC FOODS: (CHECK ONE MUST BE COMPLETED FOR ALL FORMULA REQUESTS)

All (issue all allowed age appropriate WIC Foods starting at six months)

Restriction (check foods to be OMITTED):

<p>Infant (6-12 months)</p> <p><input type="checkbox"/> All (issue formula only)</p> <p><input type="checkbox"/> Infant cereal</p> <p><input type="checkbox"/> Infant fruits/vegetables</p>	<p>Child (1-5 years) and Woman</p> <p><input checked="" type="checkbox"/> All (issue formula only)</p> <p><input type="checkbox"/> Milk</p> <p><input type="checkbox"/> Yogurt</p> <p><input type="checkbox"/> Cheese</p> <p><input type="checkbox"/> Eggs</p> <p><input type="checkbox"/> Legumes</p> <p><input type="checkbox"/> Peanut butter</p> <p><input type="checkbox"/> Breakfast cereal</p> <p><input type="checkbox"/> Bread, rice, tortilla, oatmeal, pasta</p> <p><input type="checkbox"/> Fresh fruits/vegetables</p> <p><input type="checkbox"/> 100% fruit/vegetable juice</p> <p><input type="checkbox"/> Canned fish (women only)</p>	<p>Special Instructions/Comments:</p> <hr/> <hr/> <hr/> <hr/>
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Special Formula/Food Request Form

Food Package reflects Request Form?

Food Package: C1 MAX (WHOLE MILK)

Quantity	Package Size	Description
0	JAR	16-18ozPnutBtr,lb Dry,15-16ozChBean
0	BTL	64 OZ JUICE
0	OZ	CEREAL
0	LB	CHEESE (\$8.00 MAX PER LB.)
0	DOZ	EGGS
0	\$\$\$	FRUITS AND VEGETABLES
0	LB	WHOLE GRAINS
0	HGL	WHOLE MILK
0	GAL	WHOLE MILK
14	CAN	14.1 oz Pwd Elecare Jr

Special Formula/Food Request Form

Section 4 (Optional)

4. **MILK SUBSTITUTIONS (optional): Medical Reason for Milkfat Change:** _____

2% milk (in place of \leq 1% milkfat, woman/child \geq 2 years; or whole milk, child 12-23 months). Honored only if medically indicated.

Whole milk (in place of \leq 1% milkfat, woman/child \geq 2 years). Honored only if medically indicated formula prescribed above.

Soy Beverage in place of milk for child:

Milk allergy Lactose intolerance Vegetarian/Vegan diet Cultural practice Other _____

Special Formula/Food Request Form

Section 5

5. DURATION:			
<input type="checkbox"/> 1 month	<input type="checkbox"/> 2 months	<input type="checkbox"/> 3 months	<input type="checkbox"/> 4 months <input type="checkbox"/> 5 months <input type="checkbox"/> 6 months (maximum approval)
Medical Provider Name		WIC Use Only Client # (Optional)	
Address		Approved Through (Optional)	
Phone Number	Fax	Reason (if denied)	
Signature	Date	Signature (if denied)	Date

Special Formula/Food Request Form

⚙ Determining Expiration Date

5. DURATION: <input type="checkbox"/> 1 month <input type="checkbox"/> 2 months <input type="checkbox"/> 3 months <input type="checkbox"/> 4 months <input type="checkbox"/> 5 months <input checked="" type="checkbox"/> 6 months (<i>maximum approval</i>)	
Medical Provider Name:	WIC Use Only Client # (Optional)
Address:	Approved Through (Optional): 5/3/17 OS
Phone: Fax:	Reason (If Denied):
Signature: <i>[Signature]</i> Date: 11/3/16	Signature (If Denied): Date:

▶ IFF SIMILAC NEOSURE POWD (0-3 MOS)	1/27/2017	2/26/2017	<input type="checkbox"/>	
IFF SIMILAC NEOSURE POWD (4-5 MOS)	2/27/2017	4/26/2017	<input type="checkbox"/>	
IFF SIMILAC NEOSURE POWD (6-11 MOS)	4/27/2017	10/26/2017	<input type="checkbox"/>	

 Approved Not Approved Expiration Date: 5/3/2017

Thank You
 Please submit any questions to:



Kevin Sarb
sarbk@Michigan.gov
 517-241-4404