

Postpartum Depression: What Do Pediatricians Need to Know?

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Practice Gap

Although pediatricians are aware of the effect of postpartum depression on their patients, it is seldom screened for in the setting of the well-child visit.

Objectives

After completing this article, readers should be able to

1. Describe the different types and phases of postpartum depression and anxiety (PPD).
2. List the risk factors for developing PPD.
3. Detail the different types of validated screening tools to detect PPD.
4. Describe the effects of PPD on the mother-infant dyad interaction.
5. Discuss the different treatment options available for mothers experiencing PPD.
6. List available resources to help mothers, fathers, and their families.

AUTHOR DISCLOSURE Drs Sriraman, Pham, and Kumar have disclosed no financial relationships relevant to this article. This commentary does not contain a discussion of an unapproved/investigative use of a commercial product/device.

ABBREVIATIONS

EPDS	Edinburgh Postnatal Depression Scale
PPD	postpartum depression and anxiety
SSRI	selective serotonin reuptake inhibitor
TCA	tricyclic antidepressant

INTRODUCTION

PPDA

Postpartum depression and anxiety (PPD), also known as *postpartum mood and anxiety disorders*, is a common medical condition that can significantly affect the health and well-being of mothers, infants, and family units. PPD affects 10% to 25% of mothers, making it the most common underdiagnosed obstetric complication. Nationally, it is estimated that every year, more than 400,000 infants are born to mothers who are depressed. Although pediatricians are aware of this condition, it may not be the foremost thought in their minds at the well-child visit. However, pediatricians have the greatest opportunity of encountering the infant and caregivers regularly. Therefore, we have a responsibility to screen mothers for PPD and offer the most appropriate resources. (1)

DEFINITION

The postpartum spectrum of psychiatric syndromes can be classified into 3 major categories: postpartum blues, postpartum depression, and postpartum psychosis

(Fig 1). (2) Postpartum blues are a common emotional experience for women after delivery that affects 30% to 80% of women. Symptoms include emotional lability, difficulty sleeping, decreased appetite, and excessive anxiety. The onset is typically in the first 5 days postpartum and tends to self-resolve by the second week after delivery. (1)

Postpartum depression is a major depressive episode, per the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, which occurs at the onset of delivery or within the first 4 months of delivery and can last several months to a year. (3) Although postpartum mood and anxiety disorders are common, the variation in timing and symptoms, along with comorbid conditions, such as anxiety and bipolar disorder, can further complicate the diagnosis.

Many new mothers can experience symptoms, including trouble sleeping, weight loss, exhaustion, anxiety, loss of

interest in usual activities, and depressed mood. However, the duration and severity of symptoms help separate normal experiences of new mothers, also known as *postpartum blues*, from postpartum depression. Postpartum depression generally lasts for longer than 2 weeks; symptoms occur almost daily and last for most of the day, and functional impairment may ensue.

Postpartum psychosis is a psychiatric emergency that occurs in the first month; it must be addressed immediately and requires hospitalization. Symptoms include substantial mood shifts, paranoia, hallucinations, delusions, and suicidal or homicidal thoughts, which put newborns at risk. The incidence of psychiatric hospitalization for postpartum psychosis is low, ranging from 1 to 2 of every 1,000 births. Postpartum psychosis can occur rapidly, within hours to a few weeks. Women with a history of bipolar disorder have a higher risk (72% to 88%) of developing postpartum

