

Hormonal contraception and lactation: Reset your practices based on the evidence

Evidence-based and patient-focused approaches for addressing hormonal contraception use in breastfeeding individuals

Melissa J. Chen, MD, MPH; Susan Crowe, MD

IN THIS ARTICLE

Breastfeeding challenges

[this page](#)

Guidance on hormonal contraception

[page 48](#)

Integrating evidence into counseling

[page 49](#)

CASE Patient concerned about hormonal contraception's impact on lactation

A 19-year-old woman (G2P1102) is postpartum day 1 after delivering a baby at 26 weeks' gestation. When you see her on postpartum rounds, she states that she does not want any hormonal contraception because she heard that it will decrease her milk supply. What are your next steps?

The American Academy of Pediatrics recently updated its policy statement on breastfeeding and the use of human milk to recommend exclusive breastfeeding for 6 months and continued breastfeeding, with complementary foods, as mutually

desired for 2 years or beyond given evidence of maternal health benefits with breastfeeding longer than 1 year.¹

Breastfeeding prevalence—and challenges

Despite maternal and infant benefits associated with lactation, current breastfeeding prevalence in the United States remains suboptimal. In 2019, 24.9% of infants were exclusively breastfed through 6 months and 35.9% were breastfeeding at 12 months.² Furthermore, disparities in breastfeeding exist, which contribute to health inequities. For example, non-Hispanic Black infants had lower rates of exclusive breastfeeding at 6 months (19.1%) and any breastfeeding at 12 months (24.1%) compared with non-Hispanic White infants (26.9% and 39.4%, respectively).³

While many new mothers intend to breastfeed and initiate breastfeeding in the hospital after delivery, overall and exclusive breastfeeding continuation rates are low, indicating that patients face challenges with breastfeeding after hospital discharge. Many structural and societal barriers to breastfeeding exist, including inadequate social support and parental leave policies.⁴ Suboptimal maternity care practices during the birth hospitalization may lead to challenges with



Dr. Chen is Associate Professor, Department of Obstetrics and Gynecology, University of California, Davis.



Dr. Crowe is Clinical Professor, Department of Obstetrics and Gynecology, Stanford University School of Medicine, Stanford, California.

The authors report no financial relationships relevant to this article.

doi: 10.12788/obgyn.0257



FAST TRACK

Maternal medical conditions, breast anatomy, pregnancy-related events, and infant conditions all contribute to a risk of impaired lactation

breastfeeding initiation. Health care practitioners may present additional barriers to breastfeeding due to a lack of knowledge of available resources for patients or incomplete training in breastfeeding counseling and support.

To address our case patient's concerns, clinicians should be aware of how exogenous progestins may affect breastfeeding physiology, risk factors for breastfeeding difficulty, and the available evidence for safety of hormonal contraception use while breastfeeding.

Physiology of breastfeeding

During the second half of pregnancy, secretory differentiation (lactogenesis I) of mammary alveolar epithelial cells into secretory cells occurs to allow the mammary gland to eventually produce milk.⁵ After delivery of the placenta, progesterone withdrawal triggers

secretory activation (lactogenesis II), which refers to the onset of copious milk production within 2 to 3 days postpartum.⁵ Most patients experience secretory activation within 72 hours; however, a delay in secretory activation past 72 hours is associated with cessation of any and exclusive breastfeeding at 4 weeks postpartum.⁶

Impaired lactation can be related to a delay in secretory activation or to insufficient lactation related to low milk supply. Maternal medical comorbidities (for example, diabetes mellitus, thyroid dysfunction, obesity), breast anatomy (such as insufficient glandular tissue, prior breast reduction surgery), pregnancy-related events (preeclampsia, retained placenta, postpartum hemorrhage), and infant conditions (such as multiple gestation, premature birth, congenital anomalies) all contribute to a risk of impaired lactation.⁷

CONTINUED ON PAGE 48

TABLE 1 US Medical Eligibility Criteria for contraceptive implant, DMPA, POP, and CHC use for breastfeeding individuals⁸

Subcondition	Implant	DMPA	POP	CHC
<21 days postpartum	2	2	2	4
21 to <30 days postpartum				
With other risk factors for VTE	2	2	2	3
Without other risk factors for VTE	2	2	2	3
30–42 days postpartum				
With other risk factors for VTE	1	1	1	3
Without other risk factors for VTE	1	1	1	2
>42 days postpartum	1	1	1	2

Key: 1, no restrictions (method can be used); 2, advantages generally outweigh theoretical or proven risks; 3, theoretical or proven risks usually outweigh the advantages; 4, unacceptable health risk (method not to be used).

