

Dengue Fever

Information for women who have dengue fever during pregnancy or breastfeeding

The information provided below is for readers based in the United States of America. Readers outside of the United States of America should seek the information from local sources.

What is dengue fever?

Dengue fever (DF) is caused by the dengue virus, which is spread to humans mostly through bites from *Aedes aegypti* mosquitos, the same mosquitos that also carry yellow fever, chikungunya, and [Zika viruses](#). On rare occasions, the dengue virus can transmit from human to human through organ transplants, transfusion of blood products, or, in the case of pregnancy, through the placenta from an infected mother to her developing baby.

Following infection, the dengue virus produces disease that comes in three phases, both in pregnant and non-pregnant people. First comes the febrile phase, which basically means that you develop a high [fever](#). Next comes what is called the critical phase, in which the fever breaks, body temperature drops but in a small number of cases, there is a rapid progression to more severe disease. Finally, there is a convalescent phase, also called the reabsorption phase, a period in which the person makes gradual progress toward recovery as the fluid that has leaked into tissues is reabsorbed into the blood.

How common is dengue during pregnancy?

About 2.5 billion people (40 percent of humans) are estimated to live in regions where there is a strong risk of dengue virus transmission. These regions are spread through more than 100 countries in Asia, the Americas, Africa, the Pacific Islands, and the Caribbean. According to the World Health Organization (WHO), between 50 and 100 million people are infected with dengue virus each year, leading to about 500,000 cases of DHF and 22,000 deaths.

In the continental US (the contiguous 48 states), dengue infection occurs almost exclusively in people who have been traveling in tropical and subtropical regions of the world. Within the US, the majority of dengue infections occur among people who live in Puerto Rico and on other islands, such as the U.S. Virgin Islands, Guam, and Samoa - places where the virus and the *A. aegypti* mosquito live. Outbreaks of

DF and DHF have been fairly common for the past century in Puerto Rico in particular, where its possible to be infected with dengue virus throughout the year, but especially from August to November.

How is dengue fever diagnosed?

Dengue fever moves to the top of the list of possible diagnoses in cases when somebody has developed a fever (generally 40°C or higher) within 14 days of having been traveling or residing, in an area of the world where dengue virus and *Aedes* mosquitoes exist, and if the person has at least two of the following symptoms: Nausea and vomiting; rash; aches (muscle, joint, eye, or [headaches](#)); evidence that severe dengue is developing, such as leakage of fluid from blood vessels; a positive result on what's called a tourniquet test, which reveals how easily bruises form; a low white blood cell count. Diagnosis is then confirmed by testing for the presence of the dengue virus, usually with a technique called the polymerase chain reaction (PCR) to identify genetic material of the virus. Less commonly, antibody testing is performed to demonstrate that the virus is present.

Does dengue fever cause problems during pregnancy?

During the initial phase of the condition, the febrile phase, which can last about 2-7 days, the main problem is that the woman will suffer a high fever (40°C or higher). In addition to making you uncomfortable and often giving you the chills, a fever can cause [dehydration](#), or exacerbate any dehydration that you were experiencing already. Dehydration, in turn, can make you dizzy and weak, and if severe it can force your heart to accelerate and work harder to compensate for the decrease in volume of your blood, plus it can change the concentrations of the various electrolytes (minerals in your blood that are dissolved as individual atoms with unequal numbers of electrons and protons), which can disrupt your physiology in multiple ways. In the event that the disruption of body systems triggers a [spontaneous abortion](#) (miscarriage), a pregnant woman with dengue fever has an elevated risk of suffering severe bleeding in the uterus.

The second phase of dengue virus infection is called the critical phase, because its a time when you are in danger of developing a serious complication, resulting from leakage of the liquid component of blood (plasma) out from capillaries (small blood vessels). In most people with dengue virus infection, this leakage either does not happen noticeably, or it happens to what doctors call a sub-clinical degree. The latter means that capillaries are leaking fluid, but not enough to cause one of the life-threatening complications, if the dengue fever is managed carefully. In a small fraction of cases, the leakage becomes clinical, meaning that it produces noticeable symptoms. This can lead to either of two life-

threatening complications of DF, one of which is called dengue hemorrhagic fever (DHF), the other called dengue shock syndrome (DSS).

While most people, including most pregnant patients, with DF experience limited disease in which fever is the worse symptom, the critical period is a time when you must be observed carefully for warning signs that, if present, mean that you are at risk of developing clinical fluid leakage that can lead to DHF or DSS. Such warning signs include bruises on the skin, blood oozing from the nose or mouth, breathing difficulty (suggesting fluid entering the lungs, which can be confirmed by taking an x-ray image of your chest), a tender, enlarged liver, and increasing grogginess (lethargy) even though you remain awake.

Even if you have had a normal pregnancy up to the point of getting DF, even if you have no medical conditions, and even if you have no warning signs, simply being pregnant means that you must be admitted to the hospital for monitoring of your dengue infection until the disease has resolved.

Does dengue fever during pregnancy cause problems for the baby?

Dengue fever increases the risk of premature birth and low birth weight. Some studies have suggested that fever during pregnancy can increase a baby's risk of having congenital defects involving the heart and other organs. Also, a recent study identified maternal fever as a possible risk for the baby developing autism spectrum disorder.

