

Vector-Borne Illnesses: How to Fight the (Bug) Bite During Pregnancy

The arrival of spring and summer warmth spurs many of us to spend more time outdoors and make travel plans, be it for a honeymoon, babymoon, or other seasonal getaway. Such was the case with Yesenia, who contacted MotherToBaby with questions about her upcoming summer vacation after finding out she is pregnant. Yesenia knew that with warmer temperatures comes an increased chance of mosquito bites and the infections they can carry. Like Yesenia, as you engage in more outdoor activity and plan getaway time, you may also have questions about exposure to these infections and their possible effects on a pregnancy. Understanding the potential risks of these illnesses and ways to protect yourself may help you make better-informed decisions before you decide to travel. This month, MotherToBaby turns to our partner the Society for Maternal-Fetal Medicine (SMFM) to help answer some of Yesenia's questions:

What are vectors and vector-borne illnesses?

Vectors are living organisms, such as mosquitoes, ticks, biting flies or fleas, that are capable of spreading diseases to humans through bites and other forms of contact. Some common examples of these diseases, called vector-borne illnesses, include Chikungunya, dengue, malaria, Oropouche, and Zika virus. While disease-carrying insects can bite year-round, they are most active during warm weather. Many vector-borne illnesses have no cure, and treatment is usually limited to just managing the symptoms. This is why it's important to protect yourself from bites!

How can vector-borne illnesses affect a pregnancy?

There can be serious health complications for the mother with some vector-borne infections during pregnancy, such as severe anemia, bleeding, and the need for hospitalization. If the mother develops serious complications, it increases the chance of problems for the baby, such as low birth weight, preterm delivery, or stillbirth. Some vector-borne illnesses may be passed from mother to baby during pregnancy, which can lead to serious birth defects, such as microcephaly (a condition where the head is smaller than normal), other structural defects of the brain and eyes, and problems with long-term development and cognition (such as learning, understanding, and memory). For more information, see the MotherToBaby fact sheets on [dengue](#), [malaria](#), [Oropouche](#), and [Zika](#). The CDC also has information about [chikungunya](#) and other vector-borne diseases. Additionally, SMFM has [fact sheets](#) on vector-borne illnesses and pregnancy (also available in Arabic, Chinese, Korean, Spanish, Tagalog, and Vietnamese).

I am pregnant and I am planning to travel. How can I protect myself?

Here are some quick tips:

- If traveling, check your destination(s) on CDC's [Travelers' Health](#) page before booking your trip. There you will find recommended vaccines and other tips to prevent travel-related illness at each destination. Avoid

nonessential travel to any areas that have a Travel Health Notice of Level 2 or higher.

- Apply Environmental Protection Agency (EPA) registered insect repellents to exposed skin and clothing.
- Avoid outdoor activity during dusk and dawn when mosquitoes are most active.
- Minimize exposure to open water sources, such as pools and lakes, which are breeding grounds for vectors.
- Keep windows and doors closed or use fans, mosquito nets, and mesh screens on windows and doors.
- Use the CDC's Pregnant Travelers' Health Guide for other general travel tips.

Which insect repellents are EPA-registered? And are they safe for me to use during pregnancy?

EPA-registered insect repellents include:

- N, N-diethyl-meta-toluamide (DEET)
- Picaridin
- IR3535
- Oil of lemon eucalyptus
- Para-menthane-diol

The EPA has studied these insect repellents for their effectiveness and safety profile. When used as directed on the product label, there is no evidence to suggest that these insect repellents increase the chance of birth defects or other pregnancy-related complications. For additional information, please see the MotherToBaby fact sheet on **insect repellents**.

Are there alternative insect repellents I can use?

Other essential-oil-based insect repellent products, including disposable wristbands and patches, are often advertised as safer alternatives to EPA-registered products, but there is no scientific evidence that they effectively protect you and your baby against disease-carrying insects. In addition, the essential oils in these products, such as peppermint, citronella, and lemongrass, are not regulated by the EPA as pesticides. It's better to steer clear of these products in favor of EPA-registered insect repellents.

I've read about "parasite cleanses." Do they work on vector-borne illnesses?

