

infoKEM 2024

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2024 AUGUST





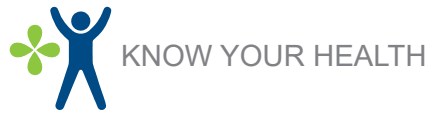
Beyond Nutrition Exploring the Full Spectrum of Breastfeeding Benefits

The World Breastfeeding Week is celebrated annually from August 1st to 7th. The week aims to promote the importance of breastfeeding for both the health of infants and mothers, and to encourage support from communities and policymakers. It also seeks to raise awareness about broader benefits of breastfeeding, including emotional and social impact.

The observance was first established in 1992 by the World Alliance for Breastfeeding Action (WABA), in collaboration with the World Health Organization (WHO) and UNICEF. The initiative was launched to foster a global culture of breastfeeding and to highlight the need for supportive environments to make breastfeeding successful and sustainable.

**Breastfeeding is highly valued for both infant and maternal health.
Here are some commonly known benefits:**

- **Optimal Nutrition for the Infant:** Breast milk provides a perfect balance of proteins, fats, vitamins, and minerals that are essential for an infant's growth and development, adapting to their changing needs.



- **Boosts Infant Immunity:** It contains antibodies and other immune factors that help protect the baby from infections and illnesses, strengthening their immune system.
- **Promotes Healthy Weight in Infants:** Breastfeeding supports optimal weight gain and helps prevent childhood obesity by regulating the baby's appetite and metabolism.
- **Enhances Cognitive Development:** Research shows that breastfeeding is associated with better cognitive development and higher IQ scores in children.
- **Strengthens Maternal Bonding:** The physical closeness and skin-to-skin contact during breastfeeding foster a strong emotional connection between the mother and the baby, enhancing the bonding.
- **Reduces Risk of Chronic Diseases for Mothers:** For mothers, breastfeeding lowers the risk of breast and ovarian cancers. It also decreases the likelihood of developing type 2 diabetes and cardiovascular diseases later in life.
- **Aids Maternal Recovery Post-Childbirth:** Breastfeeding helps the uterus return to its pre-pregnancy size more quickly and reduces postpartum bleeding. It also assists in post-pregnancy weight loss.
- **Cost-Effective and Environmental-Friendly:** Breastfeeding eliminates the need for formula and feeding supplies, saving money and reducing environmental waste associated with formula-feed production and packaging.

Certainly! Here are some lesser-known benefits of breastfeeding for both mothers and infants:

1. BREASTFEEDING AND BRAIN DEVELOPMENT: ENHANCING COGNITIVE FUNCTION AND IQ

Breastfeeding is not only crucial for an infant's physical health but also plays a significant role in brain development. Research has consistently demonstrated that breastfeeding is associated with improved cognitive function and higher IQ scores.

Nutritional Components and Cognitive Development:

Breast milk contains essential nutrients and bioactive components that are vital for brain development. Key elements include long-chain polyunsaturated fatty acids (LCPUFAs), particularly docosahexaenoic acid (DHA), which is crucial for neural development and cognitive function. DHA supports the growth of brain cells and the formation of synaptic connections, which are fundamental for learning and memory.



STUDIES LINKING BREASTFEEDING TO HIGHER IQ:

- **The Avon Longitudinal Study of Parents and Children (ALSPAC):** A large cohort study published in the Lancet (2011) followed over 10,000 children and found that those who were breastfed had higher IQ scores at age 8 compared to those who were formula-fed. The study attributed this difference to the presence of LCPUFAs in breast milk, which are essential for brain development.
- **The Brazilian Study on Breastfeeding and Cognitive Development:** Research published in Pediatrics (2015) involving over 3,000 Brazilian children showed that breastfeeding for six months or longer was associated with better cognitive performance and higher IQ scores at age 5. It showed an increased IQ by 3-5 points. The study highlighted the role of breastfeeding in promoting cognitive development through its nutritional and emotional benefits.

MECHANISMS OF IMPROVEMENT:

- **Enhanced Neurodevelopment:** The nutrients in breast milk support the development of the cerebral cortex, the brain region associated with complex cognitive functions such as problem-solving, language, and abstract thinking.
- **Reduced Risk of Cognitive Delays:** Breastfeeding is associated with a lower risk of developmental delays and learning disabilities, providing a stronger foundation for future academic success and cognitive skills.

