



When Allergies and Asthma Complicate Pregnancy

Asthma is a common, potentially serious medical condition to complicate pregnancy. In fact, asthma affects almost seven percent (7%) of women in their childbearing years. Well-controlled asthma is not associated with significant risk to mother or fetus. Although uncontrolled asthma is rarely fatal, it can cause serious maternal complications including high blood pressure, toxemia and premature delivery.

Fetal complications of uncontrolled asthma include increased risk of still birth, fetal growth retardation, premature birth, low birth weight and a low Apgar score at birth.

Asthma can be controlled by careful medical management and avoidance of known triggers, so asthma need not be a reason for avoiding pregnancy. Most measures used to control asthma are not harmful to the developing fetus and do not contribute to either spontaneous abortion (miscarriage) or congenital birth defects.

Although the outcome of any pregnancy can never be guaranteed, most women with asthma and allergies do well with proper medical management by Allergists familiar with these disorders and the changes that occur during pregnancy.

What is Asthma and What Are Its Symptoms?

Asthma is a condition characterized by obstruction in the airways of the lungs caused by spasm of surrounding muscles, accumulation of mucus, and swelling of the airway walls due to the gathering of inflammatory cells. Unlike individuals with emphysema who have irreversible destruction of their lung cells, asthmatic patients usually have a condition that can be reversed with vigorous treatment.

Individuals with asthma most often describe what they feel in their airways as “tightness.” They also describe wheezing, shortness of breath, chest pain, and cough. Symptoms of asthma can be triggered by allergens (including pollen, mold, animals, feathers, house dust mites and cockroaches), environmental factors, exercise, infections and stress.

What Are the Effects of Pregnancy on Asthma?

When women with asthma become pregnant, a third of the patients improve, one third worsen, and the last third remain unchanged. Although studies vary widely on the overall effects of pregnancy on asthma, several reviews find the following similar trends:

- Women with severe asthma are more likely to worsen, while those with mild asthma are more likely to improve.
- The change in the course of asthma for an individual woman during her first pregnancy tends to be similar on successive pregnancies.
- Asthma exacerbations are most likely to appear during the 24th to 36th weeks of gestation, with only occasional patients (10% or fewer) becoming symptomatic during labor and delivery.
- The changes in asthma noted during pregnancy usually return to pre-pregnancy status within 3 months of delivery.

Pregnancy may affect asthmatic patients in several ways. Hormonal changes that occur during pregnancy may affect the nose and sinuses, as well as the lungs. An increase in the hormone estrogen contributes to congestion of the capillaries (tiny blood vessels) in the lining of the nose, which in turn leads to a “stuffy” nose in pregnancy (especially during the third trimester).

A rise in progesterone causes increased respiratory drive, and a feeling of shortness of breath may be experienced as a result of this hormonal increase. These events may be confused with or add to allergic or other triggers of asthma. Spirometry and peak flow are measurements of airflow obstruction (a marker of asthma) that help your Allergist determine if asthma is the cause of shortness of breath during pregnancy.

Fetal Monitoring

For pregnant women with asthma, the type and frequency of fetal evaluation is based on gestational age and maternal risk factors. Ultrasound can be performed before 12 weeks if there is concern about the accuracy of an estimated due date and repeated later if a slowing of fetal growth is suspected. Electronic heart rate monitoring, called “non-stress testing” or “contraction stress testing,” and ultrasonic determinations in the third trimester may be used to assess fetal well-being. For third trimester patients with significant asthma symptoms, the frequency of fetal assessment should be increased if problems are suspected. Asthma patients should record fetal activity or kick counts daily to help monitor their baby according to their Obstetrician’s instructions.

During a severe asthma attack in which symptoms do not quickly improve, there is risk for significant maternal hypoxemia, a low oxygen state. This is an important time for fetal assessment. Continuous electronic fetal heart rate monitoring may be necessary along with measurements of the mother’s lung function.

Fortunately during labor and delivery, the majority of asthma patients do well, although careful fetal monitoring remains very important. In low risk patients whose asthma is well-controlled, fetal assessment can be accomplished by 20 minutes of electronic monitoring. Intensive fetal monitoring with careful observation is recommended for patients who enter labor and delivery with severe asthma, for those who have a non-reassuring admission test or other risk factors.

Avoidance and Control

The connection between asthma and allergies is common. Most asthmatic patients (75-85%) will test allergic to one or more allergens such as: pollens, molds, animals, feathers, house dust mites and cockroaches. Pet allergies are caused by protein found in animal dander, urine and saliva. These allergens may trigger asthma symptoms or make existing symptoms worse.

Other non-allergic substances may worsen asthma and allergies. These include tobacco smoke, paint and chemical fumes, strong odors, environmental pollutants (including ozone and smog) and drugs, such as aspirin or beta-blockers (used to treat high blood pressure, migraine headache and heart disorders).

