

# Human Milk Insights

October 2020

*The Human Milk Insights newsletter presents the latest breastfeeding topics and clinical practice solutions, addresses coding issues challenging the lactation community, features a lactation service, and announces upcoming webinars and conferences.*

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## FEATURED STORIES THIS MONTH

### NEWS YOU CAN USE

- Research Reviews
- Original Research
- Commentary
- Organizational Statements and Resources Regarding COVID-19

### HUMAN MILK EDUCATION

- Human Milk Monthly Webinar Series
- Virtual Program with Diane Spatz, PhD, RN-BC, FAAN
- Neonatal Perspectives
- Initiation Courses

### CLINICAL PEARLS IN LACTATION

- Keeping Mothers and Babies Together: Use of Oral Glucose Gel for Hypoglycemic Neonates

### TOOLS YOU CAN USE

- Medela's Webinar Series for Breastfeeding and COVID-19

### SPOTLIGHT ON PRACTICE

- Uzma Faisal, MBBS, MRCP, MCPS, IBCLC

## NEWS YOU CAN USE

### RESEARCH REVIEWS

**The Role of Human Milk in Decreasing Necrotizing Enterocolitis through Modulation of the Infant Gut Microbiome: A Scoping Review.** Jessica A. Davis, BSN.../Aug 2020 Summary of the investigation of human milk and the impact on necrotizing enterocolitis, a complication within the premature infant population which causes significant morbidity and mortality. <https://doi.org/10.1177/0890334420950260>

**Methods and Success Factors of Induced Lactation: A Scoping Review** Gemma Cazorla-Ortiz.../Sept. 2020 Assessment of methods and factors to induce lactation. <https://doi.org/10.1177/0890334420950321>

**Breastfeeding and Postpartum Glucose Regulation Among Women with Prior Gestational Diabetes: A Systematic Review** Marie Tarrant, RN, MPH, PhD.../Sept 2020 Assessment of the association with risk of Type 2 Diabetes and breastfeeding <https://doi.org/10.1177/0890334420950259>

### ORIGINAL RESEARCH

**Human Milk Feeding Patterns at 6 Months of Age are a Major Determinant of Fecal Bacterial Diversity in Infants** Kameron Y. Sugino, PhD.../Sept. 2020 Investigation of proportion of human milk in the diet of 6 month olds as a major determinant of microbiota. <https://doi.org/10.1177/0890334420957571>

**Influence of Early Lactation Assistance on Inpatient Exclusive Breastfeeding Rates** Keyaria D. Gray, DO.../Sept. 2020 Examination of known factors impacting breastfeeding success and timing of lactation assistance for healthy infants in the hospital setting. <https://doi.org/10.1177/0890334420957967>

**Racial and ethnic disparities in severity of COVID-19 disease in pregnancy in the United States** Chiamaka Onwuzurike.../International Journal of Biology and Obstetrics, July 2020 The racial and ethnic disparities in COVID-19 outcomes are evident in disease incidence and severity. <https://doi.org/10.1002/ijgo.13333>

**Telelactation: A Necessary Skill With Puppet Adjuncts During the COVID-19 Pandemic** Sarah Dhillon BSc Midwifery, IBCLC.../Sept 2020 With current restrictions in physical visits during the pandemic, telehealth is useful for lactation consults. This article highlights supports found to be useful during telehealth lactation consultations. <https://doi.org/10.1177/0890334420958623>

### COMMENTARY

**The COVID-19 liquid gold rush: Critical perspectives of human milk and SARS-CoV-2 infection** *The American Journal of Human Biology* Aunchalee E. L. Palmquist.../August 2020 Exploration of key considerations for the study of human milk related to COVID-19. <https://doi.org/10.1002/ajhb.23481>

## ORGANIZATIONAL STATEMENTS AND RESOURCES REGARDING COVID-19

### CDC: The Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention have updated the resource “Pregnancy, Breastfeeding, and Caring for Newborns” webpage

<https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/pregnancy-breastfeeding.html#mothers-suspected?eType=EmailBlastContent&eld=00ca58be-e6b8-480b-8803-92647a43ae28>

## HUMAN MILK EDUCATION

Medela continues to stay on the forefront of breastfeeding in the COVID-19 environment. Information on the Medela COVID-19 microsite is designed to help answer breastfeeding questions for clinicians and mothers. New information is added frequently so please check back often. We hope this information will be helpful to you, your practice and to your patients.

<https://www.medela.com/breastfeeding/mums-journey/covid-19-information-concerning-breastfeeding>

On Thursday, October 8<sup>th</sup>, [Hans van Goudoever, MD, PhD](#) will be presenting [Breast Milk, A Source of SARS-CoV-2 Antibodies](#). Complimentary registration is now open! For more information or to register, visit [www.MedelaEducation.com](http://www.MedelaEducation.com).

