AIMS For a better birth...

Vaccination During Pregnancy

Vaccination has long been a controversial and divisive issue and has become even more so during the Coronavirus pandemic.

There are strongly-held views on both sides of the debate. Some people see vaccines as a great achievement of medicine that has saved many people from death or serious illness. Others feel that they are an unnecessary or even harmful interference with the body's natural immune system, and/or that the reduction in harm for a minority is outweighed by a greater number suffering side-effects or long-term health consequences. Others are left wondering what to think!

AIMS does not endorse any particular view on this issue. We are committed to supporting you in your choice and to protecting your fundamental right to consent or withhold consent to the vaccinations offered during pregnancy. It is YOUR body, YOUR baby and YOUR life and very important that you come to your own decision about this as for every other part of your pregnancy and birth journey. We list below some points you may want to consider when making a decision about being vaccinated during pregnancy and point you to further resources that may help you in your decision-making.

What vaccinations are offered in pregnancy and why?

Currently pregnant women and people in the UK are recommended to have vaccinations against Coronavirus, seasonal Flu and Whooping Cough (Pertussis).

The Whooping Cough vaccine is intended to provide protection to babies before they are offered their first vaccinations at 2 months old, through maternal antibodies which pass across the placenta[1]. As there is no vaccine available just for Whooping-Cough, the one that is usually offered during pregnancy (Boostrix IPV) includes vaccines against polio, diphtheria and tetanus as well as Whooping Cough. There is more information about this on this NHS webpage Whooping cough vaccination in pregnancy - NHS

The Flu vaccine is also thought to give some protection to babies in the same way. However, the main reason for offering it is that pregnancy depresses the immune system. This means that if you get Flu while you are pregnant you are more likely to get it badly, and more likely to be admitted to hospital, though this is still very rare[2]. There is more about the Flu vaccine in pregnancy here The flu jab in pregnancy - NHS

As of 16th December 2021, pregnant women have been defined by the UK Government as a 'vulnerable group' who should be prioritised for COVID-19 vaccination if they wish to have it. Although the data on Coronavirus (COVID-19) infections is still limited, there is growing evidence that pregnant women with

COVID-19 are more likely to become severely ill and be admitted to intensive care than those who are not pregnant.

Most babies born after a COVID-19 infection in pregnancy are healthy, and there seems to be no increase in the likelihood of a miscarriage or birth defect, but possibly a higher chance of a stillbirth, though this remains rare. The main problem seems to be an increased chance of a planned premature birth (often a caesarean) in order for a mother who has been hospitalised with COVID-19 to receive treatment. For the latest information about the risks of COVID-19 infection during pregnancy see the sections headed 'What are the risks for me if I'm pregnant?' and 'What are the risks for my baby?' on our webpage Coronavirus and your maternity care. For the latest research on coronavirus vaccine safety see the section 'What about vaccinations?'

Making decisions about vaccinations

As with any other decision about medical care, you have the right to be informed about the benefits and risks both of having and not having a particular vaccination. For more about this see our webpageMaking decisions about your care.

It has to be recognised that the medical establishment tends not to question the value of vaccination. It can therefore be extremely difficult for members of the public to ask questions and receive an unbiased, in-depth answer from healthcare staff. However, it is your right to be given all the information that you need in order to make your decision.

All medicines, including vaccines, come with a leaflet which describes any known side-effects and how frequently they occur. This will also explain whether there are reasons (called contraindications) for specific groups of people to avoid it, for example, if they have previously had an allergic reaction to a similar vaccine or any of the ingredients, or if they have certain medical conditions. If it hasn't been given to you, you can ask to read this leaflet before deciding whether to agree to a vaccination. It should also be available on the manufacturer's website.

Your midwife, nurse or doctor should be willing to explain to you both the risks for you and your baby of catching the disease and of the vaccine, and tell you how common these risks are. This information should be specific to your circumstances. You should also be provided with written information about the specific vaccine which you are being offered.

When asking about risks it's helpful to ask what the actual risk is (e.g., whether one in 100 or one in a 10,000 people experience it) rather than just being told that the risk is 'increased'.

Things you might want to ask about include:

- How effective is the vaccine at preventing the disease and how likely are you to catch it if you are not vaccinated? The risk of catching a disease will partly depend on how many cases there are in

the general population in your area at the time, so you might want to check that, as well as whether there is anything that puts you at a greater than average risk.

- What might be the short and long-term consequences for you or your baby if you were to catch the disease, how serious and how common are they?
- What are the known side-effects of the vaccine including any known long-term side-effects, how serious and how common are they?
- Are there any reasons why the vaccine might be unsuitable for you?

It is up to you to decide how you feel about the risk of vaccine side-effects compared to the risk of a health problem for you or your baby if you were to catch the disease. You may also want to consider the need to protect vulnerable family members or others from catching the disease if you were to become infected. You may feel differently about a particular vaccine according to how high the chances and how great the risks of catching the disease are for you, your baby and others, compared to the risk of side effects. That means that you might decide that it is better to accept some vaccines and decline others.

