Treating for Two: Safer Medication Use in Pregnancy

CDC’s Treating for Two is an initiative aimed at providing better information on medication use in pregnancy to women and their health care providers.

What Do We Know about Medication Use In Pregnancy?

Understanding the effects of specific medications used during pregnancy is important for both a mother and her baby. The effects depend on many factors, such as:

- How much medication was taken
- When during the pregnancy the medication was taken
- Other health conditions a woman might have
- Other medications a woman takes

Better information on the safety or risk of specific medications will allow women and their doctors to make informed decisions about treatment during pregnancy. The Centers for Disease Control and Prevention (CDC) is committed to understanding and communicating the risks of birth defects that might be associated with the use of medications during pregnancy.

Why is Medication Use in Pregnancy a Public Health Concern?

**Common exposure:** Most women (about 90%) take at least one medication during pregnancy and about 70% take at least one prescription medication. Over the last 30 years, first trimester use of prescription medications has increased more than 60%.1

**Unknown risks to mother and baby:** One in every 33 babies born in the United States is born with a birth defect. Taking certain medications, such as thalidomide or isotretinoin, during pregnancy can cause serious birth defects. As of 2011, only 9% of medications approved by the U.S. Food and Drug Administration (FDA) from 1980 through 2010 had sufficient data to determine their risk for birth defects. Only about 2% of medications approved by the FDA from 2000 through 2010 had sufficient data to characterize this risk.2

What Can Be Done to Address Medication Use in Pregnancy?

CDC and its collaborators study medication use during pregnancy to understand how specific medications might affect an unborn baby. CDC coordinates the largest population-based effort in the United States to identify the preventable causes of birth defects: the National Birth Defects Prevention Study. Population-based studies like this one help identify specific medications associated with an increased risk of birth defects.

Recently, CDC’s study collaborators have reported important findings about some medications used during pregnancy that might increase the risk for birth defects among infants:

- **Prescription pain killers**—Taking medications such as codeine or hydrocodone during pregnancy might increase the risk of having a baby with spina bifida, congenital heart defects, and other types of major birth defects.
- **Antidepressants**—Taking bupropion (used for depression and to stop smoking) during pregnancy might increase the risk of having a baby with certain heart defects.
- **Medications to treat asthma**—Taking corticosteroids might increase the risk of having a baby born with cleft lip, cleft palate, or both.
- **Medications to treat thyroid disease**—Taking medications to treat thyroid disease might increase the risk of having a baby with craniosynostosis, hydrocephaly, or hypospadias.
- **Medications to treat epilepsy**—Taking medications such as valproic acid or carbamazepine during pregnancy increase the risk of having a baby with spina bifida, cleft palate, or other birth defects.
Treating for Two: Safer Medication Use in Pregnancy Initiative

CDC is committed to working with its partners, other federal agencies, and the public to build a comprehensive approach to improve the quality of data on this subject, translate this information into safe and effective healthcare for pregnant women, and make this information easily accessible to women and their healthcare providers. This initiative aims not only to prevent birth defects, but also to make mothers healthier, by working to identify the best alternatives for treatment of common conditions during pregnancy and during the childbearing years in general.

As part of this initiative, the major activities include:

- Providing up-to-date national prevalence estimates of use of specific medications among women in the United States just before and during pregnancy.
- Establishing priorities for research about the effects of medication use during pregnancy based on these national prevalence estimates.
- Participating on pregnancy registry and surveillance advisory committees and FDA advisory boards that assess the risk for birth defects associated with medication use during pregnancy.
- Modeling the potential public health impact of shifting prescribing practices toward medications with lower risks for birth defects and other adverse outcomes, while ensuring that maternal health is optimized.
- Developing a framework for an ongoing, systematic, evidence-based review of specific medications used during pregnancy and adverse fetal outcomes.
- Disseminating information related to medication use and its effects during pregnancy to healthcare providers and to the public.

Notable Recent Accomplishments

- **New Research:** In 2012, CDC's study collaborators reported important findings about some pregnancy exposures that are associated with birth defects. For example, researchers analyzed data from the National Birth Defects Prevention Study and found that topiramate increased the risk for orofacial clefts. Topiramate is a medicine that is used to treat seizure disorders, and it’s also a component of a new weight loss medication. These findings will allow women and their doctors to make informed decisions about treatment with this medication during pregnancy.

- **Expert Meeting:** The Treating for Two initiative proposes a formal review process to assess the embryonic and fetal effects of medication use during pregnancy. To move Treating for Two forward, CDC convened a meeting of experts in January 2013. The objectives of this meeting were to seek expert input on the initiative and framework.

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