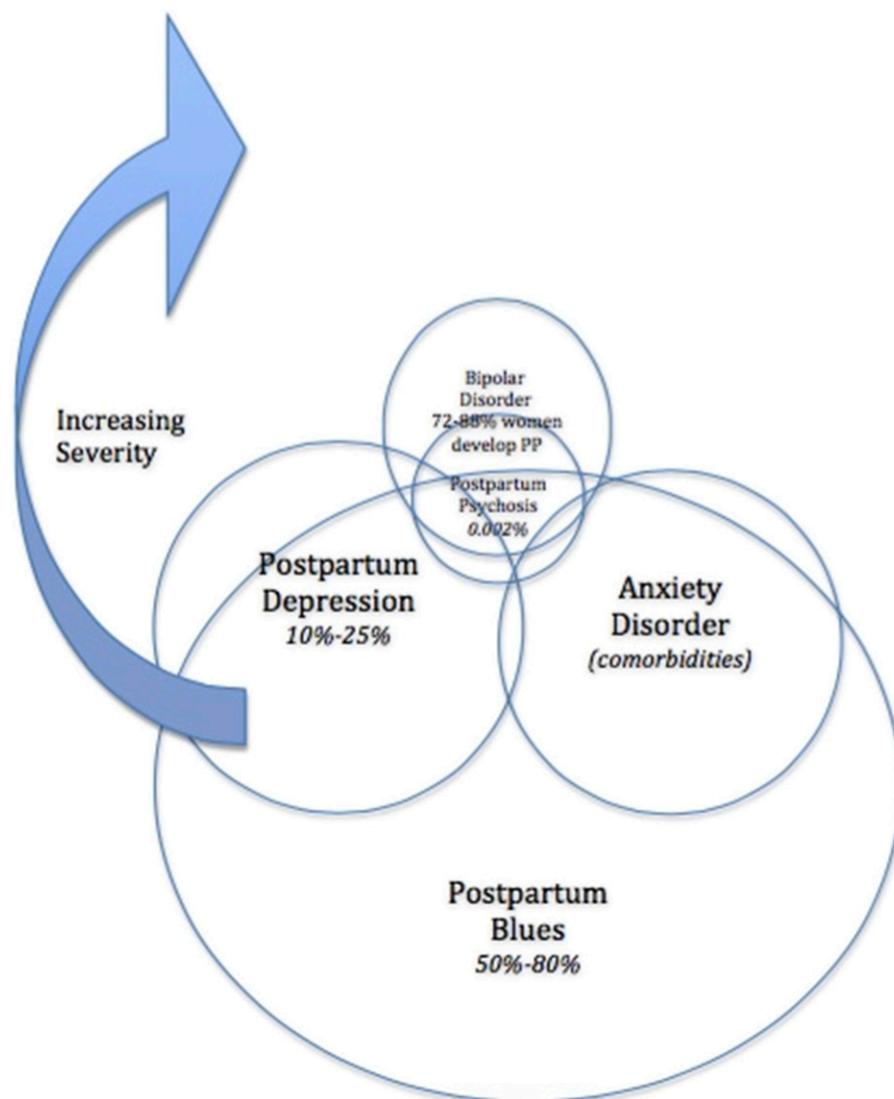


Figure 1. Diagram shows the spectrum of postpartum mood disorders. PP=postpartum psychosis.

psychosis. (4) However, some women who develop postpartum psychosis will have no prior psychiatric history. (5)(6)

Postpartum depression can range from mild to severe. Women with a history of anxiety and depression, especially during pregnancy, have a higher risk of developing postpartum anxiety and/or depression. Other factors that increase the likelihood of PPD are young maternal age, lower socioeconomic background, lack of support, unintended pregnancy, psychosocial stress from marital discord, alcohol or substance abuse, and family history of depression. (7)(8)

INTRUSIVE THOUGHTS

One should be aware of postpartum intrusive thoughts. Postpartum **intrusive thoughts** and **obsessive-compulsive disorder** are commonly occurring concerns for postpartum women. Intrusive or obsessive thoughts are involuntary thoughts or **subconscious ideas that can become repetitive** and compulsive in nature. These stressful thoughts can be difficult to control and eliminate. (9) Examples include a mother envisioning hurting her infant, such as smothering the infant with a pillow or shaking the infant.

Not all thoughts of harm are signs of psychosis, nor do these thoughts lead to specific acts. Intrusive thoughts of harm toward an infant are common in the early postpartum period and are associated with high levels of parenting stress and poor social support. (10) It is important for physicians to ask about intrusive thoughts as mothers are not likely to offer this information for fear of repercussions.

CLINICAL IMPORTANCE

Postpartum depression can severely threaten the mother-child relationship in terms of ability to form attachments and bonds. (1) This in turn can lead to developmental delays, which can potentially result in impaired cognitive, social, and behavioral development. (11)(12) Postpartum depression may **impair the interaction between mother and infant** and prevent a mother from interpreting her infant's cues, **which may cause the infant to become fussy, withdrawn, or have difficulties feeding or sleeping**. This can make it increasingly difficult for a mother to enjoy her infant. (1)

Mothers with postpartum depression show **decreased rates of breastfeeding**, including breastfeeding initiation, duration, and exclusivity, with many mothers developing negative feelings toward breastfeeding. (13) Furthermore, the direct **lack of interest in caring for the infant** puts the infant at risk for failure to thrive, **accidents due to parental inattentiveness, and nonaccidental trauma**. These sequelae can result in increased medical care costs, since children who

have a depressed mother have higher rates of emergency department visits and sick visits, with lower rates of well-child care and preventive visits. (14)

Even if infants are brought in for well-child visits, mothers and parents with depression are less likely to integrate health care advice from their pediatric providers, which includes important topics such as sleep safety and car seat use and other home safety anticipatory guidance. (15)

The children of mothers with PPD are at increased risk for developing behavioral issues and mood disorders in their adolescent and adult lives. Studies show that maternal depression can result in increased cortisol levels in an infant that could lead to anxiety, withdrawal, and impaired social development. (1) Postpartum depression not only has an effect on the mother-child relationship but can affect the entire family, introducing such issues as domestic abuse and child neglect.