EMOTIONAL AND ENVIRONMENTAL FACTORS:

In addition to nutritional benefits, breastfeeding often correlates with increased maternal engagement and responsive caregiving. These factors contribute to a stimulating environment that supports cognitive development and enhances IQ.

2. BREASTFEEDING AND FUTURE OBESITY: THE ROLE OF LEPTIN AND SUPPORTING EVIDENCE

Breastfeeding has been shown to significantly reduce the risk of childhood and adult obesity. One of the key biological mechanisms involved is the role of leptin, a hormone crucial for regulating appetite and metabolism.

ROLE OF LEPTIN IN OBESITY PREVENTION:

- **Leptin Regulation:** Leptin is a hormone produced by adipose (fat) tissue that helps regulate energy balance by signaling the brain to reduce appetite and increase energy expenditure. During breastfeeding, the levels of leptin in breast milk play a critical role in developing the infant's appetite control system.
- **Leptin in Breast Milk:** Breast milk contains leptin, which helps to program the infant's hunger and satiety signals. The presence of leptin in breast milk may influence the development of the infant's hypothalamic leptin receptors, promoting more effective appetite regulation and reducing the likelihood of excessive weight gain.



MECHANISMS OF OBESITY REDUCTION:

- **Appetite Regulation:** The leptin in breast milk helps establish a healthy appetite regulation system. It may promote normal feeding behavior and reduce the risk of overeating, which is a key factor in preventing obesity.
- **Metabolic Programming:** Early exposure to leptin through breastfeeding may influence the infant's metabolic programming, potentially reducing the risk of obesity by establishing healthier fat storage and energy balance.

SUPPORTING EVIDENCE:

- **Study on Leptin and Weight Gain:** Research published in The Journal of Clinical Endocrinology & Metabolism (2004) found that higher levels of leptin in breast milk were associated with lower weight gain and reduced risk of obesity in infants. The study indicated that the leptin provided through breastfeeding plays a role in regulating weight gain patterns.
- **The European Childhood Obesity Project:** This study, detailed in The American Journal of Clinical Nutrition (2011), found that infants who were exclusively breastfed for at least 4 months had a 25% lower risk of obesity at age 5 compared to those who were formula-fed or breastfed for shorter durations. The researchers suggested that leptin, among other factors, might contribute to this reduced risk.
- **The ALSPAC Study:** The Avon Longitudinal Study of Parents and Children (ALSPAC) published in The Lancet (2011) showed that breastfeeding was associated with a lower risk of obesity in children. Although the study did not focus exclusively on leptin, it supports the broader finding that breastfeeding influences obesity risk, likely through mechanisms including hormonal regulation.

QUANTITATIVE IMPACT - REDUCTION IN OBESITY RISK:

Research indicates that breastfeeding reduces the prevalence of obesity by approximately 20-25%. The role of leptin, along with other factors, contributes to this reduction by promoting healthy appetite regulation and metabolic balance.

LONG-TERM BENEFITS - IMPACT ON ADULT OBESITY:

Evidence from studies, including one published in The Lancet (2016), suggests that breastfeeding has long-term effects on reducing the risk of obesity and type 2 diabetes in adulthood, highlighting the importance of early hormonal regulation in shaping lifelong health outcomes.

3. BREASTFEEDING AND METABOLIC SYNDROME

DIABETES:

- **Lower Risk of Insulin Resistance:** Breastfeeding has been linked to improved insulin sensitivity in infants, which reduces the risk of developing insulin resistance. Insulin resistance is a core feature of metabolic syndrome and can lead to type 2 diabetes.
- **Supportive Evidence:** A study published in Diabetologia (2012) found that breastfeeding is associated with a lower risk of developing type 2 diabetes in both mothers and children.



The study suggests that breastfeeding promotes better insulin regulation and reduces the risk of metabolic dysfunction.

