

# PREGNANCY

## 1 General

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Travelling has become so matter-of-fact that few women postpone a trip because of pregnancy. A few facts must nevertheless be taken into consideration:

- Statistically, the chance of requiring **medical intervention** is greater for a pregnant woman. It is not always possible to foresee whether problems will arise during pregnancy. You should investigate the quality of the medical infrastructure in the country of destination before your departure.
- The risk of **infections** is higher when travelling. Infections can also be more difficult to treat due to the potential harmful effect of certain medicines on the embryo. In addition, any infection that is accompanied by high body temperature can bring on labour.
- It is often only a tourist trip. You must not actively seek difficulties. Choosing a different travel destination or postponing the trip always remains a possibility.

As the risk of miscarriage is greatest during the first three months, it is better to postpone a long journey until after this period. Travelling in such a manner does not increase the risk of miscarriage, though coping with possibly severe haemorrhage can raise problems, especially in remote areas.

During the third trimester one must especially watch out for haemorrhages (e.g. placenta praevia), pregnancy toxicosis (swollen feet, high blood pressure, protein in the urine) and premature rupturing of the membranes. Moreover, travelling during the last three months of pregnancy is physically difficult and uncomfortable. After 35 weeks a pregnant woman may no longer undertake any international flights, and after 36 weeks a pregnant woman may no longer undertake internal domestic flights. One should preferably wait 7 days [after giving birth] before flying again. The mother's doctor should preferably supply a certificate showing the expected date of birth.

The ideal period for travel is approximately between 16 and 28 weeks: the first pregnancy checks have been carried out, the period of morning sickness / nausea is behind, there is less chance of miscarriage and the risk of premature labour is still some time ahead.

Pregnant women must be discouraged from travelling to remote areas, to regions where yellow fever is endemic (if not vaccinated) and to areas where resistant malaria is prevalent, with a high transmission risk (zone C).

All routine pregnancy examinations must be carried out before departure. For compulsory vaccinations and malaria prophylaxis we refer both to other texts and to the following paragraphs in which the essential points are summarised.

The emphasis lies on prevention of illnesses such as diarrhoea, worm infestations, skin infections,

and of course also rubella, toxoplasmosis, etc. The opinion of a specialist may be obtained if there is any doubt about possible contraindications.

## 2 Malaria

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Situations occasionally arise where a pregnant woman has to remain in a region where there is chloroquine-resistant malaria. Maximum prevention is indicated here, because of the proven detrimental effects of malaria for mother and foetus.

Prevention primarily includes protective measures against mosquito bites. The use of DEET-based repellents for a limited period is not discouraged, as no side-effects in pregnancy have been reported (though the effects of long-term use are not known). It is advisable to use DEET in a concentration of at most 30%. To limit contact with the product as much as possible it is recommended to rinse off residues from the skin when protection is no longer necessary.

Use of mefloquine Lariam® is not recommended during the first three months of pregnancy due to a theoretically possible harmful effect on the embryo (when taking Lariam® women of child-bearing age should make sure that they use an effective contraceptive throughout the entire period of treatment and continue to do so for three months after taking the final dose, due to the slow elimination of Lariam®). According to the World Health Organization, Lariam® can be used during the second and third trimester of pregnancy and when breast-feeding an infant. If Lariam® is taken accidentally after conception or before the fourth month of pregnancy, there is on the other hand no reason for alarm, as extensive experience has shown that there is no increased risk of genetic abnormalities (the patient's doctor can contact the producer for the latest scientific data). Breast-feeding, if necessary, is not a contraindication for the administration of Lariam®.

The combination Nivaquine® - Paludrine® is totally safe during pregnancy and breast-feeding, though in most situations it is also less effective than Lariam®. If Paludrine® has to be taken for a long time, it is best to prescribe a folic acid supplement of 4 mg per day.

As no single method can produce 100% prevention of malaria infections, it is very important to give adequate explanation of the treatment of "breakthrough malaria" to individuals during a prolonged stay in the tropics.

