

INFANT FEEDING UPDATES

Breastfeeding and Best Feeding 2017

PRESENTATION GOALS

- To provide evidence -based , up to date information on breastfeeding promotion, support and basic breastfeeding skills as well as current complementary infant feeding guidelines, and strategies for counseling families on safe and healthy feeding for a newborn through 12 month old.

INFANT FEEDING GUIDELINES AND RECOMMENDATIONS

FOOD AND NUTRITION FOR BABY

- Only breastmilk for first 6 months
- Continue breastfeeding for 12 months or until mother and baby desire
- If breastfeeding is not desired or possible, a US brand of infant formula
- First foods should be introduced at 6 months
 - sitting up, reaching for food, teeth
- Infants *may* have sensitivity to foreign proteins in mom's milk
ie: dairy

BENEFITS FOR MOM AND BABY

Reduce risk for baby of:
Gastrointestinal illness
Respiratory illness
Otitis media
Juvenile diabetes
Childhood obesity

Weight loss for mom
Reduced postpartum bleeding
Reduced risk of ovarian cancer
Reduced risk of breast cancer
Better bone strength later in life



BREASTFEED FOR 6 MONTHS. YOU MAY HELP REDUCE YOUR CHILD'S RISK FOR CHILDHOOD OBESITY.

Recent studies show babies may be less likely to develop childhood obesity when exclusively breastfed for six months. Call 800-994-WOMAN or visit www.4woman.gov to learn more. Or talk to your healthcare provider.

Babies were born to be breastfed.