What to consider about taking medications when you are pregnant or breastfeeding:

- The risks to yourself and your baby if you do not treat the dengue virus infection. In this case, treatment is supportive and includes only mild medications such as those given for fever.
- The risks and benefits of each medication you use when you are pregnant
- The risks and benefits of each medication you use when you are breastfeeding

What should I know about using medication to treat dengue fever during pregnancy?

There is no specific medication for treating dengue fever, such as an anti-viral drug to combat dengue virus. Instead, treatment is supportive, consisting of very careful management of fluids and electrolytes, and management of the fever. The latter rests on the use of [acetaminophen](#) in the United States and [paracetamol](#) in several other countries. These drugs are considered safe during pregnancy. Another category of anti-fever medications, that includes [non-steroidal anti-inflammatory drugs \(NSAIDs\)](#) and [aspirin](#), are safe during some phases of pregnancy for use against fever from certain causes, but they are not safe for anybody with dengue fever (whether pregnant or not), because they put the

individual at risk of bleeding.

Who should NOT stop taking medication for dengue fever during pregnancy?

As noted above, medication is given generally only to combat the fever of dengue, whereas most of the effort in dengue fever focuses on the management of fluids.

What should I know about choosing a medication for my dengue fever during pregnancy?

You should not take non-steroidal anti-inflammatory drugs (NSAIDs) to combat fever, as these can exacerbate bleeding. Stick with paracetamol or acetaminophen.

You may find Pregistrys expert reports about the individual medications used to treat dengue fever [here](#). Additional information can also be found in the sources listed at the end of this report.

What should I know about taking a medication for my dengue virus when I am breastfeeding?

Acetaminophen and paracetamol, given for fever, are not thought to be risky for those who are nursing infants. What has concerned mothers in the past is whether insect repellent could affect a nursing infant. The answer to this is that the risk of insect repellent entering breastmilk is less than the risk of the dengue virus itself entering breastmilk, although the latter is also very unlikely. Thus, there is no strong reason for avoiding medication, or for avoiding breastfeeding. On the other hand, the evidence for using insect repellent is very strong, since it is an important preventive measure to keep you from getting dengue virus in the first place.

What alternative therapies besides medications can I use to treat my dengue fever during pregnancy?

The main component of therapy for dengue fever is management of fluids. Whenever possible, patients with dengue fever should be given fluids by mouth. Intravenous administration of fluids is reserved for patients who are not getting enough hydration from oral fluids, and must be performed with extreme care and only for a short period because too much fluid during the critical phase can exacerbate the movement of fluids out of capillaries, leading to fluid in the lungs and other dangerous problems. Fluid management includes monitoring how much fluid goes into the person, and also the volume of fluid that comes out as urine. The particular situation of the patient informs the decision on what particular type of fluid the doctor orders. A type of fluid called isotonic saline is given initially, for instance, but then colloid fluids are given when a patient is in shock despite having received 2 -3 doses of saline.

The most important strategy against Dengue fever is prevention by way of mosquito control and also the use of insect repellent.

What can I do for myself and my baby when I have dengue fever during pregnancy?

Pregnancy is a condition that warrants hospital admission for dengue fever, so the best thing you can do is agree to be hospitalized and follow the instructions of your health care providers.

Resources for dengue fever in pregnancy:

For more information about **dengue fever** during and after pregnancy, contact

<http://www.womenshealth.gov/> (800-994-9662 [TDD: 888-220-5446]) or check the following links:

- US Centers for Disease Control and Prevention: [Protect Yourself and Your Baby from Dengue](#)
- Baby Center: [Dengue Fever in Pregnancy](#)

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General information

It is very common for women to worry about having a miscarriage or giving birth to a child with a birth defect while they are pregnant. Many decisions that women make about their health during pregnancy are made with these concerns in mind.

For many women these concerns are very real. As many as 1 in 5 pregnancies end in a miscarriage, and 1 in 33 babies are born with a birth defect. These rates are considered the background population risk, which means they do not take into consideration anything about the health of the mom, the medications she is taking, or the family history of the mom or the baby's dad. A number of different things can increase these risks, including taking certain medications during pregnancy.

It is known that most medications, including over-the-counter medications, taken during pregnancy do get passed on to the baby. Fortunately, most medicines are not harmful to the baby and can be safely taken during pregnancy. But there are some that are known to be harmful to a baby's normal

development and growth, especially when they are taken during certain times of the pregnancy. Because of this, it is important to talk with your doctor or midwife about any medications you are taking, ideally before you even try to get pregnant.

If a doctor other than the one caring for your pregnancy recommends that you start a new medicine while you are pregnant, it is important that you let them know you are pregnant.

If you do need to take a new medication while pregnant, it is important to discuss the possible risks the medicine may pose on your pregnancy with your doctor or midwife. They can help you understand the benefits and the risks of taking the medicine.

Ultimately, the decision to start, stop, or change medications during pregnancy is up to you to make, along with input from your doctor or midwife. If you do take medications during pregnancy, be sure to keep track of all the medications you are taking.