TeachME PROFESSIONAL DEVELOPMENT
CEU's for Teachers and Educators

Postpartum Depression and Breastfeeding

Curriculum Objectives

After completing this curriculum, health care providers will be able to:

- Identify women who may be at risk for depression in the perinatal period.
- Recognize the symptoms of depression and other mood disorders in pregnant and postpartum women.
- Describe how postpartum mood disorders may impact breastfeeding.
- Describe the causes of postpartum depression.
- Provide information to mothers so they can weigh the risks and benefits of various treatment options for depression.
- Work with mothers to preserve the breastfeeding relationship whenever possible.

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Growth

I. Toward a Breastfeeding-Friendly Approach to Depression in New Mothers

1) Health care providers have increasingly acknowledged that untreated maternal depression can harm both mother and baby. Consequently, more health care providers are screening for depression than ever before.

2) Unfortunately, despite good intentions, some health care providers have attitudes or beliefs about depression that may undermine breastfeeding. Some believe that breastfeeding is expendable—or even the *cause* of depression. The evidence does not support that position.

3) We would like to offer an alternative view. Breastfeeding can have a positive effect on women's mental health and should be preserved whenever possible.

4) This curriculum provides an overview of depression in new mothers, including the range of treatment options that are compatible with breastfeeding.

A. Breastfeeding and Depression

1) The relationship between breastfeeding and depression is complex, but breastfeeding does not *cause* depression. In fact, just the opposite is true. A recent review found that mothers who did not breastfeed were significantly more likely to be depressed (Dennis & McQueen, 2009). Further, depressed mothers were less likely to initiate breastfeeding and more likely to quit early.

2) Breastfeeding *difficulties,* however, may increase the risk of depression. In one study, once breastfeeding issues were resolved, mothers were no longer depressed (Amir et al., 1996).

3) Breastfeeding may also provide emotional benefit to depressed mothers. They may feel that breastfeeding is the only thing going well for them, as actress Brooke Shields describes in her story of postpartum depression

> If I were to eliminate [breastfeeding], I might have no hope of coming through this nightmare. I was hanging on to breastfeeding as my lifeline. (*Down Came the Rain,* p. 80)

4) Upon diagnosing depression, health care providers may advise women to wean. For some mothers, that may be the most realistic option. But in most cases weaning is not necessary because almost all treatments for depression are compatible with breastfeeding (See Sec VI). Indeed, some women may refuse to seek treatment because they are afraid that they will be told to wean. Their concern is realistic.

B. The Adaptiveness of Breastfeeding

1) Stress is a potent risk factor for depression (Kendall-Tackett, 2007). Breastfeeding is adaptive (i.e., confers a survival advantage) because it attenuates the stress response and promotes calm in mothers (Groër et al., 2002; Groër & Morgan, 2007).

2) In a study of 28 mothers who were both breast- and bottle-feeding, researchers found that breastfeeding decreased negative mood whereas bottle feeding decreased positive mood in the same women (Mezzacappa & Katkin, 2002).

3) Breastfeeding also lowered the stress hormones ACTH and cortisol in another study. Lactation provided a short-term suppression of the HPA axis and stress-related cortisol (Heinrichs et al., 2001).

4) Breastfeeding also lowers stress that babies experience when their mothers are depressed. Jones et al. (2004) examined the EEG patterns of babies of depressed and non-depressed mothers. The EEG patterns of babies of depressed breastfeeding mothers were normal. In other words, breastfeeding protected the babies of depressed mothers from the harmful effects of maternal depression.

The authors explained their findings by noting that the depressed/breastfeeding mothers did not disengage from their babies the way that depressed/bottle-feeding mothers did. The depressed/breastfeeding mothers continued to look at, touch and stroke their babies because these behaviors are built into the breastfeeding relationship. In contrast, when a mother bottle feeds, she doesn't have to even hold her baby, making it easier for her to disengage, leading to the symptoms that babies typically exhibit when their mothers are depressed (Jones et al., 2004).

II. Consequences of Untreated Postpartum Depression

A. Consequences for Mothers

1) Untreated depression has a profound and devastating impact on the health of mothers and babies. In the Global Burden of Disease Study, major depression was the fourth most common cause of early death and disability for adults throughout the world (Murray & Lopez, 1997).

2) Some of the health problems associated with depression are due to the stress hormone cortisol, which is often elevated in people who are depressed. Elevated levels of cortisol can suppress the immune system and lower the number of white blood cells (Kop & Gottdiener, 2005). Increased levels of cortisol can also lead to atrophy of the hippocampus, a brain structure involved in learning and memory. Even formerly depressed patients had smaller hippocampal volume than patients who had never been depressed. The decrease in volume ranged from 12% to 19% (Sapolsky, 2000).

3) Elevated cortisol levels can also impact breastfeeding. One study found that high cortisol levels after birth delayed lactogenesis II for several days (Grajeda & Perez-Escamilla, 2002). Lactogenesis II refers to the time when women's milk supply becomes more plentiful (or "comes in") three to four days after birth.

4) Untreated depression also increases the level of systemic inflammation by increasing levels of proinflammatory cytokines (Corwin & Pajer, 2008; Kendall-Tackett, 2007; see Section IV-A1). Increased inflammation is implicated in increased rates of cardiovascular disease, metabolic syndrome, diabetes and other serious chronic diseases in depressed people. For example, patients who become depressed after a myocardial infarction (MI) are three-to-four times more likely to have another MI than those who were not depressed (Lesperance & Frasure-Smith, 2000). Cardiovascular events are less likely in a population of new mothers, but these studies illustrate depression's serious health effects.

5) Groër and colleagues (2005) found that mothers who were stressed, fatigued or had negative moods had lower levels of prolactin in their milk and serum than mothers who were not tired and stressed. Lower levels of prolactin may have a negative impact on milk supply.

6) Depression also has an impact on women's relationships with their partners. Depressed women are more likely to report poor communication, disengagement, and marital dysfunction that persists long after the depression has resolved (Roux et al., 2002).

7) A study with a community sample of women compared three groups: those currently depressed, those with a history of depression, and those with no history of depression. The depressed and formerly depressed women were impaired on every measure of interpersonal behavior, had less stable marriages, and lower levels of marital satisfaction than women without a history of depression (Hammen & Brennan, 2002).

B. Consequences for Babies

1) Numerous studies have also demonstrated the harmful effects of maternal depression on babies and children.

2) Mothers with depression or anxiety during pregnancy are more likely to have preterm infants (Dayan et al., 2006; Orr et al., 2008; Wisner et al., 2009).

3) A study of 48 neonates and their mothers (Field et al., 2002) found that babies of depressed mothers had abnormal EEG activation patterns, elevated cortisol levels, and had sub-optimum performance on the Brazelton Neonatal Behavior Assessment Scale than babies of non-depressed mothers.

