

4-H COMMUNITY HEALTH OUTREACH TOOLKIT: RESPONDING TO MOSQUITO-BORNE ILLNESSES

Learn what you can do to help your
community fight against Zika.



United States Department of Agriculture | National Institute of Food and Agriculture | 4-H National Headquarters



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PROTECTING AGAINST ZIKA

You may have heard about Zika on the news, social media, and possibly even in your classes. Zika is a disease that is transmitted by a certain type of mosquito bite and can cause a lot of health issues for people.

But you can help educate your peers and neighbors on the risks associated with mosquito bites. Fairs, farmer's markets, sporting activities, and other community events are the perfect opportunity to reach out and educate others about mosquito bite prevention.

Use this toolkit to teach your friends and community about the easy steps they can take to protect against mosquito bites and diseases like Zika!



There are simple everyday steps that you can take to make sure that your family, friends, and neighborhoods are safe from mosquitoes. Because there are multiple types of illnesses that can be transmitted through mosquitoes, you should always take steps to protect yourselves from any type of mosquito bite.

In this toolkit, there are:

- Resources designed to help you stop the breeding of mosquitoes and keep yourself safe and healthy from mosquito bites.
- Infographics that help explain what happens when you are bitten by a mosquito and the risks that are associated with it.
- Activities that can help you teach others in your community about what they can do to keep their families safe from diseases carried by mosquitoes.

With this toolkit, you will be able to teach yourself about Zika, and learn how to educate others on the risks of mosquito bites and the spread of mosquito-borne illnesses. The resources in this toolkit will help you keep yourself, your family, and your community safe from mosquitoes.

ABOUT ZIKA VIRUS

Diseases, like Zika, can be spread when people get bitten by certain types of mosquitoes, specifically the *Aedes aegypti* and *Aedes albopictus*.*

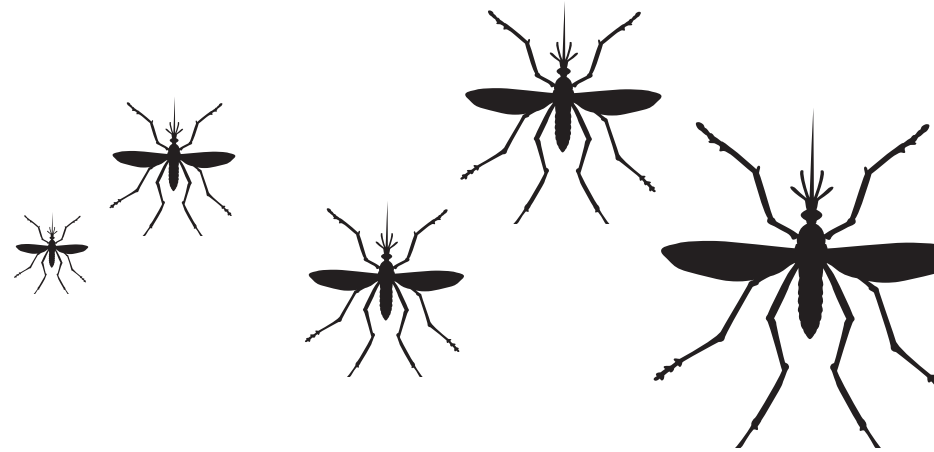
Any person that lives in an area that has these types of mosquito, which spread Zika, is at risk and could catch Zika through a mosquito bite. The types of mosquitoes that are known to carry Zika virus are found in almost every state in the country, from Maine to Florida and from Washington, DC to California.**

A mosquito that bites a person who has Zika can spread it to another person through bites. People can only catch Zika if they live in or travel to an area where mosquitoes are spreading Zika and are bitten by a mosquito carrying Zika. Everyone can take steps to prevent mosquito bites to protect themselves and others.*

Zika is spread through mosquito bites; wearing light-weight long pants, shirts, and bug spray can help you avoid being bitten. Making sure all standing water is removed can help you reduce the number of mosquitoes in your area, which ultimately reduces the risk of spreading Zika.*

Standing water is any water that does not flow, like you would find in old tires, buckets, planters, toys, abandoned swimming pools, birdbaths, flowerpot saucers, or trash containers (properly maintained swimming pools do not qualify as standing water, as long as the water is flowing).

Outside your house, once a week, empty and scrub, turn over, cover, or throw out items that hold water, and tightly cover any water storage containers. If you live in an area where the type of mosquito that spreads Zika lives, which most people do, these simple precautions are necessary to reduce your risk.



Many people infected with Zika virus won't have symptoms or will only have mild symptoms. The most common symptoms of Zika, which happen to be very similar to flu symptoms, are red eyes, fever, joint pain, or a rash that lasts a few days to a week. There is no specific medicine or vaccine for Zika virus but you can treat symptoms.*

Get plenty of rest; use insect repellent in order to minimize the risk of transmission; drink fluids to prevent dehydration; take medicine such as acetaminophen to reduce fever and pain. (If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication.)

