1/2022

JOURNAL FOR NICU & MATERNITY CARE

Beginnings

GOOD TO KNOW
At-risk conditions for lactation

BETTER BE READY
How to treat sore nipples

BEST TO HAVE
Research-based technology for successful initiation

medela
THE SCIENCE OF CARE™

medela
THE SCIENCE OF CARE™

Turning Science into Care

To us, caring is natural. It is life giving – and life changing. That's why caring has always guided everything we do at Medela. As a family company, you could even say it's in our DNA.

Our team is passionate about our commitment to Swiss quality and service, because we know that this is how trust is earned. We understand the needs of moms and babies, patients and the professionals who dedicate themselves to their care. And we've been caring for moms and babies, patients and healthcare professionals for so long, we've turned it into a science.

We realized early on that the first step in caring is understanding. We listen to the needs of breastfeeding mothers, new parents, and healthcare providers, and we bring their voice into everything we do. By advancing research and gaining deep insight of natural behavior, we develop forward-thinking innovation to nurture life for generations. This is why we partner with world-renowned researchers, institutions and clinical organizations as we strive to solve today's healthcare problems.

By analyzing the lactating breast and infant suckling for example, we developed our 2-Phase Expression® Technology which mimics a baby's natural nursing rhythm to build and maintain breast milk supply, and we formulated the Symphony PLUS® Breast Pump with Initiation Technology® to activate and increase milk supply. Using 3D anatomic scans from thousands of lactating breasts, we created PersonalFit FLEX™ and PLUS Breast Shields to increase comfort and milk removal. And recognizing the importance of skin-to-skin contact between mom and baby, Medela's Contact Nipple Shield features a unique cut-out shape, encouraging sensory connection.

Across the different stages of life, Medela's products go beyond form and function. They heal, nurture health and build bonds. The bond between mother and infant is probably one of the strongest bonds there is. It certainly is of great importance for the healthy development of every child. Let us work together to strengthen it!

From Switzerland into the world

The Swiss company, based in the canton of Zug, was founded in 1961 by Olle Larsson. Today, his son Michael Larsson heads the company as chairman. In recent years, Medela has become one of the leading providers of breastfeeding products and medical vacuum technology. With more than 1.600 employees in 20 subsidiaries worldwide and a distributor network in over 100 countries, Medela serves over 14 million customers.

To the Top: Olle Larsson

Michael Larsson, Chairman

"Through advancing research, observing natural behavior and listening to our customers, we turn science into care nurturing health for generations."

CONTENT

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HOSPITAL-GRADE PUMPING FOR THE FUTURE

1983 – **Early product successes included the introduction of the world's first high-quality and and at the same time affordable HAND BREAST PUMP in 1983.**

1987 – **1987 saw the launch of LACTINA - the world's most distributed rental breast pump.**

1991 – **This was followed in 1991 by the MINI-ELECTRIC - the smallest and most technically advanced fully automatic breast pump at the time.**

2001 – **In 2001, Medela launched the SYMPHONY®, a breast pump that revolutionized the hospital and rental sector with its research-based 2-Phase Expression® Technology: By studying the lactating breast and infant suckling, it mimics a baby's natural nursing rhythm to build and maintain breast milk supply.**

2018 – **SYMPHONY PLUS® – The Symphony gets an additional program: the research-based INITIATE program, developed especially for milk expression and breast stimulation during the first days after birth.**

2019 – **Using 3D anatomic scans from thousands of lactating breasts, Medela creates PERSONALFIT FLEX™ and PLUS BREAST SHIELDS to increase comfort and milk removal.**

2020

PLAN B FOR BREASTFEEDING

At-risk conditions and effective lactation support

The more milk of their own mother infants receive from very early on, the better for the healthy development of every child. However, as a healthcare professional you know that there are risk factors which may delay breastfeeding and jeopardize the future milk supply. The earlier these can be addressed, the greater the chances of counteracting successfully.