3) In a series of two studies, researchers compared babies' cortisol levels after interacting with their depressed or non-depressed mothers (Bugental et al., 2008). The babies were 14 to 16 months old. Infants who had been born prematurely were more reactive to their mothers' depression than were infants who were full term.

4) In an American sample of 5,000 mother-infant pairs, researchers found that children of depressed mothers had more behavior problems and lower vocabulary scores at age five (Brennan et al., 2000). In this study, mothers were assessed for depression during pregnancy, immediately postpartum, and at six months and five years of age. The more severe and chronic the depression, the more behavior problems the children exhibited.

5) Children of mothers who had postpartum depression were lower in social competence at ages eight to nine in a study from Finland (Luoma et al., 2001). Social competence included parents' reports of children's activities, hobbies, tasks and chores; functioning in social relationships; and school achievements. Mothers were assessed for depression prenatally, postnatally, and when their children were eight to nine years old. Mothers' *current* depression was also associated with their children's low social competence and low adaptive functioning.

6) The impact of parental depression can last well past childhood. A 20-year follow-up of children of depressed parents compared them with a matched group of children of parents with no psychiatric illness. The adult children of depressed parents had three times the rate of major depression, anxiety disorders, and substance abuse compared with children of non-depressed parents. In addition, children of depressed parents had higher rates of medical problems and premature mortality (Weissman et al., 2006).

III. Postpartum Depression and Co-Occurring Conditions

A. Incidence and Symptoms

1) Perinatal depression is relatively common, affecting approximately 12% to 25% of new mothers worldwide (Beck, 2006; Centers for Disease Control, 2008; Kendall-Tackett, in press).

2) Some populations, however, such as low-income ethnic minority mothers, may have rates as high as 40% to 50% (McKee et al., 2001). But in cultures that support new mothers, rates of postpartum depression and co-occurring conditions are quite low (Stern & Kruckman, 1983).

3) Depression may also manifest as somatic complaints or severe fatigue. In many cultures, these symptoms are more acceptable than depression, so depression may present as pain or tiredness. Another indication of possible depression is increased use of health care services for the mother or her baby. If a mother is seeking care above and beyond normal well-care, she may be depressed (Kendall-Tackett, in press). Of course, any possible real illness needs to be ruled out before concluding that a mother is simply depressed.

Symptoms of Depression

- Depressed or dysphoric mood
- Anhedonia (inability to experience pleasure in normally pleasurable activities)
- Sleep difficulties unrelated to infant care
- Fatigue
- Inability to concentrate
- Hopelessness
- Changes in appetite
- Increased anger or hostility, and thoughts of death

4) "Baby blues" are often mild and self-limiting. But many believe that the blues are an early manifestation of depression, and therefore should not be ignored (Beck, 2006).

5) Postpartum psychosis is relatively rare, occurring in approximately 0.01% of postpartum women. It can manifest as bipolar disorder with psychosis, schizophrenia, or other psychotic states with a postpartum onset. In almost every case, mothers require medications to stabilize their symptoms, and may require hospitalization to ensure their safety and the safety of their babies (Beck, 2006; Kendall-Tackett, in press).

B. Co-Occurring Conditions

1. Posttraumatic Stress Disorder (PTSD)

A) Women may experience PTSD or dissociation as a result of a prior trauma-producing event (e.g., childhood abuse, rape or assault, car accident, natural disaster) or as a result of the birth itself (Beck, 2004).

B) A key aspect of what makes an event traumatic is whether the mother believed that either she or a loved-one's life was in danger.

C) To meet full criteria for PTSD, women must have experienced a traumatic event and have symptoms in three clusters: re-experiencing, avoidance and hyperarousal.

D) Even when someone does not meet full criteria, they may still have symptoms that can be troublesome. For example, emotional numbness or dissociation after a traumatic birth may make it difficult initially for a mother to bond with her baby. Intrusive thoughts, nightmares, and chronic hyperarousal may compromise the quality of a mother's sleep, further impairing her mental health (Beck, 2006; Kendall-Tackett, in press).

E) Mothers are more vulnerable to PTSD if they have had prior episodes of depression or PTSD, are abuse survivors (which increases the risk of both PTSD and depression), had prior episodes of loss (including childbearing loss), or were depressed during pregnancy.

F) PTSD or depression during pregnancy can also lead to pregnancy complications including increased rate of miscarriage and premature birth (Seng et al., 2001). This elevated risk could be related to elevated levels of proinflammatory cytokines (Coussons-Read et al., 2005; Dayan et al., 2006).

2. Bipolar Disorder

A) Bipolar disorder can also manifest in the postpartum period for the first time. The postpartum period is the time of greatest risk for a woman to develop hypomanic symptoms (Yatham et al., 2009).

B) An underlying postpartum bipolar disorder may be initially misdiagnosed as major depression in the postpartum period. In such situations, if a manic episode is triggered by treatment of depression with an SSRI, a diagnosis of bipolar disorder would be more likely.

C) Postpartum bipolar disorder can occur with or without psychosis and tends to run in families. Mothers whose own mothers had bipolar disorder with psychosis are at particularly high risk of experiencing the same condition (Kendall-Tackett, in press).

3. Eating Disorders

A) Eating disorders can occur during pregnancy and the postpartum period.

B) Active eating disorders during pregnancy or postpartum increase the rate of postpartum depression. In a sample of 49 women with eating disorders who had recently given birth, the rate of postpartum depression was 35% (Franko et al., 2001).

C) Active bulimia nervosa during pregnancy also increased the risk of postpartum depression, miscarriage and preterm birth (Morgan et al., 2006). The risk of depression (OR 2.8, CI=1,2-2.6), miscarriage (OR=2.6, CI=1.2-5.6), and preterm birth (OR=3.3, CI-1.3-8.8) were all increased among with women with active bulimia. The comparison group was pregnant women with quiescent bulimia.

4. Obsessive-Compulsive Disorder (OCD)

A) OCD is characterized by recurrent, unwelcome thoughts, ideas and doubts and/or the presence of compulsive behaviors. The exact incidence of postpartum OCD is not known, but a high percentage of women with postpartum OCD also have postpartum depression.

B) Postpartum OCD can manifest itself as repetitive thoughts of infant harm or intrusive images of accidental harm to the baby. Unlike with psychosis, in postpartum OCD women are usually appalled and frightened by their thoughts, and will go to extreme measures to keep something from happening to their babies (Abramowicz et al., 2002).

C) In contrast, women with postpartum psychosis are out of touch

with reality, may experience delusions that external forces are telling them to harm their babies, and thus are at grave risk of hurting themselves or their children (Beck, 2006). Postpartum psychosis is an acute clinical emergency that requires immediate medical care to assure the safety of both mother and baby.

C) OCD and co-occurring depression are treated with SSRIs.

