BACKGROUND

Pregnancy, is an increasingly important and complex issue to be considered when travelling overseas. There can be considerable additional risks in travelling and living in a developing country when pregnant. Because there are so many variables, each woman who is pregnant or might become pregnant when overseas needs to do two things. The first is to seek specific medical travel advice, ideally 6 to 8 weeks before travel when they can weigh the risks and start to make plans. The second is to become as informed as possible about the increased risks of travel during pregnancy and informed about the specific medical care and support which will be available at their destination.

All pregnant travellers should ask themselves if their trip is really essential. A sending agency / organisation may also have a policy on employees travelling during pregnancy. The traveller should check with their employer if they are happy for them to go and confirm that their health insurance will cover for any complication of pregnancy while travelling – some policies may specifically exclude this.
This is important even in the very early stages of pregnancy when complications such as miscarriage or ectopic pregnancy are reasonably common. It is important to be aware of the law in the UK (or the country of employment) regarding disclosure of a pregnancy to the agency / organisation. While an individual is not required to disclose their pregnancy to the employer, the employer will have no additional duty of care towards the traveller if they are unaware of the circumstances.

**ACTIONS TO BE TAKEN PRE- TRAVEL:**

- If pregnant, have this confirmed by a clinician or home test and preferably by a dating scan (normally 10-13 weeks). This to confirm the viability of the pregnancy, dates and to make sure it is not an ectopic (tubal) pregnancy.
- If pregnant, have a detailed antenatal examination and an in-depth discussion with the obstetrician or midwife.
- Have a copy of the ante-natal records to take when travelling.
- Research the intended destination to gather information about the availability of medical treatments and facilities. Good medical care may be limited in some areas, so also have an emergency plan in case it is needed.
- Take out travel insurance which covers pregnancy-related health problems, any health problems affecting the unborn child and if the birth were to occur when travelling. Ensure that the newborn baby is covered during or after delivery including cover for any extended stay in a neonatal unit. A recommended level of cover is £1 million for those in Europe and £2 million for the rest of the world.
The mere act of travelling during pregnancy carries small additional risks owing to the greater likelihood of illness and accidents, and also the distance from good healthcare when away from home. However, for most healthy travellers with no previous problems during pregnancy, this risk is small providing certain extra precautions are taken - see sections below:

**Flying:**
Air flight is safe during pregnancy and the difference in oxygen concentration and the reduced pressure in the aircraft has no adverse effects on either mother or fetus.
The safest time to travel is between 18 and 24-26 weeks. The least safe times are up until 15 weeks (risk of miscarriage or ectopic pregnancy) and after 30 weeks (danger of late pregnancy complications, including bleeding and premature labour).
General health issues which tend to be worse in pregnancy e.g. indigestion and flatulence, can be a greater problem during flying and it is worth avoiding fizzy drinks. It is important to keep fluid intake up and prevent dehydration by avoiding alcohol and caffeine. Feet may swell more than normal. Travel sickness may affect you or get worse. In late pregnancy it is always sensible to travel with a companion.

Pregnancy and up to 6 weeks after the birth of a baby, increases the risk of Deep Vein Thrombosis (DVT) when flying, partly due to sitting for a prolonged length of time on a flight. The risk of DVT increases with the length of the flight. To reduce this risk it is worth considering wearing flight socks on long haul flights, keeping hydrated and walking around the cabin at regular intervals during the flight (so it is wise to choose an aisle or a bulkhead seat). Also, regular movements will help - flexing and extending feet and ankles to encourage blood flow from the lower legs.
Most international flights will be unwilling to carry a passenger known to be 36 weeks pregnant, or beyond 32 weeks in the case of twin or multiple pregnancies, but many domestic flights make a cut-off point at 36 weeks. Check the exact regulations with the airline concerned and leave a margin of two weeks in case of last-minute changes of plan or cancellations. After 28 weeks gestation, the airline may ask for a letter from a doctor or midwife confirming and stating the expected date of delivery and risk of any complications.