The problem:

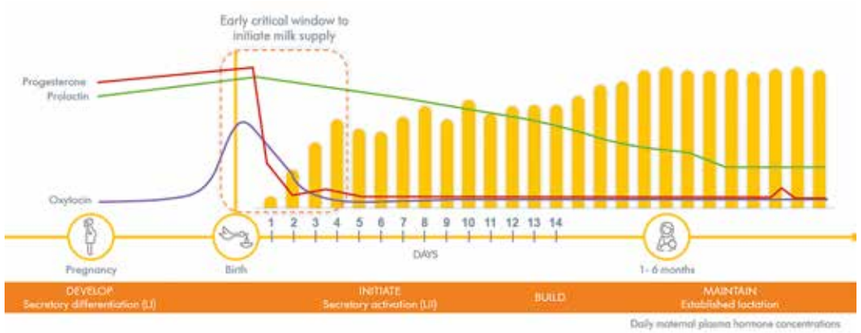
POTENTIAL DELAYED SECRETORY ACTIVATION

Secretory activation, i.e. milk 'coming in', normally occurs between 24 – 72 hours after delivery.[1] It initiates the increase of larger volumes of milk, and is closely connected to the natural interaction of the hormones progesterone, oxytocin and prolactin.[2] This interaction is highly dependent not only on the mother's health but also on external factors like the birth process and the infant's suckling at the mother's breast directly after birth. In fact, early and frequent breast stimulation in these early hours and days is essential to support timely milk 'coming in' and long-term milk production.[3]

Over 40 % of mothers[4] are at risk from delayed secretory activation or delayed onset of lactation (DOL), which means little or no maternal perception of breast fullness or leaking in the first 72 hours post-birth.[1] The potential problems resulting from this are not to be underestimated: DOL can lead to excessive infant weight loss and the need for formula supplementation[4], as well as a shortened duration of lactation overall:[5] Women experiencing DOL have 60 % higher odds of stopping breastfeeding at 4 weeks.[5]

> Delayed secretory activation (≥72 hours after birth) is linked to risks of persistent low milk volumes and a shortened duration of lactation. [4,5]

Stimulating the breast early and frequently in the initial 72 hours after birth, and prior to secretory activation (milk 'coming in') is critical for future breastfeeding success.



Neville MC. J Mammary Gland Biol Neoplasia (2009) 14:269–270. Boss M et al. F1000Res. 2018; 7.

The risk factors:

The risk factors:

Prioritising initiation, building and maintaining mother's milk volume is the most important lactation-related responsibility for maternity and neonatal caregivers.

PRIMIPARITY, INDUCED LABOUR & CO

What are the risk factors for delayed secretory activation and how can healthcare professionals assess and address them effectively? Research names maternal primiparity among the most relevant factors with first time mothers at a 30 - 40 % increased risk of a delayed onset of lactation. [4,6,7,8] It is the combination of this and other factors as well as the cascade of medical interventions they often trigger, that puts affected women at a much higher risk of inadequate milk volumes.[1]

Many of the prenatal risk factors for lactation are closely linked with the mother having an increased chance of requiring an induction of labour (IOL)[9]. For instance, women with (gestational or pre-existing) diabetes and women with obesity are likely to be advised to have their labour induced.[10] First time mothers tend not to give birth on their "due date".

Rather than waiting for the pregnancy to continue until 42 weeks, as was done in the past, in many countries we now see obstetric care recommending inducing labour at 41 weeks. Compared to women who went into labour spontaneously, those who were induced are more likely to experience epidural use (71 % vs 41 % for spontaneous labour), episiotomy (41 % vs 30 % for spontaneous labour), vacuum or forceps use and/or, eventually, a caesarean section (29 % vs 14 % for spontaneous labour).[11] Overall, IOL means more stressful labours and the often resulting medicalised birth leads to increased risk of pain, postpartum haemorrhage, stress, sleepy and exhausted infants[11] or even the separation of mother and infant. All these conditions may result in the failure to breastfed well or at all within the crucial first hours and/or days and may have potential delayed secretory activation as a consequence.[1,4,15]

Risk factors that can be assessed before birth:

1. **Maternal obesity** [12-14]
2. **Diabetes** [1,4,15] **(gestational or pre-existing)**
3. **Maternal age over 30** [1]
4. **Breast reduction surgery** [16]
5. **Primiparity (first time mothers)** [1, 4]
6. **Induction of labour (IOL)**
   Compared to women who have spontaneous labour, those who have an IOL are more likely to have:caesarean sections, epidurals, episiotomies and postpartum haemorrhage[1, 11]
7. **Planned caesarean section** [17]

+ Additional risk factors: history of breast hypoplasia, ovarian cysts, untreated hypothyroidism, PCOS and use of certain medications.[1]

Risk factors that may be noted during or after birth:

1. **Unplanned/emergency caesarean section** [17]
2. **Stressful or prolonged labour and birth** [4, 18-20]
3. **Psychosocial stress / pain** [4,18-20]
4. **Postpartum haemorrhage (PPH)** [1,21]
5. **Preterm or late preterm infant** [1, 22]
6. **Mother – infant separation** [1, 23]
7. **Delayed first breastfeeding episode** [24]
8. **Supplementation within the first 48 hours** [25]
9. **Breastfeeding (or pumping) < 8 times in 24 hours** [1,5, 19,23]

Additional risk factors: infant feeding issues and overuse of pacifiers.[1,19]

A MOTHER DIAGNOSED WITH AT-RISK CONDITIONS FOR INADEQUATE MILK SUPPLY NEEDS IMMEDIATE SUPPORT AND, IF NECESSARY, A SUITABLE AID TO INITIATE.

