



**Doral Police Department -
Office of Emergency Management**

Action Plan – Zika Virus – Prevention, Preparedness and Outreach

update

Date: Feb. 4, 2016

Transmission:

- The transmission of the Zika virus is through mosquito bites.
- Zika virus is transmitted to people primarily through the bite of an infected Aedes species mosquito. Known by the white-striped pattern on its legs, this mosquito species is a vector for various tropical diseases including dengue, chikungunya and, more recently, Zika.
- They are aggressive daytime biters, prefer to bite people, and live indoors and outdoors near people.
- Spread of the virus through blood transfusion and sexual contact has been reported.



Symptoms:

One in five (20%) people infected with Zika virus become symptomatic but usually with mild symptoms. These may occur 2-7 days after the mosquito vector bite. Symptoms lasts no more than one week and may include the following:

- mild fever
- skin rash or redness (covered by elevated bumps)
- headaches
- arthralgia (joint stiffness)
- myalgia (episode or zones of muscular pain)
- asthenia (lack of energy or loss of strength)
- conjunctivitis (pink eye - inflammation of the eye & inner surface of the eyelids, redness and discharge)

Treatment:

Zika is an acute infection. CDC recommends the following treatment: seeing a physician, hydrating, taking acetaminophen-Tylenol to lower fever and reduce pain, and rest. However, aspirin or other anti-inflammatory medications, like ibuprofen or naproxen, **should be avoided** until the patient is tested to rule out Dengue fever.

Ongoing research for development of a Zika vaccine has been reported, but in the world of medical research, this could take "three to five years."



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Prevention:

Following guidelines by the CDC and Miami-Dade County, these are steps to prevent the Zika virus. What each person does in his/her surroundings become the first line of defense against the virus.

Drain: (this applies to residences, businesses, government facilities, parks, etc.)

- According to the South Florida Water Management, November 2015 to January 2016 has been the wettest for this 3-month period in S. Florida since at least 1932. This unusual amount of rain can be ideal for mosquitoes to breed.
- Drain all standing water around the yard. Mosquitoes need only a surprisingly small amount of water to breed. Empty cans, buckets, garbage cans, house gutters, flower pots, bromeliads and other plants that hold water, bottles, toys, plastic “kiddie” pools, lids, old tires, pool covers, barrels and any other container or item that holds or can hold water.
- If you have a boat, turn it upside down if it’s small enough, or cover it if it’s too large to turn. Just make sure the boat cover doesn’t also hold water.
- If you have a swimming pool, make sure to maintain it properly and run the pump every so often as mosquitoes do not like to breed in moving water.
- Twice a week, make sure to empty or rinse out bromeliads and other plants that hold water, pets’ water bowls and birdbaths.

Cover:

- Make sure your doors and windows are covered with screens to keep mosquitoes out of your house. Protect infants with mosquito netting.
- Avoid going outside when mosquitoes are most active, at dawn and dusk. If you do have to be outside, cover yourself up by wearing loose, light-colored clothing (preferably long pants and long sleeves), shoes and socks.
- Use a repellent when you go outside. Follow the directions on the label. The best repellents use DEET or picaridin as the active ingredient.

Miami-Dade County's Mosquito Control Unit conducts numerous mosquito inspections and spraying operations throughout the County to help keep down the volume of mosquitoes. To request a mosquito inspection or to report a mosquito nuisance, the public is encouraged to call 3-1-1. Information on mosquito control in Miami-Dade County can be found on this link www.miamidade.gov/solidwaste.

Follow travel alerts:



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- CDC has issued a travel notice (Level 2-Practice Enhanced Precautions) for people traveling to regions and certain countries where Zika virus transmission is ongoing.
- This alert follows reports in Brazil of microcephaly and other poor pregnancy outcomes in babies of mothers who were infected with Zika virus while pregnant. However, additional studies are needed to further characterize this relationship. More studies are planned to learn more about the risks of Zika virus infection during pregnancy.
- Until more is known, and out of an abundance of caution, the CDC recommends special precautions for pregnant women and women trying to become pregnant.
- Pregnant women in any trimester should consider postponing travel to the areas where Zika virus transmission is ongoing.
- Women trying to become pregnant should consult with their healthcare provider before traveling to these areas and strictly follow [steps to prevent mosquito bites during the trip](#).
- More information on Zika virus and pregnancy can be found at <http://www.cdc.gov/zika/pregnancy/question-answers.html>
- Avoid travel to the following countries especially if the person is pregnant or planning to become pregnant:

World map showing countries and territories with reported active transmission of Zika virus (as of February 4, 2016). Countries are listed in the table below.



