



## Asthma and Pregnancy

When you become pregnant you may notice many physical and emotional changes. Joy and wonder are often mixed with concerns about your health and the health of your unborn child. If you have asthma you may be concerned about this also. It is helpful to know that studies show having asthma does not increase your chances of having a baby with birth defects or of having multiple births. Further studies show that asthma can be controlled during pregnancy with little or no risk to you or your baby.

### Your Health Care Provider

Many women with asthma do very well during pregnancy. Your doctor will consider the benefits of medication versus the risks to both you and your unborn baby. Together, you will determine the best ways to manage your asthma. Your doctor will review your asthma history and have you do a breathing test (spirometry).

Since uncontrolled asthma can threaten your well-being and that of your baby, you and your doctor share a common goal throughout your pregnancy. The goal is to keep you healthy and breathing normally. Keeping your asthma under control during pregnancy is one of the most important things you can do for your baby's health.

### What You Need To Know

Good asthma management is always important, but never more so than during



your pregnancy. Asthma management includes:

- Learning more about your asthma and pregnancy
- Identifying and controlling and/or treating things that make asthma worse
- Medicine therapy
- Monitoring asthma
- An action plan

Ask your health care provider about ways to learn more about your asthma.

### What Makes Asthma Worse

It is important to know what things make your asthma worse and how to avoid them. Things that can make asthma worse include: irritants, allergies, exercise, infections, sinusitis, weather, emotions, gastroesophageal reflux and **hormone changes**.

- **Irritants.** Avoid smoking and exposure to second hand smoke. Both can make asthma worse. Smoke exposure can also pose major risks for your unborn baby.

- **Allergies.** Avoid things you are allergic too (allergens). Pollen, mold, animal dander, house dust mites and cockroaches are common allergens.
- **Exercise.** If exercise makes your asthma worse talk with your doctor. Using inhaled medication before you exercise can often prevent asthma symptoms while you exercise. Continuing to exercise, while pregnant, is desirable.
- **Infections.** A cold, the flu or other respiratory infections can make asthma worse. Good hand washing is the most effective way to avoid the spread of common cold viruses. The yearly flu vaccine is recommended for people with asthma. It may be given during the second or third trimester of pregnancy.
- **Sinusitis.** Sinusitis can make asthma worse, especially at night. Treating the inflammation in the nose and decreasing the post-nasal drip can reduce cough and throat irritation. This can decrease asthma symptoms. Sinus care often includes:
  - Nasal wash – A salt water or nasal saline wash helps remove mucus and bacteria from the nose and sinuses. When done routinely, this can also decrease post-nasal drip. The nasal wash should be done before using a steroid nasal spray.
  - Steroid nasal spray – This helps to decrease irritation and inflammation in the nasal and sinus passages. Mucus production and swelling decreases.
- **Emotions** do not cause asthma, but if a person has asthma, emotions can make asthma worse.
- **Weather.** Asthma symptoms may occur with changes in the weather. However, there is not

one type of climate which is good or bad for all people with asthma. Work with your doctor on keeping your asthma under good control whatever climate you live in.

- **Gastroesophageal reflux.** In some people the muscle between the esophagus and stomach may not work well. This allows some back flow of stomach acid into the esophagus that may cause heartburn. This acid may also cause a reflex response that can result in asthma symptoms. This is more common during pregnancy and is treatable.
- **Hormone changes.** There are a variety of hormonal changes during pregnancy. An equal amount of women's asthma is worse, better and stays the same during pregnancy.

### Medicine Therapy

A pregnancy without medicine is not always possible or desirable. By working closely with your doctor, you will be able to take the least medicine necessary for good asthma control. It is most important that your asthma be controlled to assure your baby's oxygen supply and decrease your health risk.

The U.S. FDA has classified medicine into categories based on safety for the mother and baby. Medicine is rated A, B, C, D and X. A is the safest and X is absolutely contraindicated. All medicines approved since 1980 are classified in one of the categories. No medicines to treat asthma fall into category A (controlled studies show no risk). Most of the medicine used to treat asthma fall into category C (risk cannot be ruled out). Some fall in category B (no evidence of risk in humans). As with any medicine used during pregnancy, you and your doctor need to weigh the benefits versus the risks of its use. Remember, uncontrolled asthma can threaten your well-being and that of your baby. Your doctors and you share a common goal throughout your pregnancy. The goal is to keep you healthy and breathing normally. This often requires the use of medicine to control asthma.