Effective lactation support:

Effective lactation support:

TIMELY INITIATION THROUGH BREAST STIMULATION

It is the professional intervention and support of midwives, nurses, doctors and lactation specialists that can now ensure mother and infant get off to the right start. The mother's breast needs to be sufficiently stimulated to program the processes that regulate long-term milk synthesis. This will help infants who cannot effectively breastfeed in the early days after birth to be exclusively fed their own mother's milk (OMM).

The time between birth and secretory activation (milk 'coming in') is critical for safeguarding future milk supply.[26] The first hours after delivery are a crucial time window for priming the breast tissue and making use of the natural rise and fall in maternal hormones. Specifically, the rapid fall in progesterone and the elevated levels of oxytocin and prolactin shortly after birth switch on the lactocytes (milk-making cells).[2] Together with breast stimulation they are the physiological triggers for the onset of significant milk production (milk 'coming in') between 24 and 72 hours.

> NICU mothers who initiate pumping within 3 hours after birth significantly reduce the time to secretory activation and have higher daily and cumulative milk volumes over time.[31-33] They are also more likely to be pumping at 6 weeks and when infants are discharged from NICU.[31-33]

Early breastfeeding and pumping

Early breastfeeding should commence within the first hour of the birth. If an infant cannot (effectively) breastfeed, pumping with a hospital-grade electric double pump should be started within the first three hours of birth. Only when milk is removed frequently (8-12 times in 24 hours)[32] and the breasts are drained effectively, can an adequate milk supply be built and the mammary gland is programmed for long-term lactation.

FOR MORE INFORMATION
medela.dk/risikobetonede-tilstande

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MILK FROM AN INFANT'S OWN MOTHER IS TAILORED TO THAT INFANT'S NEEDS. IT HELPS REDUCE THE INCIDENCE, SEVERITY AND RISK OF MORBIDITIES SUCH AS NEC[27] AND SEPSIS[28] AND DOES SO IN A DOSE RESPONSE MANNER – MORE MILK, MORE BENEFIT[29,30]

Don't hesitate. Initiate!

Not all mothers with risk factors will need to use a breast pump. Mothers whose infants are breastfeeding well do not need to be pumping in addition to breastfeeding. They will need to focus on establishing good breastfeeding techniques. However, any mother, whose infant does not have a first breastfeed within the first hour after birth and/or is sleepy and ineffectively/infrequently breastfeeding (less than 8x in 24 hours), should be given support and advice to stimulate the breasts with pumping until the infant can breastfeed effectively.

SYMPHONY® PLUS

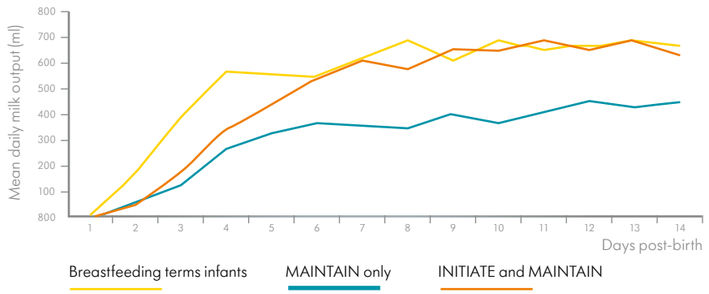
One pump - one unique combination of programs

With its two research-based programs, the Symphony breast pump with the Symphony® PLUS card is the best choice for ensuring a good start and build-up when there are initial difficulties, and – if necessary – maintains the mother's milk supply in the long term.

During the first few days after their birth, infants suck differently from when lactation is established: Their sucking behaviour is still irregular and includes frequent pauses – a rhythm specially designed by nature to optimally stimulate lactation after birth. Symphony offers the INITIATE program to ensure the most accurate simulation of this triggering process for breastfeeding.

It mimics the sucking and pausing rhythm of the newborn infant during the first days of lactation. After secretory activation, the mother can then switch to the MAINTAIN program, which imitates the sucking rhythm of a healthy newborn infant during established lactation, based on the 2-Phase Expression technology: Initially, the infant stimulates the mother's breast by means of fast, short sucking cycles. Once the milk ejection reflex has been triggered and milk starts to flow, the baby changes to a more regular sucking pattern. The 2-Phase Expression technology precisely mimics this rhythm, enabling milk to be expressed more effectively.