AMERICAS:



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Barbados
Bolivia
Brazil
Colombia
Commonwealth of Puerto Rico, US territory
Costa Rica
Curacao
Dominican Republic
Ecuador

El Salvador
French Guiana
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique

Mexico
Nicaragua
Panama
Paraguay
Saint Martin
Suriname
U.S. Virgin Islands
Venezuela

OCEANIA/PACIFIC ISLANDS:



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American Samoa
Tonga
Samoa

AFRICA:

Cape Verde

Specific CDC travel notices can be found in the following link:

<http://wwwnc.cdc.gov/travel/page/zika-travel-information>

Note: As of January 27, 2016, according to news reports, both American Airlines and United have been offering refunds.

Zika in the United States and its territories:

- Locally transmitted Zika virus has been reported in the Commonwealth of Puerto Rico.
- One locally transmitted virus has been reported in Texas through sexual contact.
- Cases have been reported in returning travelers. Of the Nine cases reported in Florida, four are in Miami-Dade County. Gov. Scott declared a public health emergency management on Feb. 3. As of Feb. 4 counties include Miami-Dade and Broward.
- With the recent outbreaks, the number of Zika cases among travelers visiting or returning to the United States will likely increase.
- These imported cases could result in local spread of the virus in some areas of the United States.

Outreach:

Given the demographics of the City of Doral and the touristic and commerce ties with South American and Caribbean countries, on the week of January 25, 2016 the Office of Emergency Management began posting information on the Zika CDC travel alerts to those countries on the city's social media platforms. In addition, information from the CDC and Miami-Dade County has also been shared regarding prevention tips to avoid mosquito bites.



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The information can be found in the following links:

Miami-Dade County Mosquito Control: <http://www.miamidade.gov/solidwaste/mosquito-control.asp>

World Health Organization (WHO) on Zika virus: <http://www.who.int/topics/zika/en/>

Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/Zika/> (including a video on Zika virus)

Doral TV will run the CDC Zika virus video. The duration of the program is 2 minutes and 52 seconds.

The video can be found at this link:

<https://youtu.be/iOm15VyWlwo>

All updated information will be provided to Public Affairs with the purpose of creating a webpage to keep the public informed.

City Departments' Actions:

Employees in the field from Departments such as Public Works, Parks and Recreation, Code Enforcement, Building, Police, etc. should follow prevention tips including use of insect repellents while working in the field and report any incident of standing water that are potential breeding grounds for mosquitoes.

Parks and Recreation will post flyers in their facilities and provide information to park programs participants regarding prevention from mosquito bites.

The following fact sheets will also be distributed or posted by HR at Government Center.

The Police Department will distribute the information to HOAs and Business Associations.

The flyers include information in Spanish:



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file:///C:/Users/frenchn.DORALPD/Desktop/safe%20travel.mos.qxp_01-16.pdf

http://www.cdc.gov/zika/pdfs/fs_mosquito_bite_prevention_travelers_spanish.pdf

file:///C:/Users/frenchn.DORALPD/Desktop/mos.prevention.qxp_02-16.pdf

http://www.cdc.gov/chikungunya/pdfs/factsheet_mosquito_bite_prevention_us_spanish.pdf

http://www.cdc.gov/zika/pdfs/control_mosquitoes_chikv_denv_zika.pdf

http://www.cdc.gov/zika/pdfs/control_mosquitoes_chikv_denv_zika_spanish.pdf

The Office of Emergency Management continues communication with the County's OEM while monitoring the situation especially since the World Health Organization (WHO) declared an international state of emergency on Monday, February 1, 2016.

WHO statement on the first meeting of the International Health Regulations (2005) (IHR 2005) Emergency Committee on Zika virus and observed increase in neurological disorders and neonatal malformations

<http://www.who.int/mediacentre/news/statements/2016/1st-emergency-committee-zika/en/>

WHO Director-General summarizes the outcome of the Emergency Committee regarding clusters of microcephaly and Guillain-Barré syndrome

<http://www.who.int/mediacentre/news/statements/2016/emergency-committee-zika-microcephaly/en/>

Following are flyer samples in English and Spanish:

For printing purposes please open links to pdf formats provided above.



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Feeling the sting of mosquitoes? Then it's time to **drain and cover.**



Don't forget to **drain and cover.**

DRAINCOVER

Drain standing water.

Drain water from garbage cans, house gutters, pool covers, coolers, toys, flower pots or any other containers where sprinkler or rain water has collected.

