

JOURNAL FOR NICU & MATERNITY CARE

Beginnings

ALTERNATIVE FEEDING

Why supplementation at the breast is best

GOING DIGITAL

A new guide on how to use Symphony

COLLECTING COLOSTRUM

For life giving properties galore



Register now!
BREASTFEEDING & LACTATION SYMPOSIUM 2023

Medela Symposium 2023

TOGETHER FOR A NEW APPROACH:
LACTATION SUPPORT IN EUROPEAN NEONATAL UNITS

Since 2006, Medela's yearly Global Breastfeeding & Lactation Symposium has been a unique platform for healthcare professionals worldwide to learn and connect about current research and evidence-based best practices. This year, there will not only be one Symposium but a series of three platforms in Europe, China and the United States to include even more regional topics of interest in addition to globally relevant presentations.

JOIN US AND REGISTER NOW!
Europe's first very own Symposium from June 23-24 will premiere in Munich, Germany and offers a world-class two-day scientific program with talks and workshops following the motto:

"Together for a new approach in lactation support in European neonatal units".

European Breastfeeding and Lactation Symposium
June 23-24 2023
medela.com/europe-symposium



While the on-site symposium will be limited to a selected group of experts, all presentations on Day 1 will be streamed live, allowing healthcare professionals from all across Europe to register free of charge. Join us to learn about the latest scientific findings in the field of breastfeeding and lactation and share local experiences to improve the quality of breastfeeding care and infant feeding!

The experts on site will then take these findings into curated workshops on Day 2 with the goal of translating the findings into clinical practice. We are already looking forward to sharing all key conclusions and expert recommendations in this journal and other platforms and events throughout the year.
We are excited to continue our journey of turning science into care with you!

Register now!

CONTENT

- 02 **Breastfeeding and Lactation Symposium 2023**
Register for free online expert talks
- 04 **Colostrum: The Drops of life**
A scientific look into benefits and best practice
- 12 **Symphony goes online**
Discover the new "How to use" Hub
- 14 **Introducing Freestyle hands-free**
Superior pumping on the go
- 16 **Supplementation at the breast**
Protecting that special breastfeeding bond
- 19 **Local News**

IMPRESSUM

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DAY 1

June 23rd | 12:45 – 18.00 (tbc)
On-site participation upon invitation

FREE
live streaming
& translations!*

"A call to action: Improving human milk & breastfeeding outcomes by prioritizing effective initiation of lactation"



Speaker: Prof Diane Spatz (USA)

"Lactation as a biological system: The importance of dose"



Speaker: Prof Donna Geddes (AUS)

"Lactation as a biological system: The dynamics of human milk composition"



Speaker: Prof Lars Bode (USA)

"Initiation of lactation: Prophylactic lactation support as Standard of Care for mothers of NICU infants"



Speaker: Dr Rebecca Hoban (CAN)

"Prioritising own mother's milk in the neonatal unit: need for standardised metrics that capture lactation and infant feeding"



Speaker: Prof Neena Modi (UK)

Improving survival & outcomes for preterm infants through optimizing early Maternal Breast Milk: a national Quality Improvement toolkit from BAPM"



Speaker: Dr Sarah Bates (UK)

*All presentations and discussions will be held in English. Registered participants will have access to live audio translation in French, German, Italian and Spanish via our virtual platform. Registration is free of charge. As places are limited (up to 1.000 participants), we kindly ask you to check your availability before registering.

DAY 2

June 24rd
Expert workshops | **On-site only, upon invitation.**

Conclusions and results to be presented in virtual events following the Symposium.

In this second part, three recognized experts will lead active discussions in smaller and interdisciplinary groups, focusing on exploring practical and feasible solutions to overcome the most recurring barriers to using and tracking own mother's milk in neonatal units. Workshops will be led and moderated by:



Prof. Matthias Keller (GER)
Health Economist, Neonatologist,
Director of the Children's Hospital, Passau



Thomas Kühn (GER)
Medical Consultant, Vivantes Hospital
Level III Centre of Perinatology,
Berlin and CEO of Neotrainer



Leon Mitoulas, PhD (AUS)
Global Director Medical Research
at Medela AG and an Honorary Research
Fellow in the School of Molecular Sciences,
The University of Western Australia.

Go for Gold!

Submit your poster abstract for the Medela Best Abstract Award 2023! The winner will be invited to attend and present their research on June 23rd in Munich.

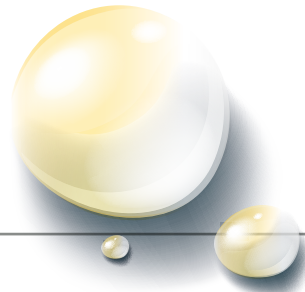
www.medela.com/poster-abstract

Deadline for submission:

May 12th
2023



COLOSTRUM



Drops of Life

Ideal nourishment, delivered by nature, yet scarce and only temporarily available: The first milk mothers produce deserves all the attention and more. A scientific look into benefits, challenges and clinical practice.

Precious ingredients

“It is almost impossible to grasp how positive the effect of colostrum is on a sick child. The components are too many to list.”

Serena Debonnet, midwife, lactation consultant and BFHI coordinator, Belgium

There remains no doubt among experts that colostrum, the first milk mothers produce when starting breastfeeding, is the ideal nourishment for a newborn. It's unique composition is tailored to the fragile infant's specific needs in the first hours and days of his life.