PATERNAL PPD

While maternal PPD has received some recognition in the pediatric setting, **paternal PPD** is still underrecognized. Studies have shown a **10.4% prevalence** rate worldwide, with a 14.1% rate in the United States in comparison to 8.2% outside of the United States. Paternal PPD rates are lowest during the 0- to 3-month postpartum period and **highest during the 3- to 6-month period**. Risk factors for paternal PPD include **past history of severe depression**, prenatal depression, prenatal **anxiety**, **lower educational status**, **having other children**, and **maternal prenatal depression**. (16)

Similar to maternal PPD, paternal depression can have long-term effects on the developing child. A strong association between paternal PPD at 8 weeks postpartum and later development of behavioral and emotional problems in children by 3.5 years of age has been shown. Unlike maternal PPD, which did not show a difference in the effects on boys versus girls, paternal **PPD was more likely to be associated with behavioral problems in boys** than in girls. **By the age of 7 years, paternal PPD was significantly associated with psychiatric disorders in children, most notably oppositional defiant disorder** and conduct disorder, with a comparison of 12% in children of fathers with PPD versus 6% in children of fathers without PPD. **Maternal postpartum depression can increase the rate of paternal depression**, which can intensify the adverse effects of depression on children. (17)(18) These findings highlight the importance of recognizing PPD in both mothers and fathers and the effect that parental depression can have on the pediatric population. Among the primary care specialties, pediatricians and family physicians have the greatest amount of exposure to children and their parents in the early stages of a child's life. Mothers

should be screened throughout the first year of their child's life in an effort to objectively identify parental PPD, offer intervention, and improve children's emotional and behavioral development.

SCREENING TOOLS

While the American Congress of Obstetricians and Gynecologists currently recommends screening for PPD at least once in the perinatal period, many mothers may be overlooked if their initial postpartum obstetric follow-up is delayed. (19) However, since the pediatrician is seeing the mother-infant dyad frequently and is more attuned to the relationship between mother and child, pediatricians are in an ideal position to elicit symptoms that indicate postpartum depression. (20)(21)

The **Edinburgh Postnatal Depression Scale (EPDS)** is a **10-question screening tool** for mothers that can be completed **in 5 minutes** (Fig 2). It focuses on **symptoms over the past 7 days**. On the basis of current recommendations, the screening can take place at the **1-, 2-, 4-, and 6-month well-child visits (level of evidence A)**. **A score of at least 10 constitutes a positive result and raises the concern for depressive illness in the mother. A singular positive response to question number 10 regarding suicidal thoughts is also considered a positive screening result and necessitates further intervention.** The EPDS is in the public domain, is free and available in many languages, and has **cross-cultural validity**. The EPDS has a sensitivity of **86% and a specificity of 78%** for the identification of postpartum depression. (22) In comparison to other screening tools, positive answers on the EPDS are more representative of mood symptoms and are corrected for generalized findings associated with new parenthood, such as fatigue and disturbed sleep.

The scale has **also been validated for fathers. Fathers whose partners had positive results were also noted to score higher on the EPDS.** (23)

In the setting of busy clinics or in repeat assessments, the **EPDS-3**, which is an **abbreviated form** of the 10-item questionnaire, can also be used and was shown to have a **sensitivity of 95%** (level of evidence A). (24) Owing to the prevalence of anxiety symptoms in women with PPD, the following **3 questions** are used:

1. I have **blamed myself unnecessarily when things went wrong.**
2. I have been **anxious or worried for no good reason.**
3. I have felt **scared or panicky for no very good reason.**

TREATMENT

Once a mother with PPD has been identified, the pediatrician should give the mother and/or the family appropriate

resources and information (Table) on where she can receive the help she needs. While there are various treatment options for mild to moderate depression, including treatment for a breastfeeding mother, psychotherapy should be considered as first-line therapy.

Nonpharmacological Treatment

Psychotherapy is effective for the treatment of postpartum depression and is a good start in the treatment plan. All 3 types of psychotherapy—interpersonal therapy, cognitive behavioral therapy, and psychodynamic psychotherapy (non-directive therapy)—show similar effectiveness in treating the symptoms of postpartum depression (level of evidence A).

Pharmacological Treatment

If **psychotherapy is unavailable** or if symptoms are **severe**, then medications need to be considered. Many factors must be considered when choosing an antidepressant. **Most drugs**, including all antidepressants, are **excreted in breast milk**. When making the initial treatment choice, the physician should take into consideration the following: the mother's previous treatments for depression, symptoms to target, family history of anxiety and depression, and complete medical history, including medication use, allergies, and previous side effects. Most importantly, the prescriber needs to consider the mother's intent and the desired outcome from the treatment (level of evidence A).

Selective Serotonin Reuptake Inhibitors. Selective serotonin reuptake inhibitors (**SSRIs**) are the most commonly prescribed antidepressants. SSRIs, by blocking the serotonin transporter to increase the serotonin availability in the neuronal synapse, **improve depression and anxiety.** **Infant side effects include uneasy sleep, colic, irritability, poor feeding, and drowsiness.** While all SSRIs have been detected in breast milk, paroxetine and sertraline are usually undetected when infant serum levels are measured. However, since paroxetine may have an increased risk of cardiac defects when the fetus is exposed in the first trimester, sertraline is the best option because of low concentrations in breast milk and a good safety profile during pregnancy.