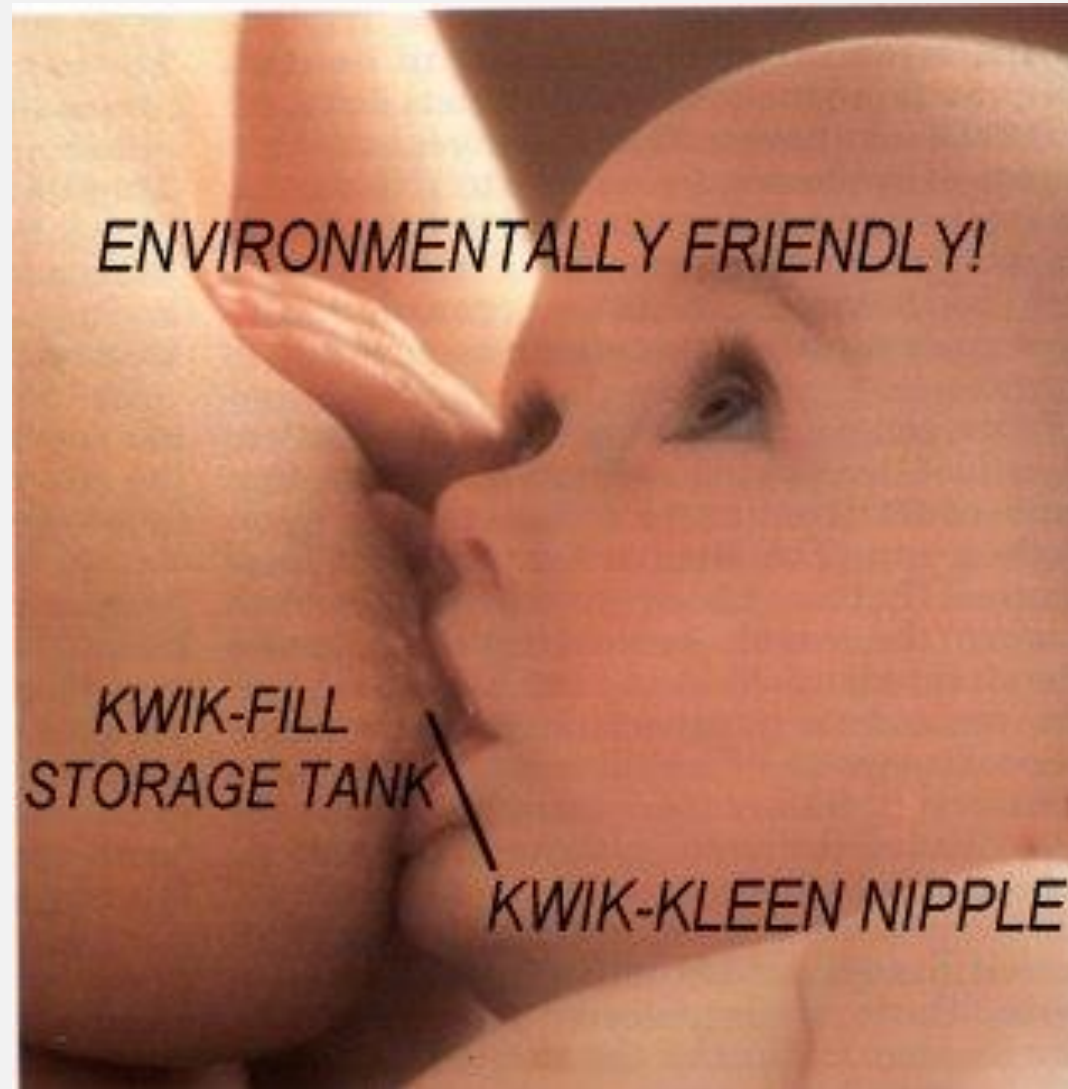


U.S. Department of Health and Human Services



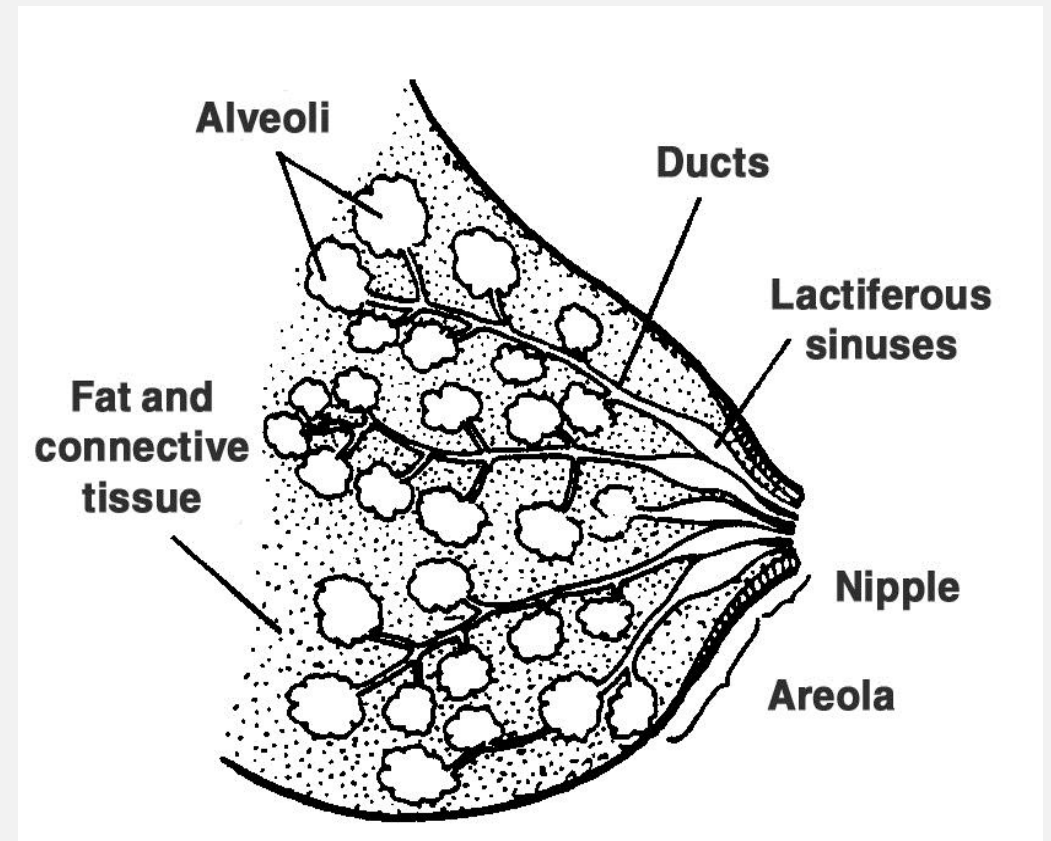
MECHANICS OF BREASTFEEDING

This is the basic anatomy!