Thick and distinctly more yellow¹ in appearance compared to mature mother's milk, colostrum contains nutrients in highly concentrated form. It is full of protein, yet low in fat, making it easy to digest.² Most importantly, it plays a crucial role in building the infant's fragile immune system and kick-starting baby's healthy development. So much in fact, that colostrum has sometimes been dubbed a baby's “first vaccination”.

A LITTLE GOES A LONG WAY

A little literally goes a long way with these droplets – and their scarcity make them all the more precious to save: post-partum, colostrum is typically only available to the infant in the first three to five days before the mother's milk develops into transitional and later mature milk³ – with one exception: Research has found that in mothers of preterms colostrum can, in fact, last longer. In light of the importance of the protective properties of colostrum for fragile infants in particular, this, of course, makes a lot of sense. Therefore, to ensure these infants can benefit from colostrum's unique ingredients as much as possible, it is crucial that they receive their mother's colostrum – regardless of the overall feeding situation and decision.⁴

INGREDIENTS OF COLOSTRUM

White blood cells that produce antibodies to neutralize bacteria and viruses.⁵ This is particularly relevant for infants with immature guts and can prevent diarrhoea.

slgA antibodies lining the infant's gastrointestinal tract.⁶ They become concentrated in the mucus lining of the gut and respiratory system, protecting the infant against illnesses the mother has already experienced.

TGF-beta and Insulin-like growth factors, that stimulate growth of protective mucus membranes in the infant's intestines, assist with tissue repair after stress and can decrease intestinal cell apoptosis (cell death).⁷

Prebiotics, such as human milk oligosaccharides (HMOs), in colostrum feed and build up the “good” bacteria in infants gut.⁸

Vitamins protect and help your baby start fighting infections on his own. They can, for example, produce vitamin A, important for visual development.⁹

Minerals, e.g. magnesium, copper and zinc. While magnesium supports the heart and bones, copper and zinc, help develop the infant's immune system.^{10,11} Zinc also aids brain development, and there's nearly four times more zinc in colostrum than in mature milk.

Laxative properties help the infant have his first bowel movement, eliminating meconium¹² and reducing the risk of neonatal jaundice.¹³

“COLOSTRUM HAS A SIMILAR MAKE-UP TO AMNIOTIC FLUID WHICH THE INFANT HAS BEEN SWALLOWING AND EXCRETING IN THE WOMB. THIS HELPS EASE THE TRANSITION TO THE OUTSIDE WORLD.”¹⁴

Precious benefits

Precious benefits



Colostrum's benefits become paramount for preterm and sick infants. The unique ability of mother's milk to adapt to the needs of a baby is especially relevant here. For instance, higher levels of transforming growth factor (TGF)-beta that can stimulate secretory IgA production¹⁵ and regulate homeostasis and inflammation¹⁶ have been detected in colostrum of mothers with c-section births.¹⁷ This is particularly notable since their infants were not exposed to the distinct microbiota/microflora of a vaginal delivery. Thus, feeding colostrum may prevent the negative impact of pathogens which often colonize the infant's gastrointestinal tract following c-section.

"With colostrum, information is key. All mothers have to realize why it is so important that those few drops protect their baby."

Serena Debonnet,
midwife and lactation
consultant

MORE COLOSTRUM, LESS INTERVENTION

Notably, colostrum of mothers of prematurely born infants has more components for immune and nutritional signalling than term milk.¹⁸ It has a lower fat content compared to colostrum of mothers with term born infants, but significantly higher levels of proteins.² Fresh colostrum is incredibly rich in immunological components such as secretory IgA,⁶ lactoferrin,¹⁹ leukocytes,⁵ epidermal growth factor²⁰ – growing intestinal mucosa. Pasteurized mature donor milk often given to preterms in the first hours and days simply cannot provide the same benefits. In fact,

own mother's milk (OMM) and colostrum, compared to formula, reduces the risk of multiple morbidities and rehospitalisation: necrotising enterocolitis (NEC),²¹⁻²⁴ sepsis²⁵, broncho-pulmonary dysplasia (BPD),²⁶ retinopathy of prematurity (ROP),²⁷ neuro-developmental problems²⁸. In comparison, donor human milk has been shown to only reduce NEC when it replaces formula in the early days.^{29,30} Own mother's milk also achieves faster growth outcomes than donor human milk and thus requires significantly less fortification.^{29,30}

MORE EFFORTS, MORE BENEFITS

This is why all mothers need support to provide their colostrum early and frequently to their babies. However, preterm infants often cannot feed and suck effectively at the start due to immaturity and/or the need for respiratory support. In these cases, research suggests oral therapy could do the trick (s. below). Not only does receiving colostrum in this way aid in protecting the infant from pathogens, it also expedites transition to full enteral feeds: Published studies^{4,7,31} support improved feeding tolerance in infants that receive oral colostrum. This practice also aids with the absorption of nutrients and gut motility.

Fresh is best

Preferably, colostrum should be given to the infant fresh to profit from all its unique ingredients. Live stem cells for example, that have the amazing ability to stir repair processes in the body,⁵ cannot be found in refrigerated or frozen colostrum, only in freshly expressed drops.⁵²



ORAL THERAPY IN NICU

What?

Applying small amounts (0.1–0.2 ml) of OMM inside the infant's cheeks, starting from birth within 24 hours after birth and continuing until oral feeds begin.³²⁻³⁶ As regular mouth care for infants that are NPO (nil per os, nothing by mouth) and oral stimulation for non-nutritive sucking (NNS). With enteral feeds, every 3-6 hours are recommended.

Why?

