

Breastfeeding Education: An approach to educating first year medical students

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American Academy of Pediatrics Policy Statement on Breastfeeding

Rationale:

- The long-term health impacts of breastfeeding has been well established globally, yet, its **emphasis within medical school curriculum is limited.**
- Medical school students can benefit from increased content exposure on breastfeeding to provide solid foundational knowledge and increased comfortability when discussing with future patients.

Methods:

Invited 42 M1 students to this session delivered as part of their regular curriculum to:

- Explore the basics of breastfeeding
- Evaluate mastery of content and perception of a novel educational session



Prior to the session, students reviewed:

- Session objectives along
- Two brief articles addressing the physiology of lactation and prolactin



During class students:

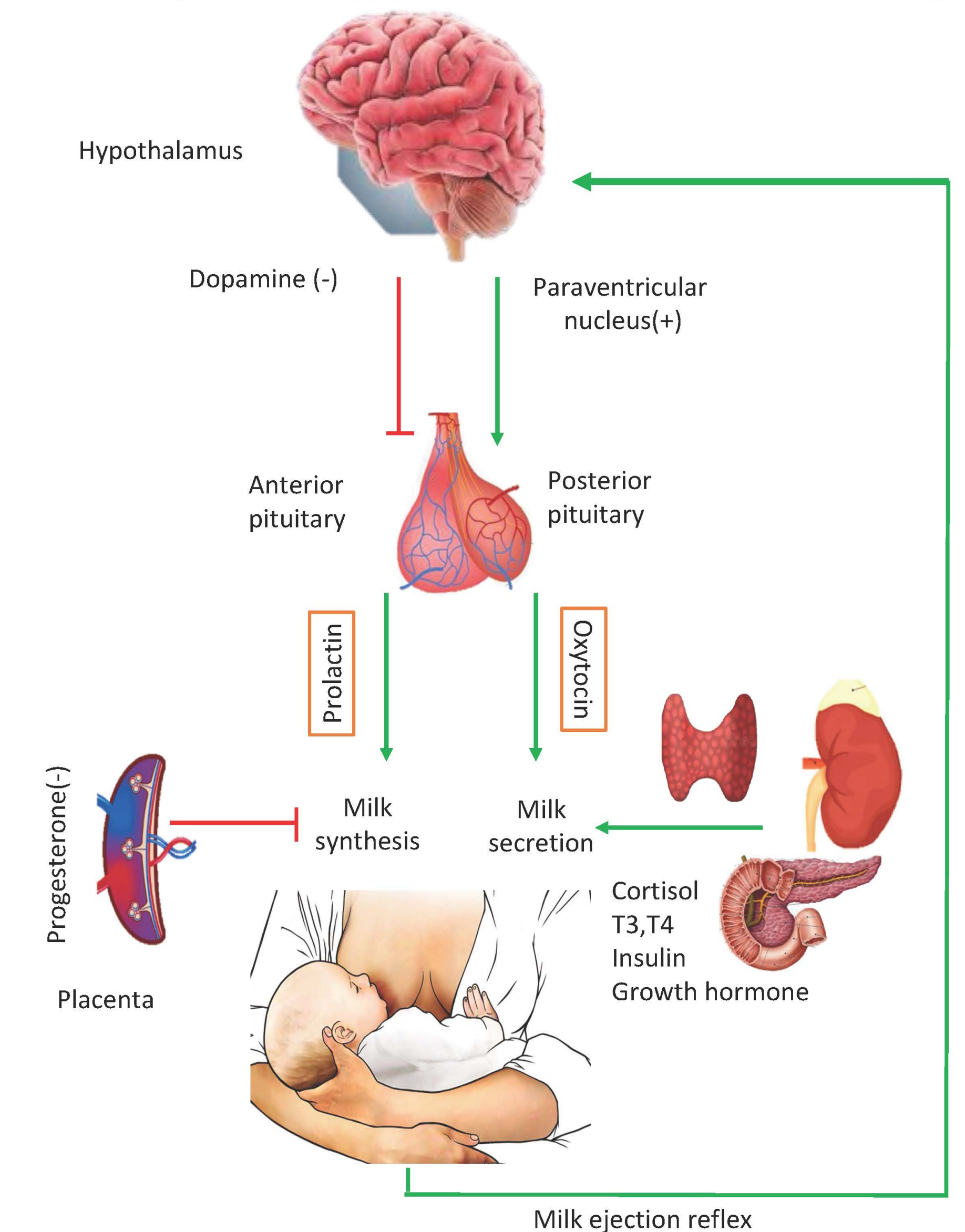
- Completed the Pre-exercise questionnaire
- Participated in a 40- minute educational session on the physiology and importance of breastfeeding
- Followed by the post-exercise questionnaire



Results:

- 100% of students present participated in the study.
- Performance on post questionnaires showed a statistically significant increase compared to the pre-questionnaires (n=15, p=0.007).
- No change in students' perceived level of importance of breastfeeding on long term outcomes.
- 100% of students increased their confidence in comfort level discussing breastfeeding with families after the activity.