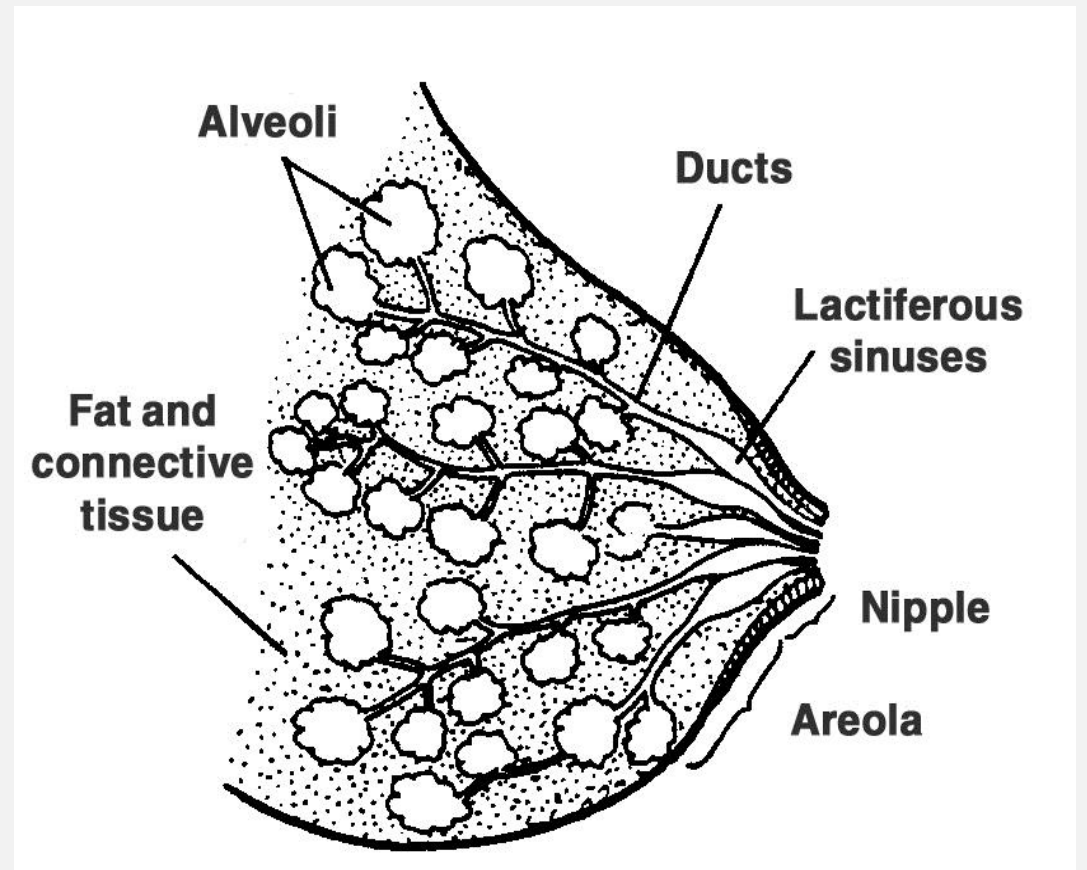
DURING PREGNANCY

- During puberty the ducts are stimulated to grow by the surge of estrogen.
- In pregnancy, breasts have intensified growth of ductal and lobular-alveolar systems (*ductal proliferation*).
 - High levels of progesterone cause rapid increase in number of alveoli
- Milk fat and protein synthesis begin in alveoli, although very little is secreted into the ducts - this builds colostrum!



AT BIRTH

- The final stage of breast development occurs during lactation after birth.
- The rapid drop of progesterone caused by delivery of the placenta triggers full secretory role in alveolar cells.
- Milk is released into the alveoli and then into the ducts .



ON GOING MILK PRODUCTION

- The third stage of production (L III) is the process of milk supply maintenance over the course of breastfeeding however long mom and baby wish.
- Supply and demand!
- Rarely, breast abnormalities or medical conditions may affect milk production in this stage.

Pituitary releases prolactin and oxytocin.



Stimulation of nerve endings in mother's nipple/areola sends signal to mother's hypothalamus/pituitary.



Hormones travel via bloodstream to mammary gland to stimulate milk production and milk ejection reflex (let-down).



Infant suckles at the breast.



FOOD AND NUTRITION FOR MOTHERS

- 300-500 additional calories per day based on weight/need
- No “forbidden foods” that hurt milk/baby
- No “magic” foods or pills to make milk
- Less than 1800 kcal/day may be at risk of low nutrient intake
 - Reduces composition not volume
 - Counsel mothers on balanced nutrition and fitness for weight loss or management

Get My Plan

Not sure how much to eat from each food group? Simply enter your age, sex, height, weight, and physical activity level to get a plan that's right for you. The MyPlate Daily Checklist shows your food group targets – what and how much to eat within your calorie allowance.

