

Postpartum Care: An Approach to the Fourth Trimester

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The postpartum period, defined as the 12 weeks after delivery, is an important time for a new mother and her family and can be considered a fourth trimester. Outpatient postpartum care should be initiated within three weeks after delivery in person or by phone, and may require multiple contacts with the patient to fully address needs and concerns. A full assessment is recommended within 12 weeks. Care should initially focus on acute needs and risks for morbidity and mortality and then transition to care for chronic conditions and health maintenance. Complications of pregnancy, such as hypertensive disorders and gestational diabetes mellitus, affect a woman's long-term health and require specific attention. Women diagnosed with gestational diabetes should receive a 75-g two-hour fasting oral glucose tolerance test between four and 12 weeks postpartum. Patients with hypertensive disorders of pregnancy should have a blood pressure check performed within seven days of delivery. All women should have a biopsychosocial assessment (e.g., depression, intimate partner violence) screening in the postpartum period, and preventive counseling should be offered to women at high risk. Additional patient concerns may include urinary incontinence, constipation, breastfeeding, sexuality, and contraception. Treating these issues during the postpartum period is important to the new mother's immediate and long-term health. (*Am Fam Physician*. 2019;100(8):485-491. Copyright © 2019 American Academy of Family Physicians.)

The 12 weeks after delivery, known as the postpartum period or the fourth trimester, are a critical time in the life of a mother and her infant. Maternal mortality, which is defined as deaths that occur during pregnancy and the first year postpartum, is highest in the first 42 days postpartum and represents 45% of total maternal mortality.^{1,2} Early postpartum visits should evaluate complications from pregnancy as well as common postpartum medical complications.³⁻⁵ Subsequent care should include a full biopsychosocial assessment and be tailored to individual patient needs going forward.³ Family physicians should be aware of the importance of social determinants of health and disparities in maternal outcomes according to race, ethnicity, and public health insurance status.

Timing and Frequency of Postpartum Visits

Historically, physicians have performed a single postpartum visit between four and six weeks after delivery to close

the prenatal care relationship.¹ There is a growing consensus to initiate care within the first three weeks postpartum, and to extend the postpartum period to transition to care of chronic conditions.⁶⁻⁸ The American College of Obstetricians and Gynecologists (ACOG) recommends a postpartum evaluation within the first three weeks after delivery in person or by phone, with a complete biopsychosocial assessment to be completed within 12 weeks postpartum.³ The World Health Organization recommends visits at three days, seven to 14 days, and six weeks postpartum, inclusive of newborn care.^{3,9} A routine pelvic examination is not indicated unless there are patient concerns.

Postpartum Health Issues and Patient Concerns

Health issues in the postpartum period include medical complications, patient concerns, and conditions that may cause future health risks (*Table 1*).^{4,10-52} Family physicians may need to continue to provide medical care for these conditions beyond 12 weeks after delivery. Complications that occur during the prenatal period may reveal areas for intervention and surveillance.^{20,21}

SECONDARY POSTPARTUM HEMORRHAGE

Secondary postpartum hemorrhage is defined as significant vaginal bleeding that occurs beyond 24 hours postpartum. Rates may be as high as 2%,¹⁰ and retained placental tissue and infection are the most common causes. Women with

See related editorial on page 460.

CME This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 465.

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Patient information: A handout on this topic is available at <https://familydoctor.org/recovering-from-delivery>.