CHOLESTEROL:

- **Impact on Cholesterol Levels:** Breastfeeding is associated with healthier lipid profiles, including lower levels of LDL (bad cholesterol) and higher levels of HDL (good cholesterol). Dyslipidemia is another component of metabolic syndrome, so improving lipid levels can help reduce the risk of this condition.
- **Study Findings:** Research published in *The American Journal of Clinical Nutrition* (2010) showed that breastfeeding is linked to more favorable cholesterol levels in children, which may contribute to a lower risk of developing metabolic syndrome.

LOWER BLOOD PRESSURE:

- **Hypertension Prevention:** Breastfeeding has been associated with lower blood pressure in both children and adults. Since hypertension is a component of metabolic syndrome, breastfeeding's role in maintaining normal blood pressure helps in reducing the risk of this syndrome.
- **Supporting Data:** A study published in *Pediatrics* (2014) found that breastfeeding was associated with lower blood pressure in children, suggesting that breastfeeding may contribute to long-term cardiovascular health.

LONG-TERM METABOLIC HEALTH:

- **Reduced Risk of Metabolic Syndrome in Adulthood:** Evidence suggests that breastfeeding has long-term benefits for metabolic health. A study in *The Journal of Clinical Endocrinology & Metabolism* (2013) found that individuals who were breastfed as infants had a lower risk of metabolic syndrome in adulthood, emphasizing the lasting impact of breastfeeding on metabolic health.

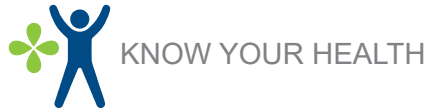
MATERNAL BENEFITS:

- **Decreased Risk of Metabolic Syndrome:** Breastfeeding also benefits mothers by reducing the risk of developing metabolic syndrome. Research published in *The American Journal of Clinical Nutrition* (2015) found that women who breastfed for longer durations had a lower risk of developing components of metabolic syndrome, such as obesity and type 2 diabetes.

4. BREASTFEEDING AND ALLERGY PREVENTION

REDUCED RISK OF ATOPIC CONDITIONS:

- **Prevention of Atopic Dermatitis:** Research has shown that breastfeeding, especially exclusive breastfeeding for the first 4 to 6 months, can lower the risk of atopic dermatitis (eczema). Atopic dermatitis is a common allergic condition characterized by itchy and inflamed skin.
- **Supporting Study:** A meta-analysis published in *Pediatrics* (2012) reviewed multiple studies and found that exclusive breastfeeding was associated with a 25-30% reduction in the risk of developing atopic dermatitis in infants.



IMPACT ON FOOD ALLERGIES:

- **Lower Risk of Food Allergies:** Breastfeeding has been associated with a lower risk of developing food allergies. The presence of specific proteins in breast milk may help in the development of oral tolerance to various allergens.
- **Relevant Research:** The study published in The American Journal of Clinical Nutrition (2015) found that breastfeeding was linked to a decreased risk of developing food allergies, particularly when breastfeeding was sustained for longer durations.

INFLUENCE ON RESPIRATORY ALLERGIES:

- **Reduced Risk of Asthma:** Breastfeeding may also reduce the risk of developing asthma, another common allergic condition. The protective effect is thought to be due to the beneficial impact of breast milk on immune system development and lung function.
- **Evidence from Studies:** Research published in The Lancet (2008) found that breastfeeding was associated with a 30% reduction in the risk of asthma in children, highlighting its role in preventing respiratory allergies.

BALANCED GUT MICROBIOTA:

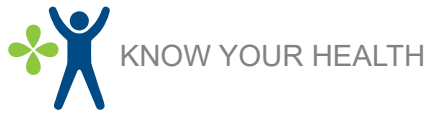
- **Promotion of Healthy Gut Flora:** Breastfeeding supports the development of a healthy gut microbiota, which plays a crucial role in immune system regulation and can influence allergic disease development. The prebiotics in breast milk promote the growth of beneficial gut bacteria that help in developing oral tolerance to allergens.
- **Scientific Findings:** A study in The Journal of Allergy and Clinical Immunology (2015) showed that breastfed infants have a more balanced gut microbiota compared to formula-fed infants, which is associated with a lower incidence of allergies.