DISCARD:

old tires, drums, bottles, cans, pots and pans, broken appliances and other items that aren't being used.

EMPTY AND CLEAN:

birdbaths and pets' water bowls at least once or twice a week.

PROTECT:

boats and vehicles from rain with tarps that don't accumulate water.

MAINTAIN:

the water balance (pool chemistry) of swimming pools. Empty plastic swimming pools when not in use.

Stop mosquitoes from living and multiplying around your home or business.



COVER YOUR SKIN WITH:

CLOTHING If you must be outside when mosquitoes are active, cover up. Wear shoes, socks, long pants, and long sleeves.

REPELLENT Apply mosquito repellent to bare skin and clothing. Always use repellents according to the label. Repellents with DEET, picaridin, oil of lemon eucalyptus, and IR3535 are effective. Use mosquito netting to protect children younger than 2 months.

COVER DOORS AND WINDOWS WITH SCREENS.

Keep mosquitoes out of your house. Repair broken screens on windows, doors, porches, and patios.



www.floridhealth.org



www.miamidade.gov/publicworks



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Mosquito Bite Protection for Overseas Travelers

FloridaHealth.gov • Florida Department of Health

Mosquitoes spread viruses and parasites that cause diseases like chikungunya, dengue, Zika and malaria. Before you travel to areas where these diseases are found, talk to your health care provider about your health concerns, and ask about malaria prevention medicine.

Mosquitoes can live indoors and will bite at any time, day or night.

Bring Environmental Protection Agency (EPA)-registered insect repellents

When you travel to areas with mosquitoes, bring an EPA-registered insect repellent. Use products with active ingredients that are safe and effective.

- Always follow the product label instructions.
- Do not spray repellent on skin under clothing.
- If you use sunscreen, put sunscreen on first and insect repellent second.
- It is safe for pregnant or nursing women to use EPA-approved repellents if applied according to package label instructions.
- Learn more: www2.epa.gov/insect-repellents.

USE INSECT REPELLENT WITH ONE OF THESE ACTIVE INGREDIENTS

DEET →→	OFF, Cutter, Sawyer, UltraShield
Picaridin (IKEE gear), Bayrepel and Icaridin →→	Skin So Soft Bug Guard Plus, Avon (outside the U.S.)
Oil of lemon eucalyptus (OLE) or para-methanediol (PMD) →→	Rapel
IR3535 →→	Skin So Soft Bug Guard Plus Expedition, Skin Smart

Higher percentages of active ingredient = longer protection

Cover up with clothing

- Wear long-sleeved shirts and long pants.
- Mosquitoes can bite through thin clothing. Treat clothes with permethrin or another EPA-registered insecticide for extra protection.

Use permethrin-treated clothing and gear

- Permethrin is an insecticide that kills mosquitoes and other insects.
- Buy permethrin-treated clothing and gear (boots, pants, socks, tents), or use permethrin to treat clothing and gear—follow product instructions closely.
- Read product information to find out how long the permethrin will last.
- Do not use permethrin products directly on skin.

Keep mosquitoes out of hotels rooms & other lodging

- Choose a hotel or lodging with air conditioning and screened windows and doors.

If you will be sleeping outside or in a room that is not well screened, buy a bed net BEFORE traveling overseas.

- Buy bed nets from an outdoor store, and choose a WHOPEs-approved bed net (like ProMax®), compact, white, rectangular, with 150 holes per square inch and long enough to tuck under a mattress.
- Permethrin-treated bed nets provide more protection than untreated nets.
- Do not wash bed nets or expose them to sunlight—this will break down permethrin more quickly.
- Learn more: www.cdc.gov/malaria/malaria_worldwide/education/en.html.

www.cdc.gov/features/StopMosquitoes

FloridaHealth.gov • Florida Department of Health

If you are travelling with a baby or child:

- Always follow product instructions when applying insect repellent to children.
- Spray insect repellent onto your hands and then apply to a child's face.
- Do not apply insect repellent to a child's hands, mouth, cut or irritated skin.
- Do not use insect repellent on babies younger than 2 months.
- Use permethrin-treated clothing and gear (such as boots, pants, socks, tents) or purchase permethrin-treated clothing and gear. Read product information to find out how long the protection will last.
- Do not use permethrin products directly on skin.
- Dress babies or small children in clothing that covers arms and legs.
- Cover cribs, strollers or baby carriers with mosquito netting.