- During the first three months and during the final weeks of pregnancy: quinine 500 mg 3 times per day for 7 days (for 10 days on trips to the Far East).
- During the second trimester of pregnancy and the first half of the third trimester: either quinine alone (for 7 days), or combine with Fansidar® (this is not contraindicated in this period; however, this has not been available in Belgium since the end of 1997), or with clindamycine (3 x 600 mg per day for 5 days). Doxycycline, Malarone® and Halfan® are no longer used. According to the World Health Organization, Lariam® can be administered from the fourth month. Quinine occasionally causes contractions of the uterus, but it can bring on labour only at

the end of pregnancy. On the other hand high body temperature due to malaria also increases the risk of miscarriage or premature birth.

- Any of these antimalaria agents, if indicated, may also be used during lactation (Fansidar® is preferably not used during the first two weeks after birth).

### 3 Vaccinations

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Administration of a live attenuated vaccine to pregnant women should be avoided. Similarly, getting pregnant should also be avoided for 3 months after such vaccination. Inactivated vaccines can, whenever they are indicated, be administered without objection and may also be given during lactation. However, it is best to avoid vaccination during the first three months of pregnancy.

Yellow fever vaccine is not routinely given to pregnant women. A special certificate is given. In emergency cases (epidemic of yellow fever) the vaccine may be administered from the 6th month of pregnancy. Problems have never been reported upon accidental vaccination before the 6th month of pregnancy, and so there is no cause for alarm. Breast-feeding is not a contraindication for administration of the vaccine.

Tetanus vaccination must be up to date. Pregnant women may be vaccinated. Both the tetanus vaccine and the combined vaccine (tetanus/diphtheria) may be administered.

Vaccination is recommended to women who have no immunity to hepatitis A. Vaccination provides complete and long-lasting protection and may be administered from the second trimester of pregnancy.

Pregnant women should be protected against poliomyelitis. The oral polio vaccine is not given to pregnant women. The booster inoculation (if the previous vaccination was given more than 10 years before this) is preferably given by injectable killed vaccine.

Due to a lack of sufficient data, the relative risks to pregnant women of the oral and of the injectable typhoid vaccine are not known. The live vaccine is therefore not administered to pregnant women. The inactivated vaccine may be used.

Hepatitis B vaccine may be administered to pregnant women. Vaccination is indicated when there is some risk of infection with hepatitis B.

Meningococcal meningitis vaccine may be administered to pregnant women.

Rabies vaccine may be administered if necessary.

Measles-, mumps-, and rubella vaccine is contraindicated during pregnancy.

There are no specific data on the safety of vaccines against Frühsummer encephalitis and Japanese encephalitis in pregnant women, and hence these vaccines should not be routinely administered. However, if a pregnant woman has to go to a highly endemic area, she should certainly be vaccinated because of the great risk of infection for mother and child.

B.C.G.: Although a live vaccine, this vaccine may nevertheless be given to pregnant women in emergency, though in practice this is rarely done.

## **4 Miscellaneous**

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- In order to reduce the risk of deep venous thrombosis during long journeys by air: wear loose clothing, comfortably large shoes or slippers, regularly stretch your legs and walk around in the aircraft.
- Disinfection of drinking-water: the use of chlorine drops is no problem, but prolonged use (more than 3 weeks) of iodine drops is not advised.
- Traveller's diarrhoea: avoid use of medicines. Rehydration is essential (oral salt-sugar solution is an essential part of the travel medicine kit). Loperamide is regarded as relatively safe, but should only be used for excessive watery diarrhoea. Quinolones are contraindicated. Aminopenicillins and erythromycin are safe in an emergency during pregnancy, and cotrimoxazole may be used in the second trimester of pregnancy, though their efficacy is often insufficient. Azithromycin (Zitromax 500 mg per day for 3 days) or second- or third-generation oral cephalosporins can be used by pregnant women for severe traveller's diarrhoea.
- Amoebic dysentery is a potentially life-threatening disease and can be treated with metronidazole (to be avoided in the first three months of pregnancy) and paromomycin.
- A pregnant woman should enquire before departure to what extent the travel insurance covers medical problems due to pregnancy.