

## Air Travel in Pregnancy - Full Clinical Guideline

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### 1. Introduction

Obstetricians and Midwives are frequently asked to advise on whether it is suitable for women to fly during pregnancy. Pregnant women should be informed that flights of more than 4 hours are associated with a small increase in the relative risk of venous thrombosis, although overall the absolute risk is very small.

### 2. Purpose and Outcomes

To ensure that women receive the appropriate advice regarding air travel whilst pregnant.

### 3. Abbreviations

DVT	-	Deep Vein Thrombosis
EDD	-	Expected Date of Delivery
G.P.	-	General Practitioner
LAU	-	Labour Assessment Unit
LMWH	-	Low Molecular Weight Heparin
PAU	-	Pregnancy Assessment Unit
RCOG	-	Royal College of Obstetrician and Gynaecologists
TEDS	-	Thrombo Embolic Decompression Stockings
VTE	-	Venous Thromboembolism

### 4. Health Concerns Associated with Air Travel during Pregnancy

There are no data to suggest that commercial airline travel is associated with an adverse pregnancy outcome in terms of miscarriage / pre-term labour, pre-term rupture of membranes or abruption. The cabin changes can be associated with increased risk of

discomfort and medical complications in the mother. The increasing altitude and reduction in barometric pressure can lead to problems within the ear, particular if there is nasal congestion which is more common because of the vasodilatation of pregnancy. For some women motion sickness will be a problem and this may accentuate morning sickness.

The increased cosmic radiation exposure associated with flying is not considered significant in terms of risk to the mother or fetus for occasional flights.

The use of body scanners, utilizing ionizing radiation for security checks prior to flying, is not considered to cause a significant risk to mother or fetus and there is no information to suggest that a pregnant woman should avoid such security scans.

## **5. Deep Vein Thrombosis**

The incidence of DVT following long haul flights is unknown and difficult to determine. Although the absolute risk is small, especially following a flight of four hours or less, this risk is likely to be increased by air travel when women are restricted in their movements and remain in a seated position for a longer amount of time (absolute incidence increase of around 18% for each two hours increase in flight duration).

For short haul flights under four hours no specific measures are recommended. However general advice to minimize the risk of DVT is to have an aisle seat to facilitate ease of movement, take regular walks around the cabin and/or carry out in-seat exercises every 30 minutes, maintain a good fluid intake (minimize caffeine as it promotes dehydration).

For medium and long haul flights (>4hours) it is suggested that all pregnant women are advised to wear properly fitted graduated compression stockings (TEDS), obtained from the G.P. or community midwife.

Where there are additional risk factors for thrombosis i.e. previous DVT, symptomatic thrombophilia (such as antiphospholipid syndrome or DVT and a heritable thrombophilia), morbid obesity or medical problems such as nephrotic syndrome, specific pharmacological prophylaxis with low molecular heparin should be considered, a prophylactic dose for the day of travel and several days after if the woman is not already on LMWH. Aspirin alone is not recommended as VTE prophylaxis and is associated with potential non-obstetric haemorrhagic complications.

## **6. Timing Of Flights**

The main concern restricting the airlines from accepting pregnant women as passengers relates to the risk of labour developing during the flight. Many airlines will not allow women to fly after 36 completed weeks of pregnancy, whilst this can be brought down to 32 completed weeks if there are significant risk factors for preterm birth. A letter will be required signed by a midwife or doctor to confirm there are no anticipated complications for flights taken after the 28<sup>th</sup> week of pregnancy and confirmation of the expected date of delivery.

## **7. Contraindications To Air Travel In Pregnancy**

Examples of relevant medical complications which may occur during pregnancy and which would contraindicate commercial air travel include:

- Severe anaemia with haemoglobin less than 7.5 g/dl
- Recent haemorrhage
- Otitis media and sinusitis
- Serious cardiac or respiratory disease
- Recent sickling crisis

- Recent gastrointestinal surgery, including laparoscopic surgery, where there have been gastrointestinal procedures carried out and where suture lines on the intestine could come under stress due to the reduction in pressure and gaseous expansion
- Unstable fracture, where significant leg swelling can occur in flight, is particularly hazardous in the first few days of a cast being placed.
- Severe pregnancy complications e.g. threatened pre-term labour, fulminating pre-eclampsia

## 8. **Other Considerations**

- To consider the reason for travel, the duration and the destination
- Issues with the destination include recommended immunisation and anti-malarial medication. In general terms antimalarial agents can be used, whilst a live vaccine such as for Yellow fever should be avoided.
- How many weeks pregnant will the woman be when she travels and when she returns.
- The medical facilities at the destination in the event of an unexpected complication with pregnancy
- Travel insurance to cover pregnancy and care for the newborn baby in the event of an unexpected delivery.
- Advise the woman to take her handheld pregnancy notes with her.
- Advise the woman if she is feeling unwell on her return to see her G.P. or contact LAU / PAU.
- The woman should be advised to ensure that the strap is reasonably tightly fastened under her abdomen and across the top of her thighs.

