

“Travelling for two”

Travel considerations for pregnant and lactating women

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Societatea Romana de Ginecologie + Obstetrica

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Introduction

- **Background:** International travel on the rise following pandemic restrictions, number of pregnant travellers is likely to proportionally increase.
- Importance of safety and comfort for pregnant and lactating women, patient concerns, and common questions:
 - before the trip
 - treatment of disorders during the trip
 - what to watch out for after the trip?
- **Objectives:** To provide evidence-based recommendations and considerations for safe travel during pregnancy and breastfeeding



Aust N Z J Obstet Gynaecol 2023; 63: 643–650
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ANZJOG

CLINICAL PERSPECTIVE

Vaccination recommendations for pregnant people travelling overseas

Adrian Alexander¹, Sushena Krishnaswamy^{2,3,4}, Stephen Cole^{4,5} and Michelle L. Giles^{3,4,6}

Air Travel and Pregnancy

Scientific Impact Paper No. 1
May 2013



ACOG
The American College of
Obstetricians and Gynecologists

Workshop de l'ASPP, Zurich, 16 mars 2017

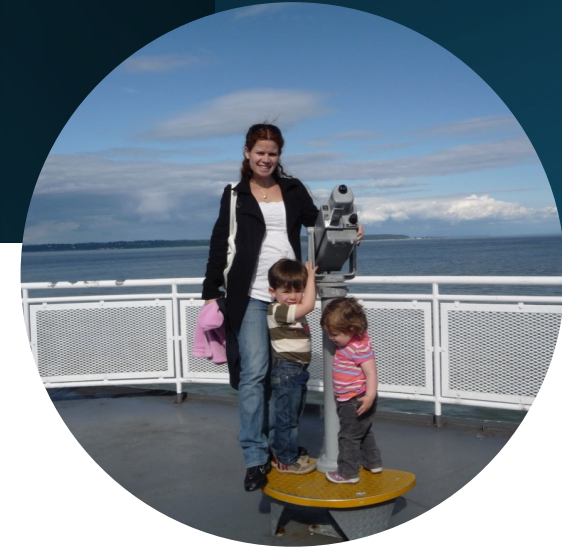
Voyager pendant la grossesse et l'allaitement

Barbara Lardi

INTERNATIONAL TRAVEL AND HEALTH – 18 NOVEMBER 2022 (REVISED ON 3 JANUARY 2023)

Country List¹
Country vaccination requirements² and WHO recommendations for vaccination against yellow fever, poliomyelitis, and malaria prophylaxis in international travellers

Benefits of Travel



- **Mental health:** Stress reduction and relaxation
- **Physical health:** Moderate physical activity during travel
- **Social well-being:** Visiting family and friends, attending conferences

General Considerations before travelling



Destination:

Avoid countries with malaria,
Zika, hepatitis E

Avoid countries with poor
sanitary infrastructures

Visit FDFA website

Mode of transport:

Pros and cons of various
travel methods



Medical check up:

Best time: 2nd trimester

Avoid travel after 36 weeks or
if high-risk pregnancy

Vaccinations: Check for
required and safe vaccines.

Medications: Carry necessary
medications, compression
stockings



Emergencies:

Know emergency contacts
and hospitals at the
destination

Carry prenatal records

<https://www.eda.admin.ch/eda/fr/dfae/representations-et-conseils-pour-les-voyages/reiseinformationen.html>

Virus Zika et grossesse, SGGO Avis d'experts #46

Alexander, ANZJOG 2023

Infectious diseases



Risk for the mother

Malaria

Yellow fever

Hepatitis E

Dengue fever



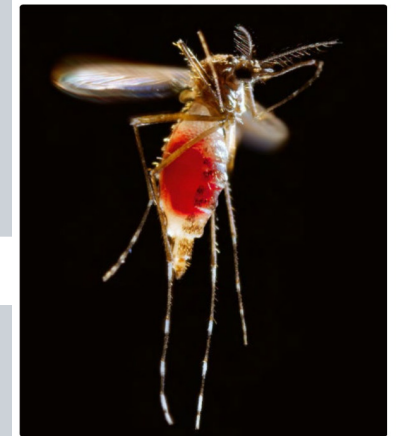
Risk for the fetus

Zika

Toxoplasmosis

Listeriosis

Figure 1: *Aedes aegypti*.



Le virus Zika se transmet par les mêmes moustiques que la dengue et le chikungunya. Les co-infections sont donc fréquentes.