Tricyclics and Heterocyclics. These are an older class of antidepressants that are used for depression, anxiety, sleep, and chronic pain. **Tricyclic antidepressants (TCAs) block the norepinephrine transporter, which increases the amount of norepinephrine in the synapse.** They also **block** muscarinic cholinergic, H_1 , and α_1 -adrenergic receptors, which cause various side effects. These include **hypotension, sedation, dry mouth, urinary retention, weight gain, constipation, and sexual dysfunction.** An overdose of TCAs can cause cardiac arrhythmias and death. Aside from nortriptyline, there are few studies of TCAs and the effects on lactation and breast milk.

LR+ 3,9
LR- 0,18

Score > 9 = abnormal

Edinburgh Postnatal Depression Scale¹ (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____

Baby's Date of Birth: _____ Phone: _____

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:

- Yes, all the time
- Yes, most of the time This would mean: "I have felt happy most of the time" during the past week.
- No, not very often Please complete the other questions in the same way.
- No, not at all

In the past 7 days:

- | | |
|--|--|
| <p>1. I have been able to laugh and see the funny side of things</p> <ul style="list-style-type: none">0 <input type="checkbox"/> As much as I always could1 <input type="checkbox"/> Not quite so much now2 <input type="checkbox"/> Definitely not so much now3 <input type="checkbox"/> Not at all <p>2. I have looked forward with enjoyment to things</p> <ul style="list-style-type: none">0 <input type="checkbox"/> As much as I ever did1 <input type="checkbox"/> Rather less than I used to2 <input type="checkbox"/> Definitely less than I used to3 <input type="checkbox"/> Hardly at all <p>*3. I have blamed myself unnecessarily when things went wrong</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, most of the time2 <input type="checkbox"/> Yes, some of the time1 <input type="checkbox"/> Not very often0 <input type="checkbox"/> No, never <p>4. I have been anxious or worried for no good reason</p> <ul style="list-style-type: none">0 <input type="checkbox"/> No, not at all1 <input type="checkbox"/> Hardly ever2 <input type="checkbox"/> Yes, sometimes3 <input type="checkbox"/> Yes, very often <p>*5. I have felt scared or panicky for no very good reason</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, quite a lot2 <input type="checkbox"/> Yes, sometimes1 <input type="checkbox"/> No, not much0 <input type="checkbox"/> No, not at all | <p>*6. Things have been getting on top of me</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, most of the time I haven't been able to cope at all2 <input type="checkbox"/> Yes, sometimes I haven't been coping as well as usual1 <input type="checkbox"/> No, most of the time I have coped quite well0 <input type="checkbox"/> No, I have been coping as well as ever <p>*7. I have been so unhappy that I have had difficulty sleeping</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, most of the time2 <input type="checkbox"/> Yes, sometimes1 <input type="checkbox"/> Not very often0 <input type="checkbox"/> No, not at all <p>*8. I have felt sad or miserable</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, most of the time2 <input type="checkbox"/> Yes, quite often1 <input type="checkbox"/> Not very often0 <input type="checkbox"/> No, not at all <p>*9. I have been so unhappy that I have been crying</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, most of the time2 <input type="checkbox"/> Yes, quite often1 <input type="checkbox"/> Only occasionally0 <input type="checkbox"/> No, never <p>*10. The thought of harming myself has occurred to me</p> <ul style="list-style-type: none">3 <input type="checkbox"/> Yes, quite often2 <input type="checkbox"/> Sometimes1 <input type="checkbox"/> Hardly ever0 <input type="checkbox"/> Never |
|--|--|

➔ Intervention

Administered/Reviewed by _____ Date _____

¹Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786 .

²Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

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Figure 2. The Edinburgh Postnatal Depression Scale.

EPDS-3
(forme
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Edinburgh Postnatal Depression Scale¹ (EPDS)

Postpartum depression is the most common complication of childbearing.² The 10-question Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for “perinatal” depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity. The EPDS score should not override clinical judgment. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt **during the previous week**. In doubtful cases it may be useful to repeat the tool after 2 weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

Women with postpartum depression need not feel alone. They may find useful information on the web sites of the National Women’s Health Information Center <www.4women.gov> and from groups such as Postpartum Support International <www.chss.iup.edu/postpartum> and Depression after Delivery <www.depressionafterdelivery.com>.

SCORING

QUESTIONS 1, 2, & 4 (without an *)

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 3, 5-10 (marked with an *)

Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

Maximum score: 30

Possible Depression: 10 or greater

Always look at item 10 (suicidal thoughts)

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Instructions for using the Edinburgh Postnatal Depression Scale:

1. The mother is asked to check the response that comes closest to how she has been feeling in the previous 7 days.
2. All the items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others. (Answers come from the mother or pregnant woman.)
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

¹Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786.

²Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

Figure 2. The Edinburgh Postnatal Depression Scale.