A patient information leaflet is available from the RCOG site which is downloadable.

## 9. **Monitoring Compliance and Effectiveness**

As per agreed business unit audit forward programme

## 10. **References**

Royal College of Obstetricians And Gynaecologists. Scientific Impact Paper No.1; Air Travel and Pregnancy; May 2013

**Letter for air travel in pregnancy**

Name of woman intending to fly:

Date of birth of woman intending to fly:

I can confirm that:

- The pregnancy is progressing normally
- The pregnancy appears to be uncomplicated at present
- The expected due date is:
- I do not know of any pregnancy related reason this woman can't fly

Letter provided by:

Name:

Designation:

Date:

Signature

# Patient Information

## Air travel and pregnancy

### Who is this information for?

This information is for you if you are pregnant and are thinking of travelling by air. The information is relevant for short haul (under four hours), medium and long haul (over four hours) flights.

If you are a member of a flight crew or you fly frequently as part of your work, you should seek additional advice from your occupational health department concerning your own situation.

### Will flying harm me or my baby?

If your pregnancy is straightforward, flying is not harmful for you or your baby:

- If you have a straightforward pregnancy and are healthy, there is no evidence that the changes in air pressure and/or the decrease in humidity have a harmful effect on you or your baby.
- There is no evidence that flying will cause miscarriage, early labour or your waters to break.

Anyone who flies is exposed to a slight increase in radiation. Occasional flights are not considered to present a risk to you or your baby

### When is the safest time to fly during pregnancy?

When you are pregnant, the safest time to fly is:

- Before 37 weeks, if you are carrying one baby. From 37 weeks of pregnancy you could go into labour at any time, which is why many women choose not to fly after this time.
- Before 32 weeks, if you are carrying an uncomplicated twin pregnancy.

Most airlines do not allow women to fly after 37 weeks. It is important that you check with your airline before flying. It may also be more difficult to get travel insurance after 37 weeks.

### Am I at increased risk of problems if I travel by air?

Some pregnant women may experience discomfort during flying. You may have:

- swelling of your legs due to fluid retention (oedema)
- nasal congestion/problems with your ears – during pregnancy you are more likely to have a blocked nose and, combined with this, the changes in air pressure in the plane can also cause you to experience problems in your ears
- pregnancy sickness – if you experience motion sickness during the flight, it can make your sickness worse.

## Deep vein thrombosis (DVT)

A DVT is a blood clot that forms in your leg or pelvis. If it travels to your lungs (pulmonary embolism) it can be life threatening. When you are pregnant and for up to six weeks after the birth of your baby, you have a higher risk of developing a DVT compared with women who are not pregnant (for more information please see the RCOG patient information *Reducing the risk of venous thrombosis in pregnancy and after birth*, which is available at: [www.rcog.org.uk/en/patients/patient-leaflets/reducing-the-risk-of-venous-thrombosis-in-pregnancy-and-after-birth](http://www.rcog.org.uk/en/patients/patient-leaflets/reducing-the-risk-of-venous-thrombosis-in-pregnancy-and-after-birth)).

There is an increased risk of developing a DVT while flying, due to sitting for a prolonged length of time. The risk of a DVT increases with the length of the flight. Your risk is also increased if you have additional risk factors such as a previous DVT or you are overweight. Your midwife or doctor will be able to check your individual risk.

### What can I do to reduce the risk of a DVT?

If you are taking a short haul flight (less than four hours), it is unlikely that you will need to take any special measures. Your midwife or doctor should give you an individual risk assessment for venous thrombosis and advice for your own situation.

To minimise the risk of a DVT on a medium or a long haul flight (over four hours), you should:

- wear loose clothing and comfortable shoes
- try to get an aisle seat and take regular walks around the plane
- do in-seat exercises every 30 minutes or so – the airline should give you information on these
- have cups of water at regular intervals throughout your flight
- cut down on drinks that contain caffeine (coffee, fizzy drinks)
- wear graduated elastic compression stockings – you will need the correct size and type for you as they are different from standard flight socks (pharmacy can help).