On Wednesday, October 21<sup>st</sup>, [Rebecca Penders, PhD, RNC-OB](#) will be presenting [Employed Mothers’ Satisfaction with the Breastfeeding Provisions in the Patient Protection and Affordable Care Act](#). Complimentary registration is now open! For

more information or to register, visit [www.MedelaEducation.com](http://www.MedelaEducation.com).

On Wednesday, November 18<sup>th</sup>, [Jennifer Thomas, MD, MPH, IBCLC, FAAP, FABM](#) will be presenting [Supporting Breastfeeding During COVID-19](#). Complimentary registration is now open! For more information or to register, visit [www.MedelaEducation.com](http://www.MedelaEducation.com).

We are excited to announce our first virtual education program. [Diane Spatz, PhD, RN-BC, FAAN](#) will present her topic [Getting it Right – The Critical Window of Opportunity to Establish Lactation and Improve Patient Satisfaction](#). This virtual program will be presented Tuesday, October 6, Tuesday, October 13, Tuesday, October 20 and Tuesday, October 27. The content will be the same each day, so pick the date and time that best fits your schedule. Complimentary registration is now open! For more information or to register, visit [www.MedelaEducation.com](http://www.MedelaEducation.com).

On August 5<sup>th</sup> [Danielle Prime, PhD](#) presented her topic *The PersonalFit™ PLUS/Flex 105° Oval Breast Shield: Research Review and Sizing/Fitting Guidelines*. If you missed this webinar and would like to view it, please [click here](#).

On August 7<sup>th</sup> Medela, along with WBFA, presented a webinar titled *Breastfeeding in High Risk Countries - WBFA and Medela Partner to Fight Infant Mortality and Improve Breastfeeding in Nigeria*. If you missed this webinar and would like to view it, please [click here](#).

### Neonatal Perspectives

This is a blog for NICU professionals that features clinical information from neonatal consultants, as well as industry news and

popular topics. Click [here](#) to read the latest blogs.

### **Initiation Courses**

Interested in learning more about initiation of breast milk? Click [here](#) to see what education tools we have available. We also have promo codes for the following online courses:

[Initiation of Lactation: At Risk Mothers and Proactive Interventions](#) Promo code XS6TSP

[Initiate, Build and Maintain Milk Supply](#)  
Promo code GQ6NET

[Connecting the Dots Between Increasing Lactation Risk Factors and Suboptimal Breastfeeding Outcomes: A Proactive Approach to Clinical Practice](#) Promo code KS6TKC

## CLINICAL PEARLS IN LACTATION

*This column is for lactation practitioners to share clinical challenges and successes, observations and pearls with colleagues. To share a clinical pearl, [submit it here](#). If your submission is selected for publication in a future issue of Human Milk Insights, you will receive a \$25.00 VISA gift card.*

### **Keeping Mothers and Babies Together: Use of Oral Glucose Gel for Hypoglycemic Neonates**

Hypoglycemia is a condition commonly seen in neonates which can have long term neurological outcomes. Glucose is the primary energy source for the brain and is just as essential to its function as oxygen. Risk factors associated with neonatal hypoglycemia include infants born to women with diabetes, both large and small for gestational age babies, late preterm infants, and Apgar scores less than 7 at 5 minutes of age. Prompt identification and treatment is necessary to avoid adverse outcomes. Some of these treatments often result in separation of mother and baby during a critical time of physical and emotional bonding and establishment of an adequate milk supply. Infants are frequently supplemented with infant formula and many times are admitted to the NICU.

An innovative treatment alternative is the use of 40% glucose gel. It consists of 40% glucose plus water and glycerin. It is rubbed into the buccal mucosa of infants who have a low blood glucose and, because of the high vascularization of the tissue, is as effective in raising blood sugar as IV dextrose. Glucose gel has not been associated with rebound effects; it is well tolerated and has not been associated with any adverse outcomes. This treatment can keep mothers and babies together after birth, improve health outcomes for newborns and significantly decrease healthcare costs.

The Cochrane review reports, "Treatment of infants with neonatal hypoglycemia with 40% dextrose gel reduces the incidence of mother baby separation for treatment and increases the likelihood of full breastfeeding after discharge compared with placebo gel. No evidence suggests occurrence of adverse effects during the neonatal period or at two years' corrected age. Oral dextrose gel should be considered first-line treatment for infants with infant hypoglycemia."

"Use of 40% oral glucose gel has been shown to reduce NICU admission, appropriately treat transient neonatal hypoglycemia, be well tolerated, been shown as safe, calculated to be cost effective, and able to preserve exclusive breastfeeding in the hospital. This low-tech option is easy to administer and does not disrupt the development of the infant gut microbiome as formula does." (Romald. Coda, Rishi & Khalil (2019).

