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THE PREGNANT TRAVELLER

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Before travelling, pregnant women should consult their health care providers for risk-based advice. Travel health advisors should discourage travel to certain destinations, especially during stages of pregnancy when such travel may be harmful to maternal or fetal health. The second trimester is the safest time to travel, and often the only period in pregnancy covered by travel insurance underwriters. Areas with significant health risks should be avoided.¹ These include malaria and yellow fever endemic areas and destinations where health services are absent or inadequate.

Airline policies vary. International airline travel is generally permitted until 32 weeks of gestation, while domestic travel may be allowed until 36 weeks.² Contraindications to flying include severe anaemia, sickle cell disease or trait, thrombophlebitis or placental insufficiency.²

Malaria avoidance and chemoprophylaxis are of paramount importance because of the increased risk of mortality to both mother and fetus. Chemoprophylaxis does not harm the fetus — the reason frequently given by

travellers and expatriates for not taking medication (authors' unpublished research). Reducing the risk of insect bites by limiting time outdoors, protective clothing, bed nets, window screens and insect repellents, provides protection from malaria and other vector-borne infections. DEET is the most effective insect repellent and evidence supports DEET being safe for pregnant women when used as recommended.³ Pregnant travellers to areas with no chloroquine-resistant *Plasmodium falciparum* should use chloroquine prophylaxis. In drug-resistant areas, mefloquine may be used during the second and third trimesters. Atovaquone (Malanil) has not been sufficiently researched in pregnancy and both doxycycline and primaquine are contraindicated because of potential adverse effects on the fetus.⁴

Pregnant travellers require advice regarding nausea and vomiting, the most common symptoms of early pregnancy, which are exacerbated by travel. A Cochrane review indicates that antiemetic medication reduces the frequency of nausea in early pregnancy and pyridoxine (vitamin B₆) reduces the severity of nausea.⁵ A doxylamine/pyridoxine combination is considered the standard of care.⁶ Since gingivitis is more common in pregnancy, a dental check up is advisable before travel.

Back pain is common in pregnancy and is aggravated by travel, which may involve lifting luggage and prolonged sedentary periods without an opportunity to exercise or lie down. Low back pain is reported as being most common between the fifth and seventh months of pregnancy.⁷ Specific risk factors are twisting and bending, lifting, prolonged sitting, stair climbing, single-leg stance and constrained postures. Activity and exercise

increase functional movements and decrease low back pain, as does lumbar support while seated. Pregnant travellers should avoid scuba diving, strenuous exercise in high ambient temperatures or humidity, and sports with an increased trauma risk such as horseback riding or skiing. Advice is particularly important for those who have already experienced back pain during the pregnancy.

Itching in pregnancy can be exacerbated by tropical travel. In late pregnancy, aspirin appears to be more effective than chlorpheniramine (antihistamine) when no rash is present, but if there is a rash, chlorpheniramine appears to be more effective.⁸

A systematic review on preventing and treating leg cramps, a relatively frequent condition in travellers, and which becomes more common as pregnancy progresses, indicates that magnesium lactate or citrate taken as 5 mmol in the morning and 10 mmol in the evening is best in relieving troublesome cramps.⁹

Hygiene and sensible dietary practices are particularly important for the pregnant traveller since dehydration and infections such as listeriosis and toxoplasmosis are harmful to the fetus. Prophylactic antibiotics should be avoided.¹⁰ Traveller's diarrhoea should be managed with oral rehydration and a combination of kaolin and pectin can be used. If an antibiotic is indicated, it is recommended that an oral third-generation cephalosporin be considered. Pregnant expatriates should avoid iodine-containing water purification systems since long-term use could result in congenital goitres.

Constipation can be a common problem in late pregnancy and should be managed initially by dietary supple-

Guidelines for pregnant travellers

- Make sure that there is adequate medical insurance/cover
- Check what medical facilities are available at the destination
- Make arrangements for antenatal visits before departure
- Take documented details of date of delivery/blood type, etc.
- Take any necessary medications/prescriptions
- Travel with a companion
- Take regular exercise during air flights – request an aisle seat
- Flex and extend ankles regularly during flight or journey
- Take plenty of fluids and remain well hydrated
- Take care to avoid contaminated food and drinks
- Check package inserts of all medications for contraindications

ments of fibre, which the traveller can take with her. If this fails, stimulant laxatives have been shown to be more effective than bulk-forming laxatives.¹¹

All immunisations in pregnant travellers should be based on benefits versus risk to the woman and the fetus.¹² There is no evidence of increased risk from immunising pregnant women with inactivated virus or bacterial vaccines or toxoids.¹³ Routine immunisations that are considered safe to administer during pregnancy include tetanus, diphtheria, inactivated influenza and hepatitis B. Because of the theoretical risk of transmission to the fetus, contraindicated live vaccines include yellow fever, measles, mumps, rubella, varicella, and live influenza. Administration of meningococcal, hepatitis A, typhoid, inactivated poliovirus, Japanese encephalitis and rabies vaccines depends on the risk and specific circumstances.¹³ Pregnant travellers visiting a yellow fever area where the disease is not a current threat should be given a medical waiver by a practitioner licensed to administer yellow fever vaccine to accompany the signed immunisation record for presentation to relevant authorities.

Guidance should be given to pregnant women regarding medications that

they may use while travelling. They should be advised to read the package inserts of all medication prescribed or bought over the counter for statements such as 'causes/is suspected to cause birth defects when taken during pregnancy/is contraindicated in pregnancy'.¹⁴

References available on request.

TRAVELLER'S DIARRHOEA AND THE DOCTOR

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The chance of a person contracting diarrhoea on his/her travels to developing and developed countries is high. Annually, between 20% and 50% of travellers develop traveller's diarrhoea (TD), depending on the duration and destination of travel.¹ TD is usually of short duration but could compromise an important business engagement or holiday plan. It usually occurs in the first week of travel. Classic TD is defined as the passage of 3 or 4 unformed stools per 24 hours, with at least one accompanying symptom (e.g. nausea, vomiting or abdominal cramps), which is associated with travelling or recent travel. The severity of the diarrhoea is influenced by the inoculation dosage, virulence of the aetiological agent and concurrent medical conditions (e.g. persons on antacids). The incidence of TD has not decreased significantly during the past 20 years.

Health care providers are responsible for promoting preventive measures to restrict the risk of TD. General hygiene and the prudent selection of food and drinks while avoiding ice, especially crushed ice, and unsterilised water, should be advised. Even swimming should be done circumspectly. The organisms responsible are enteric pathogens inadvertently ingested with contaminated food and water.