IV. Causes of Depression in New Mothers

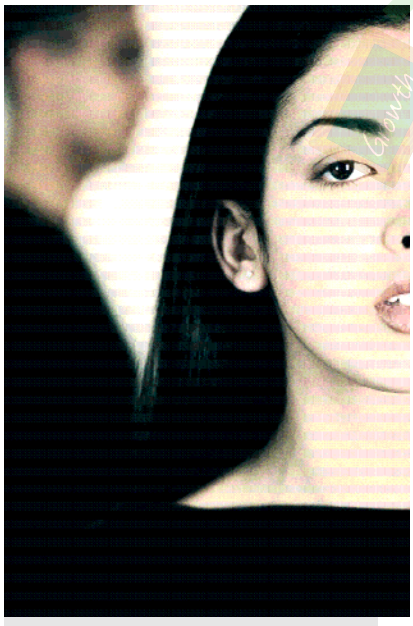
1) The factors that underlay depression in mothers vary from woman to woman. Each of these risk factors alone can cause depression. However, many mothers have multiple risk factors and these can potentiate each other.

2) Causes of depression in new mothers fall into five categories. These are listed below. By helping mothers identify the sources of their depression, intervention can be targeted more specifically.

A. Physiological Causes

1. Immune Dysfunction in Depression

A) Researchers have recently discovered that systemic inflammation has an important role in the etiology of depression in new mothers and may, in fact, underlie the other known risk factors (Groër & Morgan, 2007; Kendall-Tackett, 2007, 2008).



B) Inflammation includes high levels of proinflammatory cytokines and acute-phase proteins, such as C-reactive protein (CRP), in the mother's plasma (Kop & Gottdiener, 2005). The cytokines that have been most consistently identified in depression are interleukin-1β (IL-1β), interleukin-6 (IL-6), and tumor necrosis factor-α (TNF-α).

C) Cytokines are the chemical messengers of the white blood cells. In preparation for birth, levels of proinflammatory cytokines rise during the last trimester of pregnancy. When these cytokines are within normal levels, they are adaptive because they help prevent infection, and prepare women's bodies for labor. When they are abnormally high, however, they increase the risk of depression and a number of serious illnesses (Kiecolt-Glaser et al., 2007; Maes et al. 2004; Robles et al., 2005).

D) There are a number of reasons why inflammation increases the risk of depression. First, when inflammation levels are high, people experience classic symptoms of depression, such as fatigue, lethargy, and social withdrawal. Second, inflammation increases levels of cortisol—a stress hormone that is often elevated in depressed people. And finally, inflammation decreases the neurotransmitter serotonin by lowering levels of its precursor, tryptophan (Corwin et al., 2003; Maes & Smith, 1998).

2. Fatigue/Sleep Disturbance

A) Fatigue and sleep difficulties can both cause and be a consequence of depression.

B) Depression alters and impairs sleep (Posmontier, 2008). Depressed mothers get less sleep and poorer-quality sleep than their non-depressed counterparts, even when the baby is not with them (Field et al., 2007; Lee et al., 2007).

C) Separation of mother and baby to prevent or treat depression may not be effective because depressed mothers' sleep is likely to be disturbed even if their babies are not there.

D) Inflammation is related to fatigue and depression. When inflammation is high, mothers become fatigued. And when fatigue is high, inflammation increases. One study found that higher levels of IL-1β were related to fatigue in women at four weeks postpartum (Corwin et al., 2003).

E) In a study of women at four to six weeks postpartum, Groër and colleagues (2005) found that tired mothers were also more stressed and depressed. They also had higher rates of infection.

F) Severe fatigue also predicts future depression. One study recruited 38 healthy new mothers who had uncomplicated births at day one postpartum (Bozoky & Corwin, 2002). The authors found that fatigue at day seven predicted depression at day 28. Indeed, fatigue on day seven accounted for 21% of the variance in depressive symptoms. Similarly, a study of 465 postpartum women also found that sleep problems at one month postpartum predicted depression at four months (Chaudron et al., 2001).

Questions to Ask Mothers About Their Sleep

What was your sleep like before you had your baby?
How many minutes does it take for you to fall asleep?
Do you wake in the middle of the night when everyone else is sleeping?
Do you have a sleep disorder like sleep apnea or restless leg syndrome?
Do you have a history of depression or posttraumatic stress disorder?
Is your baby sleeping near you or in another room?

These questions may indicate that mothers have sleep disturbances that are independent of baby care. So separating mother and baby is unlikely to help.

G) Breastfeeding mothers get more sleep and are less fatigued than mothers who formula feed or combine formula–feeding and breastfeeding (Doan et al., 2007).

H) Delayed sleep latency (minutes to get to sleep) may be one of the most important predictors of postpartum depression (Goyal et al., 2007). A mother who takes 25 minutes or more to fall asleep may be depressed.

I) Mothers taking medications to help them sleep should never bed share with their babies.

3. Pain

A) Pain and depression are highly co-morbid conditions and may have a common etiology (Kendall-Tackett, 2003).

B) There are many types of pain that postpartum women can experience. Pain can be the result of birth or breastfeeding difficulties. It can be caused by prior psychological trauma, which can lower the pain threshold so that normal sensations are perceived as painful (Kendall-Tackett, 2003).

C) Pain may also trigger depression. High levels of acute pain immediately postpartum tripled the risk of postpartum depression at 3 months for all types of births in another recent study (Eisenach et al., 2008).

D) A study of 113 breastfeeding women (48 with nipple pain, 65 without) demonstrated that women with nipple pain were significantly more likely to be depressed than women without pain (38% vs. 14%). Once the pain resolved, their moods returned to normal (Amir et al., 1996).

E) High levels of proinflammatory cytokines increase pain. Cytokines (especially IL-1) are stimulated by Substance P. Substance P is the neuropeptide present in patients with pain. High levels of Substance P are related to lower levels of serotonin, which increases the risk of depression. Cytokines also increase prostaglandin synthesis, including the prostaglandin cyclooxygenase-2 (COX-2), which increases pain (Konsman et al., 2002; Machelska et al., 2001).

4. Reproductive Hormones

A) The hormonal explanation for postpartum depression has, at this time, only limited scientific support. Some of this may be due to inaccurate measures of fluctuating hormones. Future studies may find that reproductive hormones are indirectly related to depression because of their influence on stress hormones, immune markers or sleep quality.

B) Ahokas and colleagues (2000; 2001) have used 17β-Estradiol to treat severe postpartum depression. In one study, 23 women with postpartum major depression were recruited from a psychiatric emergency unit. All were severely depressed and had low serum estradiol concentrations. Within a week of treatment with estradiol, the depressive symptoms had substantially diminished. By the end of the second week, when estradiol levels were comparable to the follicular phase, the scores on the depression measure were comparable to clinical recovery (Ahokas et al., 2001). However, this was an open-label trial and did not account for the placebo effect, so these findings have limited generalizability. Blinded-placebo trials of estrogen, estradiol, or progesterone generally show no improvement in symptoms compared to the placebo (Kendall-Tackett, in press).