Colostrum and early OMM are high in immunologic, anti-infective and anti-inflammatory factors. Oral therapy is therefore considered to function as a form of immune therapy.³²⁻³⁴ Moreover, performing oral therapy has been shown to enhance bonding, promote maternal confidence³⁵ and motivate mothers to continue expressing milk for her infant and increase breast milk feeding rates.³⁶ Research on the clinical benefits is continually evolving. To date this practice has been associated with trends towards decreasing the incidences of NEC^{37,38}, late-onset sepsis^{37,38}, reduced days to achieve full enteral feeding³⁷ and shorter hospital stays as well as better nutritional outcomes³⁹. Oral therapy is therefore recommended as routine care for preterm infants in the NICU³⁸.

How?

Using a colostrum/OMM covered swab or a 1 ml syringe filled with 0.1-0.2 ml OMM, small amounts of OMM should be applied inside the infants cheeks, toward the posterior oropharynx for at least 10 seconds. Ideally, mothers are instructed to administer oral care after each pumping session with fresh colostrum/OMM. Make sure to support mothers to express early (within 3 hours after birth) and frequently (8 or more times in 24 hours) to have OMM available.



ORAL CARE WITH COLOSTRUM IS SAFE, INEXPENSIVE, FEASIBLE AND WELL TOLERATED EVEN IN INFANTS WEIGHING LESS THAN 1000 G.^{33,35,36}

Best practice



ANTENATAL COLOSTRUM COLLECTION

Hypoglycaemia prevention for newborns of diabetic mothers

Newborns of mothers with diabetes mellitus have an increased risk of transient hypoglycaemia after birth. Midwife Bettina Kraus has learned to tackle this challenge in close collaboration with parents.



Bettina Kraus,
midwife and breastfeeding
consultant at the obstetrics
ward at St. Joseph
Hospital in Berlin,
Germany
(~4000 birth/year)

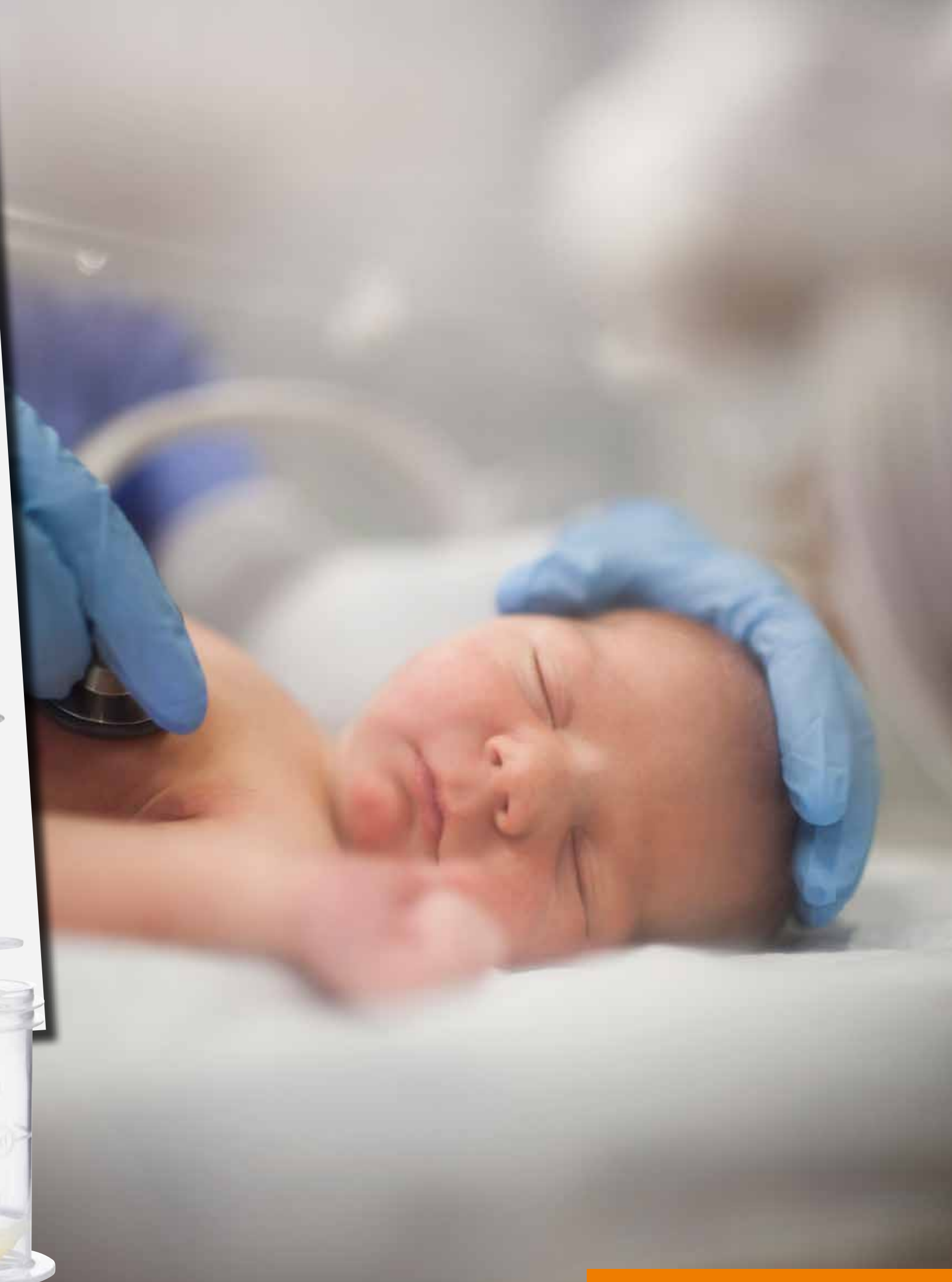
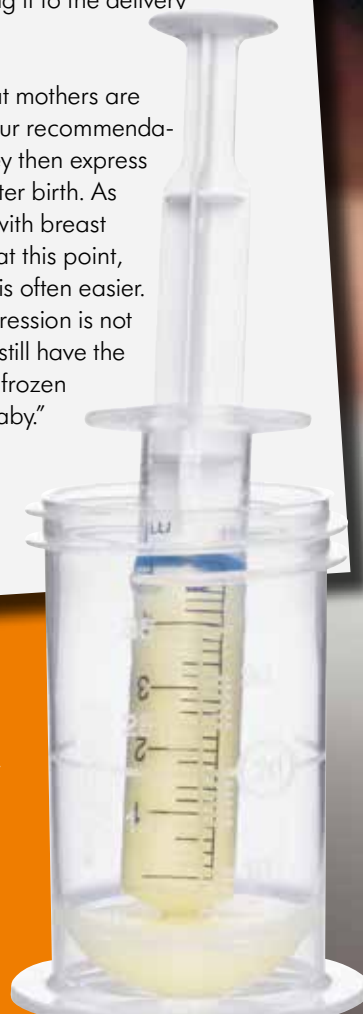
“Diabetic mothers who give birth automatically pass on the risk for hypoglycaemia to their babies. To counteract this, according to the German AWMF guideline*, all newborns of diabetic mothers should receive their first feed 30 minutes after birth as standard of care. In order to make the best use of this ambitious time window, we support mother and child in extensive bonding directly after birth to promote a first independent latch-on. Best case, the child intuitively grasps the breast and drinks effectively. However, if this is not yet the case, the mother can actively collect colostrum to put into the child's mouth or use colostrum that was collected antenatally. To have this “liquid gold” available directly after birth, educating parents in antenatal conversations is key.