Age

Sex

Pregnant/ Breastfeeding

How much breast milk
and formula are you
feeding?

Weight pounds

Height feet inches

Physical activity

[Calculate Food Plan](#)



AVOIDING EARLY BREASTFEEDING PROBLEMS

GETTING THE BEST START

- Dry infant at birth EXCEPT hands
- Encourage breastfeeding in the first 30-60 minutes
- Rooming in 24 hours while in hospital
- Teach mother about sleep states/signs
- Feeding cues
- Teach positioning and latch with props and videos
- Teach mother how to express and feed milk if having difficulty

INFANT FEEDING CUES

- All infants exhibit feeding cues which mothers can be taught to recognize
- Early feeding cues are subtle and include
 - Bringing hand to mouth or cheek and trying to suck on them
 - Rooting
 - Lip smacking , mouthing, tongue protrusion

CRYING

- Crying is a LATE feeding cue
- When crying is seen, earlier feeding cues have been missed
- It is much more difficult to feed an infant who is crying

RECOGNIZING CORRECT LATCH-ON

Correct latch involves 3 aspects:

I. Baby's body position

- Tummy to tummy position
- Baby's lower arm around mother's trunk
- Baby's head should not be turned away from the breast, but looking at it
- Never push the baby toward the breast



Tummy to tummy and chest to chest and only the chin should touch the breast!

RECOGNIZING CORRECT LATCH-ON

2. Baby's mouth position

- Mouth wide open with lips 1-1 1/2" beyond base of nipple
- Tongue under areola
- Lips not folded in
- Oral searching reflex stimulated by touching baby's lip with nipple
- Gape elicited when baby drawn back from breast
- There should not be dimpling of cheeks during feeding



