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Immediate versus Delayed Postpartum Levonorgestrel IUD: Impact on Lactogenesis II and Breastfeeding Duration

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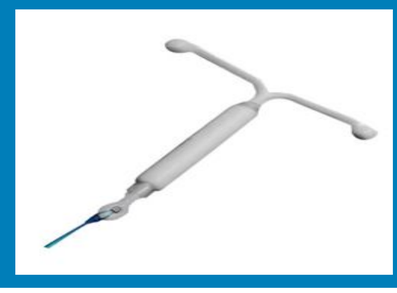


BACKGROUND

- CDC/US Department of Health and Human Services public health goals to maximize maternal child health include:
  - Increasing the proportion of infants initially breastfed and exclusively breastfed for 6 months
  - Reducing the rate of unintended pregnancies
  - Increasing interpregnancy interval to ≥ 18 months
- There is a theoretical risk that progesterone-containing contraceptives could negatively impact breastfeeding initiation and duration
  - The immediate postpartum withdrawal of progesterone is a key stimulus for the initiation of lactogenesis II
  - Lactogenesis II : Milk secretion triggered by birth and delivery of placenta; typically occurs postpartum day 4
  - Little is known about the impact on lactogenesis II or on breastfeeding duration with immediate postpartum versus delayed LNG IUD insertion

OBJECTIVES

Synthesize the literature on the relationship between lactogenesis II/breast feeding duration and immediate versus delayed postpartum insertion of the LNG IUD

Indicate clinical implications and recommendations for providers caring for breastfeeding women interested in using the LNG IUD

METHODS

Databases searched:

- PubMed, CINAHL, Cochrane Library

Search Terms:

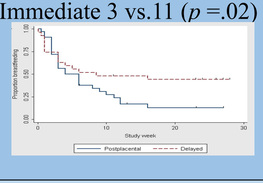
- "Breastfeeding duration," "Levonorgestrel intrauterine device," "lactation," "lactogenesis," "lactogenesis II" "postpartum," "delayed insertion," "immediate-insertion"

Inclusion criteria:

- RCTs, systematic reviews and meta-analyses; Published within the last 5 years; English language

SEARCH RESULTS

- 14 RCTs/systematic reviews
- 10 excluded as they either did not address immediate insertion, included etonogestrel/levonorgestrel implants versus the IUD, or focused on expulsion rates
- 2 RCTS and 2 Systematic Reviews/Meta-Analysis met inclusion criteria

Publication Author, Year	CEBM Level of Evidence	Design	Outcomes
Abdelhakim, A.M., Sunoqrot, M., Amin, A.H., Nabil, H., Raslan, A.N., & Samy, A. (2019)	CEBM Level I	Systematic Review & Meta-Analysis comparing BF continuation in early vs. delayed insertion of LNG IUD 12 RCTs of moderate to high quality **N** = 1,006	• Pooled data showed no significant difference between immediate vs. delayed groups • BF at 6 months: Immediate 62.2% vs. 64.6%, $p = 0.88$
Levi, E.E., Findley, M.K., Avila, K., & Bryant, A.G. (2018)	CEBM Level II	Secondary analysis of a RCT comparing BF rates at 6 mos between immediate intra-cesarean insertion of LNG IUD vs. delayed insertion **Participants:** 18-45 yrs who underwent C-section delivery and desired LNG IUD contraception **N** = 33 intra-cesarean **N** = 30 delayed	• A logistic regression analysis noted no difference in the odds ratios of women breastfeeding at 24 weeks • BF at 24 weeks: Immediate 20.7% vs. 28.6%, $p = 0.49$
Phillips, S.J., Tepper, N.K., Kapp, N., Nanda, K., Temmerman, M., & Curtis, K.M. (2015)	CEBM Level I	Systematic Review of 8 RCTs and 41 observational studies investigating outcomes of BF duration and infant outcomes with various progestin-only contraception • 49 articles reporting on 47 studies from 1969 through 2014 ranging from poor to fair quality • One RCT compared BF duration in immediate vs. delayed insertion of LNG IUD (Chen et al., 2011) **N** = 32 immediate **N** = 27 delayed	• Overall the review concluded progestin-only contraceptives do not compromise a woman's ability to BF • Chen et al. (2011) noted no significant difference between groups at: BF 6-8 weeks: Immediate 15 vs. 16 ($p = 0.62$) BF 3 months: Immediate 7 vs. 13 ($p = 0.13$) • Women in the delayed group, however, were more likely to continue BF at 6 months: Immediate 3 vs.11 ($p = .02$) 
Turok et al. (2017)	CEBM Level II	A non-inferiority RCT examining the effect of immediate vs. delayed PP LNG IUD insertion on BF outcomes at 8 weeks & 6 mos postpartum **Participants:** 18-40 yrs who intended to BF and desired LNG IUD contraception **N** = 132 immediate **N** = 127 delayed	• Analysis demonstrated non-inferiority between groups at 8 weeks postpartum: Immediate 79% vs. delayed 84% ($p = 0.28$) • Rates of exclusive breastfeeding were similar in both groups at 6 months: Immediate 33% vs. 40% ($p = 0.27$) • Mean difference in time to lactogenesis between groups was 1.7 hours ($p = 0.22$): immediate 65 +/- 25.7 hrs delayed 63.6 +/- 21.6 hrs

DISCUSSION

- Postpartum women are highly motivated to prevent pregnancy
- Both breastfeeding and immediate postpartum contraception have significant maternal and infant health benefits
- High quality evidence, although limited, concludes few if any differences in lactogenesis II or duration of breastfeeding for immediate or delayed postpartum LNG IUD insertion groups
- High quality evidence, although limited, supports the use of immediate postpartum LNG-IUD insertion for breastfeeding women
- IUD expulsion rates are higher in immediate versus delayed LNG IUD insertion groups

CLINICAL IMPLICATIONS

- Immediate postpartum insertion of the LNG Intrauterine Device is an evidence-based option for women planning to breastfeed.
- Patient education should include information on the high rates of expulsion in the context of the advantages versus disadvantages of immediate LNG IUD contraception.
- Providers can feel confident offering immediate postpartum intrauterine device insertion to breast-feeding women planning to use the levonorgestrel intrauterine device, and engage in shared decision-making once reviewing risks/benefits.
- CDC Medical Eligibility Recommendations categorize immediate postpartum, progesterone only Levonorgestrel IUD insertion for breastfeeding women as Category 2 (benefits outweigh risks).
- Reimbursement protocols vary from state-to-state for immediate postpartum, in-hospital IUD insertion.

References

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