

Infant Formulas – It’s a Jungle Out There

The best way to avoid the jungle of infant formulas is to provide exclusive breastmilk. Be sure to educate families about breastfeeding and support their breastfeeding efforts. WIC staff are supported to attend trainings about breastfeeding by accessing additional training funds. See this policy - http://www.kansaswic.org/manual/ADM_11.02.00_Financial_Support_for_LA_On-Going_Training.pdf

WIC breastfeeding initiation rates are good but that rate drops dramatically with many fewer moms still breastfeeding at two weeks postpartum. Moms are unable to reach their breastfeeding goals and the top reason is - “I didn’t think I had enough milk.” We are failing moms by not providing adequate anticipatory guidance about the first few weeks of breastfeeding (let’s face it folks – babies want to eat all the time the first few weeks and moms are not expecting that), not providing adequate baby behavior information, and not enough support. When parents switch to formula they are confused with good reason – let’s do our best to support breastfeeding!

In today’s formula market there are major pharmaceutical brands, store brands, generic brands, formulas for different ages of infants, formulas for various digestive problems, lactose free, soy, and those with “special” ingredients. That doesn’t count those that are considered to be medical foods or WIC Eligible Nutritionals.

The following is information about basic categories of formulas for full-term, healthy infants.

Standard Formulas

- Kansas WIC currently (2016) offers only one standard milk based formula and one standard soy based formula because KS WIC participates in the Western State Contract Alliance for rebates on these formulas. The standard formulas offered change as the contract changes which could as early as 2017. The standard milk based formula currently is Similac Advance and the standard soy based formula is Gerber Good Start Soy.
- Standard milk and soy based formulas have to meet minimum requirements as cited in the Infant Formula Act of 1980. Store brand formulas contain the same ingredients as major brands. Perrigo Pharmaceuticals makes most store brands of infant formulas. Abbott makes the Costco brand. Parents Choice is the same as Walgreen brand. Let parents know that if they run out of formula they should not water down what they have. They can purchase less expensive store brands and generic brands to fill in which will be just as good.
- Soy formulas – all are lactose free. Studies show no problems with phytoestrogens. The phytates and aluminum in soy formula compete with calcium for absorption so manufacturers add more calcium making these formulas not recommended for premature babies.

Designer Formulas

- Staged formulas
#1, #2 etc. Manufacturers are trying to introduce staged feeding with formulas that change throughout the growth of the baby. Stage 2 products have more protein which is the opposite of breastmilk as it has more protein early on. These products may contain differing amounts of whey versus casein (type of protein ratio.) Breastmilk contains the perfect casein to whey ratio

for infants but manufacturers may vary these amounts or partially hydrolyze them (comfort proteins) to try to make the non-human milk proteins easier to digest. Staged formula is not necessary and they vary little from standard formulas as they still must meet FDA minimum requirements.

- OptiGro, Nutri protect, Neuro Complete etc .
These are marketing names for regulated nutrients such as DHA, Lutein and Vitamin E. DHA and ARA oil used in formula are produced from algae and fungus respectively and extracted using petrochemical solvents. Both are present naturally in breast milk and been shown to be critical to brain and vision development. There is some concern that these synthetic DHA and ARA oils are causing illness in some babies.
- 19 versus 20 calorie formulas
Studies in milk banks show that human milk varies in caloric content from 19.1 to 25 calories per ounce and averages out to about 20 calories per ounce. Research shows that infants eat what they need so they may eat more of the lower calorie formula and the family run out of formula sooner. The estimated additional cost for a family purchasing 19 calorie formula versus 20 calorie formula is about \$140 per year.
- Supplemental Formula (as in supplemental to breastmilk) These formulas are marketed to make breastfeeding moms think they need a specialized formula if supplementing. These formulas vary only slightly from standard milk based formulas.
- Organic Formulas – None of the current brands are approved for use by Kansas WIC clients. Information about how to find a safe organic formula can be found in a Cornucopia Report – *How to Find the Safest Organic Infant Formula*. Many are not so safe or organic.
- Non-GMO formulas - These are formulas with no genetically engineered ingredients. Non-GMO formulas are not approved for use by the Kansas WIC Program and are not included in our current contract. There is a significant price difference and since it is difficult to obtain non-GMO products some formulas are not totally GMO free.
- Formulas marketed for “feeding issues”
 - Some are modified by decreasing or removing lactose or partially hydrolyzing proteins or changing the whey to casein ration. Probiotics may be added. There is currently no research on the long term effects of all whey formulas on a developing baby’s gut.
 - Lactose free or modified formulas - lactose intolerance is a good selling point to adults but babies are not lactose intolerant so varying lactose amounts is not helpful for excessive crying and fussiness. Reduced lactose does reduce calcium absorption.
 - The addition of probiotics and prebiotics can make stools softer. Mixing formula correctly using WHO guidelines and hot enough water to destroy bacteria can also destroy probiotics.
 - Comfortable stool formulas – there is no research that these formulas help with a fussy baby. Enfamil Reguline (not a KS WIC approved formula) has polydextrose and prebiotics (galacto-oligosaccharides) and the smallest amount of iron possible to meet federal minimum requirements. Similac Total Comfort has probiotics, reduced lactose, 100% whey protein (Similac Advance has 48% whey protein) and prebiotics (galacto-oligosaccharides.)
 - Formulas for spit up – lactose is removed and rice starch added. The formula becomes thicker when it encounters stomach acid. Similac Spit Up formula is 98% lactose free

which is replaced with corn syrup solids. All these products have more casein and sit longer in the stomach.

- Formula preparation – parents using formula (especially powdered formula) should be educated on proper formula preparation and on how to properly feed using a bottle. This handout is on the WIC website [Safe Infant Formula Preparation](#) This site provides information on paced bottle feeding (important for breastmilk fed and formula fed infants) - <http://www.motherlove.com/blog/view/feeding-breastmilk-by-bottle-learn-paced-feeding-to-avoid-overfeeding-your->
- For information on Human Milk Fortifier see http://www.kansaswic.org/manual/FCI_02_06_00_Direct_Shipments_of_Specialized_Formulas.pdf

Sources:

World Health Organization *How to Prepare Formula for Bottle-Feeding at Home*
http://www.who.int/foodsafety/publications/micro/PIF_Bottle_en.pdf

FDA Takes Final Step on Infant Formula Protections
<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm048694.htm>

Infant Formula Guidance Documents and Regulatory Information
<http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/InfantFormula/default.htm>

<http://www.fda.gov/Food/FoodborneIllnessContaminants/PeopleAtRisk/ucm108079.htm>

<http://www.theatlantic.com/health/archive/2014/05/lower-calorie-infant-formulas-wont-solve-child-obesity/370810/>

<http://kellymom.com/nutrition/milk/dha-formula-comments/>

Thanks to the Texas WIC Program presentation Infant Formulas: Navigating Marketing and Health Claims at the 2016 Texas WIC Conference