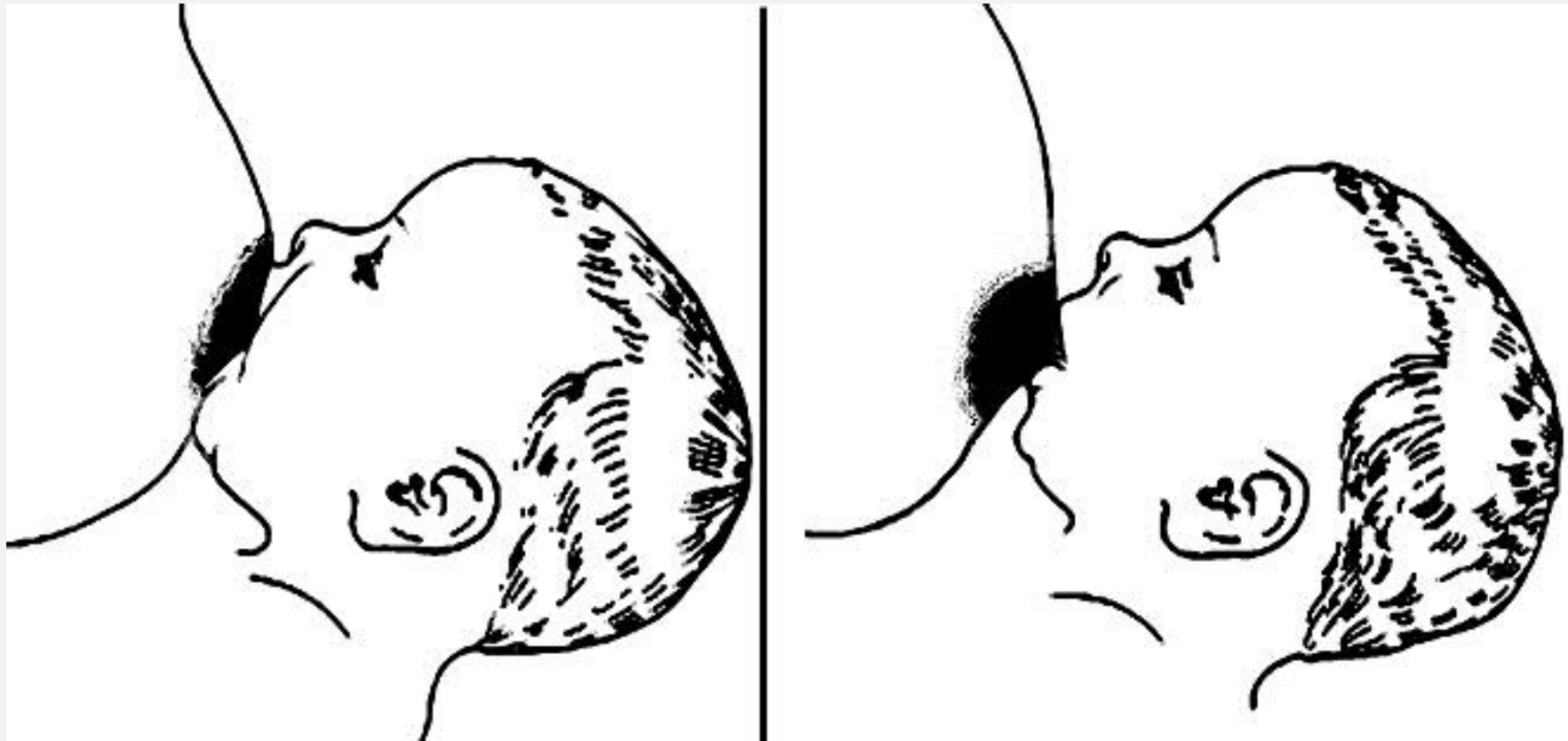
RECOGNIZING CORRECT LATCH-ON

3. Mother's Position

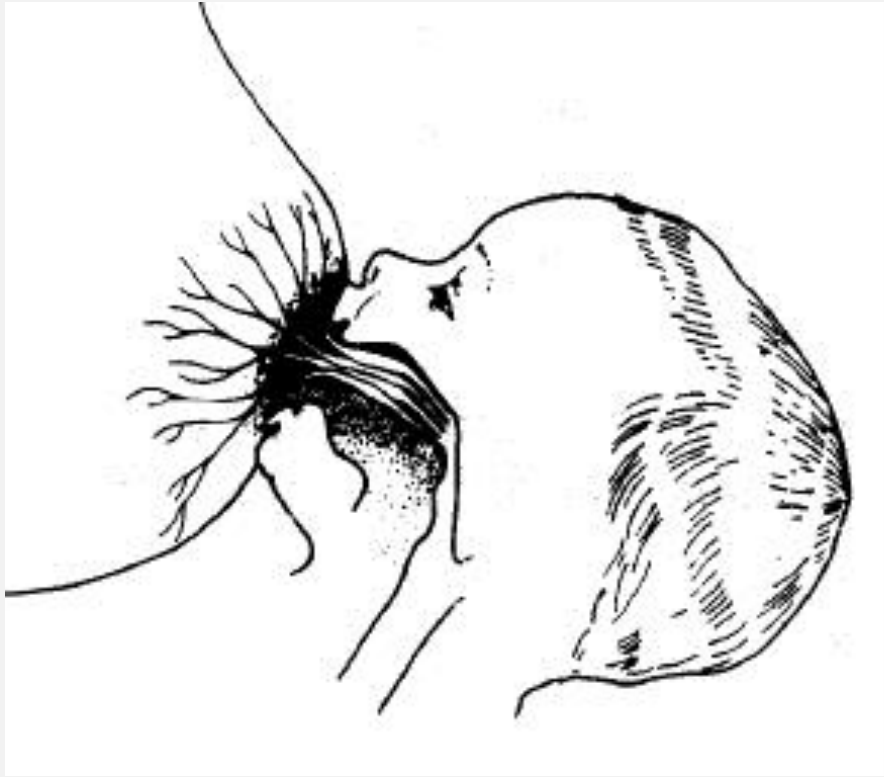
- Should be comfortable without tension
- Hand position, if any, at breast should not interfere with placement of baby's mouth or compress ducts
- Mother should experience no breast or nipple pain