TABLE 1

Postpartum Health Issues and Patient Concerns

Condition/ concern	Diagnostic considerations	Treatment considerations	Notes
Secondary postpartum hemorrhage ¹⁰⁻¹²	Ultrasonography to look for retained placental fragments	Uterotonics are first-line treatment May need uterine curettage Antibiotics for endometritis if infection is suspected	Occurs in up to 2% of women in the postpartum period Hemorrhage can occur up to 12 weeks postpartum Risk factors include immediate postpartum hemorrhage, vaginal (vs. cesarean) delivery, and maternal age of 35 years or older
Endometritis ^{13,14}	Fever with no other source, may be accompanied by uterine tenderness and vaginal discharge	Usually requires intravenous antibiotics, most evidence for clindamycin and gentamicin	Higher likelihood of anaerobic infection or chlamydia in late infections
Thromboembolic disease ¹⁵⁻¹⁷	Risk is five times higher during postpartum period than pregnancy Elevated risk persists up to 12 weeks postpartum	Avoid direct thrombin inhibitors and direct oral anticoagulants in women who are breastfeeding	—
Hypertensive disorders ^{4,18,19}	Highest risk is < 48 hours after delivery Recommend office visit to check blood pressure within 7 days of delivery	Treat if blood pressure \geq 150/100 mm Hg, can use oral nifedipine or labetalol Hospitalize if signs of end organ damage or blood pressure \geq 160/110 mm Hg Recommend lifestyle changes and annual follow-up for blood pressure and body weight monitoring	Occurs in up to 10% of women in postpartum period Risk factor for future cardiovascular disease, cerebrovascular disease, and venous thromboembolism
Gestational diabetes mellitus ²⁰⁻²²	75-g, 2-hour fasting oral glucose tolerance test 4 to 12 weeks postpartum to detect type 2 diabetes mellitus, then screening every 1 to 3 years	Recommend lifestyle changes and annual follow-up	5% to 10% of women with gestational diabetes continue to have type 2 diabetes after delivery Lifetime risk of developing type 2 diabetes is multiplied at least eightfold after a diagnosis of gestational diabetes Risk increases with a higher body mass index, more abnormal glucose tolerance test results, nonwhite race, and older age
Thyroid disorders ^{23,24}	Can have symptoms of hyperthyroidism or hypothyroidism Test thyroid-stimulating hormone and free thyroxine Positive thyroid-stimulating hormone receptor antibodies distinguish Graves disease from postpartum thyroiditis	Hyperthyroidism is transient and usually not treated Beta blockers can be used as needed for symptoms Hypothyroidism is treated with thyroid hormone therapy	Up to 10% of women develop postpartum thyroiditis Up to one-half of patients will be hypothyroid at one year postpartum, sometimes after initial recovery of thyroid function The American Thyroid Association recommends annual screening for hypothyroidism in women with a history of postpartum thyroiditis
Postpartum depression ²⁵⁻²⁹	Edinburgh Postnatal Depression Scale and Patient Health Questionnaire-2/9 are valid diagnostic tools for postpartum depression	Consider counseling and medication	Occurs in up to 10% of women in postpartum period Recommend counseling to prevent depression in high-risk women
Intimate partner violence ^{30,31}	Use HARK (humiliation, afraid, rape, kick) or HITS (hurt, insult, threaten, scream) tools to evaluate for intimate partner violence	Consider counseling, home visits, and parenting support	Prioritize patient safety, consider referral to intimate partner violence prevention organizations

continues

TABLE 1

Postpartum Health Issues and Patient Concerns (continued)

Condition/ concern	Diagnostic considerations	Treatment considerations	Notes
Urinary incontinence ³²⁻³⁴	Evaluation includes history, examination including cough stress test with a full bladder and assessment of urethral mobility, urinalysis, and measurement of postvoid residual urinary volume	Bladder training, weight loss, pelvic floor muscle exercises effective as first-line treatment	More than one-fourth of women experience moderate or severe urinary incontinence in the first year postpartum
Hemorrhoids and constipation ³⁵	Consider effects of medications and supplements such as iron	Increased dietary fiber and water intake Osmotic laxatives (polyethylene glycol [Miralax] or lactulose) recommended for constipation Stool softeners recommended for hemorrhoids May need excision or ligation for refractory hemorrhoids or grade III or higher	Constipation may affect up to 17% of women in the first year postpartum
Breastfeeding problems ³⁶⁻³⁸	Evaluate latch, swallow, nipple type and condition, and hold of the infant	Interventions include professional support, peer support, and formal education	—
Postpartum weight retention/metabolic risk ^{39,40}	Women with higher gestational weight gain, black race, and lower socioeconomic status are at higher risk	Dietary changes, or diet and exercise in combination are effective	Increased risk of future obesity and type 2 diabetes
Sexuality ^{41,42}	Symptoms of low postpartum libido and reduced sexual function likely caused by low estrogen levels and multiple psychosocial factors	Reassurance usually appropriate Resolves over time	Address earlier return of sexual activity with contraception to avoid unintended closely spaced pregnancies
Contraception ⁴¹⁻⁵²	—	For women who are breastfeeding: progestin-only methods can be used immediately postpartum (e.g., etonogestrel implant [Nexplanon], levonorgestrel-releasing intrauterine system [Mirena], medroxyprogesterone [Depo-Provera]) Adolescents: begin motivational interviewing, discussion of long-acting reversible contraception during pregnancy Timing: offer progestin-only methods immediately (no estrogen until three weeks postpartum) to all women regardless of lactation	Immediate use is not harmful to the infant Can improve pregnancy spacing Intervention during pregnancy is superior to postpartum period Earlier introduction of contraception