However, it is the combination of these two programs that makes Symphony so unique: As part of a randomised clinical trial, researchers investigated the effectiveness of the INITIATE and MAINTAIN programs. The participants consisted of mothers of premature infants, all of whom needed a breast pump, and they were divided into two groups: One group used Symphony with the INITIATE program until secretory activation occurred, and then changed to the MAINTAIN program. The other group only used MAINTAIN.1



Neville MC et al. Am J Clin Nutr. 1988; 48(6):1375–1386
Meier PP et al. J Perinatol. 2012; 32(2):103–110

The results

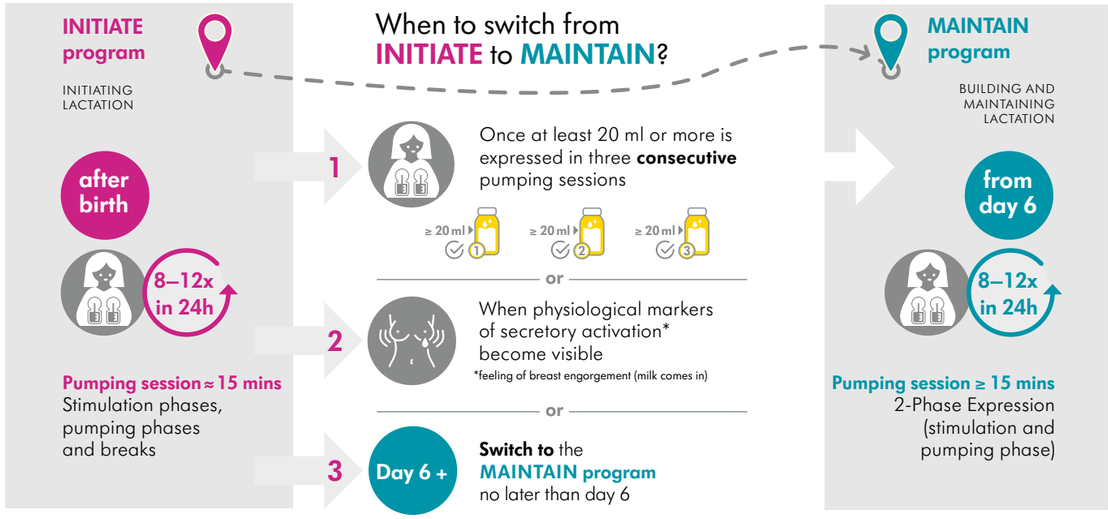
Compared with mothers using MAINTAIN only, mothers using INITIATE followed by MAINTAIN:[1]

- Achieved significantly higher daily milk volumes over the first two weeks.
- Were more likely to achieve a supply greater than 500 ml (16.9 fl oz) per day by the end of the second week.
- Expressed volumes after using INITIATE followed by MAINTAIN that were similar to those consumed by a term-born infant from days six to 14 after birth.[1,2]

MOTHERS WHO USED INITIATE REACHED SECRETORY ACTIVATION[4] 1.2 DAYS FASTER

BENEFITS OF DOUBLE PUMPING

As well as being quicker – a big plus for busy healthcare professionals and mothers – research shows that double pumping at established lactation obtains 18 % more milk on average, compared to single pumping each breast in turn.[3] And the milk expressed had a higher energy content, too.[3]



FOR MORE INFORMATION
medela.dk/symphony

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Quality Improvement in NICU

WE ACCEPT THE CHALLENGE

In NICU evidence-based protocols can save lives. When caring for the most vulnerable infants, timely interventions are crucial. Medela's Quality Improvement Initiative helps to support hospitals in assessing their human milk practices and implementing evidence-based protocols.

Only about 50 % of the responding healthcare professionals say their NICU protocols assess human milk dose and/ or exposure period.*

For very low birth weight, preterm and/or sick infants, own mother's milk (OMM) is a nutrient whose beneficial impact depends on the dose and length of exposure.[1,2,3] For ensuring NICU infants can receive as much OMM as possible during the hospital stay and beyond, a protocol of intervention and set metrics for the initiation of lactation and transition to breastfeeding are necessary. However, though plans for interventions in lactation care and infant feeding exist in NICU and maternity, they are not always being tracked continuously and in a standardised way.