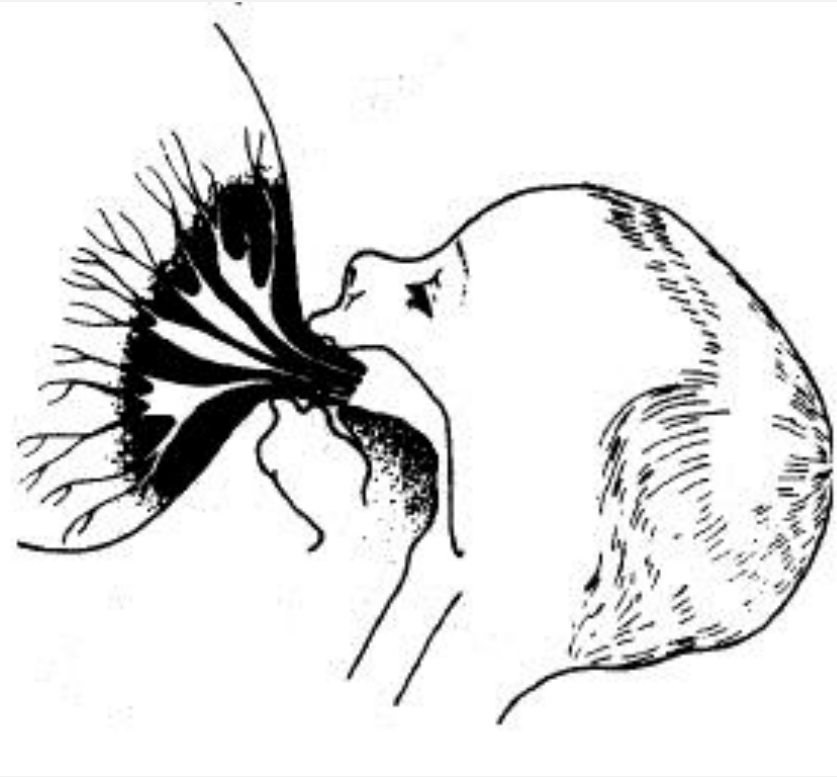
RECOGNIZING CORRECT LATCH-ON



WHAT CAN YOU SEE?



Good attachment



Poor attachment

MOST COMMON COMPLAINTS

- Engorgement – uncomfortable fullness
 - From not feeding baby often and having a correct latch
- Nipple damage and pain
 - From incorrect latch-on or occasionally an issue with the baby's mouth or tongue
 - Use of bottles or pacifiers before breastfeeding was going well
- Low milk supply
 - From use of bottles, formula and pacifiers

NEWBORN CAPACITY

- Average newborn swallow is 0.6 ml at breast
- Stomach size is very small. Parents should have realistic expectations regarding the volume the newborn stomach can hold at each feed.
- With time, the amount of milk per suck increases
- Changes in suck-swallow ratios relate to availability of milk via flow



GOING BACK TO WORK OR SCHOOL

GOING BACK TO WORK OR SCHOOL AND USING FORMULA AND SOLIDS

Mothers have options depending on age of baby

- Pumping and doing a combination of bottles and breastfeeding
- Starting solids while breastfeeding
- Using formula when separated and breastfeeding at home
- Weaning and doing only formula/solids
- Our job is to offer support and guidance for success

PUMPING

- Double electric pump
- Proper storage and handling education
- Workplace support
- Practice 2 weeks before going back to work
- Education about feeding to the caregiver

- <http://www.flbreastfeeding.org>

WEANING

- Avoid sudden weaning, have mom reduce a breastfeeding every 2-3 days and supplement baby as appropriate
- Usually the morning and night breastfeedings are the last to go
- Make sure mom stays physically comfortable
- Make sure baby has appropriate food

INFANT FORMULA TYPES

- Ready to feed, considered a sterile product and does not need water. Just need to teach mother correct measuring for infant needs and safe handling and storage.
- Concentrated formula is considered sterile and requires water for mixing. Need to teach mother correct mixing, safe handling and storage.
- Powdered infant formula (PIF) is not sterile and requires sterile water to mix. Need to teach mother how to sterilize water, safely mix, handle and store.
- PIF has been associated with serious illness and death in infants due to contamination with *Enterobacter sakazakii* (renamed *Cronobacter*)

PROCESS OF CONTAMINATION (II)

- **During the preparation of PIF**
- Risk increases when bacteria allowed to multiply in reconstituted formula handled under unsafe conditions.
- The potential risk of infection increases when feedings are prepared, handled or stored incorrectly.
- Handouts and research available at <https://www.cdc.gov/features/cronobacter/index.html>

GROWTH AFTER RECONSTITUTING PIF

- Most outbreaks are related to improper storage temperatures for extended periods of time.
- Sterile water must also be used for powdered formula.



WHAT MOTHERS THOUGHT...