**Cars:**
It is best to avoid long car journeys when pregnant. If they cannot be avoided then it is important to make sure to get out of the car regularly to stretch and move around. Also doing some gentle foot and ankle exercises in the car (when not driving) such as flexing and rotating feet and ankles is recommended. This will keep the blood flowing around the legs, reducing stiffness and the risk of DVT as covered in the previous section.

Fatigue and dizziness are common when pregnant, so it is important to drink and eat small amounts regularly.

It is important to always wear a seatbelt in a car or bus. A lap belt with a shoulder strap is best and the straps should be placed carefully across the pelvis and under the bump, not across the bump. Car crashes are still the highest causes of morbidity and mortality when travelling.

**Food and water precautions:**
The effect of gastrointestinal illness in pregnancy can be significant for both mother and fetus. Diseases that spread via the facial-oral route such as Hepatitis A and E can have severe consequences in pregnancy. Hepatitis A has been reported to increase the risk of premature delivery and Hepatitis E has been associated with fetal complications and fetal death.
There are also extra dangers from certain foods - this includes the risk of toxoplasmosis and listeria. The pregnant traveller should take extra precaution with food and water hygiene - strictly avoid all salads, undercooked meats, unpasteurized milk, soft cheese and paté. Take all precautions to avoid diarrhoea and use oral rehydration solution early as dehydration may reduce placental blood flow.

The antibiotic Azithromycin, often used for traveller’s diarrhoea, does not have adequate data from use in pregnant women and so should not be used during pregnancy. We would not recommend using antibiotics against traveller’s diarrhoea in pregnancy without a good reason and without seeking medical advice as to whether it is essential to do so.

**COVID-19:**
More than half of pregnant women who test positive for COVID-19 infection do not have symptoms. However, the risk of preterm birth is increased two to threefold for those who develop symptoms of COVID-19 infection, usually due to medical intervention to help improve the breathing of the mother [Nathnac]. It is important to follow advice to stop the spread of COVID-19 throughout pregnancy, such as social distancing and hand hygiene. Especially when more than 28 weeks pregnant (in the 3rd trimester) [NHS].

**IMMUNISATIONS:**

**Pre-conception and vaccines:**
Vaccinating prior to conception is preferable to vaccination during pregnancy. However, due to the theoretical risk of live vaccine virus transmission to the fetus, women should be advised to delay conception for 28 days after receiving a live vaccine. [Nathnac]
During pregnancy:
Pregnancy does not prevent a woman from receiving vaccines that are considered safe and will protect her health and that of her unborn child. Non-live vaccines reveal no safety issues, since 2012 pertussis (whooping cough) vaccine has been offered to pregnant women due to the increased levels of pertussis across the UK.

Although the risk of damage to the fetus from any vaccine given in pregnancy is extremely rare, like all medical decisions, risks and benefits have to be reviewed and discussed. This is particularly important in reference to live vaccines such as yellow fever. Due to the theoretical risk that the live attenuated virus (in the vaccine) may cross the placenta and affect / infect the fetus.

These should be discussed with an experienced advisor in a travel health consultation who can brief the pregnant traveller on the issues relevant to them and the destination.

COVID-19 vaccine:
The COVID-19 vaccine is being offered to pregnant women at the same time as the rest of the population, based on age and clinical risk. Some pregnant women may become seriously unwell with the COVID-19 infection, particularly in the later stages of pregnancy. There is emerging data on the safety of the vaccines in pregnancy and no evidence that the vaccines can cause any harm to the pregnant woman or her baby [Royal College of Obstetricians and Gynaecologists]. There is some data suggesting that certain stages of pregnancy are more recommended for the vaccine than others. This is a developing area and expert medical advice should be sought about this for the most up to date advice.
MOSQUITO BORNE ILLNESSES:

Malaria:
Pregnant women are advised to avoid travelling to malarious areas. Pregnant women have an increased risk of developing severe malaria and have a higher risk of fatality compared to non-pregnant women. Malaria, especially falciparum malaria, which is common in sub-Saharan Africa and South-East Asia, increases the risk of severe anaemia, renal failure and jaundice which can result in premature labour, miscarriage and stillbirth. Women who are pregnant, or recently pregnant, are more attractive to mosquitoes – and more likely to get mosquito-borne illnesses, especially malaria. It is essential to take the strictest precautions to avoid mosquito bites, including ideally staying indoors between dusk and dawn. If outdoors at these times, then the pregnant traveller should adhere to rigorous bite avoidance such as covering up especially during dusk to dawn and the use of 50% DEET-based insect repellent at the normally recommended concentration: this is not harmful to mother or fetus.