Medela's new Quality Improvement (QI) Initiative in NICU wants to support hospitals to achieve the best outcomes in lactation care. Working with leading experts, we have created a free toolkit with straight-forward but effective resources that NICUs can use to assess the human milk practices they have in place, collect data, identify the potential for improvement and implement evidence-based best practices.

The idea is simple: We want to support you in supporting the infants in your care. By presenting a step-by-step process to implement QI and practice changes; providing expert evidence-based best practices and knowledge – and ultimately enabling support for mothers to achieve their goal of delivering high dose, long exposure of own mother's milk to their vulnerable infants.

YOUR QUALITY IMPROVEMENT TOOLKIT:

- **Interactive scorecard:** to evaluate your performance and assess priorities in evidence-based practices shown to improve human milk feeding in the NICU
- **Human milk calculator:** to model the effect of feeding with own mother's milk on incidence reductions
- **Step-by-step pathway:** explains NICU lactation QI and details how to get the project off the ground
- **Lactation and OMM data collection tool:** web-based application to collect appropriate data in a simple and standardised way
- **NICU lactation Quality Improvement framework**: to systematically improve lactation care and infant health outcomes

FULL TOOLKIT AND FOR MORE INFORMATION medela.dk/nicu

* according to European Market Research by FMR Global Health

1 Bigger HR. 2014. J Perinatol 2014; 34: 287–291. **2** Patel AL. 2013. J Perinatol 2013; 33: 514–519. **3** Sisk PM. 2007. J Perinatol 2007; 27: 428–433.

Dr. Rosalina Barroso, Head of the Neonatal Intensive Care Unit at Prof. Doutor Fernando Fonseca Hospital in Portugal, on successfully implementing new practices through the NICU QI initiative.

Best Practice:

"A ROADMAP TO INCREASE THE DOSE OF OWN MOTHER'S MILK IN OUR NICU"

What was your driver to start working with the NICU QI toolkit?

We went through the NICU scorecard and recognized the gaps in lactation data that we had as well as an opportunity to improve the dose of own mother's milk for our most vulnerable infants. There is a wealth of evidence showing that own mother's milk feeding for preterm and very low birthweight infants reduces the risk of many complications of prematurity and their associated costs, greatly improving the infant's health. What we developed with Medela's NICU lactation QI toolkit was the roadmap to actually increase the dose of own mother's milk in our NICU.

What did it take to implement it?
I think that team work is essential to implement such a program. We made sure we had the buy-in from labour & delivery, the obstetrics department and the NICU. And we have a very motivated team. Then, education is critical to ensure all staff members are aware of their roles and can provide consistent information to the families on the value of own mother's milk and how to build an adequate milk supply. To that end, it is important to plan training sessions when new staff joins.

What were the barriers you met with?
One of the barriers we discovered early on was that not only pumping within 3 hours of delivery was a challenge, but also the time between that first expression in the delivery room and the second expression in the obstetric department. We attributed this gap to the fact that the mother was moving between two departments. To address this, we included a nurse from the delivery room and one from the obstetrics department in our core QI team so they could be practice change drivers within their own departments. We also realised the difficulty many mothers had to recognize the importance of pumping often in the first days, as they were not obtaining significant volumes of milk. Also, mothers had a tendency to not record their pumping sessions thus leading to incomplete data. In order to manage maternal expectations in the first days postpartum, we then paid special attention to the communication around pumping in these days. We explained the importance of having pumping records as these allow us to closely monitor lactation and intervene appropriately when necessary. Another barrier we have in Portugal is that prescriptions and reimbursement for lactation care and equipment are not available. However, mothers who lack pumping equipment at home can only pump when they come to the NICU to see their baby. The resulting reduction in the number of pumping sessions will have a negative effect on maternal milk supply. What we did to overcome this, was to loan out Symphony pumps to mothers with very low economic resources.

How are you going to sustain this change in your hospital?
We find additional education sessions for the entire staff to refresh the scientific background as well as best practice are critical to ensure sustainability. We need to make sure that everybody is aware at all times of their roles and responsibilities to support initiation and OMM dosage.

Is there a next step for QI in your hospital? What will you focus on next?
Our focus is to continue to improve the dose of own mother´s milk for preterm babies and to study the relationship between own mother´s milk and morbidities. Also, we would like to certify our NICU as the first Portuguese baby friendly NICU.

Wanted

Fast relief for sore nipples

Sore nipples are a common early breastfeeding problem – and a common reason for early weaning, too. Your advice as a healthcare professional is invaluable in order to minimise this happening in the first place. Sometimes even small aids can make a big difference to breastfeeding problems.