Information from references 4 and 10-52.

secondary postpartum hemorrhage may need to be examined in the emergency department or hospital for prompt evaluation, including ultrasonography to investigate for retained placental tissue.¹¹ Treatment may include uterotonic medications, uterine curettage, or antibiotic treatment for endometritis.¹²

ENDOMETRITIS

Women with a fever and tachycardia during the postpartum period should be evaluated for endometritis. Patients may

also have uterine tenderness or vaginal discharge. Late postpartum endometritis occurs more than seven days after delivery. Risk factors include chorioamnionitis and prolonged rupture of membranes.¹³ Endometritis usually requires treatment with intravenous antibiotics, with most evidence supporting the use of gentamicin and clindamycin.¹⁴

THROMBOEMBOLIC DISORDERS

The risk of venous thromboembolic disease, including deep venous thrombosis and pulmonary embolism, is five times

higher during the six weeks postpartum than during pregnancy.¹⁷ A lesser degree of increased risk persists up to 12 weeks postpartum.⁵ Additional risk factors are increasing age, cesarean delivery, postpartum hemorrhage or infection, and a history of preeclampsia.¹⁵

Patients with a history of thromboembolism should be treated with anticoagulation for at least the first six weeks postpartum, and potentially longer if there are other risk factors. Warfarin (Coumadin) is teratogenic during pregnancy; however, it is minimally excreted in breast milk and is considered safe for women who are breastfeeding. There is a lack of data on the use of direct oral anticoagulants in breastfeeding, and they are not recommended for these patients.¹⁶

HYPERTENSIVE DISORDERS

Up to 10% of women have elevated blood pressure during pregnancy, including chronic hypertension, gestational hypertension, and preeclampsia. Women with hypertensive disorders of pregnancy should have a follow-up blood pressure check within seven days of delivery and be evaluated for signs or symptoms of end organ damage such as hepatic injury or pulmonary edema.^{4,18} Patients with new-onset blood pressure of 150/100 mm Hg or higher or with signs of end organ damage should be treated with antihypertensive medications. Patients with signs of end organ damage or a blood pressure of 160/110 mm Hg or higher should be hospitalized and treated with parenteral magnesium sulfate to prevent eclampsia.¹⁸ Nonsteroidal anti-inflammatory drugs are preferred over opioid analgesia and have been shown to be safe for women with a history of hypertension in pregnancy.^{19,53,54}

Women with hypertensive disorders have an increased risk of cardiovascular events later in life.^{18,55,56} They also have an elevated risk of cardiovascular disease, cerebrovascular disease, and venous thromboembolic disorders, and are at risk of these complications at an earlier age than the general population. All patients with a history of hypertensive disorders of pregnancy should be counseled on behavior modification and have blood pressure and body weight monitored at least once a year.^{18,55}

GESTATIONAL DIABETES MELLITUS

Gestational diabetes mellitus is a significant risk factor for the development of type 2 diabetes mellitus, hypertension, and subsequent heart disease. A woman with a history of gestational diabetes has an eight- to 20-fold risk of developing type 2 diabetes during her lifetime.^{20,21} Women with gestational diabetes should be screened for impaired glucose tolerance with a 75-g two-hour fasting oral glucose tolerance test at four to 12 weeks postpartum, and should be evaluated for development of hypertension with

blood pressure monitoring.^{20,53} They should continue to be screened for diabetes every one to three years because the risk of type 2 diabetes is elevated.²¹