TABLE. **Resources for Women's Mental Health and Postpartum Depression**

GENERAL RESOURCES

Health Resources & Services Administration

Depression During and After Pregnancy: A Resource for Women, Their Families, and Friends; https://mchb.hrsa.gov/sites/default/files/mchb/MaternalChildHealthTopics/maternal-womens-health/Depression_During_and_After_Pregnancy_ENGLISH.pdf

Healthy New Moms

Information on depression and a screening tool for depression; www.healthynewmoms.org

The Marcé Society for Perinatal Mental Health

International society for understanding, prevention, and treatment of mental illness related to childbearing; www.marcesociety.com

Massachusetts General Hospital Center for Women's Mental Health

Current information, including new research findings in women's mental health, to inform clinical practice; www.womensmentalhealth.org

Med-Ed Postpartum Depression

Experts give advice on postpartum depression and information for families; also provides provider education for primary care physicians; www.mededppd.org

National Suicide Prevention Lifeline

1-800/273-TALK (8255); www.suicidepreventionlifeline.org

Postpartum Support International

PSI Warmline (weekdays only) 800/944-4PPD (4773); www.postpartum.net
Information and resources on postpartum depression for providers, mothers, fathers, and families; includes live chats and help for new parents; access help according to state

Postpartum Depression Online Support Group

Online support group that offers information, support, and assistance to those dealing with postpartum mood disorders and their families, friends, physicians, and counselors; www.ppdsupportpage.com

Postpartum Men

For fathers with concerns about depression, anxiety, or other problems with mood after the birth of a child; www.postpartummen.com

Postpartum Progress

The most widely read blog on postpartum depression and all other mental illnesses related to pregnancy and childbirth; <http://postpartumprogress.com>

The Postpartum Resource Center of New York

www.postpartumny.org

24-Hour Helpline

631/422-2255; Toll Free: 855/631-0001

A self-help organization established to provide emotional support, educational information, and health care and support group referrals to mothers with prenatal and postpartum depression; videos available

Postpartum Support Virginia

Lists of resources, free support groups, medical professionals who specialize in postpartum mood and anxiety disorders; www.postpartumva.org

University of North Carolina Center for Women's Mood Disorders

Provides expert mental health care advice for women at each reproductive stage of life; www.psychiatry.unc.edu/wmd

LactMed

http://www.nlm.nih.gov/news/lactmed_announce_06.html; free iPhone/Android app available at <http://toxnet.nlm.nih.gov/help/lactmedapp.htm>

Academy of Breastfeeding Medicine

Protocol #18: Use of Antidepressants in Nursing Mothers; www.bfmed.org

Lactation Study Center (Rochester, NY)

(585)/275-0088, staffed 40 hours per week

MILITARY RESOURCES

Operation Special Delivery

Offers free doula support for military mothers; <http://www.operationsspecialdelivery.com/>

Give An Hour

Provides free mental health services to military members and their families affected by the conflicts of war; <http://www.giveanhour.org/>

Continued

TABLE. (Continued)

EXERCISE RESOURCES**Fit4Mom**Includes pregnancy program, stroller strides, and Body Back workout details; www.Fit4mom.com**Baby Boot Camp**Stroller fitness program; www.babybootcamp.com**BOOKS**Bennett SS, Indman P. *Beyond the Blues: A Guide to Understanding and Treating Prenatal and Postpartum Depression*. San Jose, CA: Moodswings; 2006Cooper PJ, Murray L, eds. *Postpartum Depression and Child Development*. New York, NY: Guilford; 1999Kleiman KR, Raskin VD. *This Isn't What I Expected: Overcoming Postpartum Depression*. New York, NY: Bantam; 1994Shields B. *Down Came the Rain: My Journey Through Postpartum Depression*. New York, NY: Hyperion; 2006Other titles are available at www.postpartumstress.com/books/

Herbal and Natural Treatments. St John's wort has been used to treat mild to moderate depression in Europe. Its use in the United States has been controversial. Only 1 study had adequate numbers for a review that showed colic, drowsiness, and lethargy in the infant. However, this review was confounded by inclusion of other antidepressant treatments. No long-term effects on either the infant or the milk production were noted.

Omega-3 Fatty Acids. Since omega-3 fatty acids are natural and essential elements of a woman's diet, which are often depleted during pregnancy and lactation, there is little risk associated with omega-3 fatty acid supplementation. The primary negative side effect is the "fishy" smell associated with their use. Lack of sufficient evidence precludes this from being recommended for the treatment of depression in lactating women. (25)

BREASTFEEDING IN THE SETTING OF ANTIDEPRESSANTS OR ANTIPSYCHOTICS

Studies have shown that women who had early negative breastfeeding experiences were more likely to be depressed at 2 months postpartum. Research shows that mothers who experience difficulty with nursing are more likely to experience postpartum depression due to a common neuroendocrine pathway. This highlights the importance of postpartum depression screening in mothers who have difficulty with breastfeeding. (26) Screening may help reduce the severity of PPD by enabling these mothers to be identified and referring them to a mental health professional, while continuing to consider the mother's breastfeeding goals. Pediatricians and prescribers should know that treating PPD with medication does not preclude the mother from continuing to breastfeed. This is

important, since many nursing mothers who experience postpartum depression are reluctant to start and/or continue psychotropic medication for fear of harming their infants. Also, some physicians are also reluctant to prescribe antidepressants to lactating mothers because of misconceptions about risks of taking antidepressants while breastfeeding. The amount of drug excretion into the breast milk depends on various pharmacokinetics, such as half-life, molecular weight, pH level of plasma and breast milk, plasma binding, and lipid solubility. A risk-benefit analysis must be conducted on an individualized basis. All up-to-date information can be found at LactMed (<http://toxnet.nlm.nih.gov>); a free smartphone app is available, as well.

