

# HOW TO PROTECT AGAINST MOSQUITO BITES



Mosquitoes bite during the day and night. They live indoors and outdoors. Protect your family from mosquito bites. Use insect repellent, wear long-sleeved shirts and pants, and take steps to control mosquitoes indoors and outdoors.

## Use insect repellent

- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane-diol, or 2-undecanone.
- Always follow product label instructions.
- Reapply insect repellent as directed.
  - » Do not spray repellent on the skin under clothing.
  - » If you are also using sunscreen, apply sunscreen first and insect repellent second.
- The effectiveness of non-EPA registered insect repellents, including some natural repellents, is not known.



## Wear long-sleeved shirts, pants Treat clothes and gear

- Wear long-sleeved shirts and pants.
- Treat items such as boots, pants, socks, and tents with permethrin or buy permethrin-treated clothing and gear.
  - » Permethrin is an insecticide that kills or repels mosquitoes.
  - » 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.



## EPA-registered active ingredients

Higher percentages of active ingredient provide longer protection

DEET

Picaridin (known as KBR and icaridin outside the US)

IR3535

Oil of lemon eucalyptus (OLE)

Para-menthane-diol (PMD)

2-undecanone



Find the insect repellent that's right for you by using [EPA's search tool](#).

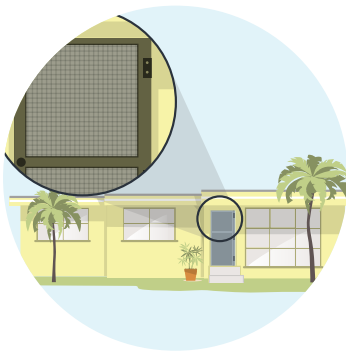
The EPA's search tool is available at: [www.epa.gov/insect-repellents/find-insect-repellent-right-you](http://www.epa.gov/insect-repellents/find-insect-repellent-right-you)



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

## Protect babies and children

- Always follow instructions when applying insect repellent to children.
- Do not use insect repellent on babies younger than 2 months old.
  - » Instead dress your child in clothing that covers arms and legs.
  - » Cover strollers and baby carriers with mosquito netting.
- Do not use products containing oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) on children younger than 3 years old.
- Do not apply insect repellent onto a child's hands, eyes, mouth, cuts or irritated skin.
  - » Adults: spray insect repellent onto your hands and then apply to a child's face.



## Control mosquitoes indoors

- Keep windows and doors shut and use air conditioning if possible.
- Use, install, or repair window and door screens.
- **Once a week**, empty or throw out any items that hold water like vases and flowerpot saucers.
- Use an indoor insect fogger or indoor insect spray to kill mosquitoes and treat areas where they rest. These products work immediately, but may need to be reapplied. Always follow label instructions.

## Control mosquitoes outdoors

- **Once a week**, empty or throw out any items that hold water like vases and flowerpot saucers.
- Tightly cover water storage containers (buckets, rain barrels, etc.)
- For containers without lids, use mesh with holes smaller than an adult mosquito.
- Use larvicides to treat large containers of water that will not be used for drinking and cannot be covered or dumped out.
- Use an outdoor insect spray in dark humid areas where mosquitoes rest, like under patio furniture or in the carpet or garage. Always follow label instructions.
- If you have a septic tank, repair cracks or gaps. Cover vent or plumbing pipe openings using mesh with holes smaller than an adult mosquito.