LONG-TERM ALLERGY PREVENTION:

- **Sustained Effects:** The protective effects of breastfeeding against allergies can extend into later childhood and even adulthood. Long-term studies suggest that the benefits of breastfeeding in allergy prevention are sustained over time.
- **Supporting Research:** A longitudinal study published in Allergy (2016) found that individuals who were breastfed as infants had a lower incidence of allergic diseases, including asthma and eczema, throughout childhood.

CONCLUSION

- Breastfeeding offers a multitude of benefits that extend far beyond its fundamental role in providing optimal nutrition. While the widely recognized advantages include supporting infant growth, boosting immunity, and fostering maternal recovery, breastfeeding's impact on less apparent areas such as metabolic health, cognitive development, and allergy prevention is equally profound.
- Among these less commonly known benefits, breastfeeding plays a crucial role in brain development. The essential nutrients and bioactive components in breast milk, such as long-chain polyunsaturated fatty acids (LCPUFAs) and leptin, significantly contribute



to cognitive function and higher IQ scores. Additionally, breastfeeding supports the development of a healthy gut microbiota, which further enhances brain health and cognitive outcomes.

- The impact of breastfeeding on reducing the risk of metabolic syndrome and allergies, alongside its crucial role in brain development, underscores its extensive protective and developmental advantages. These benefits contribute not only to a healthier start for infants but also to long-term well-being for both mothers and children.
- Incorporating breastfeeding into health and wellness strategies not only supports immediate nutritional needs but also lays a foundation for lifelong health and cognitive advancement. As we recognize and celebrate the diverse benefits of breastfeeding, it becomes clear that supporting and promoting breastfeeding practices is essential for enhancing overall public health and ensuring a healthier future for generations to come.

BENEFITS OF EXCLUSIVE BREASTFEEDING	HOW MUCH
Improves IQ	Higher by 3-5 points
Reduces Risk of Obesity	By 20-30%
Reduces risk of allergy	By 30-40%
Reduces risk of Type 2 Diabetes	By 30-40%
Reduces risk of Cholesterol	By 10-15 %

Dr Umesh Vaidya
(In-charge NICU,
KEM hospital,Pune)

Dr Janvi Shah
(Lactation consultant,
KEM hospital,Pune)

Dr Rani Balgude
(Lactation consultant,
KEM Hospital, Pune)



At KEM Hospital, Pune, our milk bank is a cornerstone of our neonatal care, providing critical support to vulnerable infants with the highest standards of safety and quality. We are excited to announce that we are expanding the milk bank. This expansion will enable us to extend our services beyond the hospital, reaching even more needy infants in the community and ensuring that they receive the essential nutrition they need for healthy development



EVENTS AND ACTIVITIES

Inauguration of the advanced Nectar Human Milk Bank

On 20th August, KEM Hospital, Pune inaugurated advanced Nectar Human Milk Bank at the hands of the chief guest and National Award-winning playback singer Ms Savaniee Ravindrara, along with the guest of honour and former director at Department of Paediatrics, KEM Hospital, Pune, Dr. Anand Pandit, in presence of Mr. Saurabh Dhonarkar, Director, Finolex Industries Ltd, and Mr. Anil Whabi, Former Managing Director Finolex Industries Ltd.

The program had the honoured presence of Dr Xerxes Coyaji, Medical Director KEM Hospital, Pune, Dr. Vishwanath Yemul, Medical Administrator, KEM Hospital, Pune, Dr.Umesh Vaidya, Head Neonatology, along with lactation consultants Dr. Janvi Shah and Dr. Rani Balgude and staff members. The advanced Nectar Human Milk Bank has been established with support from Finolex Industries and Mukul Madhav Foundation (MMF).

The milk bank with enhanced capacity will help babies at the NICU at KEM Hospital as well as other hospitals. The operations include collection of milk from mother donors, testing, pasteurization, storage and dispensing when required.





EVENTS AND ACTIVITIES

Ms. Savanee Ravindra expressed her happiness on the launch of the upgraded milk bank and sung a part of evergreen classic hindi song 'Tu Kitni Achhi Hain' reflecting mother-child relationship.