C) At this time, there is not sufficient evidence to support treatment of postpartum depression with estrogen or its metabolites. Estrogen has a dramatic negative impact on milk supply and can lead to breastfeeding cessation (Hale, 2008). This effect, coupled with the lack of empirical support for its efficacy, are sufficient to recommend avoiding estrogen and estradiol as treatments for depression in new mothers.

B. Negative Birth Experiences

1) A relatively high percentage of women perceive one or more of their birth experiences negatively. For example, in a representative sample of American mothers, 40% described their births in predominantly negative terms (Genevie & Margolies, 1987). And negative birth experiences can increase mothers' risk for depression.

2) Objective aspects of birth (e.g., cesarean vs. vaginal) only account for some reactions. Mothers who have cesarean births are at somewhat increased risk of having a negative reaction, but this is not always true. Subjective aspects of birth, such as those that are listed below, are more likely to lead to a woman's negative assessment of her birth (Beck, 2004; Kendall-Tackett, 2005).

Did she feel her birth was dangerous to herself or her baby?
Did she feel in control of either the medical situation or herself during labor?
Did she feel supported during labor and birth?

3) Birth experiences can also cause psychological trauma and lead to a diagnosis of PTSD. In one review, 1.5% to 6% of women met full criteria for posttraumatic stress disorder following birth (Beck, 2004). By way of comparison, 7.5% of residents of lower Manhattan met full criteria for PTSD following the 9/11 terrorist attacks (Galea et al., 2003).

4) Even when women do not meet full criteria, they may manifest symptoms of PTSD. In one study, 30% of mothers had symptoms of PTSD after birth (Soet et al., 2003). These symptoms also put them at risk for depression.

C. Infant Characteristics

1) Infants with a "difficult" or high-needs temperament increase the risk depression in mothers. These babies are often highly sensitive to their surroundings, don't fall into regular schedules or routines, cry a lot in the first few months, have an intense need to be with their mothers, and often do not sleep well at night.

2) High-needs babies can undermine a woman's sense of competence and self-efficacy, especially if this is her first baby. In one study, low self-efficacy mediated the effect of temperament on maternal depression. In other words, difficult temperament caused the mothers' depression by making them feel incompetent (Cutrona & Troutman, 1986).

3) A woman's sense of underlying competence may determine how she interprets and reacts to the stress of a demanding infant.

3) Infant illness, prematurity and disability can also cause depression in mothers, particularly if the babies are at high risk. However, this reaction is often delayed, and may not manifest itself until the babies are out of danger. Mothers could become depressed several months after their babies are discharged (Kendall-Tackett, in press).

4) Kangaroo Care and assigning parents to a "buddy" (i.e., a parent whose child has a similar condition) have both been effective techniques to help mothers cope with the demands of having premature, ill, or disabled infants. Perinatal home visiting has mixed results and only seems effective for mothers who perceive that they need it.

D. Psychological Factors

1. Attributional Style

Attributional style refers to how people explain events in their lives. Are they optimists or pessimists? Pessimists attribute negative events to some inherent flaw in themselves, see negative situations as unchangeable, and think that negative events influence every aspect of their lives. These beliefs increase the risk of depression and are specifically addressed in cognitive-behavioral therapy.

2. Previous Psychiatric History

A) Previous psychiatric history includes the psychiatric history of the mother and her first-degree relatives. A mother who has had prior episodes of depression or PTSD is at increased risk for depression postpartum.

B) Researchers have also found that depression in pregnancy is a strong risk factor for postpartum depression (Beck, 2001). In a large sample (N=9,028), depression rates were highest at 32 weeks gestation and lowest at eight months postpartum (Evans et al., 2001).

C) Kiecolt-Glaser et al. (2007) noted that a prior history of affective disorders seems to "prime" the inflammatory response so that the woman's body responds with an exaggerated response when presented with a current stressor. This priming effect makes mothers more vulnerable to subsequent stressors. However, this elevated risk does not mean depression is inevitable. With proper support for the mother, depression can be avoided.

3. Self-esteem, Self-efficacy, and Expectations

Self-esteem, self-efficacy, and expectations refer to how mothers feel about themselves as mothers. Do they feel competent? Are their expectations for themselves and their babies realistic? Feeling incompetent and having unrealistic expectations both increase the risk of depression.

E. Social Factors

1. Abusive or Dysfunctional Family of Origin

A) An abusive or dysfunctional family of origin can also increase the risk of depression (Kendall-Tackett, in press). Current research includes a broad range of difficulties in mothers' families of origin that can increase the risk of depression, anxiety, substance abuse or other problems.

B) These difficulties include child abuse and neglect; parental substance abuse, mental illness or criminal activity; or parental domestic abuse. These types of experiences are referred to collectively as Adverse Childhood Experiences (ACEs). Each of these increases the risk of depression. But in combination, they are even more harmful.

C) Adverse Childhood Experiences (ACE) are common. In one large, middle-class U.S. sample, 51% had experienced at least one type of ACE (Felitti et al., 2001). Samples with higher-risk populations tend to have even higher rates.

D) These types of experiences can impact mothers postpartum, most notably by increasing the risk of depression, anxiety, and PTSD.

E) A cohort 25-year longitudinal study of 1,265 adults in Christchurch New Zealand found an increased risk of depression, anxiety disorders, conduct/anti-social personality disorders, substance abuse, suicidal ideation and suicide attempts during adolescence among those who experienced childhood physical or sexual abuse (Fergusson et al., 2008). Those who had experienced child sexual abuse had 2.4 times higher rates of mental disorders than non-exposed individuals.

F) Women with histories of sexual abuse have had higher rates of intention to breastfeed and breastfeeding initiation in two studies. However, they may encounter problems and cease breastfeeding prematurely (Kendall-Tackett, 2004).

G) Practitioners may need to work with mothers to modify breastfeeding (e.g., reducing the amount of skin-to-skin contact, pumping milk and using a bottle) to make breastfeeding comfortable for women who are abuse survivors (Kendall-Tackett, 2004).

2. Loss

Loss can also increase the risk of depression and might include loss of a parent during childhood (particularly loss of a mother), child-bearing loss, and loss of a partner through death or divorce.

3. Social Support

A) Lack of social support increases the risk of depression. Social support includes emotional and instrumental support, and can be provided by a woman's partner, friends, relatives and professionals. For women without partner support, support from others can prevent depression (Stern & Kruckman, 1983).

B) American culture generally lacks many of the supportive and sustaining aspects of community inherent in more traditional non-Western societies. But individual practitioners can help new mothers seek this type of support for themselves by offering referrals to mothering organizations and support groups, providing mothers with a realistic picture of what they can expect postpartum, and giving them "permission" to ask for help.

