

## **Breastfeeding Success Influenced by Maternal Weight**

Breastfeeding is the ideal source of nutrition for almost all infants. However, only 44% of infants worldwide below six months of age are breastfed without [supplementary feeds](#). One common reason is insufficient milk to satisfy the child's needs.

A new study published online reviews existing literature to identify and analyze associations between the mother's body size and lactation, including the time of onset, amount of milk produced, and infant consumption of the [mother's own milk](#) (MOM). It seeks to explore the hypothesis that obesity and overweight, as well as underweight, inhibit successful breastfeeding.



### **Malnutrition and Lactation**

The [World Health Organization](#) (WHO) recommends exclusive breastfeeding for the first six months of life. Beyond that, breastfeeding should be continued with complementary foods until the child is at least two years of age. This presupposes that the mother has adequate milk.

Both ends of the nutrition spectrum are potential risk factors for poor lactation. Preterm birth, which is more common in both underweight and overweight [pregnancies](#), is linked to delayed lactogenesis and early cessation of breastfeeding for multiple reasons.

While underweight mothers may not have adequate energy stores to form enough milk, this is clinically observed only when the mother is severely undernourished. On the other hand, obesity may be associated with hormonal and [metabolic aberrations](#) that suppress lactation.

Prolactin is vital to successful lactation but is reduced in overweight/obese mothers. In addition, infants often find it difficult to latch on to the breast in such cases. Insulin is essential to the synthesis of [human milk](#). Insulin resistance, commonly found in obese or overweight individuals, may hinder milk production.

### **Study**

The current study included 122 articles, with a total of over 42,500 mothers. The mean maternal age was between 20 years and 35 years. The mean [body mass index](#) (BMI) ranged from 16.7 to 31.3 kg/m<sup>2</sup>. The percentage fat mass ranged from 15.5 to 45.4.

### **Results**

The authors found that most studies focused on [infant consumption](#) of MOM. The overall evidence was of very low certainty.

However, underweight or healthy-weight mothers were 35% less likely to experience a delay in producing abundant breast milk compared to obese or overweight mothers. There was no association between the time to the onset of copious breast milk and the maternal BMI as such. The lack of data on the percentage of fat mass precluded any investigation of its relationship to the onset of [lactogenesis](#).

Only one article included preterm babies with overweight or obese mothers. Interestingly, it captured an inverse association between milk production and the pre-pregnancy [maternal BMI](#). *"On day 7 postpartum, the mean expressed milk volume was significantly higher for mothers with a BMI<27 than mothers with BMI>27 (393mL vs. 195mL, respectively).*

However, infant consumption of MOM did not show any association with maternal BMI or maternal fat percentage. Possible reasons include the lack of variation in total [energy intake](#) or the small sample size for women with high percentage fat mass.

The latter may have negated the odds of observing an inverse association with infant consumption of breast milk above a critical BMI or percentage [fat mass threshold](#).

The researchers found that a high risk of bias, inconsistency, and imprecise data marred many studies. Moreover, [obese](#) or overweight mothers were consistently under-represented in lactation studies.

## **Conclusion**

While obesity and overweight appear to pose a risk factor for delayed onset of copious breast milk production 72 hours or more from delivery compared to non-overweight mothers, the supporting data is scanty as this group is underrepresented in most studies. The amount of milk produced may drop only after a certain [BMI threshold](#), accounting for the mixed results of these studies.

Most studies also did not include mothers of premature infants. This could make it necessary to use other definitions for successful lactogenesis following [preterm birth](#). For instance, a volume-based criterion, like >500 mL/day, might be preferred rather than the current traditional hours-based definition.

The finding corroborates the Academy of [Breastfeeding Medicine's](#) identification of "maternal obesity as a condition that impairs lactation." However, *"our results did not adequately capture mothers with preterm infants or those with a BMI >30kg/m<sup>2</sup>, who may be at greatest risk."* Multiple research gaps were thus identified.

If these findings are validated by future research, interventions must be designed to help overweight or obese mothers achieve successful breastfeeding. The physiological mechanisms underlying the effect of maternal body size and fat composition remain to be elucidated. Future studies should also focus on providing evidence for the success of strategies such as exercise, an [anti-inflammatory diet](#), and stress management on lactation.

## **Source:**

<https://www.news-medical.net/news/20240414/Does-maternal-weight-influence-breastfeeding-success.aspx>