THYROID DISORDERS

Postpartum thyroiditis can affect up to 10% of women during the first year postpartum, with similar rates of hyperthyroidism and hypothyroidism.²³ Postpartum hyperthyroidism is usually transient and does not need to be treated. Hypothyroidism is treated with thyroid hormone therapy. The risk of Graves disease is also increased postpartum, and women with a history of this disease are more likely to relapse. Positive thyroid-stimulating hormone receptor antibodies can distinguish Graves disease from postpartum thyroiditis. Infants of women who are breastfeeding and being treated for thyroid disorders should be monitored for growth and development; however, laboratory monitoring of infants' thyroid function is not necessary.^{23,24} The American Thyroid Association recommends annual thyroid function screening in women with a history of postpartum thyroiditis.²³

POSTPARTUM DEPRESSION

Up to 10% of women will experience depression in the first year postpartum. The U.S. Preventive Services Task Force (USPSTF), ACOG, and American Academy of Pediatrics recommend one or more screening examinations for postpartum depression in settings where systems are in place to ensure diagnosis, treatment, and follow-up.²⁵⁻²⁷ The American Academy of Pediatrics has specific recommendations for timing of screening at the one-, two-, four-, and six-month well-child visits. The Patient Health Questionnaire-2, Patient Health Questionnaire-9, and Edinburgh Postpartum Depression Scale are appropriate screening tools.

The USPSTF also recommends preventive counseling for women at high risk of perinatal depression.²⁸ Risk factors include a personal or family history of depression, a history of intimate partner violence, stressful life events including unplanned or undesired pregnancy, poor social or financial support, and medical complications. A previous *American Family Physician (AFP)* article reviewed identification and management of peripartum depression.²⁹

INTIMATE PARTNER VIOLENCE

The USPSTF recommends screening women of reproductive age for intimate partner violence with a validated screening tool such as HARK (humiliation, afraid, rape, kick; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2034562/table/T1/>) or HITS (hurt, insult, threaten, scream; <https://www.aafp.org/afp/2016/1015/p646.html#afp20161015p646-t2>), followed by referral to support services if indicated.³⁰

POSTPARTUM CARE

Interventions such as counseling and home visits can reduce intimate partner violence for women postpartum.

URINARY INCONTINENCE

In one large cohort study, 28.5% of women reported moderate or severe urinary incontinence in the first year postpartum.³² Bladder training, fluid management, body weight loss, and pelvic floor muscle exercises improve symptoms for all types of urinary incontinence, but studies have included women who are perimenopausal and not postpartum.³⁴ It is uncertain whether pelvic floor muscle training during the postpartum period has an effect on urinary incontinence; however, it does reduce postpartum urinary incontinence by about one-third when initiated prenatally.³³

HEMORRHOIDS AND CONSTIPATION

Hemorrhoids may be caused by constipation or by pushing during the second stage of labor. Initial therapy involves treatment for constipation.³⁵ Up to 17% of women report

constipation in the first six weeks postpartum. Iron supplements taken orally during pregnancy can be a contributing factor. First-line treatments include increased intake of water and fiber, and osmotic laxatives such as polyethylene glycol (Miralax) or lactulose. Patients with hemorrhoids should also be treated with stool softeners.

