



WHAT DETERMINES CHOICE?

Not all contraceptives are suitable immediately postpartum

↻ The prenatal period is the time to counsel your patient about risks and advantages of post-delivery contraceptives—and encourage her to choose one

CASE

On postpartum rounds, you visit a 21-year-old woman, G1P1, who has had gestational diabetes and, 12 hours earlier, had a spontaneous vaginal delivery.

You recall that, as part of prenatal care, you had several conversations with her about the risks and benefits of various contraceptive options postpartum. She didn't select a method then, however.

Today, your patient asks about her options. She has two initial questions:

"What if I want to start taking a birth control pill right away—can I do that? And if I want an IUD, could you insert one for me before I go home?"

She adds that she plans on exclusively breastfeeding her baby for 6 months.

How should you answer this woman's questions? See "Key guidance for responding to this patient," page 10.

After delivery, ovulation can begin as soon as 25 days. Because unintended pregnancy and a short birth interval are

associated with adverse health outcomes, **it's important that women who have delivered have a plan to start a contraceptive promptly.**

Many important variables influence the selection of a contraceptive. In the postpartum interval, the impact of a contraceptive method on **1) the risk of deep venous thrombosis (DVT) and 2) breastfeeding** are of particular importance, and should factor strongly into a woman's choice.

For example, The US Centers for Disease Control and Prevention (CDC) has recommended that combined estrogen-progestin contraceptives (oral, vaginal ring, and patch) should *not* be used:

- within 21 days after delivery by women who are not breastfeeding
- until 42 days after delivery in women who are breastfeeding or who have an additional risk factor for DVT (age >35 years, previous DVT, thrombophilia, immobility, transfusion at delivery, body mass index ≥ 30 , postpartum hemorrhage, cesarean delivery, preeclampsia, smoking).¹

Because so many postpartum women have one or more of these risk factors for DVT, combined estrogen-progestin contraceptives are not recommended for most women during the first 42 days after delivery. For women who want to start a

contraceptive in the first 42 days after delivery, therefore, options of particular importance include:

- immediate post-delivery, post-placental placement of an intrauterine contraceptive
- progestin-only contraceptive
- condom
- sterilization.

OPTION Immediate post-delivery, post-placental insertion of an intrauterine contraceptive

The US Food and Drug Administration has approved immediate placement of the copper intrauterine device (Paragard) after delivery of the placenta.

What is key is that **you have 10 minutes after delivery of the placenta to insert an intrauterine contraceptive.** Placing one of these devices after 10 minutes is associated with an increased rate of expulsion and is not recommended by experts.²

After vaginal delivery, an intrauterine contraceptive can be placed immediately after delivery of the placenta, but typically before any perineal repair,³ as follows:

- Administer oxytocin and perform fundal massage
- Assess the patient's risk of significant postpartum hemorrhage;

EDITOR'S NOTE: Brand names are given parenthetically in some places in the text solely to provide better recognition of methods discussed.

Key guidance for responding to this patient

In the scenario on page 8, your postpartum patient first asked if she could start an oral contraceptive immediately. What should you have told her?

“No.” The CDC does not recommend that a woman start an estrogen–progestin contraception immediately after delivery because of 1) the impact this dual formulation has on breast milk volume and quality and 2) the increased risk of deep venous thrombosis it creates in the postpartum period.

Your patient also asked if you could place a copper intrauterine device before she was discharged. Again, what should you have told her?

“No.” Most experts believe that an intrauterine contraceptive must be placed either 1) within the first 10 minutes after delivery of the placenta or 2) at an interval visit, such as a postpartum visit. The risk of expulsion of an IUD is thought to be higher when it has been placed between 10 minutes and 48 hours after delivery than immediately post-placentally.

proceed if postpartum hemorrhage is determined to be unlikely

- Using a new pair of sterile gloves, grasp the anterior lip of the cervix with ring forceps
- Remove the copper IUD from the insertion tube and gently grasp the stem with ring or ovum forceps
- Place the device at the fundus, its arms parallel to the anterior and posterior walls of the uterus
- To help ensure that the device is properly positioned at the fundus, place an abdominal hand on the fundus to confirm that it, and the forceps, have reached the fundus before you release and remove the forceps (alternatively, use ultrasonography to guide fundal placement of the device⁴)
- Trim the strings with scissors at the level of the cervix (you can trim them further, as necessary, at the postpartum office visit).

The technique of insertion is modified after cesarean delivery: While the hysterotomy incision is open, grasp the device with ovum forceps and position it at the fundus. Guide the strings through the internal os into the vagina. Close the

incision. Trim the strings after surgery is complete.