Vaccines



Routinely recommended

COVID-19

Influenza (epidemic period)

Diphtheria-Tetanus-acellular Pertussis



Not routinely recommended

Haemophilus influenzae

Hepatitis A, hepatitis B

Yellow fever



Contraindicated

BCG

Measles-mumps-rubella

Oral typhoid vaccine

Considerations according to trimester

- **First trimester**
 - Pre-travel pregnancy test : if in doubt!
 - Beginning of pregnancy: US to rule out an ectopic pregnancy
 - **Risks and Considerations:** Nausea, fatigue, miscarriage risk
 - **Advice:** Short trips, close to medical facilities
- **Second trimester**
 - Best time for travel
 - Longer trips
- **Third trimester**
 - **Risks and Considerations:** Preterm labor, limited mobility
 - **Advice:** Avoid long distances, travel insurance with medical coverage
- **All trimesters:**
 - Consult in case of fever



Air travel during pregnancy (1)

- **Airline Policies:** Varying rules for pregnant travellers

Many airlines:

- ✓ < 36 weeks for singletons
- ✓ < 32 weeks for multiple pregnancies
- ✓ > 6 days post partum

The date of return should be considered!



Some airlines:

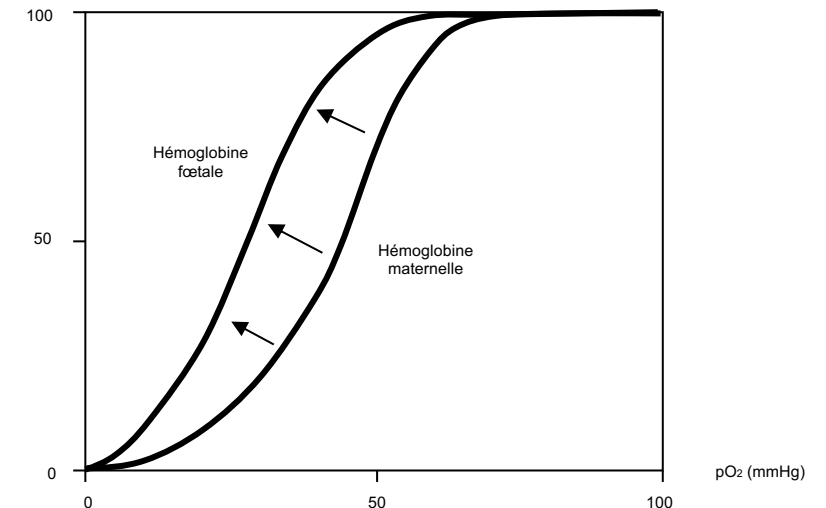
- < 28 weeks: unlimited
- > 28 weeks: certificate (due date)

- **Cabin altitude:**

- Cabin pressure: 4000-8000 feet at cruising altitude
- Reduction $P_{O_2} \rightarrow Sp_{O_2} -10\% \rightarrow \approx$ no impact on fetal O_2
- Low humidity in aircraft



Saturation en O_2 (%)



Hezelgrave et al, Advising on travel during pregnancy, BMJ 2011
Magann et al, Air travel and pregnancy outcomes: Obstet Gynecol Sur 2010

Air travel during pregnancy (2)

Air Travel and Pregnancy

Scientific Impact Paper No. 1
May 2013

- **Contraindications during pregnancy:**
 - Severe anaemia : Hb <75 g/L
 - Serious cardiac or respiratory disease
 - Recent haemorrhage
 - Otitis media and sinusitis
 - Recent sickling crisis
 - Recent gastrointestinal surgery
 - Fracture
- **Venous thromboembolism (VTE) risk:**
 - Risk of VTE in general population x3 after prolonged air travel, with an 18% higher risk of VTE for each 2h increase in flight duration
 - 1 VTE in 4600 flights in the month following a flight of 4 hours duration
- **Recommendations:**
 - Book an aisle seat if possible, consider buying an additional seat if travelling with a child <2 yo
 - Walk every hour, avoid long flights if possible
 - Compression stockings 15-30 mmHg

RR=0.10 (95% CI 0.04–0.25) of asymptomatic DVT in non-pregnant passengers

 - Additional risk of VTE: consider LMWH

Air travel and pregnancy, RCOG 2013

Clarke M, Hopewell S, Compression stockings for preventing DVT in airline passengers. Cochrane Database Syst Rev 2006

