

Asthma: Are inhaled corticosteroids safe in pregnancy?



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Asthma is a common disease, and so it is common in pregnant women as well. Perhaps 5 - 8% of pregnant women have asthma. The physical changes that happen during pregnancy will make some women's asthma get worse, especially later in the pregnancy.

Whenever a woman who has moderate or severe asthma does not control her asthma with regular medications that can prevent asthma attacks, she is at increased risk of having a major asthma attack. In pregnancy that is riskier than usual. One reason for this is because the extra burdens on the body in later pregnancy make it more difficult for women to cope with a physical crisis like a major asthma attack. This can harm the woman and her baby in several ways, partly because it reduces the amount of oxygen that gets through to the baby. Poorly controlled asthma increases the risk of the baby being born too early and too undeveloped (preterm birth), the baby not growing well and being too small, regardless of when he or she is born (growth restriction). It also increases the risk of a pregnancy-related illness called pre-eclampsia, where the main symptom is very high blood pressure (hypertension). Pre-eclampsia can become dangerous for the mother and baby.

You can read more about asthma in pregnancy and the range of things you can do to lower these risks here ([URL: http://www.informedhealthonline.org/index.477.en.html](http://www.informedhealthonline.org/index.477.en.html)) . These include quitting smoking and keeping your asthma under control. If certain substances or irritants are known to trigger asthma attacks, it is important to avoid them if possible. Many women are cautious about taking drugs while they are pregnant, so they may use their asthma medications less. Although this is understandable, it could worsen their asthma control.

There are two groups of asthma medications: the relievers that you use to get relief from an asthma attack, and then the regular long-term medications ("controllers") that you use to keep the asthma under control and prevent asthma attacks.

When they get pregnant, women who have asthma usually carry on using the same asthma medication as they did before they were pregnant. Inhaled corticosteroids are the

best-studied controllers for use in pregnancy. Corticosteroids can relieve inflammation in the lungs caused by asthma. Inhaling corticosteroids avoids many of the adverse effects of tablets (oral corticosteroids) because you breathe the drugs directly into the lungs, where they are needed. This means that, unlike with tablets, the medication does not affect the whole body.

The research on regular use of inhaled corticosteroids for asthma in pregnancy

Researchers from the University of Montreal in Canada have analysed studies to assess the state of knowledge about the safety of inhaled corticosteroids in pregnancy. Research on the effects of a drug in pregnancy is generally very complicated. This is because there are so many things going on in pregnancy that it is even harder than usual to know whether an effect has been caused by a drug, normal changes in the body or asthma. There are several main ways that are used to assess drug safety in pregnancy:

- regular monitoring of registers of information on babies who are born with abnormalities or disabilities,
- reporting of adverse effects experienced by pregnant women taking drugs, and
- studies to compare what happens to women with asthma when they do or do not take the drugs.

When it is unclear what effects a drug has in pregnancy, it is important that studies done to assess the effects of a drug in pregnancy compare women who have asthma and are taking the drug with women who have asthma and are not taking the drug. Comparing what happens to women who do not have asthma does not help much, because the asthma itself causes harm so it would not be possible to be sure that a health problem was caused by the drug, and not the disease.

The Canadian researchers found 23 studies that looked at pregnancy outcomes in women taking inhaled corticosteroids regularly to control their asthma. However, only 9 of these studies compared groups of women who all had asthma: in all the other studies, the women in the comparison groups did not have asthma. Three of the 23 studies were randomised controlled trials, involving just under 480 babies.

Inhaled budesonide can control asthma in pregnancy

and is considered to be safe

The researchers concluded that budesonide is the inhaled corticosteroid that has been the best-studied in pregnancy. Although more research is needed in this area, the researchers found that inhaled budesonide was able to:

- reduce the number of asthma attacks in pregnancy and
- reduce the number of times women had to return to hospital after hospitalisation for an asthma attack, if they used the inhaled corticosteroids after leaving hospital.

Women who took inhaled corticosteroids for their asthma generally had fewer asthma-related problems themselves and were able to protect their babies from several problems too. There was not enough data to be sure whether there was a reduction in deaths of babies. The number of babies born with abnormalities that could be detected at birth was not increased when the mothers used inhaled corticosteroids, which means that inhaled budesonide is regarded as safe for use in pregnancy.

Controlling asthma does not appear to completely eliminate the health problems that asthma causes in pregnancy, so that close monitoring for health problems like high blood pressure remains very important for pregnant women with asthma. Doctors will also try to find the lowest dose of medication possible that will still control asthma during pregnancy. You can read more about asthma in pregnancy [here](http://www.informedhealthonline.org/index.477.en.html) (URL: <http://www.informedhealthonline.org/index.477.en.html>).

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Glossary

asthma

Asthma (asthma bronchiale) is a permanent (chronic) disease with symptoms like coughing and breathlessness often occurring in acute attacks. In asthma, the airways are overly sensitive. The development of asthma is often associated with an overreaction to foreign substances or physical stimuli, frequently in connection with an allergy.

inflammation

An inflammation is a (defense) reaction of the body to an injury, irritation or infection. More blood is brought to the respective body part to protect the body. This is why this body part feels warmer, becomes swollen and red and is usually more sensitive. If the inflammation affects the mucous membranes, they secrete more fluid than usual. This helps to wash out the germs that have entered.

Sources

Breton MC, Martel MJ, Vilain A, Blais L. Inhaled corticosteroids during pregnancy: a review of methodologic issues. *Respir Med* 2008; 102: 862-875. [PubMed summary (URL: <http://www.ncbi.nlm.nih.gov/pubmed/18342498?dopt=Abstract>)]

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Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at [**www.informedhealthonline.org**](http://www.informedhealthonline.org)

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