4. Socioeconomic Status

Socioeconomic status can also impact depression. Despite the popular myth, postpartum depression is not more common in white, middle-class women. Lower-income women are more vulnerable to depression (unless they have good support). And when low-income women become depressed, they often have fewer resources available to help them recover (Kendall-Tackett, in press).

5. Stressful Life Events

A) Stressful life events refers to the number of life changes a mother has experienced in the past year or so. Having a baby is a significant life stress and even if perceived positively, may increase the risk of depression because of the magnitude of life changes involved.

B) Mothers who have endured additional recent stressful events, even positive ones (e.g., moving to a new home), are at increased risk of depression.

C) One specific type of life stress is acculturation. Acculturation refers to the cultural adaptation people experience when they immigrate to a new country, often due to fleeing a war or other political situation that makes life in their home country untenable. Some aspects of acculturation include ability to perform adequate skills for the new country while preserving their own culture, how well they socially integrate into their new society, and their sense of loss concerning their country of birth (Knipsheer & Kleber, 2006).

V. Assessment of Postpartum Depression

A. Screening for Postpartum Depression

Since pregnancy and postpartum are critical periods of vulnerability, they are also good times for practitioners to screen for depression. Pediatric and obstetric practitioners, nurses, lactation specialists, and peer counselors can screen women for depression and offer appropriate referrals. Indeed, screening may soon become mandatory in health care settings in the U.S.

Red-Flag Symptoms

The mother :

- Has not slept in two or three days
- Is losing weight rapidly
- Cannot get out of bed
- Is ignoring basic grooming
- Seems hopeless
- Says her children would be better off without her
- Is actively abusing substances
- Makes strange or bizarre statements (e.g., plans to give her children away to strangers)

Screening can be done in prenatal, hospital, home and pediatric settings. Observation alone is not enough to screen for depression as many cases will be missed. Using a standardized scale, such as those described in Section B, results in higher rates of detection.

1) Prenatal Setting: Screening for depression with a risk-assessment tool at the first prenatal visit provides an opportunity to discuss the signs and symptoms of depression in pregnancy and postpartum as mothers enter the health care system. By increasing awareness about perinatal emotional reactions, mothers and their providers can anticipate and proactively address potential issues before they develop. Also, this discussion can help to normalize and decrease stigma about acknowledging emotional difficulties.

2) Hospital Setting: Completing a depression assessment just before discharge from the hospital is a reliable method of identifying possible depression in the immediate postpartum period. Educating nurses and lactation consultants to be aware of subtle signs of depression can help minimize it and the necessity of long-term treatment. Supporting and teaching mothers the necessity of rest and acceptance of help may also minimize risk or prevent the escalation of depression.

Edinburgh Postnatal Depression Scale-Three-Item Version (EPDS-3)

I have blamed myself unnecessarily when things went wrong

Yes, most of the time	3
Yes, some of the time	2
Not very often	1
No, never	0

I have felt scared and panicky for no very good reason

No, not at all	0
Hardly ever	1
Yes, sometimes	2
Yes, very often	3

I have been anxious or worried for no good reason

Yes, quite a lot	3
Yes, sometimes	2
No, not much	1
No, not at all	0

Scores ≥3 warrant further screening

3) Home Health Setting: Home health nurses or home visitors can be alert for early signs of depression, screen for it, and make referrals as appropriate.

4) Pediatric Office Visits: Heneghan and colleagues (2007) noted that pediatricians see infants approximately seven times in the first year for well-baby checks, making it quite feasible for pediatric providers to identify maternal depression.

The two most common scales to screen for postpartum depression are the Edinburgh Postnatal Depression Scale (EPDS) and (Cheryl) Beck's Postpartum Depression Screening Scale (PDSS). According to a recent review, both were accurate in identifying depression with a low false-positive rate. These instruments were also more sensitive than instruments that screened for depression in general, such as the (Aaron) Beck Depression Inventory (Gaynes et al., 2005). A recent study found that three items from the EPDS (see above) were more accurate than the full 10-item scale (Kabir et al., 2008).

B. Assessment Inventories

1. *Edinburgh Postnatal Depression Scale (EPDS)*

The EPDS is the most commonly used postpartum depression screening tool in the world. We have provided a copy in Appendix B. The EPDS is a 10-item self-report questionnaire that can be completed in five minutes (Cox, Holden, & Sagovsky, 1987). It was designed to give primary care providers, and other health care workers, a simple tool for screening in the postpartum period.

Women are asked to report how they have felt in the past week, and the items are scored from 0 to 3. A score greater than 12 indicates possible depression (although some recommend a cutoff of 9 for screening). See Appendix B.

The EPDS offers a number of advantages. It is easy to complete and score, and is specifically written for new mothers. Although widely used, however, it is written in British rather than American English. American mothers, especially those with lower literacy levels, may find the wording of some of the questions confusing or a little odd.

2. *Postpartum Depression Screening Scale (PDSS)*

Another screening tool, which offers more depth, is the *Postpartum Depression Screening Scale*. The PDSS is a 35-item scale. Mothers answer questions about how they feel after birth with their answers ranging from "strongly agree" to "strongly disagree" (Beck, 2006). It is available at Western Psychological Services. This is a more comprehensive scale that can be used both in clinical practice and research studies. It is also written in American English so mothers you are working with may find it easier to use.

VI. Treatment Options

A. Creating a Breastfeeding-Friendly Treatment Plan

1) There are a variety of effective treatments available for mild, moderate, and severe depression. Breastfeeding-friendly treatment for depression includes a range of conventional and alternative treatments. These can be combined or used separately.

2) A breastfeeding-friendly approach to treatment of depression also empowers mothers to weigh their options and make the best treatment choices for themselves and their babies. To achieve that goal, mothers need to be involved in all parts of the decision-making process when it comes to their care. Before suggesting any treatment, talk with mothers about the treatment modalities they are most comfortable with. If mothers feel that their concerns and wishes are not taken seriously, they are less likely to comply with treatment.

3) Some mothers are adamant about not using antidepressants and will not take them no matter what their health care providers say. In the general population of patients with depression, non-compliance rates with antidepressant use are high. In one study of antidepressant use, by the three-month follow up, only 28% were still taking their medications (Olfson et al., 2006).

4) While some mothers may never take medications while breastfeeding, others will if they are assured that the medications will not harm their babies. In this case, patient education is critical. One thing you can do is to help mothers make accurate risk-benefit comparisons by helping them balance the risks of being on medication and breastfeeding, the risk of not breastfeeding, and the risks to themselves and their babies of ongoing, untreated depression. Often times, mothers make a false comparison of "contaminated" breast milk (i.e., by medications) with "pristine" formula. In almost all circumstances, the risks of breastfeeding while on medications are far less than the risk of not breastfeeding (Hale, 2008).