Air travel (3): Common Concerns

- **Radiation exposure:**
 - 10-hour flight: 0.05mSv
 - Risk of congenital malformation, miscarriage if exposure >50mSv
 - Increased cosmic radiation exposure associated with flying not considered significant for occasional flights
 - Many airlines do not allow aircrew to fly while pregnant to ensure that the radiation exposure is as low as reasonably practical due to the cumulative effect.
- **Body scanners** : radiation dose < dose received during 2' at cruising altitude
- **Preterm birth**: risk of preterm birth <37 weeks in air passengers (OR: 1.44, 95% CI 1.07–1.93), but not in flight-attendants, emphasising the inconsistency with regard to a causative link to air travel

Hezelgrave et al, Advising on travel during pregnancy, BMJ 2011

Magann et al, Air travel and pregnancy outcomes, Obstet Gynecol 2010

ACOG Committee on Obstetric Practice, Air Travel during pregnancy. Obstet Gynecol 2009

Original article

Skyborn: in-flight emergency births on commercial airlines

Travis W. Heggie, PhD, FFTM RCPS (Glasg)*



Table 3. Medical assistance provided during in-flight emergency delivery (N = 54)

Classification	Number of Births
Physician	25
Physician + Nurse	7
Physician + paramedic	1
Nurse	5
Medical student	2
Midwife	2
Flight crew	8
Flight crew (assisted from ground via radio)	4

Table 1. Reported in-flight emergency births by decade (N = 74)

Decade	Total reported births	% of reported births
2010–2019	41	55
2000–2009	21	28
1990–1999	7	9
1980–1989	0	0
1970–1979	1	<1
1960–1969	2	<1
1950–1959	0	0
1940–1949	0	0
1930–1939	1	<1
1920–1929	1	<1

Table 2. Reported gestational age of newborns delivered in-flight (N = 42)

Status	Total births
Very preterm (prior to 32 weeks)	9
Moderately preterm (32–34 weeks)	14
Late preterm (34–36 weeks)	12
At term (37–38 weeks)	7

*No late-term deliveries were reported.

**Two women reported not knowing they were pregnant.

***Two women reported not knowing the gestational age.

Car Travel During Pregnancy



- **Safety Tips:**

- Seat belt use
- Frequent breaks
- Avoiding long drives

- Hydration

- **Comfort Measures:** Seat adjustments

- No studies on the relationship between car travel during pregnancy, in terms of long or repeated journeys, and the risk of prematurity, apart from several studies of car accidents among pregnant drivers.



Travel by Train and Bus

- **TRAIN:**

- **Advantages**

- Space
 - Accessibility
 - Bathroom facilities

- **Safety Tips:**

- Avoiding heavy lifting
 - Choosing seats with easy access to restrooms
 - Hydration

- **BUS:**

- **Advantages :**

- Cost-effective
 - Accessibility
 - Community support

- **Disadvantages:**

- Long journeys
 - Bumpy roads
 - No restrooms
 - Air conditioned



Tips For Safe Bus Travel During Pregnancy

- Communicate your pregnancy to the bus service and other passengers 
- Pack a supply of food and water for the journey 
- Carry a neck pillow or back support to stay comfortable 
- Avoid sitting in the front or back rows of the bus 
- Take breaks to stretch and move around when the bus stops 
- Keep the emergency contact numbers handy 

