

Gravid travel

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If a woman is fully aware of the possible complications that can occur in any pregnancy, is prepared to accept the additional risks involved with travel, and takes steps to avoid these risks, there are few absolute contraindications to travel.

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General considerations

Pregnancy is a normal state usually associated with good health. However, when travel is being planned, there are a few risks that a woman and her doctor should discuss.

Aside from the usual risks associated with travel, normal pregnancy itself carries a number of risks including hypertension, phlebitis, spontaneous miscarriage, ectopic pregnancy and premature labour. Less severe but nonetheless uncomfortable problems that are more often seen include tiredness, nausea, reflux, urinary frequency, back pain, constipation and haemorrhoids.

Obstetric and general medical risk factors need to be known and the patient advised accordingly. The woman needs to be fully aware that should a complication occur while travelling appropriate medical care may be difficult to find and less than ideal once found. In some cases,

it may be wise to advise the patient to stay within reasonable proximity to medical health services with the necessary obstetric and neonatal expertise.

If the woman is adamant about travelling or has compelling reasons to go, then the best time to travel is generally the second trimester – after the nausea and higher risk time of miscarriage, and before the back pain from increased weight sets in.

Medications need to be reviewed for their safety profile. Paracetamol, erythromycin, penicillin and cephalosporins are considered safe in pregnancy

The clinician also needs to make an assessment of the pregnant traveller's

psychological preparedness to be able to handle situations that can change suddenly. An eight-hour layover in an airport lounge is a different experience when the passenger is seven months' pregnant.

For the pregnant woman, high risk areas to visit include:

- areas requiring live viral vaccines
- endemic areas or areas with epidemics of food- or insect-borne infections
- high altitudes with decreased oxygenation
- areas with endemic chloroquine-resistant *Plasmodium falciparum* infection.

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Malaria

The World Health Organization is quite clear about the importance of advising the pregnant traveller that she should avoid malarious areas if at all possible. Its current recommendations states the following: 'WHO advises pregnant women to avoid travelling to areas where transmission of chloroquine-resistant *P. falciparum* occurs'.¹

This can be a problem for GPs and their travelling patients who have paid for nonrefundable tickets and happily bounce into their doctor's rooms announcing that they are leaving the next week. Advising the traveller not to go can result in angry patients who are denied a refund of their ticket, and angrier travel agents.

Malaria in a pregnant woman increases the risk of maternal, fetal and neonatal death. Treatment with antimalarial medications, while life-saving, may cause significant problems to both mother and fetus. For nonpregnant women of child-bearing age, pregnancy should be avoided until three months after leaving the malarious area.

For women at risk, prophylaxis with antimalarial medications is recognised to be safer than the risk of life-threatening malaria, although each individual situation needs to be assessed on its merits. Chloroquine and proguanil are generally considered relatively safe in pregnancy. Doxycycline is contraindicated because of the risk to the fetus. Mefloquine appears to be safe in the second and the third trimesters.

Insect avoidance measures need to be advised.

Vaccines

Live vaccines (BCG, measles–mumps–rubella, yellow fever, oral polio) should be avoided wherever possible – unless the advantages of vaccination significantly outweigh the risks, and these relative risks need to be discussed. For example, yellow fever may be given in the third trimester if there is a significant risk to

the traveller, such as for a family returning to live in a known endemic area. If the vaccine is only required for legal purposes, a letter of exemption from an authorised vaccination centre is necessary.

The administration of killed or inactivated vaccines, polysaccharides and toxoids is not contraindicated in general, although many practitioners remain

concerned about possible teratogenic effects.

The current edition of 'The Australian immunisation handbook' follows the increasingly less conservative approach of other international advisory sources.² It suggests that the theoretical contraindications are not absolute because there is little evidence of absolute harm to the fetus.

Vaccines currently considered relatively safe in pregnancy now include tetanus, diphtheria, hepatitis B and influenza. There is inadequate information to make conclusive statements on the use in pregnancy of vaccines for meningococcal meningitis, Japanese encephalitis, hepatitis A and typhoid and the new oral cholera vaccine. A rule of thumb for GPs to use

is that vaccines should be given only when there is a real risk of disease.

Air travel and thrombosis

The risk of deep vein thrombosis has recently received wide publicity in the international media following the sudden death of two travellers. The jury is still out on absolute proof of air travel *per se*

being a cause of thromboembolism. Nevertheless, cabin-related risk factors for the pregnant traveller (indeed, for any traveller) include immobilisation, cramped position, insufficient fluid intake, low humidity and hypoxia. Most of these can be prevented if appropriate advice is given and followed, such as:

- regular calf exercises
- moving around the cabin every two hours
- adequate fluid intake
- avoidance of diuretics, including the effects of too much alcohol or caffeine.

This is good advice for any travel (i.e. car, bus, train), not just air travel.

Higher risk travellers, such as those with a past history of thrombosis, may be advised to wear supportive stockings and use self-injectable antithrombotic agents. Aspirin is an antiplatelet agent and is most effective on the arterial rather than venous side, but there is some evidence that it is mildly effective on the venous circulation, and travellers may prefer it to injecting themselves.

Conclusion

Offering pregnant travellers the option of alternative destinations or deferred travel may alleviate much angst. Otherwise, concerns about risk of vaccines and medications need to be carefully balanced against the real risks of illness to mother and fetus. These risks need to be mutually discussed between the patient and doctor and the decisions documented. MT

References

1. World Health Organization. International travel and health: vaccination and health advice. Geneva: WHO, 2001. [Available at: www.who.int/ith/]
2. National Health and Medical Research Council. The Australian immunisation handbook. 7th ed. Canberra: NHMRC, 2000. [Available at: www.health.gov.au/pubhlth/immunise/publications.htm]