Review all the medicine you are taking with your doctor. This includes “over the counter medicine”, vitamins and any herbal supplement you may be taking. Even these could be harmful to your baby. Ask your health care provider about any medicine before you take it. Take only medicine your health care provider has approved or prescribed.

**The following list reviews medicine that is commonly used during pregnancy:**

### **Long-Term Control Medicines**

Long-term control medicines are used daily to maintain control of asthma and prevent asthma symptoms. These medicines are taken to prevent asthma symptoms even when asthma is stable. They do not provide immediate relief of symptoms.

### **Inhaled Steroids**

Common inhaled steroids used during pregnancy include:

- Pulmicort® (budesonide)
- Qvar® (beclomethasone)

Inhaled Pulmicort® (budesonide) is the only inhaled steroid to be included in category B. All other inhaled steroids are category C. Inhaled steroids prevent and reduce swelling in the airways and may decrease mucus production. Inhaled steroids are the most effective long-term control medicine now available. They improve asthma symptoms and lung function. They have also been shown to decrease the need for oral steroids and hospitalization.

Inhaled steroids are taken on a regular basis and cause few, if any, side effects in usual doses. Using a spacer with inhaled steroids (metered-dose inhaler) and rinsing your mouth after inhaling the medicine reduces the risk of thrush. Thrush, a possible side effect, is a yeast infection causing a white discoloration of the tongue.

### **Leukotriene Modifiers**

Singulair and Accolate are also long-term control medicine. They are also category B. There have been fewer years of experience with these medicines, than with other asthma medicine. They reduce swelling inside the airways and relax smooth muscles around the airways. They are available as

tablets. They are effective at improving asthma symptoms and lung function, but not to the same extent as inhaled steroids.

### **Quick-Relief Medicines**

Quick-relief medicines are used to treat asthma symptoms or an asthma episode.

### **Short-Acting Beta-Agonists**

Common inhaled beta-agonists include:

- Proventil®, Ventolin®, ProAir® (albuterol)
- Xopenex® (levalbuterol)
- Combivent® (albuterol and ipatropium)

These medicines are category C. They have been used for decades and are deemed to be safe. Short-acting beta-agonists work quickly to relieve asthma symptoms. They are quick-relief medicines. Beta-agonists relax the smooth muscles around the airways. If you use more than one of these metered-dose inhalers in a month talk with your doctor. This is a sign that your asthma is poorly controlled and your long-term control medicine may need to be adjusted. Remember, your asthma needs to be under good control since you are “breathing for two.”

### **Oral Steroids**

Common steroid pills and liquids include:

- Deltasone® (prednisone)
- Medrol® (methylprednisolone)

Your health care provider may have you take a short-term burst of oral steroids if you have severe asthma symptoms. The burst may also prevent an emergency room visit. The steroid burst should be discontinued as soon as possible. Oral steroids are very effective at reducing swelling and mucus production in the airways. They also help other quick relief medicine work better. Intravenous (IV) steroids also may be given to control severe episodes.

### **Inhaled Medicine Technique**

It is crucial that you use your inhaled medicine correctly to get the full dosage and benefits from the medicine. If you are using a metered dose inhaler a spacer device is often recommended. This is very important with inhaled steroids. Ask your health care provider to watch your technique with the inhaled medicine to make sure you are using it correctly.

## Other Asthma Related Medication Treatment

**Annual influenza vaccine (flu shot)** The annual flu shot is recommended for pregnant women with asthma. It is given during the second or third trimester.

**Immunotherapy (allergy shots)** Allergy shots should not be started during pregnancy. However, if you have been receiving allergy shots and have not shown any severe reactions, you may continue them at the same dose.

## Monitoring Asthma

Watching for asthma symptoms and peak flow monitoring can help you and your health care provider monitor your asthma during your pregnancy. It is important to identify and treat asthma symptoms before they become worse.