We encourage diabetic mothers, who come to our hospital for birth planning, to collect their colostrum already during pregnancy. Both, doctors and midwives, inform parents about the value of colostrum and encourage colostrum collection from 37+0 weeks of gestation. We teach the mothers how to do a breast massage and use a breast model to show them how to express the first drops. We also distribute

information material on the safe storage and transport of the colostrum collected at home to the hospital at the time of birth. The mother should then collect a few drops of colostrum by hand expression once or twice a day before birth for approximately 5-10 minutes per breast. Preferably, she expresses directly into a colostrum container. This should then be labelled clearly with the name and date of collection and frozen immediately to bring it to the delivery room at the time of birth.

Our experience shows that mothers are very motivated to follow our recommendation. Ideally, of course, they then express fresh colostrum directly after birth. As they are already familiar with breast massage and expression at this point, the start to breastfeeding is often easier. However, if colostrum expression is not immediately possible, we still have the antenatally collected and frozen colostrum to give to the baby.”

* AWMF guideline 024/006
“Care of newborn diabetic
mothers”.



YOU WANT TO KNOW MORE ABOUT THE MAGIC OF COLOSTRUM?

Dr Rebecca Hoban, neonatologist and Director of Breastfeeding Medicine at The Hospital for Sick Children in Toronto, and Associate Professor of Paediatrics at the University of Toronto, shares it all in the free webinar “Colostrum- The golden ticket for a healthy start”.

Register now for Medela University to get access to this and many more fascinating courses - all free of charge!

www.breastfeedingandlactation.medela.com

Precious care



When an infant is unable to effectively stimulate the breast in the first hours and days after birth, activation of the milk-making cells is jeopardized,⁴⁰⁻⁴³ potentially delaying milk 'coming in'^{44,45} and impairing long-term milk production.^{46,47} Providing immediate lactation support is critical to safeguard not only the collection of colostrum but also future milk supply.⁴⁸ When breastfeeding remains ineffective, some healthcare professionals swear by hand expression for fear of losing the tiny amounts of colostrum in the pump kit, while other experts swear pumping remains the best way of collecting breast milk, including colostrum, from the start.

HAND EXPRESSION OR PUMPING?

Medela experts recommend a combined approach of hand expression and double electric pumping, when infant feeding is ineffective. This provides a solution to collect colostrum, ensures the vacuum required to effectively activate the milk-making cells^{41,49} and safeguards optimum milk volumes in the future.⁴² Yet while the vacuum used by electric pumps⁵⁰ effectively triggers the prolactin

response⁴⁹, activates the milk-making cells⁴¹⁻⁴³ and removes colostrum, tiny volumes of colostrum are sometimes difficult to recover. In contrast, hand expression uses tactile compression to facilitate milk ejection and colostrum collection, but lacks the vacuum required to effectively activate the milk-making cells in the early days^{41-43,49}. In fact, in two randomized controlled trials, hand expression alone has been shown to produce significantly less milk than exclusive pumping studies.^{42,43}

Nevertheless, mothers should always be taught the valuable skill of hand expression to be able to relieve engorgement, manage blocked ducts and relieve symptoms of mastitis.⁵¹ Hand expressing a few drops of milk before a feed may also encourage the baby to breastfeed⁵¹ – and facilitate the collection by pump set, if applied directly ahead of a pumping session (not instead!).

Whatever the method, the crucial point is that colostrum is collected and given to the infant. Because nothing else can offer the newborn the same incredible degree of protection this first "oral vaccination" can.

