

Prevent Mosquito Bites

Cover exposed skin by wearing long-sleeved shirts and long pants. Use an insect repellent with any of the following active ingredients:

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and icaridin)
- Oil of lemon eucalyptus (OLE) or PMD (also known as para-menthane-3,8-diol)
- IR3535 (Avon Skin So Soft Bug Guard Plus)

Higher percentages of active ingredient provide longer protection. Always use insect repellent as directed. If you are also using sunscreen, apply sunscreen first and insect repellent second. Reapply as directed.



You can buy products containing permethrin to put on clothing and gear (tents, sleeping bags) to repel mosquitoes. Protection from permethrin will last through several washings. Do not use permethrin directly on skin.

Stay and sleep in screened or air-conditioned rooms. Consider sleeping under a bed net, especially if the area where you are sleeping is exposed to the outdoors.

If You Think You Have Dengue

Talk to your doctor as soon as possible if you get sick with a fever within 2 weeks of being in a dengue risk area. Get lots of rest and drink plenty of liquids. Take acetaminophen (Tylenol or Panadol) as needed for fever and pain. Do not take aspirin, ibuprofen (Advil), or naproxen (Aleve), since these may increase bleeding.



Protect Yourself from Dengue When You Travel

- Use an insect repellent with an approved active ingredient.
- Treat clothing and gear with permethrin for additional protection.
- Cover exposed skin with long sleeves and pants.
- Stay in a screened or air-conditioned room.
- Consider sleeping under a bed net.
- Use area repellents if there are mosquitoes in your room.
- Empty standing water to keep mosquitoes from laying eggs.
- Get medical care if you get sick with fever within two weeks of returning from the tropics or subtropics.

Learn more about dengue at www.cdc.gov/dengue and www.cdc.gov/travel.
For more information, please call 1-800-CDC-INFO (800-232-4636) or visit www.cdc.gov/info.

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Travelers Can Prevent Dengue



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

What Is Dengue?

Dengue is a viral illness spread through mosquito bites. Though most infected people don't get sick or have mild symptoms, dengue can also be a severe and sometimes fatal illness. Symptoms can take up to 2 weeks to develop. Mild dengue symptoms include fever, headache, pain in the eyes, muscle and joint pain, nausea and vomiting, or rash.

Some people develop severe dengue just as they think they are getting better. Severe dengue symptoms may include intense stomach pain, repeated vomiting, abnormal bleeding from the nose or gums, vomiting blood or blood in the stool, drowsiness or irritability, clammy skin, or difficulty breathing. If you develop any of these warning signs, go to the emergency room right away. Severe dengue generally requires hospitalization.

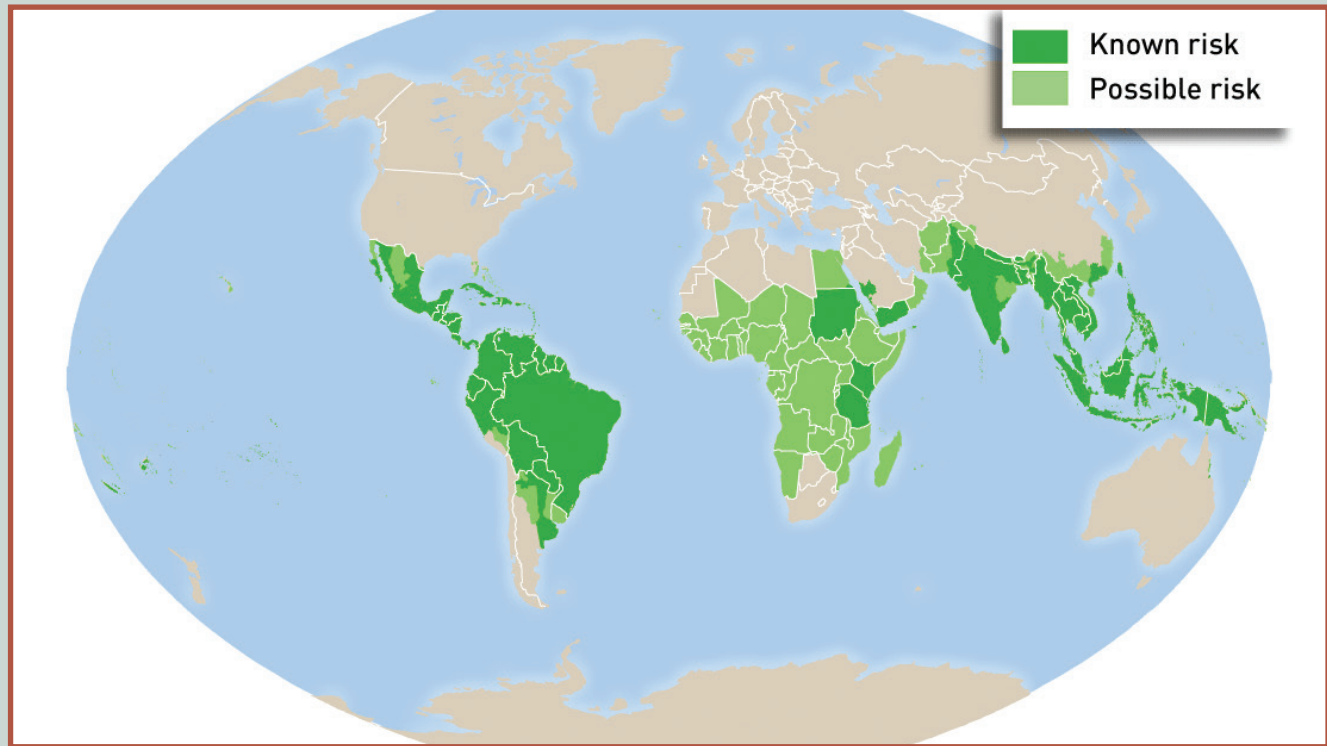


Who Is at Risk?