The most common causes of nipple pain in the first few days are poor breastfeeding positions or incorrect latching. It is also not uncommon for breastfeeding mothers to experience nipple problems such as fissures, abrasions, cracked nipples and scabbing, caused by the vaccuum a baby creates when sucking. One thing is crucial in any case: the right advice needs to be given quickly to ensure the new mother does not wean

STEP 1: FAST RELIEF AND GENTLE CARE

If the nipples are affected, it is important that they receive the appropriate care and attention so that breastfeeding does not become too painful for the mother. Purelan nipple cream, made of pure lanolin, provides the skin with fast and effective support thanks to its double action. Firstly, Purelan's soft, rich texture creates a protective barrier. As a result, Purelan strengthens the skin's natural resistance to external impact and reduces moisture loss over the damaged epidermis. Secondly, Purelan's composition is similar to the natural surface of the skin itself: the nipple cream likewise consists of complex esters, fats, sterols and free lanolin alcohols. This allows Purelan to penetrate deep into the outer layer of the epidermis so that it can hydrate the skin from the inside out. Thanks to the excellent water absorption capacity (over 210%), Purelan nipple cream also stores more than twice its weight in water, thereby allowing the skin to restore its moisture balance.

PURELAN: THE SECRET WEAPON

- **Fast relief** for sore nipples and dry skin
- **100% pure hospital-grade lanolin** A soft, rich texture that forms a protective layer on skin
- **Safe for mother and baby:** Does not need to be removed before breastfeeding
- **Lots of extra moisture:** Purelan is able to store more than twice its weight in water
- **No additives, preservatives or fragrances.** Dermatologically tested and hypoallergenic
- **Made in collaboration with animal-friendly farms** (Mulesing-free)

STEP 2: MOIST WOUND DRESSING

If nipples are not just irritated and sore, but already cracked, Hydrogel Pads are the ideal choice. They act as a protective cushion on the skin and are instantly soothing thanks to their cooling effect. Based on the principle of moist wound healing, they provide optimum support for the healing process. If the wound is too dry, this reduces cell activity and slows down the healing process. Scab formation prevents bacteria from entering the wound, but it may also slow the healing. Conversely, too wet a wound environment is counterproductive because it increases the risk of skin damage and bacterial growth. The right balance is the key to ensuring good healing. A special wound pad such as the Hydrogel Pad increases the moisture content if the skin is too dry, and absorbs any excess moisture on the skin surface: this ensures optimum healing conditions at all times in the case of sore or cracked nipples

Hydrogel Pads: immediate relief and support for the healing process. Pleasant cooling effect, 24-hour use

Breast shells: prevent friction and help the skin recover

Contact nipple shields: help the baby latch on more easily. Extra-thin, neutral in taste and specially shaped for maximum skin contact

STEP 3: TIME FOR HEALING

Treatment of sore, cracked nipples often requires a lot of patience. In order to give the damaged nipples time to heal and rest, one solution may be to express breast milk for a short period of time. Contact nipple shields can provide temporary support and facilitate latching to relieve the nipple during breastfeeding. In order to protect sore nipples, it is also important to avoid any further irritation, such as that caused by fabric rubbing against the skin: breast shells such as those offered by Medela are gentle on the breast and protect the irritated skin from friction.

YOU KNOW BEST!

Breastcare can go a long way. But your professional advice and gentle support are what really makes a difference.

FOR MORE INFORMATION
medela.dk/brystpleje

HIDDEN GEM: CALESCA

Take the guesswork out of milk warming

Breast milk is medicine, especially for premature infants. To thaw and warm these precious drops correctly is essential to preserving their life-giving benefits.

Gentle and slow warming and thawing of breast milk on maternity wards and NICUs is an indispensible building block to ensure optimal care for newborn infants. In particular, feeding premature and very low birth weight (VLBW) infants their own mother's milk, or, if this is not available, donor milk, is crucial to their healthy development and can significantly lower the risk for morbidities such as NEC[1] and sepsis[2].

The right temperature

Premature infants are born with very little body fat, thin skin and underdeveloped thermoreceptors and sweat glands resulting in inefficient thermoregulation[3]. It has been theorized that milk temperature can influence infant body temperature,[4] and research has shown that infant temperature decreases when room temperature intravenous fluids are given. Therefore it has been recommended that intravenous fluids such as blood and saline are warmed towards body temperature prior to infusion.[3,5] It makes sense that the same should apply to the milk they receive.