Abbreviations: CHC, combined hormonal contraceptive (pill, patch, and ring); DMPA, depot medroxyprogesterone acetate; POP, progestin-only pill; VTE, venous thromboembolism.

FAST TRACK

The US Medical Eligibility Criteria for Contraceptive Use provide recommendations on the safety of contraceptive use in the setting of various medical conditions and patient characteristics based on available data

Guidance on breastfeeding and hormonal contraception initiation

Early initiation of hormonal contraception poses theoretical concerns about breastfeeding difficulty if exogenous progestin interferes with endogenous signals for onset of milk production. The Centers for Disease Control and Prevention US Medical Eligibility Criteria (MEC) for Contraceptive Use provide recommendations on the safety of contraceptive use in the setting of various medical conditions or patient characteristics based on available data. The MEC uses 4 categories in assessing the safety of contraceptive method use for individuals with specific medical conditions or characteristics: 1, no restrictions exist for use of the contraceptive method; 2, advantages generally outweigh theoretical or proven risks; 3, theoretical or proven risks usually outweigh the advantages; and 4, conditions that represent an unacceptable health risk if the method is used.⁸

In the 2016 guidelines, combined hormonal contraceptives are considered category 4 at less than 21 days postpartum, regardless of breastfeeding status, due to the increased risk of venous thromboembolism in the immediate postpartum period (TABLE 1).⁸ Progestin-only contraception is considered category 1 in nonbreastfeeding individuals and category 2 in breastfeeding individuals based on overall

evidence that found no adverse outcome with breastfeeding or infant outcomes with early initiation of progestin-only contraception (TABLE 1, TABLE 2).⁸

Since the publication of the 2016 MEC guidelines, several studies have continued to examine breastfeeding and infant outcomes with early initiation of hormonal contraception.

- In a noninferiority randomized controlled trial of immediate versus delayed initiation of a levonorgestrel intrauterine device (LNG IUD), any breastfeeding at 8 weeks in the immediate group was 78% (95% confidence interval [CI], 70%–85%), which was lower than but within the specified noninferiority margin of the delayed breastfeeding group (83%; 95% CI, 75%–90%), indicating that breastfeeding outcomes with immediate initiation of an LNG IUD were not worse compared with delayed initiation.⁹
- A secondary analysis of a randomized trial that compared intracerebral versus LNG IUD placement at 6 or more weeks postpartum showed no difference in breastfeeding at 6, 12, and 24 weeks after LNG IUD placement.¹⁰
- A randomized trial of early (up to 48 hours postpartum) versus placement of an etonogestrel (ENG) implant at 6 or more weeks postpartum showed no difference between groups in infant weight at 12 months.¹¹

TABLE 2 US Medical Eligibility Criteria for copper IUD and LNG IUD for breastfeeding individuals⁸

Subcondition	Copper IUD	LNG IUD
<10 minutes after delivery of the placenta	1	2
10 minutes after delivery of the placenta to <4 weeks	2	2
≥4 weeks	1	1
Postpartum sepsis	4	4

Key: 1, no restrictions (method can be used); 2, advantages generally outweigh theoretical or proven risks; 3, theoretical or proven risks usually outweigh the advantages; 4, unacceptable health risk (method not to be used).

Abbreviations: IUD, intrauterine device; LNG IUD, levonorgestrel-releasing intrauterine device.

- A randomized trial of immediate (within 5 days of delivery) or interval placement of the 2-rod LNG implant (not approved in the United States) showed no difference in change in infant weight from birth to 6 months after delivery, onset of secretory activation, or breastfeeding continuation at 3 and 6 months postpartum.¹²
- In a prospective cohort study that compared immediate postpartum initiation of ENG versus a 2-rod LNG implant (approved by the FDA but not marketed in the United States), there were no differences in breastfeeding continuation at 24 months and exclusive breastfeeding at 6 months postpartum.¹³
- In a noninferiority randomized controlled trial that compared ENG implant initiation in the delivery room (0–2 hours postdelivery) versus delayed initiation (24–48 hours postdelivery), the time to secretory activation in those who initiated an ENG implant in the delivery room (66.8 [SD, 25.2] hours) was noninferior to delayed initiation (66.0 [SD, 35.3] hours). There also was no difference in ongoing breastfeeding over the first year after delivery and implant use at 12 months.¹⁴
- A secondary analysis of a randomized controlled trial examined breastfeeding outcomes with receipt of depot medroxyprogesterone acetate (DMPA) prior to discharge in women who delivered infants who weighed 1,500 g or less at 32 weeks' or less gestation. Time to secretory activation was longer in 29 women who received DMPA (103.7 hours) compared with 141