Parasites are living organisms that live on or inside a host and can cause harm by damaging tissues or triggering severe immune responses. Vector-borne illnesses are different from parasitic infections. But you may have seen social media posts touting home parasite cleanses that claim to "detox the body" and "kill off parasites" and wonder whether they could help prevent these diseases. The answer is a decided "no."

These cleanses, which contain a blend of herbs, have no proven record of efficacy (doing what the label claims they do) or safety (that they will not cause unwanted symptoms), especially for use during pregnancy. Although many of these products claim to target a wide range of parasites, they can have dangerous and unknown side effects for you and your baby.

Parasitic and vector-borne illnesses are serious conditions requiring proper medical attention. They cannot be cured by these products. If you suspect that you have a parasitic infection—or any other serious illness—it's important to speak with a doctor as soon as possible, especially during pregnancy.

The bottom line

So, what's SMFM's advice to Yesenia for her upcoming travel? The bottom line for protecting herself this spring and summer from vector-borne illnesses: stay away from higher-risk areas, stick with proven, safe repellents recommended by the EPA, and get in touch with her healthcare provider if she has any questions. Safe travels to Yesenia and to you!



More about Our Guest Co-Authors from SMFM

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Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://www.MotherToBaby.org).

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You are pregnant. You ask, “Can I take my medication?” If you ever heard, **“it depends...”**, you are not alone. Things affect people differently.

So, what is going on?

This has to do with genetics. Genetics is the study of genes. Genes are a part of our DNA. Genes tell your cells what to do. Genes tell us how to process the world around us.

What Do We Mean by “Exposures”?

Anything that comes into contact with your body is an exposure. Food, drinks, and drugs are exposures. Getting sick is an exposure. Stress is an exposure too.

Exposure questions can feel like a lot!

Why Can the Same Exposure Affect People Differently?

People can have the exact same exposure. Their bodies might handle it differently. That is because of metabolization. Metabolization is how fast our bodies break down an exposure. This affects how long an exposure stays in your body.

Genes affect how your body breaks down something. Genes shape how the body responds to an exposure.

What Are Some Examples?

- **Caffeine and Pregnancy**

Let us say that you got coffee with a friend at 3:00 pm. You might fall asleep easily that night. Your friend might feel jittery after half a cup. You and your friend have different responses to the same amount of caffeine. That difference comes from your genetics. Your genes might metabolize caffeine faster. This is why you fell asleep easily. Your friend

might metabolize caffeine more slowly. This is why your friend felt jittery.

Genes affect how fast caffeine is broken down. This is why caffeine during pregnancy rules are careful. It is suggested that you get 200 mg of caffeine (or less) per day during pregnancy. The rules are there to protect those that process caffeine more slowly.

The end message? There are rules about pregnancy. These rules are broad. Your experience might be different than what the rules say. For more information on caffeine, click here:
<https://mothertobaby.org/fact-sheets/caffeine-pregnancy/>

- **General Anesthesia and Breastfeeding**

Let us say that your dentist tells you to get your wisdom teeth removed. This is a surgery. For this, you will get general anesthesia. General anesthesia is a mix of medication. This is given so that you can fall asleep for a procedure.

General anesthesia is broken down fast. Your friend got her wisdom teeth removed last year. She woke up 2 minutes after her surgery was done. You woke up 5 minutes after your surgery was done.

It takes some time for you to feel normal after general anesthesia. You might feel a little loopy right after general anesthesia. Your friend felt normal about 1 hour after her surgery. You felt normal about 3 hours after your surgery. You and your friend react differently to general anesthesia.

Genes affect how fast something is broken down by the body. This is why the rules for getting general anesthesia while breastfeeding are careful. It is suggested to wait to breastfeed if you still feel loopy. This means waiting to breastfeed until you feel “back to normal.”

The end message? Everyone needs a different amount of time to break down general anesthesia. The best time to breastfeed is different for everyone. For more information on general anesthesia, click here:
<https://mothertobaby.org/fact-sheets/general-anesthesia-pregnancy/>

What Does This Mean for Pregnancy and Breastfeeding Advice?

People are different. People have different genes. This means that people break down exposures in a different way.