It is important for the physician to discuss the risks of untreated depression with the mother while evaluating the risks of adding medication to the breastfeeding dyad when making treatment decisions (level of evidence B).

Mothers should be monitored by their own physicians for side effects. Pediatricians should evaluate the infant before the mother starts taking medication and should continue to monitor the infant's growth and development at each well-child visit. Serum levels are not indicated without a clinical indication or concern. Strategies to minimize exposure should be discussed and should include taking medication immediately after feedings and pumping and discarding breast milk that was obtained during peak serum levels (level of evidence C). It is essential that there be a collaborative team-based approach while treating the mother for postpartum depression. The mother's physician should work with the pediatrician so that the mother's breastfeeding goals are met while receiving appropriate and adequate treatment for her anxiety and/or depression.

However, in cases in which breastfeeding is causing the mother increased stress and/or the medication choice is not compatible with breastfeeding, we, as pediatricians, play a vital role in advising the mother and the family that it is okay not to breastfeed and reassure her about other feeding options. The mother's mental health and the infant's health should not be seen to be at cross-purposes.

RESOURCES

Although screening is important, screening solely for depression does not greatly affect outcomes. Resources for mental health treatment and adequate follow-up are essential to help the mother-infant dyad. (27)

When establishing and starting a screening program, a network should be established for referrals to mental health specialists with case management support and appropriate follow-up. (1) Office-based policies and guidelines should be developed to ensure efficient triage and referral. Medical staff should receive training on the referral process so that they are knowledgeable about protocols in situations where the mother may be experiencing suicidal and/or homicidal ideations.

If a mother has a positive screening result or needs help, a referral to a mental health worker should be made; a social worker can help in this process. If a mother declines an immediate referral, the office should have a list of resources that the mother can access when she is ready to ask for help.

The pediatrician is also in a good position to contact a family member or friend, with maternal consent, so that the mother will have support while she receives treatment. It is important for pediatric practices to develop a referral network of mental health professionals and other community resources. However, if a mother is suicidal, she must be taken to the closest emergency department for further evaluation. Systems must be in place to keep the infant, as well as other children, safe while making arrangements for their placement with family, friends, or, if needed, social services. (2) Since postpartum depression can affect an infant's development, the pediatrician can refer the patient for early intervention if there is any concern.

WHY IS THIS IMPORTANT FOR PEDIATRICIANS?

Postpartum depression is an important and often unrecognized obstetric complication that can manifest within the first year postpartum but can sometimes extend beyond the first year. As already stated, if left untreated, postpartum depression can worsen, with subsequent negative health

outcomes for the mother, her child(ren), her partner, and their family.

Pediatricians are in an ideal position to help a mother with postpartum depression get the treatment and help she needs. Per the recommendations of the American Academy of Pediatrics, it is recommended for pediatricians to screen mothers at the infant's 1-, 2-, 4-, and 6-month well-child visits. (1) From the first newborn visit, the mother begins to develop a long-term relationship with her child's pediatrician. The trust that develops allows the mother to speak to her infant's pediatrician about other issues that may be affecting the infant's environment, health, and well-being. While many obstetricians screen mothers for PPD at their 6-week postpartum check, many mothers miss this opportunity.

Many low-income women, particularly those from minority backgrounds, have below-average rates of postpartum follow-up visits with their obstetricians. (28) Studies of economically disadvantaged families have shown that approximately 25% of all women will have ongoing depressive symptoms that last well beyond the initial postpartum year. (1) As a result, economically disadvantaged women, who also have higher rates of postpartum depression, are likely to benefit from pediatric postpartum depression screening, since they are less likely to follow up with their obstetrician, where screening may or may not occur.

Mothers who have low incomes are more likely to experience some form of depression than the general population of mothers. For low-income women, rates of depressive symptoms are reported to be between 40% and 60%. There are estimates that 11% of infants in families with incomes below the federal poverty level live with a mother who has severe depression and that more than one-half (55%) of all infants who live in poverty are being raised by mothers who have some form of depression. (29)

Owing to the lack of training and time, as well as ethical and legal concerns in screening and diagnosis for the mother, pediatricians may feel wary, since the mother is not the patient. (1) However, despite this reservation, studies show that pediatricians feel responsible for recognizing maternal depression and are more likely to change their practice management to incorporate screening for maternal depression. (30)

In January 2016, the United States Preventive Services Task Force recommended screening for depression in pregnant and postpartum women, with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up (evidence level B recommendation).