How to COLLECT COLOSTRUM

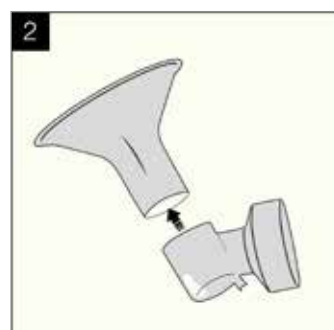


To effectively activate the mother's milk supply, Symphony's unique INITIATE program and double pumping at least 8-12 times in 24 hours (with no break longer than five hours!) should be standard practice - all the while collecting the first precious drops for the infant.

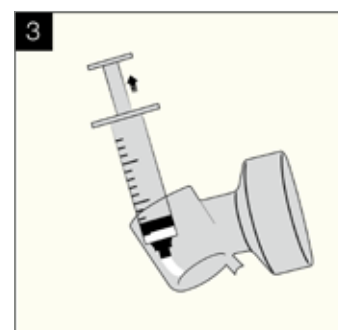
SAVE EVERY DROP IN 3 EASY STEPS



Turn the pumpset upside down. You don't need a bottle for the first pumping sessions. Then pump normally using Symphony's INITIATE program. The thick drops of colostrum will collect at the back of the connector piece.



Carefully remove the breast shield to access the connector piece. Be careful not to tilt and spill any drops.



Use a clean syringe to collect the colostrum. We recommend using this method for the first hours after birth only. As soon as the amount of colostrum increases, attach a small colostrum container and use the kit with the bottle facing downwards.



1 Patton S et al. *Lipids*. 1990;25(3):159-165. 2 Gidrewicz DA et al. *BMC Pediatr*. 2014 Aug 30;14:216. 3 Bryant J et al. *StatPearls* 2022 Jan. 2022 Oct 24. 4 Meier PP et al. *Clin Perinatol*. 2010; 37(1):217-245. 5 Hassiotou F et al. *Clin Transl Immunology*. 2013;2(4):e3. 6 Pribylava J et al. *J Clin Immunol*. 2012;32(6):1372-1380. 7 Ballard O et al. *Pediatr Clin North Am*. 2013 Feb;60(1):49-74. 8 Bode L. *Glycobiology*. 2012;22(9):1147-1162. 9 Bates CJ. *Vitamin A*. *Lancet*. 1995;345(8941):31-35. 10 Kulski JK et al. *Aust J Exp Biol Med Sci*. 1981;59(1):101-114. 11 Cassey CE et al. *Am J Clin Nutr*. 1985;41(6):1193-1200. 12 Ruth A. *Lawrence et al. Breastfeeding: A guide for the medical professional*, 7th edition, Elsevier. 13 Mitra S et al. *Br J Hosp Med (Lond)*. 2017;78(12):699-704. 14 Marlier L et al. *Child Dev*. 1998;69(3):611-623. 15 Ogawa et al. *Early Hum Dev*. 2004 Apr;77(1-2):67-75. 16 Baillie E et al. *Immunity*. 2019;65(4):924-940. 17 Kociszewska-Najman B et al. *Nutrients*. 2020 Apr 15;12(4):1095. 18 Trend S et al. *Br J Nutr*. 2016 Apr 14;115(7):1178-93. 19 Czosnykowska-tukacka et al. *Nutrients*. 2019 Oct 2;11(10):2350. 20 Oguchi S et al. *Zhonghua Min Guo Xiao Er Ke Yi Xue Hui Za Zhi*. 1997 Sep-Oct;38(5):332-7. 21 Meinen-Dew J et al. *J Perinatol*. Jan 2009;29(1):57-62. 22 Sisk PM et al. *J Perinatol*. Jul 2007;27(7):428-33. 23 Miller J et al. *Nutrients*. May 31 2018;10(6):24. 24 York DJ et al. *Nutrients*. Oct 23 2021;13(11):25. 25 Patel AL et al. *J Perinatol*. 2013;33(7):514-519. 26 Kim IY et al. *Pediatr Pulmonol*. 2019 Mar;54(3):313-318. 27 Zhou J et al. *Pediatrics*. 2015;136(6):e1576-86. 28 Belloni MB et al. *J Pediatr*. 2016;177:133-139.e1. 29 Meier P et al. *J Pediatr*. 1980;115:21. 30 Quigley M, McGuire W. *Cochrane Database Syst Rev*. 2014. 31 Rodriguez NA, Caplan MS. *J Perinat Neonatal Nurs*. 2015;29(1):81-90. 32 Rodriguez NA et al. *Trials*. 2015;16:453. 33 Rodriguez NA et al. *Adv Neonatal Care*. 2010;10(4):206-212. 34 Gephart SM, Weller M. *Adv Neonatal Care*. 2014;14(1):44-51. 35 Lee J et al. *Pediatrics*. 2015;135(2):e357-66. 36 Snyder R et al. *Pediatr Neonatal*. 2017;58(6):534-540. 37 OuYang X, Yang CY. *Int Breastfeed J*. 2021 Aug 21;16(1):59. 38 Tao J, Mao J, Yang J, Su Y. *Eur J Clin Nutr*. 2020 Aug;74(8):1122-1131. 39 Rodriguez NA, Mayo F. *J Perinatol*. 2023 Jan 3. Epub ahead of print. 40 Hoban R et al. *Breastfeed Med*. 2018;13(5):352-360. 41 Meier PP et al. *J Perinatol*. 2016;36(7):493-499. 42 Lussier MM et al. *Breastfeed Med*. 2015;10(6):312-317. 43 Slusher T et al. *J Trop Pediatr*. 2007;53(2):125-130. 44 Parker LA et al. *FASEB J*. 2017;31(1 Suppl):65019. 45 Parker LA et al. *J Perinatol*. 2012;32(3):205-209. 46 Parker LA et al. *J Perinatol*. 2020;40(8):1236-1245. 47 Hoban R et al. *Breastfeed Med*. 2018;13(2):135-141. 48 UNICEF. WHO. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO. 49 Zinaman MJ et al. *Pediatrics*. 1992;89(3):437-440. 50 Meier PP et al. *J Perinatol*. 2012;32(2):103-110. 51 Unicef UK Baby Friendly Initiative [cited 2022 Nov 15]. 52 Li S et al. *J Hum Lact*. 2019 Aug;35(3):528-534.

