

# Helping you ensure infants are fed own mother's milk

At Medela, we are advocates for the amazing benefits of human milk. It is why we partner with healthcare professionals to address everyday human milk challenges, offering the most advancing, evidence-based solutions.

The Symphony® hospital-grade breast pump is a perfect example of such a solution. It is the ideal partner for supporting mothers through the four key stages of lactation – based on only the most valuable and trusted research.

While it's already the leading choice of healthcare professionals, we want to help more infants who cannot effectively breastfeed in the early days after birth to be exclusively fed their own mother's milk (OMM).

What makes the Symphony® so popular in hospitals all over the world:



One device that can be used by all mothers in need of a breast pump<sup>1-3</sup>



Helps more mothers produce enough to feed their infants exclusively with their own mother's milk<sup>1,2</sup>

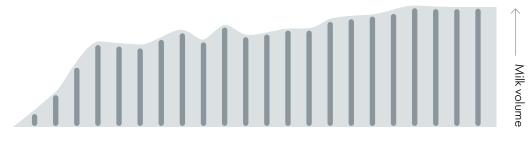


More milk in less pumping time over the first two weeks\*1

### Why OMM is so important

Milk from an infant's own mother (rather than a donor) is tailored to that infant's needs. It helps reduce the incidence, severity and risk of morbidities such as NEC<sup>4</sup> and sepsis<sup>5</sup> and does so in a dose-response manner – more milk, more benefit.<sup>5,6</sup>

#### The four stages of lactation



Pregnancy

→ Birth

#### Develop

Breast tissue develops primarily in pregnancy, when milk-producing cells begin to form.<sup>7</sup>

#### Initiate

After birth, infant sucking and hormonal changes in the mother lead to secretory activation (milk coming in) 2–4 days later.<sup>7,8</sup>

Milk comes in

#### Ruild

After secretory activation, frequent breastfeeding builds supply to meet the infant's long-term needs.<sup>9</sup>

#### Supply established

Maintain

By the end of the first month a full milk supply is established and stabilised.<sup>10,11</sup>

# When to use a Symphony® breast pump with Initiation technology

If breastfeeding is not possible, a hospital-grade breast pump can help the mother initiate, build and maintain an adequate milk supply. The sooner and more effectively she can do this, the more likely she will be to be able to exclusively breastfeed later, with minimal intervention from healthcare professionals.

#### **Pumping goals**

- Initiate milk supply when effective breastfeeding is not possible
- Ensure mothers achieve an adequate milk supply to nourish their infants

   whether transitioning to exclusive breastfeeding or exclusively pumping
- Maximise milk output so infants can benefit from an exclusive human milk diet

## How Symphony® supports lactation goals

- Helps mothers whose infants cannot effectively breastfeed during the early postpartum days, to exclusively feed them own mother's milk
- Helps safeguard milk supply by comfortably and efficiently mimicking natural sucking rhythms
- Enables mothers to express more milk with a higher energy content by double pumping with a PersonalFit<sup>TM</sup> PLUS pump set

### Properties of a hospital-grade breast pump

#### Multi-user

Has overflow protection (also referred to as a closed system) to prevent cross-contamination, and compatible with easy-to-sanitise disposable and reusable pump sets.

#### **Durability**

Developed and tested to last >2,500 pumping hours.

#### Double electric

Delivers more milk, with a higher energy content, than pumping from each breast in turn.<sup>12</sup>

#### **Clinically proven**

Shown to initiate, build and maintain pump-dependent mothers' milk supply.<sup>1</sup>

Symphony® meets all of these essential criteria.



# Learning from infant feeding behaviour to optimise expression

Medela invested in research into the way infants feed during the different stages of lactation and made some fascinating discoveries. Symphony®'s unique combination of programs were developed to mirror these findings.

#### **BEFORE** secretory activation

Healthy term-born infants suck irregularly:

- Large proportion of 'non-nutritive' sucking to stimulate the breast
- Short bursts of 'nutritive' sucking to gain small amounts of colostrum
- Pauses and rest periods of varied length



#### INITIATE

Clinically proven to support pump-dependent mothers to successfully initiate milk production.<sup>1</sup>

Mimics the sucking pattern of an infant in the first days of lactation:

- Stimulation phases
- Expression phases
- Pause phases

A fixed 15-minute duration to ensure proper stimulation.

#### **AFTER secretory activation**

Infants suck in a bi-phasic pattern:

- Phase 1: Rapid sucking at the start of a feed to elicit milk ejection
- Phase 2: Slower, deeper sucking to remove milk



#### **MAINTAIN**

Clinically proven to help mothers build and maintain milk production<sup>1,13</sup> and optimise milk output.<sup>12-16</sup>

Mimics the sucking behaviour of an infant during established lactation:

- Features 2-Phase Expression<sup>®</sup>
- High-frequency stimulation to encourage milk flow
- Longer vacuum cycles to extract millk

### Helping mothers' milk come in earlier

Around **40%** of mothers are at risk of delayed secretory activation (milk coming in after 72 hours)<sup>17</sup> and may need extra support from healthcare professionals. In addition, **60%** of them are more likely to stop breastfeeding at four weeks if secretory activation is delayed.<sup>18</sup>



Mothers who used INITIATE reached secretory activation
1.2 days faster compared to mothers using MAINTAIN alone<sup>3</sup>

# A unique combination of programs

Individually, the programs give the highest standards of performance, but it is the results of their combined use that really set Symphony® apart.

