# Perinatal Depression and Anxiety
## Beyond Psychopharmacology

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**KEYWORDS**

• Postpartum depression • Mental disorders and pregnancy • Risk assessment
• Vitamin deficiency • Alternative therapies • Pregnancy nutrition

**KEY POINTS**

- The experience of pregnancy draws heavily on a woman's nutrient stores and involves fluctuations in hormone levels and immunologic parameters.
- Decision making in the treatment of mental disorders during pregnancy and lactation involves assessing relative risks of exposure to maternal illness and the potential adverse effects of nondrug treatments versus medications.
- A holistic approach endeavors to identify the systemic, root causes of illnesses and to provide patients with tools for self-care that extend beyond compliance with a prescription.

### INTRODUCTION

Women of reproductive age represent a population whose treatment entails a complex web of risks and benefits. Between 10% and 18%[1] of women experience depression and anxiety during pregnancy and postpartum, when expectations are high for stability and wellness.

Risks associated with untreated maternal mental illness include poor self-care, substance abuse, medication exposures, preeclampsia, low birth weight, preterm birth, and neuropsychiatric sequelae in the child. Medication-associated concerns include neonatal adaptation syndrome, pulmonary hypertension, spontaneous abortion, low birth weight, and preterm labor. Although it is reassuring that, in more than 22,000 recorded exposures in the literature, no consistent findings indicate teratogenicity from antidepressants,[2] further prospective studies with longer follow-up and assessment are needed. A comprehensive approach to the care of a patient endeavors to identify root causes of illness (digestive, nutrient, hormonal, and fatty

Disclosures/Conflict of interest: None.
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Psychiatr Clin N Am 36 (2013) 183–188
http://dx.doi.org/10.1016/j.psc.2013.01.008 **psych.theclinics.com**
0193-953X/13/$ – see front matter 

acid imbalances) and to provide patients with tools for self-care that extend beyond compliance with a prescription.

## COMPLEMENTS AND ALTERNATIVES TO PSYCHOPHARMACOLOGY DURING PREGNANCY

Women who are concerned about the use of traditional medications should be advised regarding the risks and benefits of treatment with bright light therapy, S-adenosylmethionine (SAMe), and cranial electrotherapy stimulation (CES), as well as supplementation with essential fatty acids, folate, and vitamin D.

### *Bright Light Therapy*

Initially relegated to an evidence-based intervention for seasonal affective disorder, bright light therapy is used for treatment of pregnant patients. In an open study on antenatal major depression, 60 minutes of daily 10,000-lux light for 3 weeks resulted in a 49% improvement on the Hamilton Rating Scale for Depression. A 10-week, double-blind, randomized, placebo-controlled (DBRPC) trial of 7000 versus 500 lux showed an effect size of 0.43 for the 7000-lux group after 5 weeks, which is comparable with antidepressant treatment.[3] A typical regimen is 30 minutes of morning exposure to a UV-filtered, 10,000-lux lamp. Risks include headache and overactivation in patients with a history of bipolar disorder.

### *SAMe*

SAMe is a naturally occurring methyl donor in the human body participating in essential metabolic pathways including the formation of neurotransmitters, methylation of phospholipids, glutathione synthesis, myelination, coenzyme q10, carnitine, creatine, and DNA transcription (see the Bottiglieri article in this issue). Dosing is usually 400 mg to 1600 mg/d and sometimes up to 2400 mg/d depending on severity and tolerance. No adverse effects were reported in 8 studies (total n = ~150) of SAMe in the treatment of women with cholestasis during pregnancy. In postpartum patients with subjective reports of depressive symptoms, SAMe in doses up to 1600 mg/d achieved a 75% reduction of symptoms in 30 days (50% in 10 days) relative to placebo.[4]

### *CES*

Cranial electrical stimulators are patient-administered devices that are approved by the US Food and Drug Administration for treatment of anxiety, depression, and insomnia. The low-intensity alternating current transmitted across the skull for 20 minutes once or twice daily promotes alpha wave activity, and modulates neurotransmitters, endorphins, and cortisol (see the article in this issue by Kirsch and Nichols on Cranial Electrotherapy Stimulation).[5] There are no perinatal studies of the devices; however, given that the current used is less than that of a cell phone, adverse effects are unlikely. This device could become a first-line option for women because it is noninvasive and has a low side effect profile. The device requires a physician's prescription.

### *Fatty Acids*

Cholesterol, phospholipids, free fatty acids, and triglycerides provide sources of energy storage, nuanced signaling systems as eicosanoid precursors, and provide structural support with a balance of rigidity and fluidity for membrane receptors, peptides, and channels. Linoleic acid and alpha-linolenic acid are essential acids (not endogenously synthesized) found in meats, nuts, and seeds like sunflower and