FOR MORE INFORMATION
[www.medela.com/
 breast-milk-composition-world-wide](http://www.medela.com/breast-milk-composition-world-wide)

Symphony goes digital

DISCOVER OUR NEW ONLINE GUIDE

Have you been looking for Symphony step-by-step instructions, neatly packaged in one place, accessible whenever you need it? Look no further!

DISCOVER SYMPHONY HUB NOW!



www.medela.com/symphony-hub

Help us make life easier for new Mums by sticking QR Codes on all Symphony pumps you hand out.

Contact your local Medela representative to learn more and order QR code stickers for your fleet.

For the new mother, everything is overwhelming. Add further challenges like early breastfeeding issues or even a separation from her infant and the emotional stakes are sky high. Learning how to use a breast pump in this situation can be daunting. Symphony breast pump is the gold standard when it comes to supporting mothers in activating, building and maintaining their milk supply. Thanks to the new online Symphony Hub, it will now become a mother's trusted companion even faster – and save you a lot of precious care time otherwise spent explaining.

A BRANDNEW SUPPORT SYSTEM

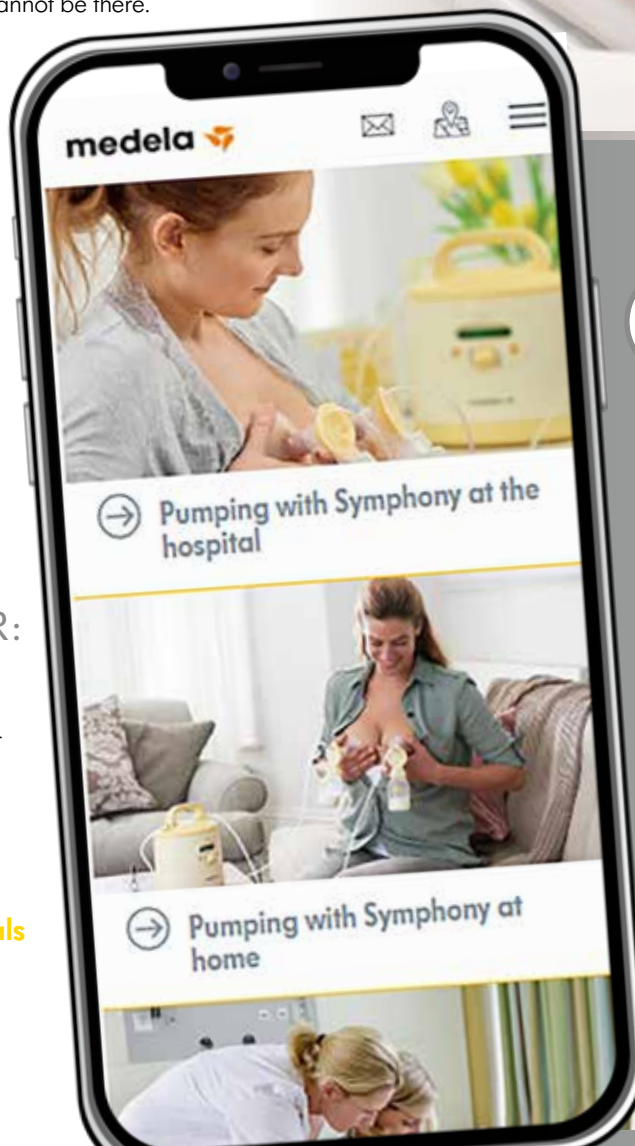
Developed to make the start and continuation of the pumping journey as easy as possible for mothers and healthcare professionals, the Symphony Hub makes learning how to use the pump a breeze: Just scan a QR code and get to know Symphony step-by-step – no registration needed! And the best part: Users can choose the information stream tailored to their personal situation, whether they are

THE NEW GAME CHANGER:

- All how-to-use instructions in one place
- Easy to access via QR code
- Tailormade to fit the individual situation of the user
- Simple step-by-step instructions
- Including helpful videos and visuals
- Optimized for mobile use

A practical support system for mothers, a real time saver for healthcare professionals

pumping in the hospital, at home – or are healthcare professionals looking for a quick refresher. With easy, short explanations, helpful videos and clear visuals. And while your early support and guidance remains irreplaceable, with this new online tool the mother now has a great support system at her side whenever you cannot be there.



JUST CHOOSE YOUR STREAM...

→ Pumping with Symphony at the hospital

After birth there is no time to waste if the baby cannot feed effectively yet. To get lactation going and build a good milk supply in spite of obstacles, we have taken all there is to know about using Symphony for activation and bite-sized it into easy to access information.

→ Pumping with Symphony at home

Whether the mother is continuing the journey she started at the hospital or is a "Symphony newcomer" because she is facing breastfeeding challenges like sore nipples, mastitis or milk blockage later, she will find all she needs to know to successfully pump milk for her baby and maintain a good milk supply.