# + 50% more milk over the first two weeks<sup>1</sup>

#### The research

The team behind INITIATE conducted a blinded, randomised controlled trial of 105 mothers with preterm infants. It compared using INITIATE followed by MAINTAIN after secretory activation with using MAINTAIN alone from the beginning.

#### The results

Compared with mothers using MAINTAIN alone, mothers using INITIATE followed by MAINTAIN:<sup>1</sup>



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.



The benefits of Symphony® with Initiation technology



# Safeguarding supply, for now and the future

Symphony<sup>®</sup> also helps the final (and perhaps the longest) part of a mother's lactation journey: maintaining milk supply. Again, the Symphony<sup>®</sup> results mirror the infant.

Infants remove an average of 67% of the available milk from the breast during feeds in the Maintain period.<sup>10</sup> Therefore this is the amount to aim for to maintain supply if pumping long-term.

Research has also shown that when mothers pump with the Symphony® at their maximum comfort vacuum (switching from stimulation to expression as soon as milk flows, then adjusting vacuum to highest level that still feels comfortable), they can remove 65.5% of available milk, which helps safeguard supply.<sup>14</sup>

### All mothers and infants can take advantage

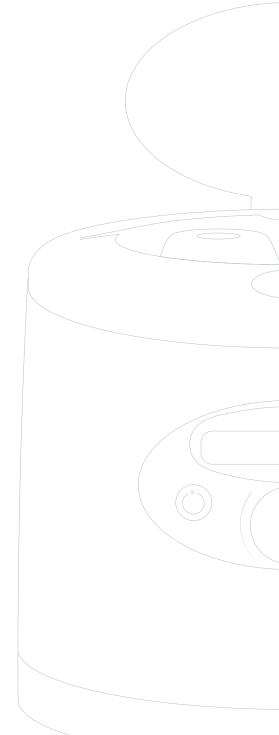
While these results are particularly good news for mothers with premature infants, studies support use of the Symphony<sup>®</sup> programs for pump-dependent mothers with infants born at any gestational age.<sup>2,3</sup>



### Making life easier in hospital or at home

Medela has also developed the Symphony® with the convenience of healthcare professionals and mothers in mind.

- Easier handling than other breast pumps – only setting the vacuum level is required
- Overflow protection (closed system) prevents milk from getting into the tubing or motor, improving hygiene and enabling a more relaxed pumping position
- Particularly gentle on sensitive breast tissue when expressing regularly over a long period thanks to patented suction curve
- Especially gentle, comfortable<sup>13</sup> transition between stimulation and expression phases via gradual vacuum increase
- Pleasingly quiet operation
- Can be upgraded in response to new research findings simply by changing the program card



# With PersonalFit<sup>™</sup> PLUS for even more milk, comfort and efficiency

The PersonalFit<sup>™</sup> PLUS pump set for Symphony<sup>®</sup> has a groundbreaking design.

It is based on unique clinical studies that demonstrated the breast shield's crucial role in optimising expression.<sup>19-21</sup>

Using Symphony® with PersonalFit<sup>™</sup> PLUS rather than a standard pump set obtains 11% more milk in 15 minutes.<sup>19</sup>

PersonalFit<sup>™</sup> PLUS is also clinically proven to offer more comfortable pumping, with 100% of mothers positively evaluating the breast shield fit.<sup>21</sup>

And because these pump sets are easier to use, handle and clean<sup>20,21</sup> they help save time on busy wards, and also mean mothers need less initial instructions and ongoing support if taking them home.



Nothing should get in the way of giving infants the very best start over the precious first days, weeks and months of life. Symphony<sup>®</sup>, its programs and technical features work together to initiate, build and maintain milk supply, so healthcare professionals can focus on what matters most: the mothers and infants in their care.

#### References

Meier PP et al. J Perinatol. 2012; 32(2):103–110. **2** Torowicz DL et al. Breastfeed Med. 2015; 10(1):31–37. **3** Post EDM et al. J Perinatol. 2016; 36(1):47–51. **4** Sisk PM et al. J Perinatol. 2007; 27(7):428–433. **5** Patel AL et al. J Perinatol. 2013; 33(7):514–519. **6** Meier PP et al. Clin Perinatol. 2010; 37(1):217–245. 7 Pang WW, Hartmann PE. J Mammary Gland Biol Neoplasia. 2007; 12(4):211–221. **8** Neville MC, Morton J. J Nutr. 2001; 131(11):3005S-3008S. **9** Kent JC et al. J Obstet Gynecol Neonatal Nurs. 2012; 41(1):114–121. **10** Kent JC et al. Pediatrics. 2006; 117(3):e387–e395. **11** Kent JC et al. Breastfeed Med. 2013; 8(4):401–407. **12** Prime DK et al. Breastfeed Med. 2012; 7(6):442–447. **13** Meier PP et al. Breastfeed Med. 2008; 3(3):141–150. **14** Kent JC et al. Breastfeed Med. 2008; 3(1):11–19. **15** Kent JC et al. J Hum Lact. 2003; 19(2):179–186. **16** Mitoulas Let al. J Hum Lact. 2002; 18(4):353–360. **17** Nommsen-Rivers LA et al. Am J Clin Nutr. 2010; 92(3):574–584. **18** Brownell Et et al. J Pediatr. 2012; 161(4):608–614. **19** Prime DK et al. 6th ABM Europe Conference, Rotterdam, NL; 2018. **20** Clinical study. (NCT02496429). 2015. **21** Clinical study. (NCT02496429). 2015. **21** Clinical study. (NCT02496429). 2015. **22** Newton M, Newton N. J Pediatr. 1948; 33(6):698–704.