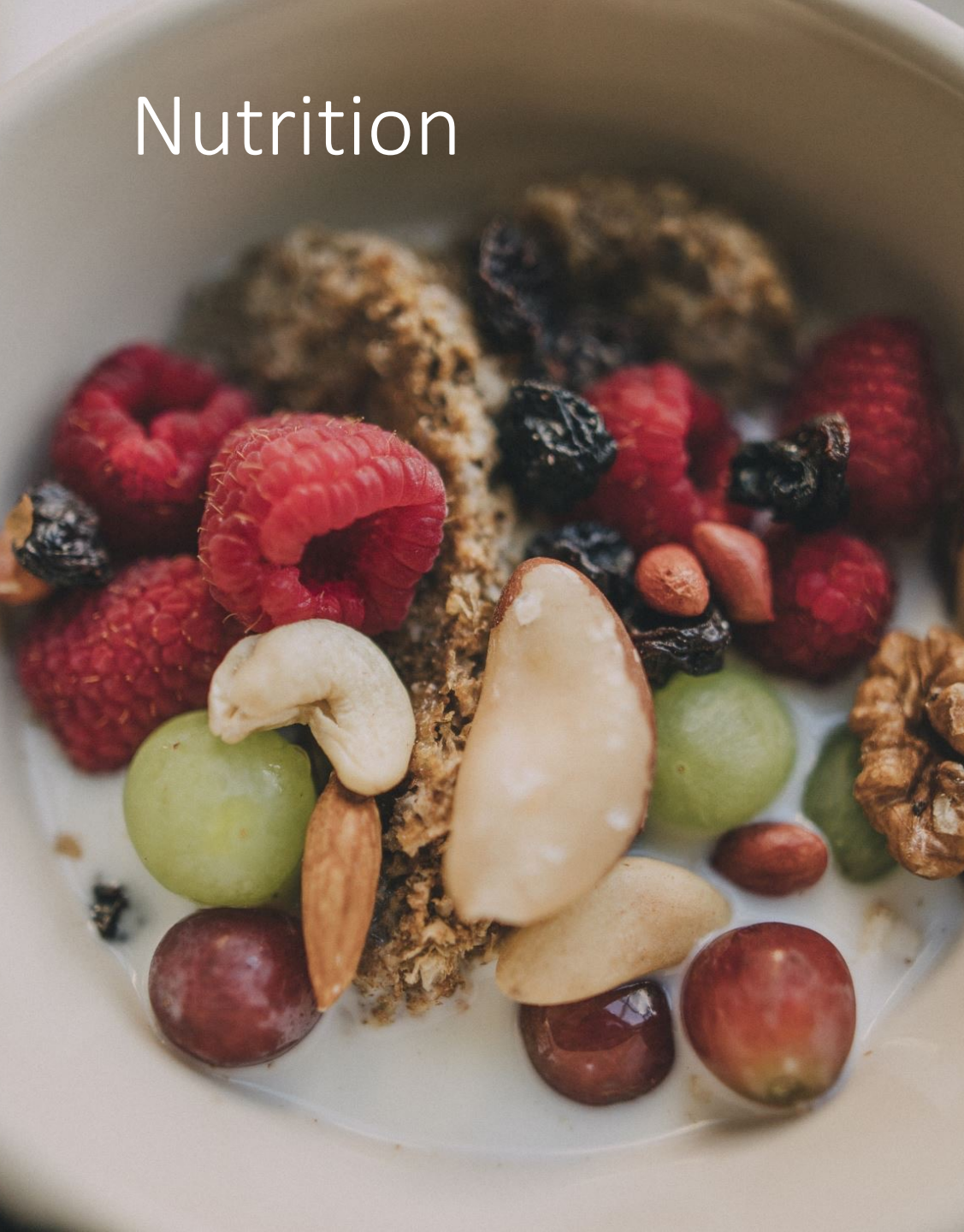
Mom Junction



Cruise travel During Pregnancy

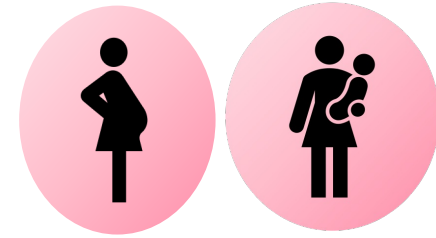
- **Ferry policies:** Ferry companies have their own restrictions and may refuse to carry heavily pregnant women
 - >32 weeks on standard crossings
 - >28 weeks on high-speed crossings
- **Risks:**
 - Seasickness: can cause nausea, dizziness, weakness, headache, and vomiting
 - Limited medical facilities
- **Advice:** Selecting pregnancy-friendly cruises, onboard medical services

Nutrition



- **Beverages:**

- Stay hydrated
- Drink pasteurized milk
- Always check if tap water is safe to drink. If in doubt, drink bottled water



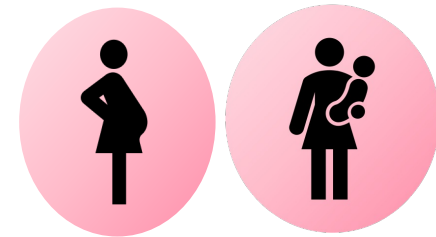
- **Food:**

- Healthy, non-perishable snacks like nuts, dried fruit, and whole-grain crackers for long journeys
- Avoid raw fruits and vegetables that are already peeled, if water quality is unsure
- If getting ill, keep hydrated and continue eating for the health of your baby, even if you're not hungry
- Prenatal vitamins