→ Pumping with Symphony for healthcare professionals

Forget rummaging for quick cards and brochures! In the new hub you will find all the Symphony information in one place to support the mothers in your care. Including how to identify a mother with risk factors for lactation and supporting the transition to home.

...FOR A TAILORMADE STEP-BY-STEP GUIDE TO SYMPHONY:

- How to identify risk factors for lactation*
- How to initiate lactation with Symphony*
- How to assemble the pump set
- How to find the correct breast shield size
- How to find the right pumping program
- How to set Symphony to the correct program
- How to find the individual Maximum Comfort Vacuum
- Golden rules for pumping
- How to clean the pump set
- How to rent a pump for at home

*exclusive content for healthcare professionals

HELPFUL downloads & links

Look, Mum NO HANDS!

Discovering a new superior pumping experience with Freestyle™ Hands-free

New Mums need all hands on deck. This is why as a healthcare professional, you are not only looking for effective, but also simple solutions that make life easier for mothers. The new Freestyle™ Hands-free delivers on all fronts.




RESEARCH-BASED & STATE-OF-THE-ART

When research-based technologies and state-of-the-art design meet to make a pumping mother's life easier, a new superior pumping experience awaits: The NEW Medela Freestyle™ Hands-free combines 2-Phase Expression® technology, 105° angled breast shields and the new anatomically designed collection cups with three easy-to-clean parts and ultralight design. In fact, the new wearable cups are amongst the lightest available and free up Mum's hands so she can take care of her baby.

THE ANATOMIC DESIGN MAKES THE DIFFERENCE

The process of lactation and milk flow is an intricate system. Milk ducts increase in size by 68% during milk flow¹. As research shows it's extremely important to reduce any compression on the breast which has the potential to obstruct milk flow.^{2,3} With this in mind, thanks to Medela's extensive research on breast anatomy, we were able to develop a unique anatomic shape for our first wearable collection cups.⁴ Our hands-free cups have a smooth surface with the rim flaring away from the breast, designed to minimise localised compression. In addition, the broader lower half of the cup helps support the underside of the breast, which houses the majority of the milk-making tissue and is susceptible to compression.^{2,5} Complementing the natural shape of the lactating breast, the collection cups fit most breast shapes and nursing bras. And the 105° angle of the breast shields delivers a more comfortable and efficient pumping experience.⁶

IN RESEARCH CONDUCTED AT THE UNIVERSITY OF WESTERN AUSTRALIA, 23 MUMS TESTED FREESTYLE™ HANDS-FREE AND THE RESULTS SHOW THAT:⁷

-  Let-down came on average **23 seconds** faster*
-  **87%** of mums were satisfied or very satisfied with the vacuum generated
-  **96%** of mums were satisfied or very satisfied with the comfort of their pumping experience.

MORE MILK & COMFORT FOR THE BENEFIT OF MOTHERS AND BABIES.

*Compared to Freestyle Flex™



Freestyle™ HANDS-free

-  **DISCREET**
-  **ANATOMIC DESIGN**
-  **LIGHTWEIGHT & COMFORTABLE**
-  **3 PARTS, EASY TO CLEAN**
-  **MIMICS BABY**
-  **+18% DOUBLE PUMPING**
-  **DESIGNED FOR MULTI-TASKING**
-  **150ML CAPACITY**

Connects to Medela Family™ App

FOR MORE INFORMATION
www.medela.com/freestyle-hands-free-world-wide

¹ Ramsay DT et al. Pediatrics. 2004;113(2):361-367. ² Prime DK et al. Breastfeed Med. 2018; 13(7):A-45. ³ Geddes DT. J Midwifery Womens Health. 2007;52(6):556-563. ⁴ Patent number EP22182874.2. ⁵ Gooding MJ et al. J Ultrasound Med. 2010; 29(1):95-103. ⁶ Sakalidis VS et al. Acta Obstet Gynecol Scand. 2020; 99(11):1561-1567 (compared to 90° breast shields). ⁷ Data on file; 2022.

PROTECTING *that special bond*

WHY SUPPLEMENTATION AT THE BREAST SHOULD ALWAYS BE THE FIRST CHOICE

The benefits of breastfeeding go far beyond nutrition. Thus, supplementation methods that preserve the breastfeeding relationship and facilitate the unique connection between mother and infant are always the best option.

Own mother's milk is always the first choice for supplementation.

THE MAGICAL POWER OF SKIN-ON-SKIN

Sensory stimulation is a key factor in both breastfeeding and bonding, i.e. touch, taste, smell, audio and visual interaction^{1,4}. When the infant is stimulating the breast by sucking at the nipple, oxytocin is released from the posterior pituitary gland into the maternal circulation¹⁻³ and milk ejection is triggered to enable milk flow^{1,5}. Oxytocin also increases the blood flow to the chest and nipple area.⁶ The corresponding rise in skin temperature⁷ in turn supports the infant's ability to control his body temperature. Moreover, next to the unique bonding experience, a healthy microbiome is another key advantage of breastfeeding vital to strengthening the infant's immune system. So how to best maintain all these advantages, if breastfeeding is not effective enough and the infant needs supplementation?

WHEN SUPPLEMENTATION BECOMES NECESSARY

While exclusive breastfeeding and early initiation remain the ideal start for the baby's healthy development, there are a number of factors, that may make supplementation necessary. Among these are delayed secretory activation and low milk supply on the mother's side and/or ineffective feeding and faltering growth on the infant's part. To interrupt the precious breastfeeding relationship as little as possible, feeding solutions at the breast such as Medela's new supplemental nursing system (SNS) play a vital role in these cases.