Zika infection during pregnancy can cause a serious birth defect called microcephaly that is a sign of incomplete brain development. Doctors have also found other problems in pregnancies and among fetuses and infants infected with Zika virus before birth.

If you think you may have or had Zika, tell your doctor and take steps to protect others and minimize the risk of transmission. Keep yourself, your family, and your neighborhood safe from Zika by using the resources throughout this toolkit.

*Source: CDC, Centers for Disease Control & Prevention, <http://www.cdc.gov/zika/about/index.html>

**Source: CDC, Centers for Disease Control & Prevention, <http://www.cdc.gov/zika/vector/range.html>

*Source: CDC, Centers for Disease Control & Prevention, <http://www.cdc.gov/zika/pdfs/fs-outdoors.pdf>

WHAT WE KNOW



AND WHAT WE DON'T KNOW.



What we know



Zika can be passed from a pregnant woman to her fetus.



Infection during pregnancy can cause certain birth defects.



Zika is spread mostly by the bite of an infected *Aedes* species mosquito.

These mosquitoes are aggressive daytime biters. They can also bite at night.



The mosquitoes that can carry Zika are found in some areas of the US.



Because the mosquitoes that spread Zika virus are found throughout the tropics, outbreaks will likely continue.



There is no vaccine or medicine for Zika.

What we don't know



If there's a safe time during your pregnancy to travel to an area with Zika



If you do travel and are bitten

- How likely you are to get Zika
- How likely it is that your baby will have birth defects from the infection





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

For more information:
www.cdc.gov/zika

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
 <i>Aedes aegypti</i> , <i>Aedes albopictus</i>	Chikungunya, Dengue, Zika	Primarily daytime, but can also bite at night
 <i>Culex</i> species	West Nile	Evening to morning

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.

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)

- ◆ 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/insectrepellents

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.
 - ◆ 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.

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.

VIDEO: FLORIDA KEYS JR. MRC SPREADS ZIKA PREVENTION AWARENESS

Students with the Florida Junior Medical Reserve Corps helped teach people what they could do to protect themselves from the Zika virus and how to prevent it from spreading in their community.



(CLICK VIDEO TO PLAY)

Please note this video was filmed prior to the continental US transmission of Zika virus

TEST YOUR KNOWLEDGE: ACTIVITIES

This section contains activities related to mosquito-borne illnesses that you can do with your friends and community.

Use this quiz to test your own knowledge about mosquitoes by answering the trivia questions with your friends!

1. True or False:

There is a cure and/or medicine for Zika.

2. True or False:

Most people who will get Zika will not get sick.

3. True or False:

Being in the United States, we are not at risk of having a Zika outbreak.

4. What kind of symptoms are associated with Zika?

- a. Fever, rash, joint pain, red eyes, muscle pain, and headache.
- b. Itchy palms, confusion, dizziness, fever, and rash.
- c. Headache, blurry vision, nausea, increased appetite, increased energy.

5. True or False:

Mosquito repellent can help you stay safe from not only mosquito bites, but Zika virus as well.

6. What family of mosquitoes carry the Zika virus?

- a. *Aedes aegypti*
- b. *Aedes albopictus*
- c. *Aedes aegypti* and *Aedes albopictus*



7. True or False:

You can reduce mosquito breeding grounds by overturning and scrubbing any pails, buckets, or containers of standing water in your yard.

8. Which of these are an active ingredient in insect repellent that can protect you from mosquito bites?

- a. DEET
- b. Oil of lemon eucalyptus
- c. Picardin
- d. IR3535
- e. All of the above

Answer Key:
1) False; 2) True; 3) True; 4) a; 5) True; 6) c; 7) True; 8) e.

BE A CITIZEN SCIENTIST! THE INVASIVE MOSQUITO PROJECT

Use the Invasive Mosquito Project to combat mosquito breeding grounds in your neighborhood!

The [Invasive Mosquito Project](#) was created by an entomologist at the U.S. Department of Agriculture (USDA), Lee Cohnstaedt. High school students from all over the country are volunteering with the Invasive Mosquito Project to track the amount and types of mosquitoes that are in a neighborhood.

This information can be verified through the USDA. The citizen science project provides students, teachers, and anyone interested the opportunity to collect real data and contribute to a national mosquito species distribution study.

All you need for this activity are brown paper towels and dark colored paper or plastic cups. The cups are filled with water and the brown paper towel is inserted into the cup and placed around the outside of your home.



After about a week, those cups should be inspected to see if there are any mosquito eggs in them, which look like little flecks of dirt.