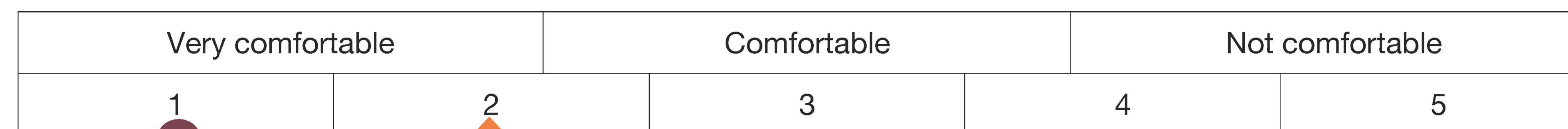
Physiology of Breastfeeding



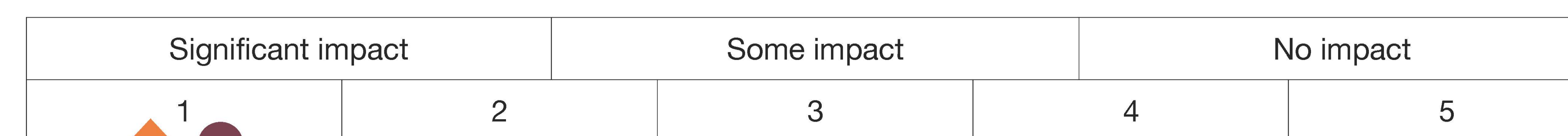
Components of Breast Milk	Immunologic Benefit
Immunoglobulins (IgA, IgM, IgE, EgD)	Protective bacterial and virus infections
Bifidus factors	Promotes formation of healthy bacterial colonization in infants lower GI
Lactoferrin	Iron binding protein that reduces the availability of iron to bacteria in the GIT
Lacto peroxidase	Destroys bacteria
Lysozyme	Kills bacteria by destroying the cell wall
Human Milk Oligosaccharides	Prebiotic, Pathogen binding

Perceptions of Breastfeeding

How comfortable would you feel discussing breastfeeding benefits with families?



What impact, do you believe, that breastfeeding has on long term health outcomes?

