# Asthma and Pregnancy

## ASTHMA AND PREGNANCY

Asthma can be a serious disease but, if you understand the disease and take the right medication to control it, you should have no problems or symptoms due to your asthma, even when you are pregnant. During pregnancy regular checks of your asthma and monitoring of your lung function is critical.

The pregnant woman with asthma may have concerns about her asthma as well as her medications. All commonly used medications for asthma treatment are safe in pregnancy. Women must be careful to control their asthma well and not avoid medication for fear of effects on the baby. Poorly controlled asthma is a much greater risk to your unborn child than asthma medication.

## HOW WILL PREGNANCY AFFECT MY ASTHMA?

Asthmatics who become pregnant may find their asthma severity staying the same (35%), improving (23%) or deteriorating (30%). Women who have asthmatic symptoms around the time of their periods are more likely to have deteriorating asthma during pregnancy. The course of asthma is similar in successive pregnancies. The control of asthma may also vary according to the stage of pregnancy. Worsening of asthma is more likely to occur in the second or third trimesters, especially around the sixth month (between week 24 and 36).

With good medication and monitoring, one should achieve good control of asthma during pregnancy. During pregnancy, exacerbation of asthma - which requires medical intervention occurs in about 13-52% of women, with approximately 2-27%% requiring admission to hospital. The rates of asthma attack are 13%, 26%, and 52% in those with mild, moderate and severe asthma, respectively. The corresponding rates of hospitalisation are usually 2%, 7% and 27%. So better control of asthma results in fewer attacks and admissions during pregnancy.

## HOW WILL ASTHMA AFFECT MY PREGNANCY?

Well-controlled asthma should have no effect on your pregnancy. The only effects on pregnancy have been shown in poorly-controlled asthmatics. Uncontrolled asthma is associated with many maternal and foetal complications, including hyperemesis (excessive vomiting), hypertension, pre-eclampsia, vaginal haemorrhage, complicated labour, foetal growth restriction, preterm birth, increased need for oxygen in the newborn infant. Because of this, it is very important to control asthma well during pregnancy, and particularly to avoid severe asthma attacks.

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## HOW WILL ASTHMA DRUGS AFFECT MY BABY?

There is no need to be concerned that asthma medication will have any effect on the baby. Numerous studies have shown these medications to be quite safe.

### *Drugs safe in pregnancy*

- Short acting β2 -agonists (relievers)
- Long acting β2- agonists (usually in combination with inhaled corticosteroids controllers)
- Inhaled corticosteroids (controllers)
- Oral and intravenous theophyllines (controllers)
- Oral steroids (for acute asthma)
- Leukotriene receptor antagonists (controllers)

Modified from reference: NICE guideline for asthma

Because it has the most published reassuring human pregnancy safety data, beclomethasone is considered the inhaled corticosteroid of choice for asthma during pregnancy. However, there is no evidence that other inhaled corticosteroid preparations are unsafe. Therefore, inhaled corticosteroids other than budesonide can be continued in patients whose symptoms were well controlled by these agents before pregnancy, especially if it is thought that changing formulations might jeopardise asthma control.

In addition, over recent years, there has been an increase in the use of the inhaled long-acting bronchodilators. All of these medications, including combining inhaled corticosteroids and long-acting bronchodilators, can be taken safely in pregnancy and, if required, should be prescribed in adequate doses. Although oral corticosteroids have been associated with possible increased risks during pregnancy (oral clefts, prematurity, and lower birth weight), they should be used if needed because these risks are less than the potential risks of severe uncontrolled asthma.

For women requiring theophylline to maintain asthma control, measurement of theophylline levels is recommended from your doctor. Due to the increase blood volume and changes in protein binding in pregnancy lower drug doses may be required.

## HOW SHOULD I CONTROL AND MONITOR MY ASTHMA DURING PREGNANCY?

The principles of asthma treatment are unchanged in pregnancy. The important thing to remember is that, in asthma, there is inflammation and swelling in the airways. Therefore, an anti-inflammatory controller medication will be needed to control the

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swelling and prevent asthma attacks. The most effective of these are the inhaled steroid preparations. These are very safe in pregnancy and have been show to prevent asthma attacks in pregnancy.

Most problems arise in pregnancy because patients have unnecessary fears about their medications and stop taking them. If you are using an inhaled controller medication, continue to do so during your pregnancy and use reliever medications when necessary. If you need to use your reliever more frequently, this means that your asthma is out of control and you need to see your doctor. Your doctor might review your technique, give you an action plan, assess whether you are taking your medications regularly and, if necessary, will increase your controller treatment (see "Keeping Asthma Under Control").

Women who are pregnant often feel short of breath and this can be difficult to differentiate from asthma. If you are asthmatic and are feeling short of breath, you need to see your doctor. Because of the changes during pregnancy, it is important to monitor your asthma. This should be done with morning and evening peak flow readings, which are recorded and discussed with your doctor. He or she will discuss with you an action plan as how to modify your asthma medication, should you have increased symptoms or a deteriorating peak flow reading. Remember that poor control of asthma is of much more concern than the use of asthma medications.

## WILL ASTHMA INTERFERE WITH LABOUR?

Asthma medicines used at recommended doses do not interfere with labour. Well-controlled asthma will not limit your choice of pain control or method of delivery. If asthma is poorly controlled, difficulty with labour may be felt. Women receiving steroid tablets at a dose exceeding prednisolone 7.5 mg per day for more than two weeks prior to delivery should receive parenteral hydrocortisone 100 mg 6–8 hourly during labour.

Some drugs used to induce labour (prostaglandin F2α) should be used with extreme caution in women with asthma because of the risk of inducing bronchoconstriction. If anaesthesia is required, regional blockade is preferable to general anaesthesia. Caesarean section is not indicated in asthmatic pregnancy women but only for the usual obstetric indications.

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## NEED I BE CONCERNED ABOUT ASTHMA ATTACKS DURING OR AFTER DELIVERY?

Acute asthma attacks are very rare during delivery (0.1%). After delivery of the baby, there are a number of body changes taking place and this is an "at risk" period for asthma attacks. However, like with other risk factors in asthma attacks, good asthma control before delivery will cut down this risk. It is important to continue around the time of delivery and not to skip any doses.

## IS IT SAFE TO BREASTFEED IF I AM USING MEDICATION FOR MY ASTHMA?

Yes! The commonly used asthma medications are quite safe for breast feeding. Less than 0.1% of oral steroids are excreted in breast milk. For maternal doses of at least 20 mg once or twice daily the nursing infant is exposed to minimal amounts of steroid with no clinically significant. For theophyllines <1% of the oral dose will, pass into the breast milk. Breast feeding is the healthiest feeding option for your child; breastfed babies may even have less allergies and asthma than bottle-fed babies.

## IS MY BABY AT HIGH RISK OF DEVELOPING ASTHMA OR ALLERGIES? IF SO, IS THERE ANYTHING I CAN DO TO PREVENT THIS?

The tendency towards allergic response (or atopy) is inherited and children of allergic parents are more likely to develop an allergy. The most important factor to avoid is cigarette smoke, either during pregnancy, or exposure of the baby to cigarette smoke after it is born (See "Risk Factors for Asthma and Triggers for Asthma Attacks").

## CONCLUSION

While the control of asthma can vary during pregnancy, the vast majority of asthmatics should have a normal pregnancy and a normal, healthy infant.

It is much more dangerous to avoid asthma medication and run the risk of poor asthma control than to take asthma medication regularly, as required and as prescribed.

References

https://www.sign.ac.uk/sign-158-british-guideline-on-the-management-of-asthma

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