

While working in the newborn nursery, you have the chance to counsel a first time mother. She had a healthy pregnancy and good prenatal care. The infant was delivered via normal spontaneous vaginal delivery and is doing well. You are counseling the mother on the benefits of breastfeeding, and she asks you what the differences are between human milk and formula. Which of the following is a true statement?

- ☐ A. Human milk has more calcium and phosphorus than formula
- ☐ B. Human milk provides adequate amounts of vitamin D
- ☐ C. Human milk contains only trace amounts of immunoglobulin A
- ☐ D. Human milk protein absorbs better and improves gastric emptying
- ☐ E. The main advantage of formula is it decreases colic

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While working in the newborn nursery, you have the chance to counsel a first time mother. She had a healthy pregnancy and good prenatal care. The infant was delivered via normal spontaneous vaginal delivery and is doing well. You are counseling the mother on the benefits of breastfeeding, and she asks you what the differences are between human milk and formula. Which of the following is a true statement?

- ☐ A. Human milk has more calcium and phosphorus than formula [4%]
- ☐ B. Human milk provides adequate amounts of vitamin D [4%]
- ☐ C. Human milk contains only trace amounts of immunoglobulin A [5%]
- ☒ D. Human milk protein absorbs better and improves gastric emptying [84%]
- ☐ E. The main advantage of formula is it decreases colic [2%]

[Proceed to Next Item](#)**Explanation:**User Id: [REDACTED]

Human milk is considered to be the ideal nutritional source for full-term infants. The American Academy of Pediatrics recommends exclusive breastfeeding until 6 months of age and then continuation of breastfeeding along with the introduction of solid foods until the infant is 1 year old. Infant formulas have improved greatly over time to more closely resemble human milk, but differences still exist.

The composition of human milk varies based on the mother's diet, the duration of lactation, and the needs of the infant. The protein in human milk is 70% whey and 30% casein, and the protein content is highest at birth and decreases over the first month of life. Whey is more easily digested than casein and helps to improve gastric emptying. Human milk also contains lactoferrin, lysozyme, and secretory immunoglobulin A proteins that confer improved immunity to the infant. The main carbohydrate in both human milk and standard infant formulas is lactose. Although calcium and phosphorus content is significantly lower in human milk when compared to formula, these minerals are better absorbed from human milk. Breast milk has an inadequate supply of vitamin D and exclusively breast-fed infants must receive supplemented vitamin D.

**(Choice A)** Although human milk contains less calcium and phosphorus than formula, these minerals are better absorbed from human milk. Therefore, no clinical difference in bone health is seen between breast-fed and formula-fed infants.

**(Choice B)** The amount of vitamin D in breast milk is not adequate and exclusively breast-fed infants must receive vitamin D supplementation.



- ☒ D. Human milk protein absorbs better and improves gastric emptying [84%]
- ☐ E. The main advantage of formula is it decreases colic [2%]

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**(Choice C)** Human milk contains proteins such as lactoferrin, lysozyme, and secretory immunoglobulin A, all of which help with immunity. In contrast, there is only a trace amount of these proteins in infant formulas.

**(Choice E)** Human milk is associated with less reflux and colic than formula.

**Educational objective:**

Human milk is the ideal form of nutrition for term infants. The major protein source is whey, which is more easily digested than casein and helps to improve gastric emptying.

Time Spent: 2 seconds

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