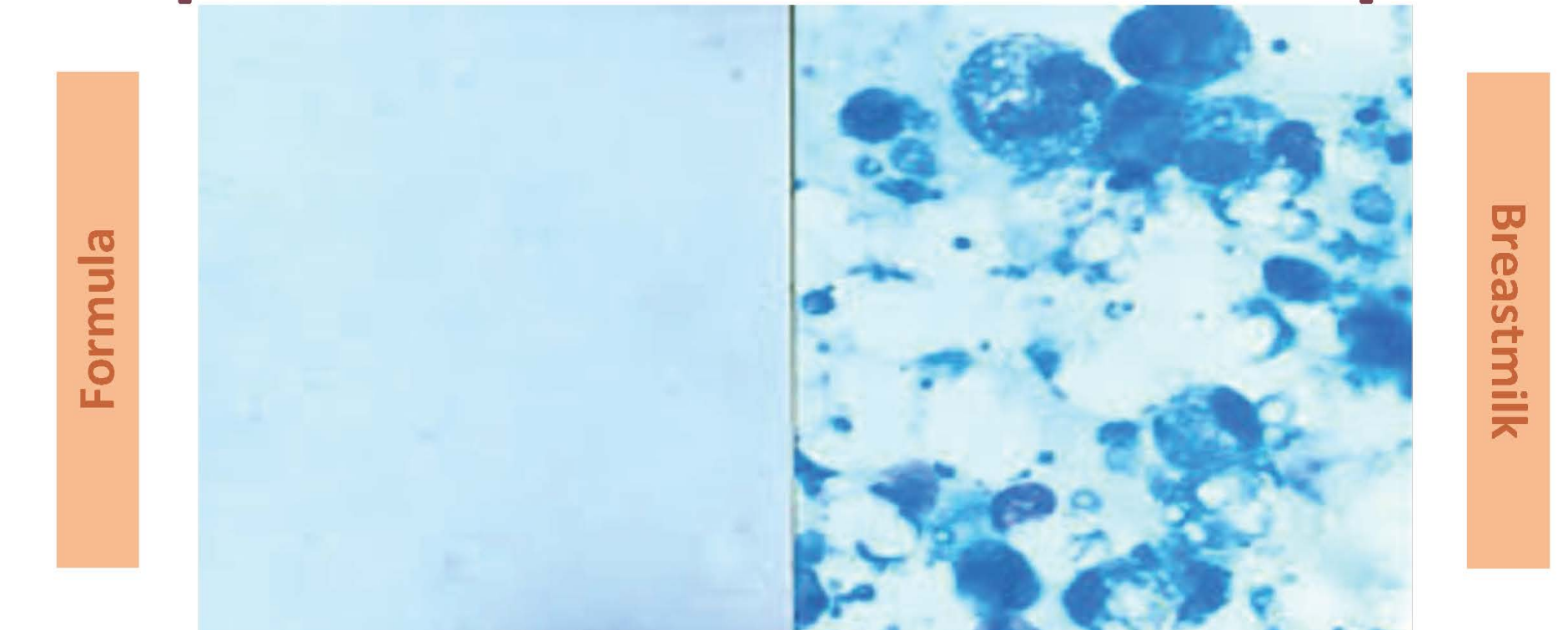


For a mother who is not producing enough breastmilk, how likely are you to encourage alternatives to human milk?



◆ Denotes average response on pre-test ● Denotes average response on post-test

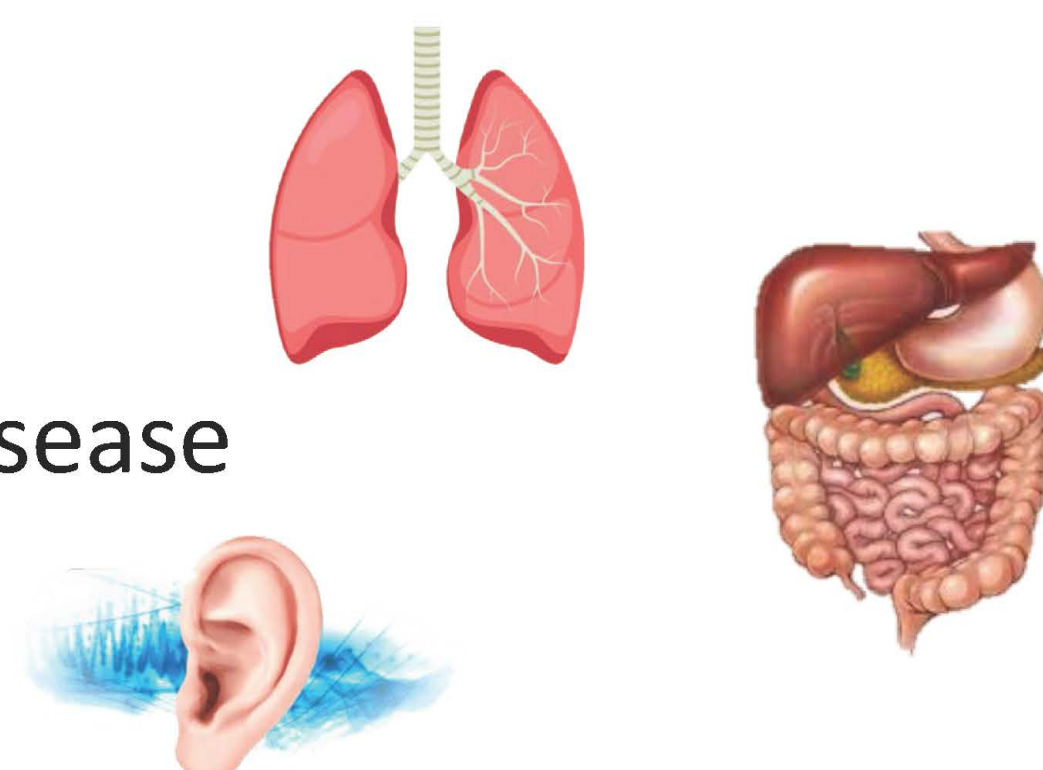
Comparison of the cellular components



Sample Content Question

Breastfeeding has been associated with decreasing the risks of long-term health for both mom and baby. Which of the following is not associated with improvement in long term health?

- Asthma
- Breast cancer
- Irritable Bowel Disease
- Lupus
- Ear infections



References:

Pillay J, Davis TJ. Physiology, Lactation. [Updated 2020 Jul 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK499981/>
Victoria CG, Bahl R, Barros AJ, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet (London, England)*. 2016;387(10017):475-490. doi:10.1016/S0140-6736(15)01024-7

Take home message:

The long term benefits of breastfeeding to mothers and children has long been established. Yet **despite the accepted implications to population health, the education curriculum for medical students and residents has been lacking in its presentation.**

Our results indicate that the inclusion of breastfeeding education in the first year is an **effective way to convey pathophysiology** and long-term benefits. This education builds confidence in future physicians' ability to discuss long-term implications of human milk nutrition. Incorporation of a small exposure, such as this, provides an opportunity for programs to address this critical gap in curriculum.