Dr. Anand Pandit was instrumental in setting up the NICU at the hospital in 1980 and recalled earlier days and said that it is a matter of pride to see the NICU grow up in a wonderful system.

Mr. Dhanorkar expressed his gratitude to the KEM hospital for giving such a noble opportunity to serve people through an association between the hospital and Finolex for the last 24 years. He assured that Finolex & MMF will always be there with KEMH to provide state-of-art medical care at affordable prices for the people.

Dr. Umesh Vaidya stated that the milk bank helps give optimal nutrition to preterm babies and helps save many lives. He added that the upgraded human milk bank is a part of our vision to provide the best services to the patients at reasonable costs and that the advanced and upgraded version of the milk bank has enhanced capacity and the state-of-the-art equipment.

The Nectar Human Milk Bank was started at the KEM Hospital in 2018 and has been a strong support for our NICU babies, saving many lives. We thank Mukul Madhav Foundation for partnering with us and providing support in this endeavour



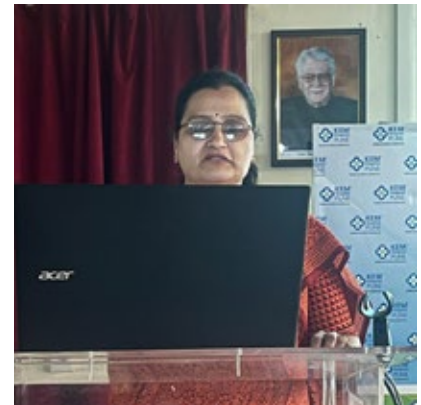


EmPACT– 2024

Emergencies in Pediatrics: A Comprehensive Teaching

A crash course for post graduates covering the theoretical and practical approach on pediatric emergencies was organized by the Department of Paediatrics on 24th & 25th August 2024, at the KEM Hospital, Pune. Symposium was well acknowledged with a total 60 registrations from Maharashtra, Gujarat, Goa, and Bangalore. Cherry-on-the-top was an active involvement/ support of renowned faculties from various Pediatrics teaching institutes from Pune like BJGMC, Bharati Hospital, Deenanath Mangeshkar Hospital, YCM Hospital and D Y Patil Hospital thus making it a grand success.

This was the first-of-its-kind symposium covering the theoretical approach on pediatric emergencies. A positive feedback received from delegates regarding the impeccable arrangements, exam-oriented critical topics covered, faculty presentations, and delightful food. Overall, the response was very encouraging, pushing us to arrange such symposia every year.

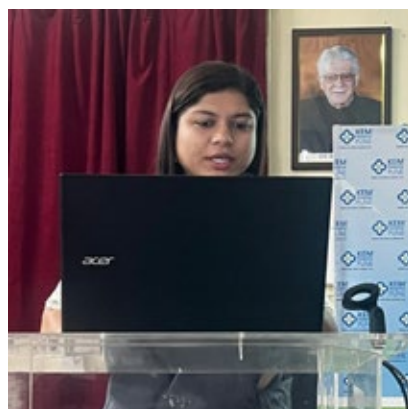




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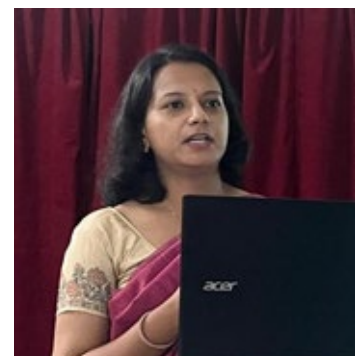
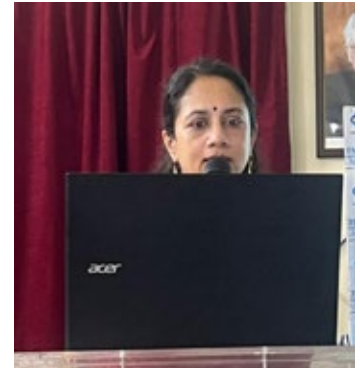
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GALD-NH	Galactosemia
Herpes simplex	Tyrosinemia
HLH	HFI
Mitochondrial	FAO
	Viral hepatitis
	Drugs

Paracetamol - therapeutic





EVENTS AND ACTIVITIES







Celebrating World Breastfeeding Week

Our enthusiastic Resident doctors participated in an engaging quiz, testing their knowledge on breastfeeding practices. This interactive session not only highlighted their expertise but also fostered a deeper understanding of lactation science. Kudos to our brilliant Residents for their dedication and enthusiasm.



