Milk Through the Ages

Michelle M. Cloutier, MD
Professor of Pediatrics & Medicine
University of Connecticut Health Center
Children’s Center for Community Research
Connecticut Children’s Medical Center
RECOMMENDATIONS BY AGE

- Newborns to 1 year of age
- 1-2 years of age
- 2-8 years of age
  - Flavored milks
- 8-18 years of age
  - 3 cups of reduced fat milk
- Adulthood
  - 3 cups of reduced fat milk
NEWBORNS TO 12 MONTHS

- Breast milk is the best source of nutrition for newborns.
- Benefits include:
  - Infection fighters
  - Bonding between mother and child
  - Always available and at the right temperature and mixture.
- Babies do not need solids until 6 months and that includes cereal in the bottle.
- At 6 months, cereal and vegetables and small amounts of milk can be introduced. All should be offered before fruits.
- Many babies need to be offered vegetables on average 18 times before they accept them.
FROM 1-2 YEARS OF AGE

- May introduce cow milk
  - Ad libitum
  - Whole milk
    - Growing brain benefits from the additional fat in whole milk
    - There is no reason to flavor the milk
EARLY CHILDHOOD

- The recommendation is clear:
  - Beginning at 2 years of age, reduced fat (1 or 2%) milk and no more than 2 cups per day
- How this is delivered is controversial
Milk Composition

- 1 and 2% flavored milk has the same 9 essential nutrients as white milk (calcium, potassium, phosphorous, protein, vitamins A, D and B12, riboflavin and niacin) including sugar (about 12 grams or 3 teaspoons)

- The difference is the added sugar content:
  - An 8 oz carton of flavored milk has about 4 teaspoons (64 calories) of added sugar
SUPPORTERS OF FLAVORED MILK

- Children’s diets in the US are calcium and Vitamin D deficient
- Children will drink more flavored milk and white milk
  - Removing flavored milk from schools resulted in 62% decrease in milk consumption by young children
- Flavored milk accounts for less than 3.5% of added sugar intake in children 6-9 and less than 2% in teens
THE CONCERNS

- No data that suggest that children who consume flavored milk consume fewer calories than children who consume white milk.
- The problem is the 64 extra calories from 8 ounces of flavored milk or 128 extra calories from 2 cups of 1 or 2% flavored milk per day.
THE ENERGY GAP

- The daily imbalance between energy intake and expenditure
- Using growth charts to determine balanced growth
- Looked at a large US dataset (NHANES)
- Between 2 and 7 years of age the children gained an excess of 4.3 kg over 10 years
- 110-165 extra calories per day

Wang, Pediatrics 118:6:e1721 2006
MORE...

- Flavored milk
  - Contains more sodium
  - Often contains artificial colors and flavors
  - Most flavored milk is served in schools

- Who is objecting to removing flavored milk?

- Nutrients can be obtained from green, leafy vegetables and legumes. Children will eat them if presented properly and early
POLICY CONSIDERATIONS

- Birthing hospitals need to become “Baby Friendly” certified
- Adopt breastfeeding-friendly policies in workplaces and businesses that assist mothers to breastfeed
- Remove flavored milk from schools
  - Chocolate or strawberry milk is a dessert
- Change the way we serve milk in school: ice-cold
- Standardize Early Learning Centers’ nutrition services
- Lead by example