A 2008 study showed the majority of US formula feeding mothers did not receive instruction on formula preparation (77%) or safe storage (73%) from a health professional

- 30% did not read the safe-use instructions on the package.
- 38% thought that PIF (not sterile) and ready-to-feed (sterile) were both unlikely to contain germs.

Source: Infant Feeding Practices Study II

PARENT TEACHING

Parents need to understand that:

- PIF is not a sterile product and that bacteria may be present that could harm their infant.
- Inappropriate preparation and storage of formula can increase the risk of serious illness.
- Prenatally and again postpartum, parents should be taught the proper methods for reconstituting PIF, with a return demonstration.
- Reminders to wash hands before prep.
- How to properly boil water and what water to use.

BOILING THE WATER

Boil a sufficient amount of water each day. FDA recommends boiling water for 1 minute.

- What is “Safe” water?
 - Bottled water is NOT sterile and needs to be boiled before use, as does tap water.
 - Softened tap H₂O – too high in sodium
 - H₂O collected as runoff from eaves – bacterial contamination
 - Filtered H₂O – may add silver and bacteria
 - Mineral H₂O – too high in sodium, other minerals
 - Distilled H₂O – contains no minerals
 - Carbonated H₂O – not appropriate for infants
 - Soda H₂O – not appropriate for infants, too high in sodium
 - Contaminated well H₂O – may contain harmful minerals, bacteria

INTRODUCING SOLIDS

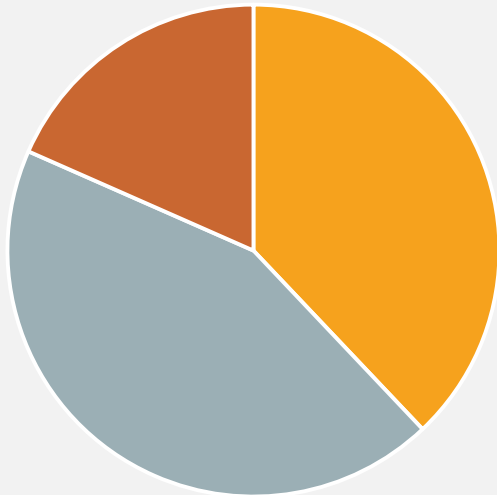
- 6 months with readiness signs
- Foster Self-feeding
- Babies are encouraged to use spoons and fingers to feed themselves
- The most common snack foods are often finger foods such as cereal, cookies, crackers, and French fries.
- Eating at regular intervals helps to foster self-regulation and reduces overeating- just like breastfeeding
- At 9 months, there is a considerable drop in fruit and veggie consumption, and an increase in non-nutritive finger and snack foods- counsel parents on healthy snacks
- Babies should drink breastmilk or formula for the first year of life

INTRODUCING SOLIDS RIGHT

- Babies have a natural interest in sweet first
 - Mother's milk is naturally sweet!
 - Formula is made with high-fructose corn syrup!
- Usually grain/cereal introduced first out of tradition.
- No medical evidence that this is best or the order matters.
- Vegetables or Fruits can be best.
- If your baby has been mostly breastfeeding, he may benefit from baby food made with meat, which contains more easily absorbed sources of iron and zinc.

SOLIDS TOO SOON

Babies fed solids



6 months 5 mo 4 mo or less

- A 2018 study showed that US babies are fed solids
 - 33% at 6 months
 - 38% at 5 months
 - 16% at 4 months or less

Babies who are bottle-fed exclusively or breast-fed for less than 4 months are most likely to be introduced to foods too early

REINFORCING GUIDELINES AND SUPPORTING PARENTS

- Acknowledge that recommendations change as we learn more about nutrition and the long-term impact on our lifelong health.
- Reinforce that early nutrition sets up healthy weight, immune function, and good eating habits for life.
- The USDA will release federal dietary guidelines for children younger than 2 years old in 2020.

BREASTFEEDING RESOURCES

- <https://www.womenshealth.gov/breastfeeding/employer-solutions/industry.html>
- <http://www.flbreastfeeding.org/business-case-for-breastfeeding/>
- <http://flca.info/index.html>

INFANT FORMULA RESOURCES

- <https://www.cdc.gov/features/cronobacter/index.html> on Cronobacter and bottle prep
- <https://www.aap.org/> Enter infant-food-and-feeding.
- www.fda.gov Enter baby food and infant formula for recalls and safety information

Thank you!