

Nutrition and Breastfeeding Case

Breastfeeding Curriculum, updated 2021

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Breastfeeding Nutrition Case

Case: Katie is a 26 year old G1P1 who presents for a routine consultation along with her 3 week old exclusively-breastfeeding daughter, Mary June, and her own mother, Sue. The infant is growing appropriately, latching well, and developing as expected. Katie denies any breast pain, nipple breakdown or other breastfeeding-related concerns.

Breastfeeding Nutrition Case Question #1

Katie remembers that taking folic acid was very important during pregnancy and asks if there are any special vitamins that she needs to be taking while breastfeeding. Which of the following is true?

- a. Continue taking a prenatal vitamin throughout the duration of breastfeeding. This is absolutely required to fortify the milk with multiple necessary vitamins needed for infant development.
- b. A prenatal vitamin with 400-600 IU of vitamin D is needed to meet the infant's vitamin D requirement.
- c. High dose maternal vitamin D supplementation is the only way to meet the infant's vitamin D requirement to prevent rickets.
- d. Extra vitamin A supplements are needed during breastfeeding.
- e. Maternal iron supplements are needed to meet the infant's requirements during breastfeeding.
- f. None of the above.



Breastfeeding Nutrition Case Question #1 Answer

Answer: F None of the above. Explanations below (C-E explained on next slide)

- a. A prenatal vitamin is often beneficial to the mother but is not mandatory for the infant's needs. Prenatal vitamins that contain iron will help replace iron as most mothers experience some degree of blood loss with delivery (gummy prenatal vitamins do not contain iron). Prenatal folic acid will also help maintain excellent folic acid levels for possible future pregnancies.
- b. Most prenatal vitamins contain 400-600 IU of vitamin D. Infants need 400 IU of vitamin D daily. This can be accomplished with infant vitamin D drops or via maternal supplementation. However, while maternal doses as high as 4000 IU daily do achieve infant vitamin D sufficiency, the prenatal vitamin D content is not enough. For maternal supplementation, doses of 5000-6400 IU/day have been studied as part of clinical trials but is not yet formally part of the AAP's guideline on vitamin D supplementation for infants. It is important to know about these studies as many breastfeeding families will want to choose maternal supplements for its ease, and may ask about it. Mothers choosing such a regime need to be monitored.



Breastfeeding Nutrition Case Question #1 Answer

Answer: F None of the above. Explanations below continued

c. High dose maternal vitamin D supplementation is one possible way to achieve infant vitamin D sufficiency but it is not the only option. Many families will utilize infant vitamin D drops, administered daily orally to the infant. For maternal supplementation, doses of 5000-6400 IU/day have been studied in clinical trials but is not yet formally part of the AAP's guideline on vitamin D supplementation for infants. It is important to know about these studies as many breastfeeding families will want to chose maternal supplemental for its ease, and may ask about it.

d. Extra vitamin A is not needed during lactation.

e. Iron supplementation can be helpful for postpartum patients since most patients experience blood loss during delivery. However, infant iron stores mainly come from what is obtained in-utero, from breast milk regardless of maternal iron ingestion and then what the infants can ingest themselves once starting solid foods.



Breastfeeding Nutrition Case Question #2

Katie's mother, Sue, states she is concerned that Katie is eating a diet rich in burgers and fries and poor in healthy, nutrient-rich food. Sue is also concerned that Mary June is drinking milk that will have insufficient nutrients for her growth and development. Which of the following is true?

- a. Milk nutrition directly correlates with maternal diet. Katie needs to adjust her diet for Mary June to get appropriate nutrition.
- b. Maternal diet does not matter if Katie takes appropriate vitamins daily.
- c. Katie should be actively dieting with calorie-restriction to lose her pregnancy weight.
- d. Regardless of Katie's diet, nutritional content of the milk will be nutritionally sufficient.
- e. A burger-rich diet is ideal because it is high in iron which the infant needs.



Breastfeeding Nutrition Case Question #2 Answer

Answer: D Regardless of Katie's diet, nutritional content of the milk will be perfect. Explanations below

- a. Milk composition relies very little on maternal consumption. With the exception of vitamin D (see question 1, answers b and c), milk will contain all appropriate nutrients for an infant.
- b. While certain vitamins may be helpful (see question 1), most are not required for milk nutrient composition.
- c. While some postpartum individuals may choose to actively try to lose weight, aggressive calorie restriction prior to establishing milk supply is not usually recommended. An extra 400-600 calories per day are used to produce adequate breast milk!
- d. Bodies are amazing. Even when someone isn't receiving adequate personal nutrition, the body will prioritize milk-manufacturing to ensure quality milk production.
- e. A postpartum patient may benefit from supplemental iron, especially after a delivery that involves blood loss, but this benefit is for the adult patient and not the infant. Breastmilk will contain iron specially designed for infant absorption.



Breastfeeding Nutrition Case Question #3

After establishing that her burger-and-fries diet isn't harming Mary June but may also not be the most healthy choice for herself, Katie asks if there are foods she needs to be avoiding while breastfeeding. Which of the following is true?

- a. Need to avoid deli meats and sushi.
- b. Need to avoid peppermint and sage.
- c. Need to avoid gassy foods such as broccoli and cabbage.
- d. Need to avoid milk and soy.
- e. No foods are off limits for most breastfeeding dyads.



Breastfeeding Nutrition Case Question #3 Answer

Answer: E, No foods are off limits for most breastfeeding dyads. Explanations below

- a. Deli meats and sushi need to be avoided during pregnancy due to risk of listeria transferring through the placenta. This is not a risk during breastfeeding.
- b. Peppermint, sage and other herbs are sometimes used to decrease milk supply. Being careful to avoid large quantities, especially when milk supply is being established and in dyads in whom milk supply is questionably adequate in volume, might be helpful. However, these herbs do not harm the infant and only need to be considered when supply issues are at hand.
- c. Some dyads will find that there are certain foods to which a baby may be sensitive. However, telling a mother to restrict her diet without cause (i.e. Milk soy protein intolerance (MSPI)) can make breastfeeding more difficult and interfere with families meeting their goals.
- d. Milk and/or soy (and sometimes other foods) need to be avoided when a baby is diagnosed with MSPI. However, most infants have no difficulty when their mothers ingest these foods.
- e. YES! While there are some babies that will have special needs that will require mothers to change their diets, the vast majority of breastfeeding dyads do not need any special changes in diet during breastfeeding.



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