

## Optimising milk removal

Reaching an adequate milk production is a journey that requires mothers to initiate, build and maintain their lactation. A mother's milk supply will increase during the first month of this journey.<sup>1</sup>

The following information is relevant if a breast pump is being used **after milk has "come in"** (initiation), to build and maintain lactation.

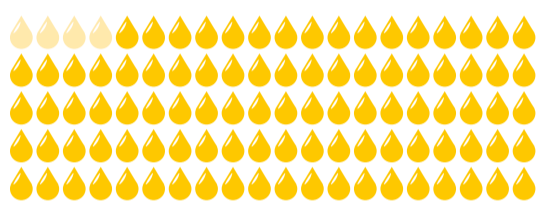


### 2-Phase Expression

2-Phase Expression technology mimics the infant's natural sucking behaviour.

#### Stimulation phase

When infants attach to the breast to feed, they begin with a fast suck rate to prompt milk flow.<sup>2</sup> Pumping with a stimulation phase of >100 cycles/minute mimics this.<sup>3,4</sup>



#### Expression phase

Once milk flows, infants apply a slower suck rate to remove milk.<sup>2</sup> Switching the pump to the slower expression phase of ~60 cycles/minute after milk ejection imitates this and supports milk removal.<sup>4,5</sup>

Only 3.9% of the total milk volume is removed before the first milk ejection (let down). Milk ejections facilitate the removal of the remaining 96.1%.<sup>6</sup>

- 3.9% during stimulation phase
- 96.1% during expression phase

**2–14**  
milk ejections  
in 15 min

Some mothers need to pump longer than others due to their number of milk ejections, which determines how often and long milk flows.<sup>7</sup>

**~15**  
minutes

Pumping should be continued until the breast feels well-drained, soft all over and the milk stops flowing, rather than for a fixed duration.



### Double pumping

Double pumping with 2-Phase Expression technology is truly advantageous for mothers.

**+1**  
milk ejection

Get an additional milk ejection and therefore more milk. Double pumping averages 4.4, single pumping 3.4.<sup>8</sup>

**18%**  
more milk

Obtain on average 18% more milk volume when double pumping, compared to single pumping each breast.<sup>8</sup>

**8.3%**  
fat content

Have milk with higher energy content. The fat content of the total pumped volume is 8.3% compared to 7.3% for single pumping.<sup>8</sup>

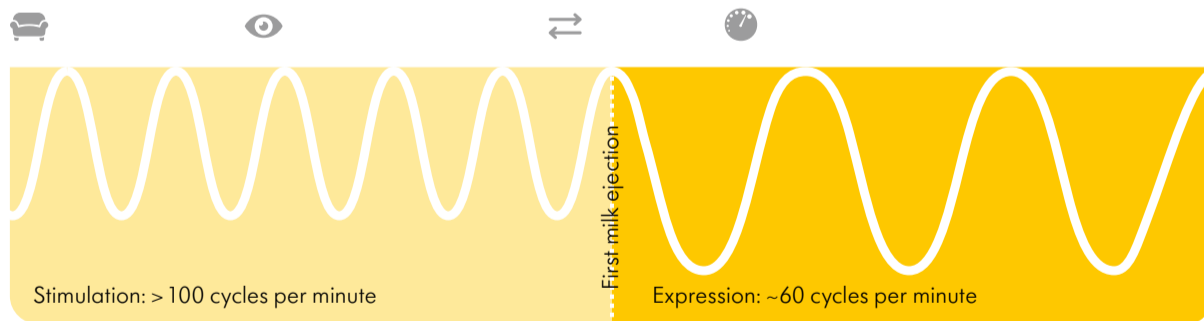
**2 hrs**  
time saving

Save up to 2 hours per day by double pumping compared to single pumping, if exclusively pumping 8x/day.



### Tips and tricks

The following tips and tricks can be helpful for a comfortable and efficient pumping session:



Relax

Being relaxed helps milk flow. Stress and adrenaline inhibit oxytocin – the key hormone for milk ejection.<sup>9</sup>



Switch

Switching to expression phase at first milk flow is important, as that first milk ejection provides ~36% of the volume.<sup>7</sup>



Watch

Many mothers do not sense milk ejection so it is essential to watch out for it. Milk ejection can be seen as the first jets of milk.<sup>3</sup>



Adjust

To remove more milk in less time, mothers should adjust the vacuum to the highest comfortable level in the expression phase.<sup>6</sup>



A helping hand

Mothers should be taught the valuable skill of hand expressing. Breast massage before and after a pumping session helps soften firmer areas, redistribute milk and lymph and stimulate hormones to support milk flow.<sup>10</sup> "Hands-on pumping" – using hand techniques during pumping – can help maximise the milk volumes removed.<sup>11</sup>

#### References

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