women who did not (88.6 hours; $P = .028$); however, there was no difference in daily milk production, lactation duration, or infant consumption of mother's own milk.¹⁵

While the overall evidence suggests that early initiation of hormonal contraception does not affect breastfeeding or infant outcomes, it is important for clinicians to recognize the limitations of available data with regard to the populations included in these studies. Specifically, most studies did not include individuals with premature, low birth weight, or multiple gestation infants, who are at higher risk of impaired lactation, and individuals with a higher prevalence of breastfeeding were not included to determine whether early initiation of hormonal contraception would impact breastfeeding. Furthermore, while these studies enrolled participants who planned to breastfeed, data indicate that intentions to initiate and continue exclusive breastfeeding can vary.¹⁶ As the reported rates of any and exclusive breastfeeding are consistent with or lower than current US breastfeeding rates, any decrease in breastfeeding exclusivity or duration that may be attributable to hormonal contraception may be unacceptable to those who are strongly motivated to breastfeed.

How can clinicians integrate evidence into contraception counseling?

The American College of Obstetricians and Gynecologists and the Academy of

FAST TRACK

While studies have enrolled participants who planned to breastfeed, data indicate that intentions to initiate and continue exclusive breastfeeding can vary

Breastfeeding Medicine offer guidance for how clinicians can address the use of hormonal contraception in breastfeeding patients. Both organizations recommend discussing the risks and benefits of hormonal contraception within the context of each person's desire to breastfeed, potential for breastfeeding difficulty, and risk of pregnancy so that individuals can make their own informed decisions.^{17,18}

Obstetric care clinicians have an important role in helping patients make informed infant feeding decisions without coercion or pressure. To start these discussions, clinicians can begin by assessing a patient's breastfeeding goals by asking open-ended questions, such as:

- What have you heard about breastfeeding?
- What are your plans for returning to work or school after delivery?
- How did breastfeeding go with older children?
- What are your plans for feeding this baby?

In addition to gathering information about the patient's priorities and goals, clinicians should identify any risk factors for breastfeeding challenges in the medical, surgical, or previous breastfeeding history. Clinicians can engage in a patient-centered approach to infant feeding decisions by anticipating any challenges and working together to develop strategies to address these challenges with the patient's goals in mind.¹⁷

When counseling about contraception, a spectrum of approaches exists, from a non-directive information-sharing only model

to directive counseling by the clinician. The shared decision-making model lies between these 2 approaches and recognizes the expertise of both the clinician and patient.¹⁹ To start these interactions, clinicians can ask about a patient's reproductive goals by assessing the patient's needs, values, and preferences for contraception. Potential questions include:

- What kinds of contraceptive methods have you used in the past?
- What is important to you in a contraceptive method?
- How important is it to you to avoid another pregnancy right now?

Clinicians can then share information about different contraceptive methods based on the desired qualities that the patient has identified and how each method fits or does not fit into the patient's goals and preferences. This collaborative approach facilitates an open dialogue and supports patient autonomy in contraceptive decision-making.

Lastly, clinicians should be cognizant of their own potential biases that could affect their counseling, such as encouraging contraceptive use because of a patient's young age, parity, or premature delivery, as in our case presentation. Similarly, clinicians also should recognize that breastfeeding and contraceptive decisions are personal and are made with cultural, historical, and social contexts in mind.²⁰ Ultimately, counseling should be patient centered and individualized for each person's priorities related to infant feeding and pregnancy prevention. ●

FAST TRACK

Clinicians can engage in a patient-centered approach to infant feeding decisions by anticipating any challenges and working together to develop strategies to address these challenges with the patient's goals in mind