5) Mothers may be more amenable to medications if they feel like there is an end-point. For example, some may be willing to take medications if there is a plan in place for evaluating them, say at 4 to 6 months, to see if they need to continue or can taper off. In the meantime, other treatments, such as exercise, therapy, or Omega-3s, can be put into place so they are less vulnerable to future episodes.

B. Alternative Treatments

1. Long-Chain Omega-3 Fatty Acids: EPA and DHA

A) EPA and DHA, the long-chain Omega-3 fatty acids, show promise in the treatment of mood disorders according to a 2006 expert panel convened by the American Psychiatric Association (Freeman et al., 2006). DHA alone has efficacy in preventing depression but not in treating it (Akabas et al., 2006). EPA is effective for treatment of depression and can be used alone or in combination with either DHA or medications (Akabas et al., 2006; Peet & Stokes, 2005).

B) Mothers from many industrialized countries are deficient in EPA and DHA because they do not consume enough in their diets. Pregnant and postpartum women are often especially deficient because the baby needs these fatty acids for its developing nervous system. Because of this, mothers' bodies will preferentially divert these fatty acids to the babies and the mothers become increasingly depleted with each subsequent pregnancy.

Contaminant-Free Sources of EPA/DHA

Pharmaceutical-Grade Fish Oil (EPA & DHA)

- Carlson Labs (www.CarlsonLabs.com)
- Vital Nutrients (www.VitalNutrients.net)

Brands of OTC Fish-Oil Supplements verified by the U.S. Pharmacopeia

- Berkley & Jensen, Equaline, Kirkland Signature, Nature Made, NutriPlus (www.usp.org)

Vegetarian DHA Supplements

- Nature's Way DHA (www.NaturesWay.com)
- O-mega-Zen-3 (www.Nutru.com)

Prescription Prenatal Supplements with DHA

- OptiNate (First Horizons Pharmaceutical)
- Citracal Prenatal + DHA (Mission Pharmacal)

Dosages

200-400 mg of DHA is the minimum recommended dose to prevent depression

1,000-2,000 mg EPA for treatment of depression (usually in combination with medications and/or DHA)

C) A population study from New Zealand found that the more fish people ate, the higher their self-reported mental health. This study controlled for other variables that could explain the results including age, household income, eating patterns, alcohol use and smoking (Silvers & Scott, 2002).

D) Hibbeln (2002) examined seafood consumption in more than 14,000 pregnant women. He found that women who ate high amounts of seafood while pregnant, and who had high levels of DHA in their milk postpartum, had lower levels of postpartum depression.

E) Pregnant or breastfeeding women cannot safely consume enough seafood to achieve an antidepressant effect because contaminants in seafood are toxic to the baby's developing nervous system. Fortunately, there are supplements available that are tested for contaminants and are safe for pregnant and breastfeeding women (see Table).

F) EPA/DHA decrease inflammation by lowering levels of proinflammatory cytokines. A large population study found that people with high levels of Omega-3s in their blood had low levels of proinflammatory cytokines. In contrast, people with low levels of Omega-3s had more inflammation (Ferrucci et al., 2006).

G) The Omega-3 in flax seed is ALA and does not have efficacy in the prevention or treatment of depression (Bratman & Girman, 2003).

2. Exercise

A) The effectiveness of exercise as a treatment for depression has been demonstrated in population studies and randomized clinical trials (Daley et al., 2007).

B) An Australian study of 587 new mothers (Su et al., 2007) examined the relationship between mothers' exercise, initiation and duration of breastfeeding, and exercise's effect on infant growth. Exercise had no negative effect on either breastfeeding or infant growth.

C) In a Finnish population study (N=3403), men and women who exercised two to three times a week experienced significantly less depression, anger, cynical distrust, and stress than men and women who exercised less frequently (Hassman et al., 2000).

D) The efficacy of exercise as a treatment for major depressive disorder (MDD) was also demonstrated in two randomized trials. In the first study, 156 patients with MDD (>50 years old) were randomized into one of three treatment groups: aerobic exercise alone, sertraline (Zoloft) alone, and a combination of exercise and sertraline. After four months, both sertraline and exercise were effective in treating major depression with no significant difference between them (Babyak et al., 2000). This group of researchers replicated their findings with another group of depressed older patients. Exercise was as effective as setraline for treating major depression (Blumenthal et al., 2007).

E) In order to achieve an antidepressive effect, mothers with mild-to-moderate depression must exercise 2 to 3 times a week for 20 to 30 minutes at a moderate level. For major depression, 3 to 5 times a week is necessary for 45 to 60 minutes (Kendall-Tackett, 2008).

3. S-Adenosyl-L-Methionine (SAMe)

A) S-Adenosyl-L-Methionine (SAMe) is another supplement that is effective in treating depression. SAMe is a substance that naturally occurs in every cell of the body and is crucial to cell metabolism in all animals. It is derived from the amino acid methionine and adenosine triphosphate.

B) SAMe contributes to a process known as methylation that regulates serotonin, melatonin, dopamine, and adrenaline. It also regulates neurotransmitter metabolism, membrane fluidity, and receptor activity (Bratman & Girman, 2003). If people have low levels of B6, B12, or folic acid, SAMe breaks down into homocysteine. High homocysteine levels are harmful to cardiovascular health and have been related to depression.

C) A meta-analysis of 28 studies indicated that SAMe decreased depression significantly more than a placebo, and was comparable to antidepressant medications in its effectiveness (Agency for Healthcare Research and Quality, 2002). The authors of this report noted that in placebo trials, SAMe was providing an active treatment. Clinically, patients improved, but SAMe did not completely eradicate depression.

D) SAMe has also been used to treat postpartum depression (Cerutti, Sichel, & Perin, 1993). In this study, women were randomly assigned to receive 1600 mg of SAMe, a placebo, or usual care. By the 10th day, women receiving SAMe had significantly lower depression than women in the placebo group. By day 30, however, the difference between the SAMe and placebo group was no longer significant. The difference was still significant, however, between the women receiving SAMe and the usual-care group, with the women who received SAMe having lower depression scores.

E) Unfortunately, we have no information on the impact of SAMe on breastfeeding. Since it naturally occurs in the body, and has been safely used during pregnancy (Agency for Health Quality Research, 2002), it is most likely safe. However, we don't know that for certain and should advise mothers accordingly.

4. Other Alternative Treatments

A) At this point, there is not a large empirical base on the efficacy of other alternative treatments for postpartum depression. However, a recent review highlights some of the approaches that are promising, and should be considered as possible approaches to treating depressed mothers. Some of these other modalities include Ayurvedic medicine, homeopathy, aromatherapy, massage, and Traditional Chinese Medicine (Mantle, 2002).