BREASTFEEDING PROBLEMS

A previous *AFP* article addressed breastfeeding recommendations and common problems.³⁶ The USPSTF found moderate evidence that primary care-based interventions to increase breastfeeding are beneficial.³⁷ Individual-level interventions have stronger evidence of effectiveness. These include professional support by physicians, midwives, or lactation counselors; peer support; or formal education sessions. A Cochrane review found that support by trained personnel (e.g., medical professionals, volunteers), face-to-face interventions, and interventions that took place over multiple encounters were more effective.³⁸

POSTPARTUM WEIGHT RETENTION AND METABOLIC RISK

Although data are limited on postpartum body weight retention, a National Academy of Sciences report estimates that most women at six months postpartum will weigh about 11.8 pounds (5.4 kg) more than their prepregnancy body weight. Risk factors for higher postpartum weight retention include more body weight gain during pregnancy, black race, and lower socioeconomic status. Postpartum weight retention is a risk factor for later metabolic risk including development of obesity, higher weight in future pregnancies, and type 2 diabetes in women who have previously had gestational diabetes.³⁹ Counseling about dietary modifications or dietary and exercise modifications together are effective in helping women lose weight postpartum.⁴⁰

SEXUALITY AND CONTRACEPTION

Libido and sexuality are common concerns during the postpartum period.⁴¹ Some studies have shown that prepregnancy estrogen levels may not return for as long as one year postpartum, particularly in women who

SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	Evidence rating	Comments
Initial follow-up should be within three weeks after delivery, in person or by phone. A comprehensive visit should occur within 12 weeks postpartum and include a biopsychosocial assessment. ³⁹	C	American College of Obstetricians and Gynecologists and World Health Organization expert consensus
Women with hypertensive disorders should have a blood pressure check within seven days postpartum. ^{18,19}	C	Narrative reviews and expert consensus
Women with gestational diabetes mellitus should be screened for diabetes with a 75-g two-hour fasting oral glucose tolerance test at four to 12 weeks postpartum. ²⁰⁻²²	C	Longitudinal cohort studies and expert consensus
All women should be screened in the postpartum period for depression in settings where systems are in place to ensure diagnosis, treatment, and follow-up. ²⁵	B	USPSTF recommendation statement
Women at high risk of perinatal depression should receive preventive counseling in the postpartum period. ²⁸	B	USPSTF recommendation statement

USPSTF = U.S. Preventive Services Task Force.

A = consistent, good-quality patient-oriented evidence; **B** = inconsistent or limited-quality patient-oriented evidence; **C** = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to <https://www.aafp.org/afpsort>.

are breastfeeding, which may contribute to a low libido.^{41,42} The length of time for women to wait to have intercourse following delivery is variable; the average is six to eight weeks in the United States.^{41,42} No consistent correlation exists between delivery complications (e.g., vaginal lacerations) and a delay in resuming intercourse.^{41,42} Because most patients report some type of sexual problem postpartum,⁴² it is important to assess patients, validate concerns, address contributing factors, reassure when appropriate, and offer support including counseling.

The prenatal period is the best time to discuss postpartum contraception. A 2015 Cochrane review reported low-quality evidence for the effectiveness of birth control method education in the postpartum period; however, a more recent study demonstrated the effectiveness of motivational interviewing resulting in a decrease in rapid repeat pregnancy and a higher use of long-acting reversible contraception in pregnant adolescents.^{43,44}

Women who are breastfeeding may also use the lactational amenorrhea method, alone or with other forms of contraception. The woman must be breastfeeding exclusively on demand, be amenorrheic (i.e., no vaginal bleeding after eight weeks postpartum), and have an infant younger than six months. This method is less reliable once the infant starts eating solid food. The failure rate is less than 2% if these criteria are fulfilled.^{45,46}

This article updates a previous article on this topic by Blenning and Paladine.¹

Data Sources: PubMed searches were done using the terms postpartum care, secondary/late postpartum hemorrhage/hemorrhage, postpartum endometritis, postpartum thyroid, hypertensive disorders of pregnancy, postpartum thromboembolism, postpartum mood disorders, postpartum substance use, postpartum urinary incontinence, postpartum constipation, postpartum hemorrhoids, breastfeeding, postpartum weight, postpartum sexuality, postpartum contraception, maternal infant dyad, and postpartum complications. Also searched were the Cochrane database, Essential Evidence Plus, and recommendations from the American College of Obstetricians and Gynecologists, the Centers for Disease Control and Prevention, the U.S. Preventive Services Task Force, and the World Health Organization. Search dates: July and September 2018, and June 2019.

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POSTPARTUM CARE

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