Anyone who travels to an area where there is dengue is at risk. The mosquitoes that spread dengue live in tropical and subtropical regions and live inside or around homes or hotels. They can bite during the day as well as at night. You can get dengue more than one time.

You Can Prevent Dengue

There is no vaccine or medicine to prevent dengue. Protect yourself from dengue by preventing mosquito bites.



Areas where dengue is a risk are highlighted. Travelers to these areas should take steps to prevent mosquito bites.

Protect Your Children

If you are traveling with a baby, dress him or her in loose clothing that covers arms and legs. Cover crib, stroller, and baby carrier with mosquito netting.

Do not use insect repellent on babies younger than 2 months. Always follow package directions when using repellent on older children.



Protect the Area Where You Are Staying

Use insecticides or area repellents, such as mosquito coils or candles, containing the active ingredients metofluthrin or allethrin indoors if there are mosquitoes.

If you will be staying longer than a week in an area where there is a risk of dengue, prevent mosquitoes from laying eggs by emptying any containers of standing water, such as flower vases, rain barrels, or discarded tires.

Keep Mosquitoes out of your Septic Tank

Mosquitoes can get inside broken or unsealed septic tanks and lay eggs. Each day thousands of mosquitoes emerge from poorly maintained septic tanks. These mosquitoes are capable of spreading viruses like dengue, West Nile, and chikungunya that can cause serious illness.

Inspect and maintain your septic tank monthly to keep it sealed

Mosquitoes may be laying eggs inside your septic tank if it is:

- Open or unsealed
- Broken with cracks or spaces between the blocks
- Lacking a screen covering the ventilation pipe

Mosquito eggs will hatch into larvae and can be found swimming in septic tanks. To reduce your contact with mosquitoes examine your septic tank monthly, to look for missing covers, cracks or gaps in the blocks, and missing ventilation screens.



Mosquitoes in a septic tank



Repair broken septic tank covers



Cover ventilation pipes

Seal and repair your septic tank

Prevent mosquitoes from entering and exiting your septic tank:

- Repair cracks or gaps in the exterior walls of the septic tank using cement.
- Cover ventilation pipes with a screen mesh, repair broken pipes and seal at the joints.
- Fill abandoned or unused septic tanks with dirt or gravel.



Septic tank ventilation pipe with screen mesh



Septic tank with concrete cover





Septic tank sealed with PVC cap

Mosquito Bite Prevention (United States)



Not all mosquitoes are the same. Different mosquitoes spread different viruses and bite at different times of the day.

Type of Mosquito	Viruses spread	Biting habits
 <p><i>Aedes aegypti</i>, <i>Aedes albopictus</i></p>	<p>Chikungunya, Dengue, Zika</p>	<p>Primarily daytime, but can also bite at night</p>
 <p><i>Culex species</i></p>	<p>West Nile</p>	<p>Evening to morning — do not bite at night</p>

Protect yourself and your family from mosquito bites

Use insect repellent

Use an Environmental Protection Agency (EPA)-registered insect repellent with one of the following active ingredients. All EPA-registered insect repellents are evaluated for safety and effectiveness.

Active ingredient	Some brand name examples*
Higher percentages of active ingredient provide longer protection	
DEET	Off!, Cutter, Sawyer, Ultrathon
Picaridin , also known as KBR 3023 , Bayrepel , and icaridin	Cutter Advanced, Skin So Soft Bug Guard Plus, Autan (outside the United States)
Oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD)	Repel
IR3535	Skin So Soft Bug Guard Plus Expedition, SkinSmart



* Insect repellent brand names are provided for your information only. The Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services cannot recommend or endorse any name brand products.



Protect yourself and your family from mosquito bites *(continued)*



- ◆ Always follow the product label instructions.
- ◆ Reapply insect repellent every few hours, depending on which product and strength you choose.
 - » Do not spray repellent on the skin under clothing.
 - » If you are also using sunscreen, apply sunscreen first and insect repellent second.

Natural insect repellents (repellents not registered with EPA)

- ◆ EPA has not evaluated natural insect repellents for effectiveness.
 - » Examples of ingredients used in unregistered insect repellents include: citronella oil, cedar oil, geranium oil, peppermint oil, or soybean oil.

If you have a baby or child



- ◆ Always follow instructions when applying insect repellent to children.
- ◆ Do not use insect repellent on babies younger than 2 months of age.
- ◆ Dress your child in clothing that covers arms and legs, or
 - ◆ Cover crib, stroller, and baby carrier with mosquito netting.
 - ◆ Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin.
 - » Adults: Spray insect repellent onto your hands and then apply to a child's face.

Treat clothing and gear



- ◆ Treat items such as boots, pants, socks, and tents with permethrin or purchase permethrin-treated clothing and gear.
 - » Permethrin-treated clothing will protect you after multiple washings. See product information to find out how long the protection will last.
 - » If treating items yourself, follow the product instructions.
 - » Do not use permethrin products directly on skin.

Mosquito-proof your home



- ◆ Use screens on windows and doors. Repair holes in screens to keep mosquitoes outside.
- ◆ Use air conditioning when available.
- ◆ Keep mosquitoes from laying eggs in and near standing water.
 - » Once a week, empty and scrub, turn over, cover, or throw out items that hold water, such as tires, buckets, planters, toys, pools, birdbaths, flowerpots, or trash containers. Check inside and outside your home.