

Does maternal obesity affect labor induction with oral misoprostol?

Impact on induction duration and delivery outcomes

Zauli Francesca, Pennetta Alessandra, Aquilino Alice, Cardelli Beatrice, Masala Ilenia, Pizii Sara, Clemenza Sara, Simonazzi Giuliana

OBJECTIVES

To compare vaginal delivery rates and duration of induction in obese vs non-obese women induced with oral misoprostol, and to assess the need for additional induction methods and maternal–neonatal outcomes.

METHODS

- Monocentric retrospective cohort study
- Sant'Orsola–Malpighi University Hospital - Bologna; 2023–2025
- 622 singleton term pregnancies
- Multivariable regression models

RESULTS

- ✓ **Longer induction in obese women**
26.7 vs 20.1 h ($p = 0.002$)
- ✓ **Higher total misoprostol dose**
196.4 vs 147.8 mcg ($p < 0.001$)
- ✓ **More required oxytocin augmentation in obese women**
 - Vaginal delivery rates comparable in both groups
 - BMI and parity: independent predictors of delivery mode and induction duration
 - Nulliparous obese women: longest inductions (obesity × parity interaction)

TABLE 1. KEY OUTCOMES

Outcome	Non-obese (n = 559)	Obese (n = 63)	p
To labor onset (h)	20.1 ± 15.2	26.7 ± 18.5	0.002
To delivery (h)	22.4 ± 16.0	28.6 ± 18.9	0.002
Misoprostol dose (mcg)	147.8 ± 101.5	196.4 ± 120.1	< 0.001
Oxytocin augmentation	49.9%	72.4%	< 0.001

CONCLUSIONS

Maternal obesity prolongs labor induction and increases the need for pharmacological augmentation. BMI and parity are independent predictors of delivery outcome and induction duration.