The right warming and thawing device

Warming the milk in hot water, on a warming plate or even in the microwave is always subjective guesswork. What's more, these methods do not only carry the risk of damaging the fragile components of the milk, overheating and creating dangerous hotspots.They can also be a source of contamination with environmental pathogens. Calesca Warming and Thawing Device avoids all of these risks by using a fully dry system: Calesca operates using a fan that circulates warm air. It has been validated to safely warm breast milk within a range of 30 – 38°C for the most commonly used milk storage containers and feeding devices on the market. A slow and gentle warming profile is used to ensure that the milk temperature does not exceed the temperatures or times that would affect milk composition and thus, preserves nutrients and vitamins.

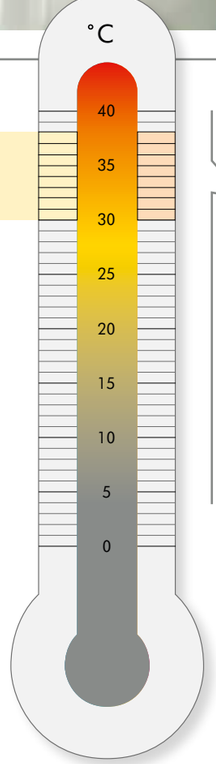
Safe and easy work flows

With visual and acoustic signals (that can be turned off!) the device clearly shows when the warming or thawing cycle is completed. Once the correct temperature is reached, Calesca will maintain it for up to 30 minutes thus allowing the healthcare professional or mother to retrieve the milk at their convenience. With two separate modes – warm and thaw – Calesca also offers more flexibility in milk handling: Breast milk thawed and refrigerated immediately can also be used for 24 hours and split into the amounts needed. This minimizes the amount that has to be discarded. The dry system of Calesca also eliminates the risk of burns and scolds by hot water[6] and the disposable inserts prevent cross-contamination, and potential mix-ups of feeds and make the device easy to clean.

Gentle and slow warming of human milk is key to keeping all the important, living, bioactive and essential components such as proteins, lactoferrin, enzymes immunoglobulins and vitamins intact. [12-17]

THE RIGHT TEMPERATURE

- Warming milk to body temperature may promote greater feeding tolerance in VLBW preterm infants[7,8]
- Preterm infants fed milk at body temperature had the least amount of gastric residuals and the greatest incidence of feeding tolerance.[7]
- Preterm infants fed milk at cooler temperatures had the highest milk residuals and the greatest incidence of feeding intolerance.[7]



37.7° C Foetus and amniotic fluid[9]
36.7° C Infant oral cavity[10]
34.8° C Mother's areola[10]
33.7° C Mother's nipple[10]
30.7° C Average* NICU feed[11]

*Milk feed temperature measured in three level III NICUs that use current water-based warming methods (range 22.0 °C to 46.4 °C).

CALESCA AT A GLANCE:

- Gentle warming process helps preserve nutrients
- Completely dry warming/thawing system
- Eliminates risk of contamination and burns/ scolds associated with warming in water
- Time-saving, hygienic & easy to use
- Supports family-integrated care

FOR MORE INFORMATION AND DOWNLOADS:
medela.dk/calesca

1 Johnson TJ et al. Neonatology. 2015; 107(4):271–276. **2** Patel AL et al. J Perinatol. 2013; 33(7):514–519. **3** Knobel R et al. JOGNN. 2007; 36: 280-287. **4** Meier P. Nurs Res. 1998; 37: 36-41. **5** Nilsson K.Paediatric Anaesthesia. 1991; 1: 13-20. **6** Keim SA et al. Pediatrics. 2012; 129: 1104–1110. **7** Dumm M et al. Adv Neonatal Care. 2013; 13(4):279–287. **8** Gonzales I et al. Neonatal Netw. 1995; 14(3):39–43. **9** Blackburn S.T. et al. Saunders, St Louis, USA. 2007: 700-719. **10** Kent J.Cet al. J Hum Lact. 2011; 27: 331-338. **11** Lawlor-Klean P et al. Adv Neonatal Care. 2013; 13: E1-E10. **12** Donovan SM et al. Pediatr Gastroenterol Nutr. 1991; 13:242–253. **13** Van Zoeren-Grobben et al. Arch Dis Child. 1987; 62:161–165. **14** Wardell JM et al. Pediatr Res. 1984; 18(4):382–386. **15** Williamson S et al. Arch Dis Child. 1978; 53(7):555–563. **16** Czank C et al. Pediatr Res. 2009; 66(4):374–379. **17** Wills ME et al. Early Hum Dev. 1982; 7:71–80.

An international symposium in the middle of a global pandemic is a challenge – but it is now more important than ever to exchange research and best practices. This is why Medela continues to share all contents of the September 2021 Virtual Global Breastfeeding and Lactation Symposium.