Nurses and in-hospital lactation consultants are in a unique position to advocate for their patients and can bring this practice change to the attention of their nursing and physician leaders. Use of oral glucose gel to treat neonatal hypoglycemia is inexpensive, noninvasive, and easy to administer.

Do you use it in your hospital? What do you think of its use? Let us know your thoughts about the use of oral dextrose gel in the treatment of neonatal hypoglycemia.

## References:

Cochrane Review, (2016). Oral dextrose gel for treatment of newborn infants with low blood glucose levels. Retrieved from: [http://www.cochrane.org/CD011027/NEONATAL\\_oraldextrose-gel-treatment-newborn-infants-low-blood-glucose-levels](http://www.cochrane.org/CD011027/NEONATAL_oraldextrose-gel-treatment-newborn-infants-low-blood-glucose-levels)

Scheans P, Bennett C, Harris D (2017). Using dextrose (glucose) gel to reverse neonatal hypoglycemia. *Neonatal Network*, July 1: 36(4):233-238.

Romald, JH, Coda L, Rishi F & Khalil E (2019). Oral glucose gel for neonatal hypoglycemia: A single hospital study. *Pediatrics*. Aug 2019, 144 (2 MeetingAbstract) 673; DOI: 10.1542/peds.144.2\_MeetingAbstract.673.

## TOOLS YOU CAN USE

### Medela's Webinar Series for Breastfeeding and COVID-19

To improve support to mothers in these difficult times and to help them achieve their breastfeeding goals, Medela, together with world-renowned experts, has created a series of one-hour webinars to provide healthcare professionals with the latest information and research results on breastfeeding, breast milk, safety and health of pregnant women, nursing mothers and their babies in the COVID-19 era.

#### **Session 1: Using the COVID-19 pandemic as an opportunity to address the use of human milk and breastfeeding as lifesaving medical interventions**

*Diane Spatz, PhD, RN-BC, FAAN* is a Professor of Perinatal Nursing at the University of Pennsylvania School of Nursing, a nurse researcher and director of the lactation program and clinical coordinator of the Mothers' Milk Bank at the Children's Hospital of Philadelphia, and is well-known for her work surrounding the use of human milk and breastfeeding particularly in vulnerable populations.

Dr. Spatz presents a one-hour recorded webinar which discusses the unique protection human milk provides, the current international recommendations related to breastfeeding and COVID-19, and how informed decision-making can be utilized as a medical intervention. This session focuses on the science of human milk and breastfeeding as a lifesaving medical intervention. Dr. Spatz shares how to help ALL families make informed feeding decisions by focusing on how human milk components function to protect the infant.

#### **Session 2: COVID-19 in human milk: What do we know?**

Lars Bode, PhD, is the Director of the Mother-Milk-Infant Center of Research Excellence (MOMI CORE) at the University of California at San Diego. The goal of the research at Dr Bode's laboratory is to understand how human milk oligosaccharides (HMOs) are synthesized in the human mammary gland and how they benefit the breast-fed infant and potentially also the breastfeeding mother.

This webinar addresses the current scientific knowledge as well as the knowledge gaps regarding human milk and SARS-CoV-2. Several published studies have reported the occasional presence of viral RNA in human milk. Dr. Bode's webinar presents new research, indicating that the presence of viral RNA is rare and does not represent active virus that can replicate and cause disease. Even if human milk were contaminated with SARS-CoV-2 during pumping and handling, Holder pasteurization, which is commonly used by human milk banks, inactivates the virus in breast milk. Together, this data indicate that transmission of SARS-CoV-2 from mother to infant through human milk is unlikely. Human milk is likely not a vector for SARS-CoV-2 but may contain numerous bioactive components that protect the infant from disease.

#### **Session 3: The impact of the COVID-19 pandemic on the use of human milk and breastfeeding in the NICU**

*Professor Jae Kim MD, PhD*, is Director of the Division of Neonatology at Cincinnati Children's Hospital Medical Center within the UC Department of Pediatrics. His special areas of clinical and

research interests include neonatal nutrition, neonatal bowel injury, bedside ultrasound and resuscitation.

Dr. Kim's webinar discusses the possible role of regional, national and international guidelines for COVID-19 in influencing support for the provision of human milk to NICU infants and breastfeeding. He presents the current science and how it has shaped the guidelines and practices in altering the provision of human milk in the NICU environment. He also helps define key ways that healthcare professionals can advocate for mothers, help them produce enough milk and safely breastfeed their infants in the NICU.