These results are verified through the USDA, local researchers, or mosquito control officials prior to uploading your findings to the website.

To verify your results, contact your local city or county health department to help get in contact with mosquito control officials.

This will help track the mosquitoes in your neighborhood and will ultimately assist the federal government in tracking the rates in which mosquitoes inhabit your neighborhoods and communities.

Check out www.citizenscience.us to find out more information about this project.

COMMUNITY ENGAGEMENT: GUIDANCE



GOALS

We are challenging 4-H with using the community events you attend this year to educate your peers on the risks of diseases that are caused by mosquito bites.

Using the handouts in this toolkit, as well as the included activities and talking points, we hope that you'll be able to educate your community on the risks associated with mosquito-borne illnesses and help create a safer and healthier environment for everyone.



OBJECTIVES



Teach your peers about where mosquitoes can be found at home and what can be done to get rid of mosquito breeding grounds that may be present around homes.



Teach your peers the importance of using bug spray, especially when spending long periods of time outdoors.



Teach your peers about how to keep their families and communities safe from mosquitoes by using mosquito nets and wearing long clothes when in an area with high numbers of mosquitoes.



HANDOUTS & RESOURCES

- [Protect Yourself from Mosquito Bites](#)
- [Help Control Mosquitoes That Spread Viruses](#)
- Visit CDC's [Zika Communication Toolkits](#) online for more resources and information.

RESOURCES FOR COMMUNITY OUTREACH

Here's what you could say when you talk to people at community events:

Short Script

“

Hi, my name is _____ and I'm a member of 4-H. One of the things we're working on is educating people about the risks of illnesses carried by mosquitoes. To keep you and your family safe, make sure you always wear insect repellent to prevent mosquito bites. It's an easy step that can help keep you safe and healthy while you're outside enjoying the summer. Another way to easily protect yourself is by wearing light-weight long pants and shirts when you're outside for long periods of time. If you pair these two steps together, you can keep yourself safe from mosquito bites all summer long!

”

“

Hi, my name is _____ and I'm a member of 4-H. One of the things we're working on is educating people about the risks of with mosquito-borne illnesses. There are a few easy steps that you can take to keep your family and friends safe from illnesses carried by mosquitoes.

Long Script

- Always make sure that your windows and doors have screening on them and that there are no holes for mosquitoes to get through.
- Use an outdoor insect spray made to kill mosquitoes in areas where they rest. Mosquitoes rest in dark, humid areas like under patio furniture, or in the carport or garage.
- If you have standing water around your house, like in old buckets, containers, an abandoned swimming pool, or anywhere that water does not flow, make sure you empty them and scrub them clean because mosquitoes can lay several hundred eggs in any container that has standing water in it. The eggs then stick to the container and can remain attached until they are scrubbed off, so it is important to make sure you not only dump any standing water but also scrub the container to get rid of any mosquito eggs.
- If you have a septic tank, repair cracks or gaps. Cover open vent or plumbing pipes. Use wire mesh with holes smaller than an adult mosquito.
- Always remember to wear insect repellent when you're outside. Wearing light-weight long pants and shirts will help protect you from mosquitoes, especially when spending a lot of time outdoors.

”

SPREADING THE WORD ON SOCIAL MEDIA

Help us spread the word and help protect people against Zika!

Share the news on Facebook, Twitter, Instagram, Snapchat, or anywhere on social media reminding people to be smart and protect themselves this summer.

Use these sample tweets and posts to help educate others, or create your own!



- Protect against Zika! Always use insect repellent and wear long pants/shirts if outside for long amounts of time. #fightthebite #NHSS #4HHQ
- Are you protected from Zika? Get rid of standing water around your home & help stop the spread of Zika virus! #fightthebite #NHSS #4HHQ
- Stay mosquito bite-free this summer: Be sure all windows and doors in your home have screens with no holes, even small ones. Protect yourself against Zika! #fightthebite #NHSS #4HHQ

#fightthebite #NHSS #4HHQ



ABOUT ASPR AND NATIONAL HEALTH SECURITY

ASPR, the Assistant Secretary for Preparedness and Response, is here to help individuals like you engage with their communities, working together to make the places where you live, work, learn, and play safe and healthy each and every day, while providing life-long leadership skills and experience in the process.

The health and resilience of your community and its residents is incredibly important to ASPR, and we know it's important to you too. As leaders in your schools, you have the skills to help fill your community's unique health and resilience needs.

When it comes to giving back and doing something for your community, there are many ways you can help, and we want to be there to help you in finding out exactly what it is that you can do and what are the best ways you can help.

When you help your community become safer, healthier, and more secure, you're helping your country's national health security.



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Be Safe. Be Healthy. Be Secure.