Medication options for malaria in pregnancy include:
- Chloroquine and proguanil (Paludrine) are considered safe in all trimesters of pregnancy but due to drug resistance in most parts of the world this option is not often recommended. In addition a 5mg folic acid supplement should be taken for the length of time of using Proguanil. Please note this is prescription strength folic acid and a higher dose than that available in conventional antenatal vitamins.
- Mefloquine has reassuring data on its use in pregnancy and is now considered to be safe in the second and third trimesters and may be used with caution in the first trimester, so is often the first choice in pregnancy.
Doxycycline is now an option for malaria prophylaxis in early pregnancy as long as the post-exposure 28 days can be completed prior to 15 weeks gestation where other options are unsuitable.

There is insufficient safety data to confirm whether or not Atovaquone & Proguanil (A&P - brand name Malarone) is safe to be used in pregnancy. At present, A&P is only used where the risk of malaria outweighs any possible risk of taking A&P during pregnancy. The UK Malaria Prevention Guidelines state that it can be used in the second and third trimesters after careful risk assessment. If used then it should also be taken with a 5mg folic acid supplement for the length of time that using Proguanil.

As mentioned before, malaria in the pregnant traveller carries much more risk than malaria in the non-pregnant woman and is a medical emergency requiring expert help. This is because travellers have no prior immunity from previous malarial exposure unlike the local population. Malaria can also be difficult to detect in pregnancy as the parasites are attracted to the placenta so may not be detectable in normal blood samples. If a pregnant traveller is in a place without access to excellent health facilities and thinks they have malaria then they should contact their health insurers urgently.

**Chikungunya:**
If a woman in the late stages of pregnancy is infected with the virus and has a fever in the days immediately prior to, or during labour, then it has been reported that mother to child transmission of Chikungunya virus can occur.

**Dengue:**
Dengue fever is spread via daytime biting mosquitoes. Some case reports suggest that dengue may predispose women to certain pregnancy complications.
It is recommended that women in the late stages of pregnancy should avoid travelling to areas of ongoing disease and those in the early stages should consider dengue a serious hazard. [Nathnac]

**Zika:**
The zika virus is spread via mosquitoes mainly during the day time (dawn to dusk) and causes microcephaly and other congenital anomalies. The disease has been spreading worldwide. It is recommended that pregnant women should postpone non-essential travel to areas with current active zika transmission until after pregnancy. A traveller should seek medical advice if pregnant or planning pregnancy and travelling to a zika area for the latest and updated information.

**Leisure pursuits and pregnancy:**
This is largely a matter of common sense, remembering that any accident may be harder to treat in a developing country, which means the risk to both mother and baby is slightly greater. Avoid extreme sports, skiing, horse-back riding and scuba diving (danger to fetus through pressure changes). At moderate altitudes there is only a minimal reduction in the oxygen supply to the mother. Experts currently advise that pregnant women should avoid altitudes over 3000 metres (about 12,000ft) apart from brief stopovers at high altitude airports. Altitudes above 2500 metres should be avoided in higher risk pregnancies, for delivery and a few weeks before.
SOURCES

- Fit for Travel - https://www.fitfortravel.nhs.uk/home
- NHS - https://www.nhs.uk/pregnancy/keeping-well/travelling/
- Public Health England -
- Royal College of Obstetricians and Gynaecologists - ‘Air Travel & Pregnancy – Information for you’
- Travel Health Pro (NathNac) - https://travelhealthpro.org.uk/
- UK Malaria Guidelines 2021:
- World Health Organization - www.who.int/ith
Thank you for accessing this resource.
For more resources and dedicated support:
visit www.thrive-worldwide.org
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