LATEST RESEARCH
from the greatest minds

Did you know Medela also offers global webinars? medela.com/webinar-series

Medela hosted the 2021 Global Breastfeeding and Lactation Symposium in a unique all-virtual environment. Accessible to attendees across the globe who share our deep commitment to advancing lactation science, sharing the latest research, and turning science into care. What can we say – we were overwhelmed by the response! Over 1,400 professionals registered for the symposium, bringing healthcare professionals, lactation scientists, and breastfeeding experts together in an exciting collective of some of the most renowned human milk minds. The goal: Sharing the newest clinical evidence to support better health outcomes for all. Presented by key speakers from all over the world, hot topics like "The protective effect of human milk against COVID-19" and "Clinical practices to preserve and promote breastfeeding in a COVID-19 era" shared the agenda with important discussions such as "Understanding experiences of bias in hospital lactation support from African American and BIPOC women" and "Best practices for the initiation of lactation in the NICU".

Unable to join the live event?
Then we have good news: Until June 2022, you can still get full access to all the great content from our 15th Global Breastfeeding and Lactation Symposium! Simply register for the "on-demand" event and you will still receive:

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The full EUR 40 registration fee will be used to donate breastfeeding supplies to several Ronald McDonald House® chapters chosen by Medela to celebrate our 60th anniversary.

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CALESCA

OPTØNING OG OPVARMNING AF MODERMÆLK. MED RESPEKT FOR DE VIGITGE BESTANDDELE.

Modermælken er designet til det enkelte barn og den er fyldt med livsvigtige og livgivende indholdsstoffer. Ikke alle stoffer tåler lige meget varme, derfor er det vigtigt at modermælken bliver behandlet varsomt og opvarmet til omkring kropstemperatur. Calesca giver en standardiseret kontrolleret opvarmning, uden brug af vand men med cirkulerende varmluft. Dermed er der ikke risiko for kontaminering eller skoldning fra opvarmningsvandet.

KAMPAGNE:
Fra 2021-12-01 till 2022-05-31 har vi kampagne på Calesca

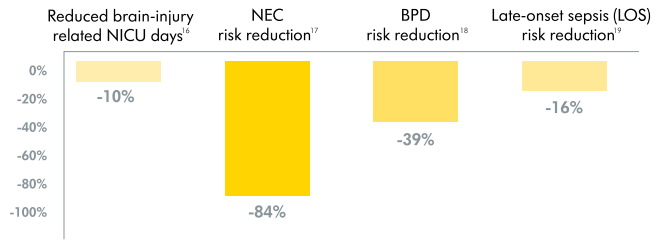
Prisen bliver sænket til kr. 3950,00 DKK eks. moms pr. enhed.
Ved køb af 3 stk Calesca, får du en kasse med 100 stk. indsatser med.

Don't hesitate. Initiate!

Prioritize early initiation now – because every drop counts.

Every drop of own mother's milk (OMM) is crucial for vulnerable infants, especially very low birth weight infants. It is proven to reduce the risk of neonatal morbidities and mortality whilst improving long-term neurodevelopmental outcomes.[1] Thus, early initiation and prioritizing maternal milk volume is the single most important lactation-related responsibility for maternity and neonatal caregivers. And it is an urgent one: Initiation is a one time event and its critical time window is easily missed. However, fragile, vulnerable and/or medically compromised infants may not be able to go directly to their mothers' breast and feed effectively after birth. At the same time, it is precisely these infants who benefit most from the early provision of OMM.

Every drop of OMM is crucial for vulnerable infants*



*based on dose and exposure cited in the relevant literature

Early,[2,3,4,5,6] frequent[7] and efficient double pumping[8] optimally within the first three hours after birth is key for building a good milk supply when breastfeeding is not (yet) possible.

Hand expression might be a good way to harvest some first precious, sticky drops of colostrum. However, available evidence suggests, that the use of early hand expression alone yields significantly less cumulative daily milk volumes compared to early exclusive pumping.[9,10]

And 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 production[11] as long as the baby cannot suck effectively:

- On the INITIATE setting, Symphony mimics the erratic suckling behavior of a newborn infant, thus stimulating and causing the necessary prolactin response to signal to the breasts to start producing milk.
- On the MAINTAIN setting, Symphony then mimics the suckling behavior of the baby after the first few days, when secretory activation has happened. The research based 2-Phase-expression technology helps mothers build and maintain milk production[11,12] and optimise milk output.[3,12,13,14,15]

Symphony PLUS:

Supporting early initiation of lactation means securing more milk for the baby when needed most!

medela.dk/symphony

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