B) Bright light therapy was helpful in two case studies of new mothers (Corral et al., 2000). Both women refused to take antidepressants, but responded to bright light therapy and had significantly lower rates of depressive symptoms after treatment.

C) In a Finnish study of healthy adults (ages 26-63 years), patients were randomly assigned to one of three conditions: aerobics class with bright light, aerobics class with normal illumination, and relaxation/stretching sessions in bright light as a control group. The authors found that bright light and exercise relieved depression. For atypical depression, bright light was more effective than exercise. The authors concluded that twice-weekly administration of bright light, alone or with physical exercise, can alleviate seasonal depression (Leppaemaeki et al., 2002).

C. Psychotherapy

1) Two forms of therapy have proven efficacious for the treatment of mild, moderate or severe depression: cognitive-behavioral therapy and interpersonal psychotherapy.

2) Both of these types of therapy have proven as effective as medications in randomized clinical trails, and have been used to treat postpartum women.

1. Cognitive-Behavioral Therapy

A) Cognitive-behavioral therapy (CBT) has been shown to be as effective as medications for treating depression, anxiety, chronic pain, and obsessive compulsive disorder (Antonuccio, 1995; Rupke, 2006).

B) CBT is based on the premise that depression is caused by distortions in thinking. The goal is to help patients learn to identify distorted beliefs and replace them with more rational ones (Rupke, 2006).

C) Patients who received CBT did better on follow-up, were less likely to relapse, and were less likely to drop out of treatment than those who received medications alone (Antonuccio, 1995; Antonuccio et al., 1995). CBT has also proven effective for the treatment of depression in adolescents (Rupke, 2006).

D) Mothers may also try a self-help approach. *Feeling Good: The New Mood Therapy* by David Burns can help mothers who are interested in trying cognitive therapy, like to read, and don't have access to a therapist who offers cognitive-behavioral therapy.

E) State psychological associations can provide names of therapists in their states who offer CBT, but these practitioners may or may not be aware of the needs of postpartum women. (See also www.nacbt.org for more information.)

2. Interpersonal Psychotherapy

A) Interpersonal Psychotherapy (IPT) is another type of psychotherapy that has demonstrated effectiveness in the treatment of depression (Klier et al., 2001). It will likely become the psychotherapy of choice for postpartum depression. In one study, IPT was as effective as tricyclic antidepressants and cognitive therapy, and was effective for almost 70% of the patients (Tolman, 2001). (See also www.interpersonalpsychotherapy.org)

B) IPT is based on attachment theory, is time-limited, and focuses on the client's interpersonal relationships. Disturbances in these relationships are hypothesized as being responsible for depression in general, as well as postpartum depression in particular (Stuart & O'Hara, 1995).

C) With IPT, on a client's first visit, a specific problem is identified, and the client and therapist begin work on that issue. The goal of IPT is to help new mothers combine their new roles with the ones they have already established. This might involve helping the mother solve a problem. But the actual solution is less important than the process of identifying a problem and making a change.

D) IPT was effective for postpartum depression in two studies (O'Hara et al., 2000). One study included 120 women with postpartum major depression (O'Hara et al., 2000). O'Hara et al. found that women in the therapy group had significantly lower depression scores than women in the wait-list group at four, eight and 12 weeks after completing treatment. IPT reduced depressive symptoms and improved social adjustment. The authors felt that IPT represents a viable alternative to pharmacotherapy, especially for women who are breastfeeding.

D. Medications

1. Herbal Medications

A) St. John's wort (*Hypericum perforatum*) is an effective treatment for mild-to-moderate depression. It has also been effective for major depression, although this is not its standard use.

B) St. John's wort is the most widely used of the herbal antidepressants and has many other properties. It is antibacterial, anti-inflammatory, antiviral, and relieves pain (Balch, 2002; Ernst, 2002).

C) A review of 22 studies (Whiskey et al., 2001) found that St. John's wort was more effective than the placebo in treating depression, and did not significantly differ from standard antidepressants in its effectiveness. The authors also concluded that side effects were more common with standard antidepressants than with St. John's wort.

D) In one study (Lecrubier et al., 2002), 375 patients were randomized to receive either St. John's wort (*Hypericum perforatum* Extract WS 5570) or a placebo for mild-to-moderate depression. The patients received treatment for six weeks. At the end of six weeks, patients receiving St. John's wort had significantly lower scores on the Hamilton Depression Rating Scale, and significantly more patients were in remission or had a response to treatment, than patients receiving the placebo.

E) St. John's wort was even effective with major depression. This study (vanGurp et al., 2002) included 87 patients with major depression recruited from Canadian family practice physicians. Patients were randomly assigned to receive either St. John's wort or sertraline. At the end of the 12-week trial, both groups improved, and there was no difference between the two groups. But there were significantly more side

effects in the sertraline group at two and four weeks. The authors concluded that St. John's wort, because of its effectiveness and benign side effects, was a good first choice for a primary-care population.

F) A review of 38 controlled clinical trials and two meta-analyses on St. John's wort found its safety and side-effect profile to be better than standard antidepressants. The incidence of adverse events ranged from 0% to 6%, 10 times lower than antidepressants (Schultz, 2006).

G) St. John's wort is currently considered safe for breastfeeding mothers. But mothers should tell their doctors that they are taking it since it can interact with several classes of prescription medications including oral contraceptives, cyclosporins and standard antidepressants (Hale, 2008; Schultz, 2006). It should never be combined with standard antidepressants.

H) Kava, another herb that is sometimes paired with St. John's wort for treatment of anxiety, is sedative and interacts with several classes of medications including benzodiazepines, alcohol and antidepressants. There have been some case reports of liver damage and other toxic effects, but these are relatively rare (Hale, 2008).

I) Kava is currently contraindicated for breastfeeding mothers (Balch, 2002; Hale, 2008).

2. Antidepressant Medications

A) There are three major classes of antidepressants: tricyclics, selective serotonin reuptake inhibitors (SSRIs), and monoamine oxidase inhibitors (MAOIs). Only MAOIs are incompatible with breastfeeding.

B) SSRIs are used most frequently in pregnant women and breastfeeding mothers (Beck, 2006; Hale, 2008).

C) Medications with inert metabolites are preferred for breastfeeding mothers since they result in lower exposure of the baby to the medication. These include sertraline, escitalopram, and paroxetine (see Appendix C). But there are some concerns about use of paroxetine during the first trimester of pregnancy due to possible neonatal complications.

D) For women taking SSRIs while breastfeeding, providers should watch infants for sedation, agitation, irritability, poor feeding, and gastrointestinal distress (Beck, 2006).

E) Only one class of antidepressants--monoamine oxidase inhibitors (MAOIs)--is *always* contraindicated for breastfeeding mothers (e.g., Nardil, Parnate).

