

Is air travel in pregnancy safe?

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ABSTRACT

QUESTION How should I advise the increasing number of my pregnant patients who need to fly as part of their jobs?

ANSWER Overall, existing data do not confirm increased reproductive risks for otherwise healthy pregnant women traveling by air. Pregnant women with specific medical conditions that might be exacerbated by a hypoxic environment, such as respiratory and cardiac diseases, should avoid flying, as should women at risk for preterm labour and those with placental pathologies.

RÉSUMÉ

QUESTION Quels conseils devrais-je donner au nombre grandissant de mes patientes enceintes qui doivent prendre l'avion pour les besoins du travail?

RÉPONSE Dans l'ensemble, les données actuelles ne confirment pas de risques accrus, sur le plan de la reproduction, causés par les voyages en avion pour les femmes enceintes autrement en bonne santé. Les femmes enceintes ayant des problèmes médicaux spécifiques susceptibles d'être exacerbés par un environnement hypoxique, comme des maladies respiratoires ou cardiaques, devraient éviter de prendre l'avion, tout comme celles à risque d'un travail prématuré ou ayant des pathologies placentaires.

Air travel has become an important part of modern life. Many more women are now employed in jobs that involve frequent flying, and, in fact, most flight attendants are women of reproductive age. In parallel, with the average age of starting a family steadily increasing, many more pregnant women have medical conditions that might be exacerbated by air travel.

Naturally, the most compelling studies on reproductive risks originate from research in flight attendants. In a cross-sectional survey among current and former flight attendants, Lauria et al¹ did not detect higher rates of miscarriage associated with active work. They did, however, find higher rates of menstrual irregularities among current flight attendants and 60% higher rates of infertility.¹ The lack of risk of spontaneous abortions was corroborated by others.² However, flight attendants who experienced spontaneous abortions reported working substantially more flight hours (74 hours per month) than did flight attendants who had live births (64 hours per month).² These data suggest that the occasional flight among healthy pregnant women should not be a concern.³ In contrast, women at higher risk for spontaneous abortions might want to limit their flights.

Pregnancy is associated with increased risk of thromboembolic disease, as is air travel; therefore, their combination has been an area of concern.⁴ Common advice includes prophylactic mobilization, fluid intake, leg exercises, and use of prophylactic acetylsalicylic

acid and compression stockings in the first trimester of pregnancy.⁴

Freeman et al⁵ addressed potential risks in late pregnancy; they retrospectively analyzed a pilot cohort of women giving birth to singleton, nonanomalous fetuses. Air travel was not associated with birth weight, shorter gestation, rate of vaginal bleeding, preterm delivery, preeclampsia, or neonatal intensive care admission. There were no thromboembolic events in any of the 118 pregnant air travelers.⁵

The management of pregnant women who suffer from serious medical or obstetric conditions needs to be individualized. Hypoxia in the cabin might put pregnant women with unstable angina, congestive heart failure, or chronic pulmonary conditions at risk.⁶ The

MOTHERISK

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Do you have questions about the effects of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at 416 813-7562; they will be addressed in future Motherisk Updates.

Published Motherisk Updates are available on the College of Family Physicians of Canada website (www.cfpc.ca) and also on the Motherisk website (www.motherisk.org).

Canadian airline rules for pregnant travelers

Air Canada and Air Canada Jazz. A woman with a normal pregnancy and no previous history of premature labour may travel up to and including her 36th week. (Visit www.aircanada.com/en/travelinfo/before/youngtravellers/infant-child.html.)

Air Transat. Up to 35 weeks of pregnancy, pregnant women may travel without restriction; from 36 to 38 weeks, they must present doctors' certificates issued 24 hours before departure. From 39 weeks and on, pregnant travelers may not travel on any Air Transat flight. (Visit www.airtransat.com/en/4_2_2.asp.)

CanJet Airlines. Pregnant women past 36 weeks of pregnancy require doctors' certificates that authorize travel and state travel dates. (Visit www.canjet.com/en_travel_policies.aspx?ID=6.)


Canadian Affair. Between 28 and 33 weeks of pregnancy, women may fly only with up-to-date doctors' letters that confirm both the stage of pregnancy and fitness to fly; beyond 34 weeks, women may not fly. (Visit www.canadianaffair.com/en/useful_info/detail/health.aspx#H3.)

Porter. Pregnant women at 36 to 38 weeks of pregnancy may fly with doctors' notes written 24 hours before departure; after 38 weeks, pregnant women are not allowed to fly. (Visit www.flyporter.com/en/faq_travelinformation.aspx.)

SkyService. Up to 35 weeks of pregnancy, pregnant women may travel without restriction; between 36 and 39 weeks of pregnancy, they may only travel with doctors' notes that are dated less than 24 hours before date of departure. After 39 weeks, pregnant women may not travel. (Visit www.skyserviceairlines.com/eng/airline/planningyourtrip/planningyourtrip.specialhandling.asp#pregnant.)

WestJet. Women at any stage of pregnancy are welcome to fly. Women past 32 weeks of pregnancy must consult their physicians to ensure the seat belt will not compromise the pregnancy and to obtain written confirmation to state that it is acceptable for them to travel. (Visit <http://c3dsp.westjet.com/guest/travelTips.jsp;jsessionid=GMTMZJkT32GNgkLhp9nJMJl142IVnpXBFIgWVy3WJvWZLmv2BK#specialneeds>.)

American College of Obstetricians and Gynecologists advises that pregnant air travelers with medical problems that might be exacerbated by a hypoxic environment who must travel be prescribed supplemental oxygen in flight.³

As a matter of common sense, women at risk of preterm delivery or those suffering from placental pathology should avoid flying in late pregnancy. 

Competing interests

None declared

References

1. Lauria L, Ballard TJ, Caldora M, Mazzanti C, Verdecchia A. Reproductive disorders and pregnancy outcomes among female flight attendants. *Aviat Space Environ Med* 2006;77(5):533-9.
2. Cone JE, Vaughan LM, Huete A, Samuels SJ. Reproductive health outcomes among female flight attendants: an exploratory study. *J Occup Environ Med* 1998;40(3):210-6.
3. American College of Obstetricians and Gynecologists, Committee on Obstetric Practice. ACOG Committee opinion. Air travel during pregnancy. *Int J Gynaecol Obstet* 2002;76(3):338-9.
4. Voss M, Cole R, Moriarty T, Pathak M, Iskaros J, Rodeck C. Thromboembolic disease and air travel in pregnancy: a survey of advice given by obstetricians. *J Obstet Gynaecol* 2004;24(8):859-62.
5. Freeman M, Ghidini A, Spong CY, Tchabo N, Bannon PZ, Pezzullo JC. Does air travel affect pregnancy outcome? *Arch Gynecol Obstet* 2004;269(4):274-7. Epub 2003 Dec 20.
6. Rodenberg H. Prevention of medical emergencies during air travel. *Am Fam Physician* 1988;37(2):263-71.