Pharmacy kit for pregnant and lactating travellers

- Hand disinfection: hydro-alcoholic gel
- Protection against mosquitoes: DEET, icaridine every 6-8h
- Malaria: prophylaxis with mefloquine
- Fever:
 - paracetamol 1g /4h, hydration
 - consult a MD
- Traveller diarrhea:
 - oral rehydration solution (Normolytoral, Elotrans)
 - loperamide for acute diarrhea
- Wounds: chlorhexidine
- Cutaneous allergy: cetirizine 10mg per day
- Travel sickness:
 - Ginger root (Zintona): 1,5g powder / day
 - Meclozine + Vitamin B6 (Itinerol B6)
- Thrombosis prevention:
 - compression stockings
- NaCl drops





Managing travel-related discomfort

- **Travel/motion sickness during pregnancy** (all trimesters):
 - meclozine (Itinerol[®], Agyrax[®]): 1 capsule one hour before departure
 - diphénhydramine (Nautamine[®]) *
 - diménhydrinate (Trawell[®], Mercalm[®]) *
- **Travel/motion sickness during breastfeeding:** *
 - In the case of a single dose, meclozine, diphenhydramine or dimenhydrinate may be used
 - If one of these 3 drugs is taken repeatedly, it is preferable to suspend breastfeeding for the duration of the treatment.
 - Breastfeeding may be resumed approximately 12 hours for meclozine and 18 hours for diphenhydramine and dimethydrinate after the last dose (2 plasma elimination half-lives).
- **Swelling and Edema:** Movement and hydration
- **Fatigue:** Rest and proper sleep





Travel Considerations for Lactating Women

- **Breastfeeding while Traveling:**
 - Pumping: bring a portable breast pump, storage bags
 - Storage: keep milk cool with ice packs or a portable cooler
 - Feeding: Plan feeding/pumping times around travel schedules
- **Hydration and nutrition:**
 - Increased fluid intake to maintain milk supply
 - Balanced diet to ensure nutrient-rich milk production
 - Food: “Cook it, boil it, peel it or leave it!”
- **Comfort and Convenience:**
 - Comfortable clothing for easy breastfeeding
 - Feeding in Public: Cultural considerations, clothing tips, nursing covers



Emergency Preparedness

- Keep partner's and doctor's number on speed dial as emergency contacts to contact them immediately in case of any emergency
- **Planning for Emergencies:**
 - Identifying medical facilities
 - Carrying medical records
- **Emergency Contacts:**
 - Local embassies
 - Consulates, and health services



After travelling

- **Symptoms after return:** fever, diarrhea
- If a travel history is given, have a low threshold for suspecting and looking for thromboembolism and infectious diseases, particularly malaria
- **Work-up:**
 - Complete blood count, CRP
 - Stool culture
 - Parasitological examination of stools
- **Return from a country with Zika:**
 - Symptomatic (<21 days after onset of symptoms):
 - RT-PCR in serum or plasma + RT-PCR in urine (min. 20ml) and, if necessary, saliva (performed at HUG)
 - IgM/IgG serology (if first consultation = initial serology) and serum freezing
 - Ultrasound monitoring
- **Request advice from infectiologists**

Resources for Patients

- **Educational Materials:**

- Websites :

- Swiss TPH: <https://www.swisstph.ch>
 - Traveller's Health - <https://www.cdc.gov/travel/>
 - Smarttraveller - <https://www.smarttraveller.gov.au>
 - NaTHNac - <https://travelhealthpro.org.uk>

- **Support Networks:** online forums, support groups

Swiss TPH



Swiss Tropical and Public Health Institute

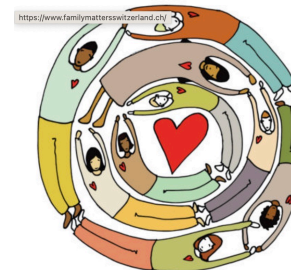


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Obstetricians and Gynecologists



Family Matters
Switzerland

Information for you

Published May 2015, Updated May 2022

Air travel and pregnancy

<https://www.familymattersswitzerland.ch/flying-when-pregnant/>

Key messages



Check-up with OBGYN
Certificate (due date)



Safe destination



Medical insurance
Emergency contacts



Vaccination before
travelling



First-aid medicines



Air travel:

- elastic compression stockings for flights >4h
- LMWH if significant risk factors