What is the evidence for the safety of vaccines in pregnancy?

Like other medicines, all vaccines have to go through clinical trials to check how safe and effective they are before they are approved for use.

However, it is normal for pregnant women to be excluded from these trials in case of unforeseen effects on the developing baby. This means that when a vaccine is first introduced, we do not know whether there is a greater risk of side-effects for someone who is pregnant compared to the rest of the population, or if there is a risk of harm to an unborn baby.

To try to detect any such problems, the UK has what is called the 'yellow-card' system for reporting suspected side-effects to the Medicines and Healthcare Regulatory Agency (MHRA). In the USA this monitoring is done by the Centers for Disease Control (CDC) and many other countries have similar systems. This data can be analysed to see whether any medical problems occur more often following vaccination than they normally would. This is how the MHRA identified a possible link between the AstraZeneca COVID-19 vaccine and rare blood clots in younger people[3].

For vaccines such as Flu and Whooping Cough which have been given to pregnant women and people for some years, there have been a number of studies which looked for any difference in problems such as miscarriage, stillbirth, birth defects or premature birth.

For example, a large-scale observational study by the MHRA[4] looked at the records of over 20 thousand pregnant women vaccinated against whooping cough and a matched historical unvaccinated control

group. If found:

- No increased risk of stillbirth either immediately after vaccination or across the remainder of the pregnancy;
- No increased risk of death for mothers or new-born babies
- No increased risk of a range of other complications of pregnancy and labour, including low birthweight

Another review published online in 2018[5] looked at the combined results of 40 studies on the Flu vaccine in pregnancy. It found:

- 'Moderate' quality evidence that the vaccine reduced the chances of a pre-term birth (though the evidence was less clear for vaccinations during the first trimester)
- 'High' quality evidence that it reduced the number of babies with low birthweight
- No significant increase or decrease in the risk of birth defects or stillbirths associated with vaccination
- Possibly a protective effect of the vaccine for miscarriages.

However, these studies only looked at short-term problems, so we don't know whether the vaccine had any long-term ill-effect on the mothers or babies.

Pregnant women and people in the UK were not initially offered Coronavirus vaccines because they had not been included in the original clinical trials. However, real-world monitoring data has now been collected for a very large number of women who had a Coronavirus vaccine in pregnancy, and so far there is no sign of an increase in miscarriages or any other major pregnancy-related concerns. For the latest information on what we know about the Coronavirus vaccine see the section 'What about vaccinations?' on our webpage Coronavirus and your maternity care.

What are the concerns about vaccines in pregnancy?

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All vaccines have the potential to cause side-effects and sometimes these can be serious. The monitoring systems will usually pick up major problems that develop shortly after vaccination but may fail to detect longer-term ones.

- All vaccines contain a range of other substances including 'adjuvants' (such as aluminium salts) to boost the immune response, preservatives or stabilisers. These are present in very small quantities, but it is possible for someone with a severe allergy to have a reaction to them. We do not know what, if any, other health impact they may have. This website[6] lists the ingredients in the Flu and Whooping Cough vaccines used in the UK.
- There is an ongoing debate about the role that vaccines, and in particular the substances in them such as aluminium, might have in triggering auto-immune diseases. This review of the literature[7] comments "There are several reports of cases of autoimmunity diseases following vaccines but despite in vitro positive results and due to both the limited number of cases and the long latency period of the diseases, every attempt for an epidemiological study has failed to deliver a connection." In other words, although there have been a few cases where people developed auto-immune diseases after having had a vaccination we don't know for certain whether this was caused by the vaccine. If this is a potential vaccine side-effect it seems to be one that occurs only rarely.
- In the past there were concerns over Thiomersal, a mercury-based preservative, but this is no longer included in the vaccines used in the UK.
- Vaccines are not 100% effective, and you can still become ill after having a vaccination, though the chance of this will be lower.
- Vaccination produces a different type of immune response to an actual infection. In some cases vaccines give long-term protection, but in others the effectiveness reduces more over time than the immunity acquired from an infection. We do not yet know how effective or long-lasting the immune response to a Covid-19 infection is compared to that of the vaccine.
- Some have argued that vaccination may impair the body's immune system and lead to a higher risk of conditions such as asthma. However, this study[8] found no evidence of an association between the main childhood vaccinations and asthma.

References

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[2] Vaccine Knowledge Project 'Flu vaccine in pregnancy' webpage last updated October 13, 2021 vk.ovg.ox.ac.uk/vk/flu-vaccine-pregnancy

[3] MHRA press release (April 2021) MHRA issues new advice, concluding a possible link between COVID-19 Vaccine AstraZeneca and extremely rare, unlikely to occur blood clots - GOV.UK

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