References

1. Meek JY, Noble L; Section on Breastfeeding. Policy statement: breastfeeding and the use of human milk. *Pediatrics*. 2022;150:e2022057988.
2. Centers for Disease Control and Prevention. Breastfeeding report card, United States 2022. Accessed November 8, 2022. <https://www.cdc.gov/breastfeeding/pdf/2022-Breastfeeding-Report-Card-H.pdf>
3. Centers for Disease Control and Prevention. Rates of any and exclusive breastfeeding by sociodemographic characteristic among children born in 2019. Accessed November 8, 2022. https://www.cdc.gov/breastfeeding/data/nis_data/data-files/2019/rates-any-exclusive-bf-socio-dem-2019.html
4. American College of Obstetricians and Gynecologists. Committee opinion no. 821: barriers to breastfeeding: supporting initiation and continuation of breastfeeding. *Obstet Gynecol*. 2021;137:e54-e62.
5. Pang WW, Hartmann PE. Initiation of human lactation: secretory differentiation and secretory activation. *J Mammary Gland Biol Neoplasia*. 2007;12:211-221.
6. Brownell E, Howard CR, Lawrence RA, et al. Delayed onset lactogenesis II predicts the cessation of any or exclusive breastfeeding. *J Pediatr*. 2012;161:608-614.
7. American College of Obstetricians and Gynecologists. Committee opinion no. 820: breastfeeding challenges. *Obstet Gynecol*. 2021;137:e42-e53.
8. Curtis KM, Tepper NK, Jatlaoui TC, et al. US Medical Eligibility Criteria for Contraceptive Use, 2016. *MMWR Recomm Rep*. 2016;65(RR-3):1-104.
9. Turok DK, Leeman L, Sanders JN, et al. Immediate postpartum levonorgestrel intrauterine device insertion and breast-feeding outcomes: a noninferiority randomized controlled trial. *Am J Obstet Gynecol*. 2017;217:665.e1-665.e8.
10. Levi EE, Findley MK, Avila K, et al. Placement of levonorgestrel intrauterine device at the time of cesarean

- delivery and the effect on breastfeeding duration. *Breastfeed Med*. 2018;13:674-679.
11. Carmo LSMP, Braga GC, Ferriani RA, et al. Timing of etonogestrel-releasing implants and growth of breastfed infants: a randomized controlled trial. *Obstet Gynecol*. 2017;130:100-107.
 12. Averbach S, Kakaire O, McDiehl R, et al. The effect of immediate postpartum levonorgestrel contraceptive implant use on breastfeeding and infant growth: a randomized controlled trial. *Contraception*. 2019;99:87-93.
 13. Krashin JW, Lemani C, Nkambule J, et al. A comparison of breastfeeding exclusivity and duration rates between immediate postpartum levonorgestrel versus etonogestrel implant users: a prospective cohort study. *Breastfeed Med*. 2019;14:69-76.
 14. Henkel A, Lerma K, Reyes G, et al. Lactogenesis and breastfeeding after immediate vs delayed birth-hospitalization insertion of etonogestrel contraceptive implant: a noninferiority trial. *Am J Obstet Gynecol*. 2023; 228:55.e1-55.e9.
 15. Parker LA, Sullivan S, Cacho N, et al. Effect of postpartum depo medroxyprogesterone acetate on lactation in mothers of very low-birth-weight infants. *Breastfeed Med*. 2021;16:835-842.
 16. Nommsen-Rivers LA, Dewey KG. Development and validation of the infant feeding intentions scale. *Matern Child Health J*. 2009;13:334-342.
 17. American College of Obstetricians and Gynecologists. Committee opinion no. 756: optimizing support for breastfeeding as part of obstetric practice. *Obstet Gynecol*. 2018;132:e187-e196.
 18. Berens P, Labbok M; Academy of Breastfeeding Medicine. ABM Clinical Protocol #13: contraception during breastfeeding, revised 2015. *Breastfeed Med*. 2015;10:3-12.
 19. American College of Obstetricians and Gynecologists, Committee on Health Care for Underserved Women, Contraceptive Equity Expert Work Group, and Committee on Ethics. Committee statement no. 1: patient-centered contraceptive counseling. *Obstet Gynecol*. 2022;139:350-353.
 20. Bryant AG, Lyerly AD, DeVane-Johnson S, et al. Hormonal contraception, breastfeeding and bedside advocacy: the case for patient-centered care. *Contraception*. 2019;99:73-76.