Asthma symptoms can range from mild to severe. It is important to identify and treat your asthma when the symptoms are still mild. This can help decrease the amount of inflammation and reduce the risk of a more serious episode. Common asthma symptoms include:

- Coughing
- Shortness of breath
- Tightness in the chest
- Wheezing

Shortness of breath, unrelated to asthma, often occurs during pregnancy so it is important to tell your provider if you experience this symptom. The peak flow meter can help you distinguish the normal shortness of breath with pregnancy from shortness of breath as an asthma symptom. A peak flow meter measures the peak expiratory flow-how much air you blow out after a maximum inhalation. It reveals how well your lungs are working. Sometimes peak flows can decrease hours, or even a day or two, before other asthma symptoms start. Ask your doctor about using a peak flow meter to help monitor your asthma.

## Asthma Action Plan

It is important to treat asthma symptoms and low peak flow numbers to ensure you and your baby

receive enough oxygen. An asthma action plan is a written plan, customized by your doctor to help you manage asthma episodes. Your action plan is based on changes in asthma symptoms and peak flow numbers. It will give you information about when and how to use long-term control medicine and quick-relief medicine. If you know what to watch for and what steps to take, you will be able to make timely and appropriate decisions about managing your asthma during your pregnancy.

A small number of women with asthma may have an asthma episode severe enough to be hospitalized. A severe asthma episode is a true medical emergency and you should seek medical assistance right away. You and your baby can be closely monitored during your hospital stay. Your treatment may include oxygen, frequent inhaled medications, and IV steroids.

## Management During Labor and Delivery

It is important to continue long-term control medicines through the labor and delivery process. Have quick-relief medicines available also. Bring your own medicine to the hospital so the health care provider will know the current medication and dosage that has been prescribed by your doctor. Plan ahead so you have your medication information available.

Talk with your health care provider before your delivery date about pain relief options during labor and birth epidurals are commonly used to reduce pain during labor and can also be used if a cesarean birth becomes necessary. Regional anesthesia (either an epidural or spinal) is most commonly used for cesareans; general anesthesia is rarely used and only during emergencies. Electronic fetal heart monitoring is done during labor and birth to keep track of the heart rate of your baby and the strength and duration of the contractions of your uterus. Your baby's heart rate is a good way to tell whether your baby is doing well or may have some problems.

If a cesarean birth is required you may need IV steroids. This is considered if you are steroid-dependent or have been on steroid tablets in the past 4-6 weeks.

It is important to plan ahead and discuss these decisions and potential problems with your health care providers. This will help decrease fears and problems that may arise once labor begins.

## Breastfeeding

Research shows that breastfeeding for the first 6-12 months of life may help prevent or delay the development of certain allergies. The decision to breastfeed should be based on you and your baby's special needs.

In general, when breastfeeding the use of most asthma medicines does not affect your baby or interfere with your milk production. It is important to discuss your use of any medicines with the health care provider caring for your baby. The medicines listed earlier for use during pregnancy are generally used while breastfeeding without problems. Remember, your blood stream absorbs less medicine with inhaled medicine; therefore, less medicine passes into your breast milk. Medication exposure to the infant can be decreased by nursing prior to taking your asthma medication.

The following list of medicines offers some additional information that can be discussed with your doctor:

- Leukotriene Modifiers - The leukotriene modifiers are excreted in breast milk. Because of the potential for adverse effects these medicines should not be taken while you are breast-feeding.

- Oral Steroids – Oral steroids pass through breast milk in trace amounts. Even at high dosages it has not been associated with problems.
- Theophylline - This medicine passes through breast milk in trace amounts. This has been associated with irritability and insomnia in some infants.

By all means, do not smoke during your pregnancy or start smoking again after your baby is born. The toxic substances of cigarettes can be transmitted to your baby during pregnancy and through breastfeeding, as well as by inhaling the second hand smoke.

We hope this information is reassuring and helpful for you during this special time.

Remember, good asthma management is important during your pregnancy, for you and your baby. Talk with your health care provider about any questions or concerns you have.

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