Mosquito Bite Prevention (United States)

It’s always important to avoid mosquito bites, and especially when you may be ill with a disease spread by mosquitoes. Not all mosquitoes are the same. Different mosquitoes spread different viruses and bite at different times of the day.

<table>
<thead>
<tr>
<th>Type of Mosquito</th>
<th>Viruses spread</th>
<th>Biting habits</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aedes aegypti,</em> <em>Aedes albopictus</em></td>
<td><em>Chikungunya,</em> <em>Dengue,</em> <em>Zika</em></td>
<td>Primarily daytime, but can also bite at night</td>
</tr>
<tr>
<td><em>Culex species</em></td>
<td><em>West Nile</em></td>
<td>Evening to morning</td>
</tr>
</tbody>
</table>

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. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.

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

* Insect repellent brand names provided for information only. The CDC cannot recommend or endorse any name brand products.

**Always follow label instructions. Do not use OLE or PMD on children younger than 3 years.
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)
- The effectiveness of non-EPA registered insect repellents, including some natural repellents, is not known.
- To protect yourself against diseases like chikungunya, dengue, and Zika, CDC and EPA recommend using an EPA-registered insect repellent.
- When used as directed, EPA-registered insect repellents are proven safe and effective.
- For more information: [www2.epa.gov/insect-repellents](http://www2.epa.gov/insect-repellents)

Mosquito-proof your home
- The mosquitoes that spread diseases like Zika lay their eggs in containers with standing water around your home!
  - 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.
- Use screens on windows and doors. Repair holes in screens to keep mosquitoes outside.
- Use air conditioning when available.

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 stroller and baby carrier with mosquito netting when outdoors.
- 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.
- Do not use products containing oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) on children under 3 years of age.

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.

www.cdc.gov/features/StopMosquitoes