If you have other risk factors for a DVT, regardless of the length of your flight, you may be advised to have heparin injections. These will thin your blood and help prevent a DVT. A heparin injection should be taken on the day of the flight and daily for a few days afterwards. For security reasons, you will need a letter from your doctor to enable you to carry these injections onto the plane.

Low-dose aspirin does not appear to reduce the risk of a DVT but you should continue to take it if it has been prescribed for another reason.

### Are there circumstances when I may be advised not to fly?

A medical condition or health problem can complicate your pregnancy and put you and your baby at risk. For this reason, if any of the following apply, you may be advised not to fly:

- You are at increased risk of going into labour before your due date.
- You have severe anaemia. This is when the level of red blood cells in your blood is lower than normal. Red blood cells contain the iron-rich pigment haemoglobin, which carries oxygen around your body.
- You have sickle cell disease (a condition which affects red blood cells) and you have recently had a sickle crisis.
- You have recently had significant vaginal bleeding.
- You have a serious condition affecting your lungs or heart that makes it very difficult for you to breathe.

It is important that you discuss any health issues or pregnancy complications with your midwife or doctor before you fly. If you have an increased chance of miscarriage or ectopic pregnancy, ask for an ultrasound scan for reassurance before you fly.

Be aware that the unexpected can happen while travelling which could delay your return home. Some airlines may not allow you to fly if you have fractured a bone, have a middle ear or a sinus infection or have recently had surgery to your abdomen that involved your bowel, such as having your appendix removed.

### **Making a decision to fly**

To help decide whether or not to fly, think about your own medical history and any increased risks that you may have. The following questions may also help you in making your decision:

- Why do you want to fly at this particular time?
- Is your flight necessary?
- How long is your flight? Will this increase your risk of medical problems?
- How many weeks pregnant will you be when you travel and when you return?
  - Your chance of going into labour is higher the further you are in pregnancy.
  - It is also important to remember that having a miscarriage, whether you fly or not, is common (one in five) in the first three months of pregnancy.
- What are the medical facilities at your destination in the event of an unexpected complication with your pregnancy?
- Have you had all the relevant immunisations and/or medication for the country you are travelling to? Have you checked with your doctor how these affect your pregnancy?
- Does your travel insurance cover pregnancy and/or care for your newborn baby if you give birth unexpectedly? There is huge variation among airlines and travel insurance policies so it is worth checking before you decide to fly.
- Have you discussed your travel plans with your midwife and informed them that you are thinking about taking a medium or long haul flight?

### **What should I take with me?**

- Your hand-held pregnancy notes
- Any medication you are taking
- If you are over 28 weeks pregnant, your airline may ask you to get a letter from your midwife or doctor stating when your baby is due and confirming that you are in good health, are having a straightforward pregnancy and are not at any increased risk of complications.
- Any document needed to confirm your due date and that you are fit to fly. Some airlines have their own forms/documents that will need to be completed at any stage of pregnancy. Contact your airline if you are unsure.
- Travel insurance documents
- If you are travelling to Europe, it is recommended that you take a European Health Insurance Card (EHIC) with you. This card is not an alternative to travel insurance but lets you get free or reduced-cost health care in Europe. It is free and you can apply for it online at: [www.nhs.uk/NHSEngland/Healthcareabroad/EHIC/Pages/about-the-ehic.aspx](http://www.nhs.uk/NHSEngland/Healthcareabroad/EHIC/Pages/about-the-ehic.aspx). It includes routine maternity care (i.e. not only treatment for illness or an accident), as long as you're not going abroad to give birth. However, if the birth does happen unexpectedly, the card will cover the cost of all medical treatment for mother and baby that is linked to the birth.

**Will I have to go through a security scanner?**

You will have to go through the normal security checks before flying. This is not considered to be a risk to you or your baby.

**Can I wear a seatbelt?**

You must wear a seatbelt. You should ensure the strap of your seatbelt is reasonably tightly fastened across the top of your thighs and then under your bump. Ask the cabin crew if you need a seatbelt extension.

**What happens if I go into labour on the flight?**

Any pregnant woman has a small chance of going into labour early or for her waters to break early. If this happens to you on a flight, there is no guarantee that other passengers or crewmembers will be trained and experienced to help you give birth safely. As a result, the pilot may have to divert the flight to get help for you.

**Documentation Control**

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	2	July 2012	Carolyn Langrick - Midwife Karen McIlwrath - Midwife Dr M Kurni – SpR Miss S Raouf – Consultant Obstetrician	Review
	3	June 2016	Cindy Meijer – Risk Support Midwife	Adopting RCOG guidance
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