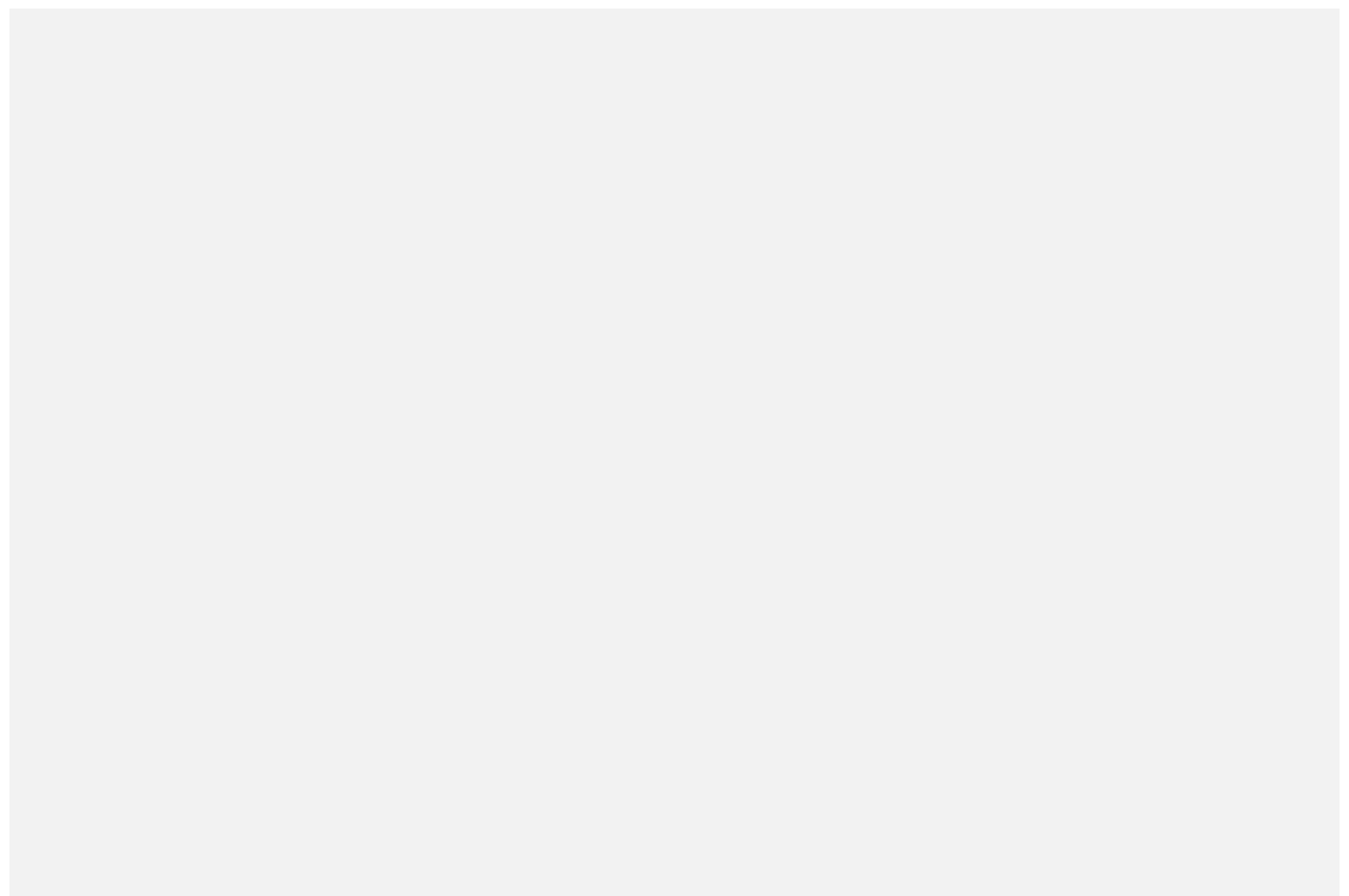
Most recommendations try to:

- Lower the chance of any possible problems;
- Help people who might break things down more slowly;
- Balance safety with needs.

Final Thoughts

What happens to your body during pregnancy and breastfeeding can feel so hard. It can feel harder when your body reacts differently than what is expected. If you compare yourself to others, you should know you did nothing wrong. You did not need to know better. You did not fail.

You might feel overwhelmed or worried about an exposure. You might feel frustrated if you get advice that clashes. Talking to MotherToBaby can help you get information without judgment.





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