While maternal mental illness can affect children and can lead to the development of behavioral problems and emotional instability, even minimal counseling has been

shown to help women with depression. The panel found that screening caused no harm but can actually help create an open dialogue between the pediatrician and the mother to talk about the postpartum mood and anxiety disorders, while minimizing the stigma that may be associated with them. (31)

In May 2016, the Centers for Medicare & Medicaid Services stated that screening for maternal depression would be covered as part of the Early and Periodic Screening, Diagnostic and Treatment benefit. (32)

Policies and guidelines must be developed to ensure efficient and adequate triage, screening, and referral of mothers who are at risk for postpartum depression. Even though there may be challenges in screening for maternal anxiety and depression, screening protocols and referral systems should be created so that this can be done efficiently, while allowing for reimbursement for the pediatrician. As the issue of postpartum mood and anxiety disorders continues to rise to the forefront in all aspects of society, by way of celebrities, insurance entities, public health initiatives, and medical avenues, it becomes even more essential to not only become more knowledgeable and comfortable with screening but to train medical students and residents so that these future physicians are armed with the information and tools they need to help the mother-infant dyad.

SUMMARY

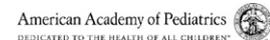
- On the basis of research evidence (level A), postpartum depression and anxiety, also known as *postpartum mood and anxiety disorders*, affects 10% to 25% of mothers, making it the most common underdiagnosed obstetric complication. However, women of lower socioeconomic status can have ongoing depressive symptoms beyond the initial postpartum year. (1)
- On the basis of research evidence (level A), postpartum depression can severely threaten the mother-child relationship in terms of the ability to form attachments and bonds. This in turn can lead to developmental delays, which can potentially result in impaired cognitive, social, and behavioral development. (11)(12)
- On the basis of research evidence (level A), mothers who experience depression are less likely to integrate health care advice from their pediatric providers, which include important topics such as sleep safety and car seat and other home safety anticipatory guidance. (15)
- On the basis of research evidence (level A), the American Academy of Pediatrics recommends that pediatricians screen mothers at the infant's 1-, 2-, 4-, and 6-month well-child visits. (1)

- On the basis of research evidence (level B), the United States Preventive Services Task Force recommends screening for depression in pregnant and postpartum women, with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up. (31)
- On the basis of research evidence (level A), the Centers for Medicare & Medicaid Services, maternal depression screening is covered under the Early and Periodic Screening, Diagnostic and Treatment benefit. (32)
- On the basis of research evidence (level A), the Edinburgh Postnatal Depression Scale is a free, validated screening instrument that can be easily integrated within the clinical setting. A score of at least 10 constitutes a positive finding and raises concern for depressive illness in the mother. (22)
- On the basis of research evidence (level A), psychotherapy is effective for the treatment of postpartum depression and is a good start in the treatment plan. (25)
- On the basis of research evidence (level A), if psychotherapy is unavailable or if symptoms are severe, then medications need to be considered. Selective serotonin reuptake inhibitors are the most commonly prescribed antidepressants. Sertraline is the best option because of low concentrations in breast milk and a good safety profile during pregnancy. (25)

To view teaching slides that accompany this article, visit <http://pedsinreview.aappublications.org/content/38/12/541.supplemental>.

Postpartum Depression: What Do Pediatricians Need to Know?

Natasha K. Sriraman, MD, MPH
Do-Quyen Pham, MD
Reeti Kumar, MD



References for this article are at <http://pedsinreview.aappublications.org/content/38/12/541>.

PIR Quiz

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1. Individual CME quizzes are available via a handy blue CME link under the article title in the Table of Contents of any issue.
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3. To learn how to claim MOC points, go to: <http://www.aappublications.org/content/moc-credit>.