Avoidance of specific triggers should lessen the frequency and intensity of asthmatic and allergic symptoms. Allergists recommend the following methods:

- Remove allergy causing pets and feather pillows or comforters from the house.
- Seal pillows, mattresses and box springs in special dust mite-proof castings. Your Allergist will be able to give you information regarding comfortable cases.
- Wash bedding weekly in 130°F water to kill dust mites. Comforters should be dry-cleaned periodically to eliminate dust mites.
- Keep home humidity under 50% to control dust mite and mold growth.
- Use filtering vacuums or “filter vacuum bags” to control airborne dust when cleaning.
- Close windows in both your house and your car.
- Use air-conditioning at home and in your vehicle.
- Avoid outdoor activity between 5 AM and 10AM, when pollen and pollution are at their highest.
- Avoid chemical fumes
- Most importantly, avoid tobacco smoke.

Can Asthma Medications Safely Be Used During Pregnancy?

Though no medication has been proven entirely safe for use during pregnancy, your Allergist will carefully balance medication use and symptom control. Your treatment plan will be individualized so that the potential benefits of your medications outweigh the potential risks of these medications or the risks of uncontrolled asthma.

Asthma is a disease in which intensity of symptoms can vary from day to day, month to month, or season to season regardless of pregnancy. Therefore, a treatment plan should be chosen based both on asthma severity and experience during pregnancy with those medications. Remember that the use of medications should not replace avoidance of allergens or irritants, as avoidance will potentially reduce medication needs.

In general, asthma medications used in pregnancy are chosen based on the following criteria:

- Inhaled medications are generally preferred because they have a more localized effect with only small amounts entering the bloodstream.
- Time-tested older medications are preferred since there is more experience with their use during pregnancy.
- Medication use is limited in the first trimester as much as possible when the fetus is forming. Birth defects from medications are rare. No more than 1% of all birth defects are attributable to all medications
- In general, the same medications used during pregnancy are appropriate during labor and delivery and when nursing.

Bronchodilator Medication

Bronchodilators, often referred to as rescue medications, may be used as necessary to control acute symptoms during pregnancy. While some medications have a long history of not producing any negative side effects during pregnancy or to the fetus, the best course of action is to always discuss medication options with your Allergist. Your Allergist specializes in the management of asthma, and the allergies which are often the underlying cause of asthma.

Anti-inflammatory Medication

Anti-inflammatory medications are preventive and are meant to control your asthma. These medications are recommended for all but mild intermittent asthma patients. As with Bronchodilators, it is best to check with your Allergist for recommendations regarding which anti-inflammatory medications are best to use during pregnancy.

Can Allergy Medications Safely Be Used During Pregnancy?

Antihistamines may be useful during pregnancy to treat the nasal and eye symptoms of seasonal or perennial allergic rhinitis, allergic conjunctivitis, the itching of urticaria (hives) or eczema, and as an adjunct to the treatment of serious allergic reactions including anaphylaxis (allergic shock). With the exception of life-threatening anaphylaxis, the benefits from their use must be weighed against any risk to the fetus. Because symptoms may be of such severity to effect maternal eating, sleeping or emotional well-being, and because uncontrolled rhinitis may pre-dispose to sinusitis or may worsen asthma, antihistamines may provide definite benefit during pregnancy.

Your Allergist will be able to provide you with useful information regarding which allergy medications to use during pregnancy.

Immunotherapy and Influenza Vaccine

Allergen immunotherapy, commonly called allergy shots, is often effective for those patients in whom symptoms persist despite optimal environmental control and proper drug therapy. Allergen immunotherapy can be carefully continued during pregnancy in patients who are benefiting from it and for those who are not experiencing adverse reactions. Due to the greater risk of anaphylaxis with increasing doses of immunotherapy and a several month delay before it becomes effective, it is generally recommended that allergen immunotherapy not be started during pregnancy.

Patients receiving immunotherapy during pregnancy should be carefully evaluated by their Allergist. It may be appropriate to lower the dose or remain on the current dose during pregnancy in order to further reduce the chance of an allergic reaction to the injections.

Influenza (flu) vaccine is recommended for all patients with moderate and severe asthma. There is no evidence of associated risk to the mother or fetus.

Can Asthma Medications Safely Be Used While Nursing?

Nearly all medications enter breast milk, though infants are generally exposed to very low concentrations of the drugs. Hence, the medications described above rarely present problems for an infant during breast feeding. Some infants can have irritability and insomnia if exposed to higher doses of certain medications. In general, the lowest drug concentration in mother's milk can be obtained by taking necessary medications 15 minutes after nursing or three to four hours before the next feeding. It is always best to discuss your asthma or allergy medication questions with your Allergist, as well as your baby's Pediatrician.

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Summary

It is important to remember that the risks of taking asthma medications during pregnancy are lower than the risks of uncontrolled asthma, which can be harmful to both mother and child. The use of asthma or allergy medication needs to be discussed with your Allergist, ideally before pregnancy. Therefore, your Allergist should be notified whenever you are planning to discontinue birth control methods or as soon as you know that you are pregnant. Regular follow up for evaluation of asthma symptoms and medications is necessary throughout the pregnancy to maximize asthma control and to minimize medication risks.

If you have questions about allergies and asthma control during pregnancy, feel free to contact our office. One of our staff would be happy to answer your questions about allergies and asthma control during pregnancy and different treatment options offered at Allergy & Asthma Clinics of Ohio.