The main concern with immediate post-delivery insertion of an intrauterine contraceptive is an expulsion rate of 12% to 24%; compare this with the much lower expulsion rate associated with interval insertion of a copper IUD: between 3% and 10%.^{5,6}

Note: Results of one small study suggest that the levonorgestrel-releasing intrauterine system (Mirena) can also be placed immediately after delivery of the placenta.⁶

OPTION Post-delivery progestin-only contraceptives

A major advantage of progestin-only contraceptives is that they have a minimal effect on the risk of DVT. In addition, unlike estrogen–progestin contraceptives, they do not inhibit production of breast milk. Estrogen–progestin contraceptives appear to both decrease the daily volume of milk and alter its composition by reducing the concentration of nitrogen, lactalbumin, lactoferrin, and lactose.

Tankeyoon and colleagues

examined the effect of hormonal contraceptives on breast milk volume using a standardized pump-expression technique.⁷ At 24 weeks after delivery, the volume of breast milk expressed with a breast pump in lactating women was (by method of contraception studied):

- estrogen–progestin pill: 41 mL
- progestin mini-pill (0.075 mg norgestrel): 65 mL
- depot medroxyprogesterone acetate (DMPA): 65 mL
- controls (intrauterine contraceptive, barrier method, sterilization, or no contraceptive): 59 mL.

These results show that the **estrogen–progestin contraceptive reduced breast milk volume by 31%**, whereas the progestin-only method increased breast milk volume by 10%.

The physical and cognitive development of breast-fed infants does not appear to be harmed if their mother uses an estrogen–progestin contraceptive. Nevertheless, most experts recommend avoiding such combination agents during the first 42 days after delivery.

Widely available progestin-only contraceptives include:

- etonogestrel progestin implant (Implanon)
- DMPA injection (Depo-Provera)
- progestin-only oral norethindrone, 0.35 mg/d (e.g., Micronor, Nor QD, Camila, Errin, Heather)

The progestin-only mini-pill, norgestrel, 0.075 mg/d, is no longer available in the United States.

Guidance for offering progestin-only methods. For women who are not breastfeeding, a progestin-only contraceptive can be started immediately after delivery. Experts are at odds, however, over the optimal timing of initiation of progestin-only contraception for women who are breastfeeding.

FDA patient information about

DMPA advises women to delay the first injection until 6 weeks after delivery. The FDA recommends that breastfeeding women delay initiating progestin-only pills until 6 weeks postpartum. In a setting of “partial breastfeeding”—a woman who combines breastfeeding with formula feeding—the FDA recommends initiating a progestin-only pill 3 weeks after delivery.

The manufacturer of the progestin implant recommends inserting the device 4 weeks after delivery; FDA labeling states only that the use of Implanon in breastfeeding women fewer than 28 days after delivery has not been studied.

Because progestin-only agents have little effect on the risk of DVT and on breast milk production, however, many experts in clinical medicine are comfortable recommending that a progestin-only agent can be initiated immediately after delivery in breastfeeding women.⁸ In fact, the CDC supports the use of progestin-only contraceptives immediately postpartum.⁹

The progestin implant or DMPA can be initiated during the patient’s postpartum stay. Doing so provides reliable contraceptive coverage through to the first prenatal visit.

Last, in a small randomized trial that compared insertion of Implanon 24 to 48 hours after delivery with injection of DMPA 6 weeks after delivery, women who were given the implant had lost more weight and had a higher serum HDL-cholesterol level, on average, than women who had an injection of DMPA at a 12-week follow-up visit.¹⁰

OPTION Barriers and permanent methods

Barrier contraceptives. A woman can have her partner use a **condom**

safely and effectively at any time postpartum. Given that some couples experience a reduction in coital frequency after the birth of their child, the condom is an excellent option: It bridges the interval from birth to the 6-week visit without any impact on breast milk production or the risk of deep venous thrombosis.

Use of a **diaphragm**, or cervical cap, should be delayed until 6 weeks postpartum, to allow any pregnancy-related changes to the vagina, cervix, and uterus to resolve.

Sterilization. Postpartum sterilization is best performed within 24 hours after delivery or as an interval procedure.

For immediate postpartum sterilization, two of the most common procedures are the **modified Pomeroy tubal ligation** and placement of a **Filshie clip**.

For interval sterilization, two common procedures are Adiana and Essure **hysteroscopic tubal occlusion**.

To recap: Counsel, encourage, choose, use

Women have many safe and effective postpartum contraceptive options. The optimal course is for a patient to decide on a postpartum contraceptive during her prenatal care, after you’ve discussed the risks and benefits of her options.

As I discussed, contraceptives that can be initiated **immediately after delivery** include:

- post-placental placement of an intrauterine device
- progestin-only method
- condom
- sterilization.

The reliability of long-acting reversible contraceptives, including the progestin implant and the LNG-IUS, make these two methods especially useful for preventing pregnancy in

women who have difficulty using a daily pill or a barrier contraceptive.

For postpartum women who are in greatest need of contraception because they lack easy access to care, your goal should be encourage them to use a long-acting, reversible contraceptive such as the copper IUD, progestin-releasing IUS, progestin implant, or DMPA. 🟢



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