#### **Session 4: Protecting maternal milk supply during the Covid-19 pandemic**

*Diane Spatz, PhD, RN-BC* presents another webinar which provides detailed guidance as to how healthcare professionals can provide improved prenatal lactation education and counseling. Dr. Spatz discusses prenatal lactation risk assessment and the importance of educating families on proactive management of milk supply issues. Parents need appropriate prenatal anticipatory guidance to ensure they will be able to meet their personal breastfeeding goals. Dr. Spatz addresses the critical window of opportunity to ensure conversion from secretory differentiation to secretory activation. She also shares evidence-based strategies to ensure milk volume is effectively established during the COVID-19 pandemic, a time when many hospitals are separating mothers from their babies and discharging families early following both vaginal and cesarean birth.

#### **Session 5: Evidence of a strong and specific antibody response against SARS-CoV-2 in human milk**

*Rebecca Powell, PhD* is an Assistant Professor of Medicine and Infectious Diseases at Mount Sinai's Icahn School of Medicine. She studies the immune properties of human milk. At present, her lab is hoping to pin down whether breast milk has antibodies specific to COVID-19, whether they might protect babies from COVID-19, and ultimately, whether they can be spun into a therapy against the illness for adults.

This webinar presents the basic immunological properties of human milk, the specific antibody response to infection in human milk and how this differs from the systemic response, and sheds light on emerging data regarding the antibody response against COVID-19 and human milk. Dr. Powell discusses possible functions and protective mechanisms of this antibody response in the context of protecting breastfed infants and children, and the potential for extracting these antibodies from donor milk as a therapeutic treatment COVID-19.

Here's where you can find this incredible series of webinars:

<https://www.medela.com/breastfeeding-professionals/news-events/2020-webinar-series>

## SPOTLIGHT ON PRACTICE

This column is for lactation practitioners and facilities who wish to acknowledge the work of others. We invite you to submit suggested practitioners or facilities you would like to spotlight. If you have a suggestion, email [education@medela.com](mailto:education@medela.com).

*This month we are spotlighting Uzma Faisal, MBBS, MRCPGP, MCPS, IBCLC*

Uzma Faisal's diverse professional career has focused on the health of families. Currently a lactation consultant for the NICU at The Children's Hospital of Pittsburgh (UPMC), Uzma assists breastfeeding families with providing human milk for their fragile and vulnerable infants.

Uzma was educated as a Family Practice physician in her native Pakistan. After graduating from medical school and completing a residency in Family Medicine, she worked in several medical centers in the Pakistan area in both out-patient and in-patient settings. Here, she was responsible for the diagnosis, treatment, health education and health promotion of patients. As a Specialist Family Physician at Aga Khan University Hospital in Karachi, Pakistan, Uzma managed a clinical practice while becoming actively involved with teaching medical students.

After completing a second post-graduation training from the Royal College of General Practitioners in the United Kingdom, Uzma moved to Dubai and began working for the Dubai Health Authority at Hatta Hospital. The hospital has attempted many times to become certified as a Baby Friendly facility. Encouraged to facilitate this designation, Uzma became certified as an IBCLC and helped lead the hospital in achieving the BFHI designation. She and a team of like physicians developed policies and conducted the staff education. Uzma organized a breastfeeding mother support group, starting with four mothers, who met within an area park rather than at the hospital or other setting. Arabic women are unaccustomed to breastfeeding in public, but the park was a comfortable setting and the group quickly grew to thirty mothers. Uzma attributed the group's expanded membership to its comfortable setting *and* that she was fluent in Arabic. She says "This breastfeeding mother support group is one of my best accomplishments."

Uzma wanted to secure a better education and opportunities for her children, and, after obtaining permanent resident status, she and her family relocated to live in the Atlanta area. Her parents and four siblings were already living in the US and although Uzma would not be able to practice as a physician without having to complete another medical residency, she knew that a better life was offered to her family in the US. At the peak of her medical career, Uzma sacrificed her profession to assist with the needs of her children.

While living in Atlanta, Uzma worked as a lactation consultant for two WIC county offices.

Uzma and her family recently relocated to the Pittsburgh area so their college age son and daughter to attend the program of studies offered at the University of Pittsburgh. Uzma is also a student at the university, studying for a Master's in Public Health. Uzma enjoys entertaining, is a master baker and appreciates long nature hikes. She has mastered five languages and is now planning to learn Spanish.

As a family practitioner, Uzma has focused her professional career in helping families stay well and to employ health-seeking behaviors. Her experiences in varied cultures has deepened her awareness of the struggles families experience to maintain health and even access basic healthcare. In her role as a lactation consultant, Uzma's reward is assisting NICU families to provide human milk for their fragile

infants. She is much admired and respected by her colleagues and by the families she works with for her dedication, compassion, lactation knowledge and skill, and boundless energy!