MAINTAINING THE ADVANTAGES OF BREASTFEEDING

Using SNS not only facilitates the necessary skin-to-skin contact, it helps to stimulate the milk supply through baby's direct sucking at the breast at the same time. These sucking movements also support the infant's oral development and help train sucking skills. All the while SNS provides supplementation without bottles or teats. For an experience as close to breastfeeding as it gets.

SNS PROVIDES SUPPLEMENTATION WITHOUT BOTTLES OR TEATS.



FOR MORE INFORMATION
www.medela.com/sns-worldwide

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NEW

Supplemental Nursing System - All benefits



Advanced system

- **Anti-leak TwistLok Lid** to prevent milk loss
- **Advanced venting system** to ensure consistent milk flow and comfortable feeding
- **Silicone tubing with soft, rounded edges;** gentle on baby's mouth



Easy to use

- **Versatile container and lid,** ideal for milk preparation, storage, transport and feeding
- **Clip** to fasten device to nursing bra, top or pillow
- **Simple "on/off" flow control**



Easy to clean

- **Dedicated cleaning aid** to help effectively clean the tube over repeated daily use



Reusable

- Also supports adoptive, surrogate, same sex, transgender and non-binary parents to create a breastfeeding / chestfeeding experience





GOOD PROTOCOLS FOR EARLY INITIATION OF BREASTFEEDING ARE CRUCIAL FOR BUILDING A GOOD MILK SUPPLY.



EASY POSITIONING, EASY FEEDING, *easy bonding*

How to use Medela's Supplemental Nursing System

<p>1</p> <p>Clip the SNS securely and comfortably to a bra strap, top, or pillow.</p>	<p>2 – Option A</p> <p>To position the tube, first attach the baby to the breast.</p> <p>Once the baby has a good latch, gently insert the tube about 1.5-2cm into the top corner of the baby's mouth.</p>	
<p>2 – Option B</p> <p>Alternatively, fixation tape may be used to help position the tube. First, tape the end of the tube to the breast with it protruding past the nipple by about 0.5cm at either the 10 o'clock or 2 o'clock position.</p>	<p>Then, the mother should attach the baby to the breast as she would normally.</p>	
	<p>3</p> <p>Release the clamp to let the milk flow.</p>	

Tips

- The height of the system can be raised to increase milk flow and lowered to decrease flow.
- Using the SNS may take a couple of attempts before it becomes an easy way to feed together. If either mother or baby are experiencing difficulties or becoming upset, try again at the next feed.

Purelan™

Fast relief for sore nipples and dry skin



Sore nipples are a common cause for mothers to stop breastfeeding early and can prove a real challenge. Thankfully, Purelan™ makes swift work of this challenge: Made of 100% medical-grade lanolin Purelan™ is formulated to provide relief for sore nipples and dry skin.

For many years, lanolin has been used in the treatment of dry and damaged skin. Its emollient and hydrating properties are well-documented.^{1,2} Research suggests that highly purified lanolin can help reduce nipple pain and promote healing in breastfeeding mothers.^{3,4} Purelan soothes dry and sore skin through a dual action – protecting the outer layers of the epidermis while helping to rebalance skin's natural moisture levels.

The viscous properties of Purelan – help create a protective barrier on the skin's surface reinforcing its natural defences against external stresses and reducing trans-epidermal water loss.

The natural chemistry of Purelan – containing complex esters, lipids, sterols and free lanolin alcohols that mimic the skins surface chemistry – is absorbed into the stratum corneum and acts with a moisturising effect. Thanks to its superior water absorption capacity (more than 210%), Purelan can hold more than twice its weight in water – naturally helping skin's rehydration.



Purelan™ helps to reinforce skins natural surface barriers against moisture loss

Purelan™ is absorbed deeply by the skin and holds water, mimicking skin's natural sebum to rebalance moisture levels

- Safe** – no need to remove before feeding
- Effective** – ultra-pure medical-grade lanolin soothes nipple soreness
- Natural** – single-ingredient lanolin moisturises and protects
- Free from** – additives, preservatives, fragrance
- Ethically sourced** – traceable supply chain, raw materials from mulesing-free farms
- Also great for chapped lips and other dry skin areas**



Small in size. Big in relief.
Recommend Purelan™ to help mothers protect and moisturise their nipples during breastfeeding. Available in 7g and 37g.

References
1 Clark EW, Steel I. J Soc Cosmet Chem. 1993; 44:181–195. 2 Barba Albanell C et al. Skin Pharmacol Physiol. 2018; 31:198-205
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FOR MORE INFORMATION
www.medela.se/purelan

Symphony. Hospital-grade pumping for home use.

Available
for rent!



Every drop of breast milk counts for the healthy development of a newborn baby. The Symphony hospital and rental breastpump can help mothers overcome minor and major breastfeeding problems at every stage of breastfeeding.

Pumping is most successful in stimulating milk supply when the pump imitates the baby's own, natural rhythm: The research-based programs of the Symphony PLUS card for Medela Symphony breast pump have been proven to effectively support timely initiation and long-term milk production¹ as long as the baby cannot suck effective.



[www.medela.se/
uthyrning](http://www.medela.se/uthyrning)

Make sure every mum and infant who need it come home to a hospital-grade rental pump!
Scan and learn everything you need to know about Symphony rentals.

¹ Meier PP et al. J Perinatol. 2012; 32(2):103-110.