Appendix A

Postpartum Depression Predictors Inventory—Revised

Marital Status (Circle One)
Single, Married/cohabitating, Separated, Divorced, Widowed, Partnered
Socioeconomic Status (Circle One)
Low, Middle, High

During Pregnancy

Self-Esteem (Y/N)
- Do you feel good about yourself as a person?
- Do you feel worthwhile?
- Do you feel you have a number of good qualities as a person?

Prenatal Depression (Y/N)
- Have you ever felt depressed during your pregnancy?
  - If yes, when and how long have you been feeling this way?
  - If yes, how mild or severe would you consider your depression?

Prenatal Anxiety (Y/N)
- Have you ever felt anxious during your pregnancy?
  - If yes, how long have you been feeling this way?

Unplanned/Unwanted Pregnancy (Y/N)
- Was the pregnancy planned?
- Is the pregnancy unwanted?

History of Previous Depression (Y/N)
- Before this pregnancy, have you ever been depressed?
  - If yes, when did you experience this depression?
  - If yes, have you been under a physician's care for this depression?
  - If yes, did the physician prescribe a medication for your depression?

Marital Satisfaction (Y/N)
- Are you satisfied with your marriage (or living arrangement)?
- Are you currently experiencing any marital problems?
- Are things going well between you and your partner?

Social Support (Y/N)
- Do you feel you receive adequate support from your partner?
- Do you feel you receive adequate instrumental support from your partner? (such as help with household chores or babysitting)
- Do you feel you can rely on your partner when you need help?
- Do you feel you can confide in your partner?

Repeat questions for family and friends.

Life Stress (Y/N)
- Are you currently experiencing any stressful events in your life such as:
  - Financial problems?
  - Marital problems?
  - Death in the family?
  - Serious illness in the family?
  - Moving?
  - Unemployment?
  - Job change?

After Delivery, Add the Following Items

Child Care Stress (Y/N)
- Is your infant experiencing any health problems?
- Are you having problems with your baby feeding?
- Are you having problems with your baby sleeping?

Infant Temperament (Y/N)
- Would you consider your baby irritable or fussy?
- Does your baby cry a lot?
- Is your baby difficult to console or soothe?

Maternity Blues (Y/N)
- Did you experience a brief period of tearfulness and mood swings during the first week after delivery?

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Appendix B

Edinburgh Postnatal Depression Scale (EPDS)

The Edinburgh Postnatal Depression Scale (EPDS) has been developed to assist primary care health professionals to detect mothers suffering from postnatal depression; a distressing disorder more prolonged than the "blues" (which occur in the first week after delivery) but less severe than puerperal psychosis.

Previous studies have shown that postnatal depression affects at least 10% of women and that many depressed mothers remain untreated. These mothers may cope with their baby and with household tasks, but their enjoyment of life is seriously affected and it is possible that there are long-term effects on the family.

The EPDS was developed at health centers in Livingston and Edinburgh. It consists of ten short statements. The mother underlines which of the four possible responses is closest to how she has been feeling during the past week. Most mothers complete the scale without difficulty in less than five minutes.

The validation study showed that mothers who scored above a threshold of 12/13 were likely to be suffering from a depressive illness of varying severity. Nevertheless, 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, and in doubtful cases it may be usefully repeated after two weeks. The scale will not detect mothers with anxiety neuroses, phobias, or personality disorders.

Instructions for Users

1. The mother is asked to underline the response which comes closest to how she has been feeling in the previous 7 days.

2. All ten items must be completed.

3. Care should be taken to avoid the possibility of the mother discussing her answers with others.

4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

5. The EPDS may be used at 6-8 weeks to screen postnatal women. The child health clinic, postnatal check-up or a home visit may provide suitable opportunities for its completion.

Scoring

Response categories are scored 0, 1, 2, and 3 according to increased severity of the symptom. Items marked with an asterisk are reverse scored (i.e., 3, 2, 1, and 0). The total score is calculated by adding together the scores for each of the ten items.

EPDS

As you have recently had a baby, we would like to know how you are feeling. Please UNDERLINE the answer which 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
- <u>Yes, most of the time</u>
- No, not very often
- No, not at all

In the past 7 days:

1. I have been able to laugh and see the funny side of things:
   - As much as I always have
   - Not quite so much now
   - Definitely not so much now
   - Not at all

2. I have looked forward with enjoyment to things:
   - As much as I ever did
   - Somewhat less than I used to
   - Definitely less than I used to
   - Hardly at all

*3. I have blamed myself unnecessarily when things went wrong:
   - Yes, most of the time
   - Yes, some of the time
   - Not very often
   - No, never

4. I have been anxious or worried for no good reason:
   - No, not at all
   - Hardly ever
   - Yes, sometimes
   - Yes, very often

*5. I have felt scared or panicky for no very good reason:
   - Yes, quite a lot
   - Yes, sometimes
   - No, not much
   - No, not at all

*6. Things have been getting on top of me:
   - Yes, most of the time I haven't been able to cope at all
   - Yes, sometimes I haven't been coping as well as usual
   - No, I have been coping as well as ever
   - No, most of the time I have coped quite well

*7. I have been so unhappy that I have had difficulty sleeping:
   - Yes, most of the time
   - Yes, sometimes
   - Not very often
   - No, not at all

*8. I have felt sad or miserable:
   - Yes, most of the time
   - Yes, quite often
   - Not very often
   - No, not at all

*9. I have been so unhappy that I have been crying:
   - Yes, most of the time
   - Yes, quite often
   - Only occasionally
   - No, never

*10. The thought of harming myself has occurred to me:
   - Yes, quite often
   - Sometimes
   - Hardly ever
   - Never

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Appendix C

Antidepressants and Their Compatibility with Breastfeeding

Medication	Lactation Risk Category	Relative Infant Dose
Sertraline (Zoloft)	L2	2.2%
Paroxetine (Paxil)	L2	2.1%
Escitalopram (Lexapro)	L2	5.3%
Fluoxetine (Prozac)	L2	6.9%
Citalopram (Celexa)	L2	3.6%
Venlafaxine (Effexor)	L3	6.4%
Bupropion (Wellbutrin)	L3	0.6-2%
Amitriptyline (Elavil)	L2	1.5%
Imipramine (Tofranil)	L2	0.15%
Nortriptyline (Pamelor)	L2	1.5%
Hypericum (St. John's wort)	L2	Not available

Source: T.W. Hale (2008). *Medications and mothers' milk*, 13th Edition. Amarillo, TX: Hale Publishing. Used with permission. L2="Safer"—risk is remote; L3="Moderately Safe"—Given only if potential benefit justifies potential risk to the infant.

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"This document was developed from the public domain document: A Breastfeeding-Friendly Approach to Depression in New Mothers: A Curriculum and Resource Guide for Health Care Providers – New Hampshire Breastfeeding Task Force."