Our talented employees participated in a greeting card making competition, showcasing the joy and beauty of breastfeeding through their creative designs. These cards will be used to congratulate and encourage our new mothers on their breastfeeding journey.





We honored the incredible mothers who have successfully breastfed their children, celebrating their dedication and resilience. The event was filled with academic discussions and fun games, making it a joyous and educational experience for all. A special felicitation was held for our generous human milk donor mothers, whose selfless acts provide nourishment to many. Your efforts inspire us all.



We conducted an intensive training session for our dedicated nursing staff, who play a crucial role in supporting breastfeeding within the hospital. Their enhanced skills and knowledge ensure that our new mothers receive the best possible care and guidance. Thank you for your unwavering commitment.





EVENTS AND ACTIVITIES

Blood Donation Camp at Central AFV Depot, Khadki





TESTIMONIALS

A. V. Lokhande BALLB. T. M. Kolhatkar B.S.L.L.B. S. A. Lokhande B.S.L.L.B.
- ADVOCATES -

To, ✓ The Co-ordinator - Madam mena ✓ Pune
The Incharge Medical Officer, F.M.D. Dated 24¹⁵ Aug 2024
K.E.M. Hospital, Pune

Respected Dr. and All in the Deptt.

I wish to place on record my Sincere thanks and gratitude to YOU ALL during the period 19¹⁵ August 2024 to 24¹⁵ August 2024, when I was required to be given I/V Injections as prescribed by Dr. Yogesh Sawani, UROLOGIST - Consultant of our Hospital.

The entire staff was very cooperative and gave all help with a smile.

-2-
I am a member of the K.E.M Hosp Society for a number of years. I felt very comfortable due to the homely treatment and care given to me.
I thank you once again

Yours sincerely
Mrs Shubhada And Lokhande





Dr. Suchitra Mohite-Jadhav who was privileged to be the Course Director for the Point of Care Ultrasound (POCUS) workshop at ISA state conference YuvaMahacon 2024 held at Mumbai this weekend.

She conducted a well-orchestrated and highly appreciated hands-on focused training highlighting the role of POCUS in resuscitation, respiratory failure, cardiac arrest, and demonstrating USG guided vascular access.

Aptly supported by Dr Prajakta Pote, Dr Upendra, Dr Geetanjali Dangat , Dr Rutuja Mayee and Dr Vinit.

The workshop was highly appreciated by all the delegates, organising team of YUVMACHON 2024 and senior ISA office bearers.





ACHIEVEMENTS

KEM SUCCESSFULLY DISCHARGES ONE MORE PATIENT AFTER LIVER TRANSPLANT

We are happy to announce that, KEMH has discharged one more patient last month after successful LIVER TRANSPLANT SURGERY, and patient is doing very well. We are immensely grateful to the donor family and entire KEM hospital staff who contributed positively to make this possible and helped one more patient by giving them the 'Gift of life'.





5 INTERESTING FACTS ABOUT BREASTFEEDING

1 Your body is ready to feed your baby from the moment they are born. Colostrum, the first milk, is yellow and thick. Even though there is only a tiny amount, it is all your baby needs for the first few days.



5 INTERESTING FACTS ABOUT BREASTFEEDING

2 During breastfeeding, both you and your baby produce oxytocin, a hormone that lowers stress and anxiety and makes us feel connected.



5 INTERESTING FACTS ABOUT BREASTFEEDING

3 Breastfeeding supports the development of healthy gut bacteria in your baby, setting them up with a healthy immune system for life.





HEALTHCARE AWARENESS

5 INTERESTING FACTS ABOUT BREASTFEEDING

4 Breastmilk contains antibodies that help your baby fight infections circulating in your environment. Babies usually breastfeed very frequently in the first few days.



5 INTERESTING FACTS ABOUT BREASTFEEDING

5 The more often your baby breastfeeds in the early days, the quicker your body will start to make more milk.

