

# Migraine and Pregnancy (1999)

**Paula D. Ravin, MD**  
**Director, Headache Clinic**  
**UMass Memorial Health Clinic**

Migraine incidence and prevalence in women is greatest during the early adult years, coincident with starting a family. The current literature suggests that many women do not experience a reprieve from migraine after the first trimester of pregnancy, and some may get worse. Furthermore, exposure to many drugs used for prevention or relief of headache during the first trimester occurs during the time of greatest teratogenicity. This makes it crucial to discuss and plan anti-headache therapy before pregnancy occurs, if at all possible.

Scientific literature surrounding drug therapy during pregnancy is scarce, and data are categorized in the PDR and other pharmacological references as follows:

- (A) Controlled studies fail to show risk to the fetus during the first trimester or afterwards
- (B) Animal studies do not show adverse effects
- (C) Animal studies are positive for fetal risk: weigh risk/benefit ratio for patients
- (D) Positive evidence of human fetal risk (X) no benefit of the drug

Isometheptine (C) or triptans (C) are frequently used by migraineurs in the first trimester inadvertently, and we have little data about risk factors. A national registry for reporting use of triptans during pregnancy has been established by each pharmaceutical company involved. Ergots (D) are contraindicated throughout pregnancy. Analgesic therapy with aspirin (C), NSAIDs (B), codeine derivatives (B), and caffeine (B) is considered safe until near term. At delivery these drugs can be tocolytic, causing fetal or maternal bleeding and lead to fetal respiratory suppression or irritability. Ketorolac (C) can not be used during pregnancy because of fetal hepatotoxicity. Butalbital (C) compounds and butorphanol (B) in large amounts can impact adversely on near term fetuses (why?), but can be safely used on an intermittent basis through most of pregnancy. Phenothiazines (B), taken intermittently, can also be safe adjunctive agents for migraine-associated nausea and vomiting, as well as for analgesia and sedation.

Preventive drugs divalproex sodium (D), amitriptyline (D), and nortriptyline (D) are contraindicated and should be discontinued before trying to conceive or as soon as pregnancy is suspected. Other common prophylactic agents such as beta-blockers (C), calcium channel blockers (C), doxepin (C), and trazodone (C) have been reported to retard fetal growth, and may compromise maternal cardiovascular status at the time of delivery. SSRI's (B), bupropion (B), and buspirone (B) have been retrospectively studied, and may be considered safe. These last tend to be more effective for the comorbid conditions of depression and generalized anxiety disorder seen in many migraine sufferers, than for the pain of migraine.

In general, minimizing the use of abortive drugs and weaning off preventatives early in pregnancy (or before) is a safe strategy. Pursuing accepted non-pharmacological strategies such as sleep regulation, regular exercise, adequate hydration and nutrition, limiting caffeine intake, eliminating alcohol intake, and learning/practicing relaxation techniques is clearly helpful for many patients.

Treating headaches during lactation presents different challenges, but there are more opportunities for intervention. Some drugs, like beta-blockers and calcium channel blockers, seem not to concentrate in breastmilk and are therefore relatively safe. Acetaminophen is compatible with breast-feeding and is preferable to aspirin. NSAIDs and opioids are also compatible with breastfeeding. Barbiturates and benzodiazepines should be used with caution due to sedative effects on the infant. Ergotamine and lithium should be avoided. Mothers can also pump and store breastmilk prior to nursing, particularly if drugs she might use have a lengthy half-life. Infant behavior should be monitored closely for signs of toxicity, even with drugs felt to be compatible, and mothers should be encouraged to practice non-pharmacological measures as much as possible.