1. You are meeting a mother and infant for the first time at their initial newborn check 3 days after birth. The mother appears quiet, with sparse eye contact. She has a flat affect throughout your conversation. In considering the spectrum of postpartum psychiatric syndromes, which of the following is the most common diagnosis?
 - A. Postpartum blues.
 - B. Postpartum depression.
 - C. Postpartum dissociative disorder.
 - D. Postpartum mania.
 - E. Postpartum psychosis.
2. At a first newborn visit, the mother appears quiet and withdrawn. You screen her for postpartum depression by asking her about symptoms such as anxiety, insomnia, and depressed mood. In distinguishing postpartum blues from postpartum depression, which of the following features suggests postpartum depression?
 - A. Duration longer than 1 week.
 - B. Onset in the first 5 days postpartum.
 - C. Presence of functional impairment.
 - D. Symptoms occur a few times a week.
 - E. Symptoms occur for 1 or 2 hours per day.
3. Your morning clinic schedule includes a number of health supervision visits, with patients ranging from the newborn age up to 3 years of age. In addition to screening for maternal postpartum depression, you have started screening for paternal postpartum depression. In what period after a child's birth is the father at highest risk for postpartum depression?
 - A. The first 5 days.
 - B. The first 2 weeks.
 - C. Months 1 to 3.
 - D. Months 3 to 6.
 - E. Months 6 to 12.
4. A new mother confides to you symptoms of moderate depression. She is hesitant to seek help from her own physician, both from fear of stigma and because she is not sure anything can help her. She is exclusively breastfeeding and believes that pharmacological treatment is not an option. For a breastfeeding mother with mild to moderate depression, which of the following treatments would be first-line therapy?
 - A. Omega-3 fatty acids.
 - B. Psychotherapy.
 - C. Selective serotonin reuptake inhibitors.
 - D. St John's wort.
 - E. Tricyclic antidepressants.
5. Because pediatricians are in a unique position to screen mothers for postpartum depression, the American Academy of Pediatrics recommends screening mothers at which of the following postpartum well-child visits?
 - A. 2-week and 1-month visits.
 - B. 2-week, 1-month, and 2-month visits.
 - C. 1-month, 2-month, 4-, and 6-month visits.
 - D. 2-month, 4-month, and 6-month visits.
 - E. 2-week, 1-month, 2-month, and 4-month visits.

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References

This article cites 28 articles, 8 of which you can access for free at:
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lymphocytic predominance. Electromyography results may show conduction abnormalities depending on the GBS subtype. Last, MRI findings, although nonspecific, may show gadolinium enhancement of the spinal nerve roots.

For initial management, patients require close monitoring of motor, autonomic, and respiratory function in the inpatient setting. Immunotherapy with intravenous immunoglobulin (IVIG) or plasma exchange is the preferred treatment modality but should be reserved for patients with severe GBS. Severe symptoms include progressive muscle weakness, respiratory compromise, bulbar symptom development, or the inability to walk unassisted. Although there are no clear inferiority or superiority outcome trials, IVIG is typically selected over plasma exchange due to ease of administration and greater availability. The total dose of IVIG in children is 2 g/kg, given as 1 g/kg for 2 days or 400 mg/kg for 5 days, usually as a single treatment course. The proposed mechanism of action of IVIG is suppression of the inflammatory and immune-mediated responses. In patients with mild disease or nonprogressive symptoms, treatment may be supportive. Once stabilized, physical, occupational, and speech therapies should be initiated early to restore and maintain function. Mortality is estimated to be 3% to 4%. Children typically have a better prognosis than adults, and in previous studies, greater than 80% of children had excellent

long-term recovery regardless of subtype. The recurrence risk is estimated to be 2% to 5%.

COMMENTS: Although it is fortunate that children tend to experience less severe disease than adults, I am struck by the variability of presentations. Although usually a monophasic disease, in some patients it may reoccur, with a mean interval to reoccurrence of 7 years. Early and timely diagnosis is important because studies have suggested improved outcomes when treatment is initiated within the first 2 weeks. Although in most patients the maximal weakness presents in the first 2 weeks, in some it may take up to 4 weeks, so it is important to have GBS in your differential diagnosis. The elevated protein level in the CSF may not initially be present but is present in approximately 50% of patients in the first week and in greater than 90% of patients after the second week of symptoms. Up to 20% of patients (when including adults) remain with some disability. Although much progress has been made, more research is needed. Active areas of research include assessing treatment effectiveness in patients with more mild disease and the best strategies to treat autonomic dysfunction and related fatigue noted in patients with GBS.

– Janet R. Serwint, MD
Associate Editor, *In Brief*

Additional Resources for Pediatricians

AAP Textbook of Pediatric Care, 2nd Edition

- Chapter 260: Guillain-Barré Syndrome - <https://pediatriccare.solutions.aap.org/chapter.aspx?sectionId=135886435&bookId=1626>

Point-of-Care Quick Reference

- Guillain-Barre Syndrome - <https://pediatriccare.solutions.aap.org/content.aspx?gbosid=311264>

For a comprehensive library of AAP parent handouts, please go to the *Pediatric Patient Education* site at <http://patiented.aap.org>.

Correction

An omission on screening guidelines appeared in the December 2017 review “Postpartum Depression: What Do Pediatricians Need to Know?” (Sriraman NK, Pham D, Kumar, R. *Pediatrics in Review*. 2017;38(12):541–551). According to current recommendations, screening for postpartum depression should take place at the 1-, 2-, 4-, and 6-month well-child visits. The online article has been updated to reflect this recommendation, and a correction was published online. The journal regrets the error.



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The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pedsinreview.aappublications.org/content/38/12/541>

An erratum has been published regarding this article. Please see the attached page for:

<http://pedsinreview.aappublications.org/content/39/1/54.full.pdf>

Data Supplement at:

<http://pedsinreview.aappublications.org/content/suppl/2017/12/04/38.12.541.DC2>

<http://pedsinreview.aappublications.org/content/suppl/2017/11/30/38.12.541.DC1>

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