When you return home:

- Avoid being bitten by mosquitoes for three weeks—especially if you feel sick. This will help prevent infection of local mosquitoes.
- Drain standing water near homes and businesses at least weekly. This will keep local mosquito populations low and prevent local introduction of disease.

www.cdc.gov/features/StopMosquitoes



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Mosquito Bite Prevention for Travelers

Mosquitoes spread many types of viruses and parasites that can cause diseases like chikungunya, dengue, Zika, and malaria. If you are traveling to an area where malaria is found, talk to your healthcare provider about malaria prevention medication that may be available.

Protect yourself and your family from mosquito bites. Here's how:

Keep mosquitoes out of your hotel room or lodging

- Choose a hotel or lodging with air conditioning or screens on windows and doors.
- Sleep under a mosquito bed net if you are outside or in a room that is not well screened. Mosquitoes can live indoors and will bite at any time, day or night.
 - Buy a bed net at your local outdoor store or online before traveling overseas.
 - Choose a WHOPEs-approved bed net (like Permax*): compact, white, rectangular, with 156 holes per square inch, and long enough to tuck under the mattress.
 - Permethrin-treated bed nets provide more protection than untreated nets.
 - Permethrin is an insecticide that kills mosquitoes and other insects.
 - Do not wash bed nets or expose them to sunlight. This will break down the insecticide more quickly.
 - For more information on bed nets: www.cdc.gov/malaria/malaria_worldwide/reduction/tn.html



Cover up!

- Wear long-sleeved shirts and long pants.
- Mosquitoes may bite through thin clothing. Treat clothes with permethrin or another Environmental Protection Agency (EPA)-registered insecticide for extra protection.



Use only an EPA-registered insect repellent

- Consider bringing insect repellent with you.
- Always follow the product label instructions.
- Reapply insect repellent every few hours.
 - Do not spray repellent on the skin under clothing.
 - If you are also using sunscreen, apply sunscreen first and insect repellent second.
- For more information: www2.epa.gov/insect-repellents



Natural insect repellents **not** registered with EPA

- In the United States, the EPA has not evaluated for effectiveness most of the commonly known natural insect repellents.
 - Examples of ingredients used in unregistered insect repellents include: citronella oil, cedar oil, geranium oil, peppermint and peppermint oil, pure oil of lemon eucalyptus, soybean oil.
 - CDC recommends that you use an insect repellent containing an active ingredient shown to be both safe and effective.

Use an insect repellent with one of the following active ingredients:

Active ingredient		Some brand name examples*
Higher percentages of active ingredient provide longer protection		(Insect repellents may be sold under different brand names overseas.)
DEET		Off!, Cutter, Sawyer, Ultrathon
Picaridin, also known as KBR 3023, Bayrepel, and icaridin		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, Skin Smart

If you are travelling with 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.
- Instead, dress infants or small children in clothing that covers arms and legs, or cover the crib, stroller, and baby carrier with mosquito netting.
 - Adults: Spray insect repellent onto your hands and then apply to a child's face. Do not apply insect repellent to a child's hands, mouth, cut or irritated skin.

Treat clothing and gear



- Use permethrin to treat clothing and gear (such as boots, pants, socks, tents) or purchase permethrin-treated clothing and gear. Read product information to find out how long the protection will last.
- If treating items yourself, always follow the product instructions.
- Do **not** use permethrin products directly on skin.

* The use of commercial names is to provide information about products; it does not represent an endorsement of these products by the Centers for Disease Control and Prevention or the U.S. Department of Health and Human Services.



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Prevención de picaduras de mosquitos para viajeros

Los mosquitos transmiten muchos tipos de virus y parásitos que pueden causar enfermedades como el chikungunya (chikunguña), dengue, Zika y paludismo (malaria). Si va a viajar a lugares donde hay paludismo, hable con su proveedor de atención médica sobre los medicamentos disponibles para prevenir el paludismo.

Protéjase y proteja a su familia de las picaduras de mosquitos:

Evite que los mosquitos entren en su habitación de hotel o a su alojamiento

- Seleccione un hotel o alojamiento que tenga aire acondicionado o malla de tela metálica en las puertas y ventanas.
- Duerma debajo de un mosquitero si el área donde duerme está en el exterior o si las puertas y ventanas no tiene malla de tela metálica. Los mosquitos pueden vivir en el interior y picar en cualquier momento, del día o de la noche.
 - Compre un mosquitero en su tienda local especializada en equipo para acampar o en Internet antes de viajar al extranjero.
- Seleccione un mosquitero recomendado por la Organización Mundial de Salud identificado como WHOPEL (WHO Pesticides Evaluation Scheme) como por ejemplo Premier™, compacto, blanco, rectangular, con 156 agujeros por pulgada cuadrada y lo suficientemente largo para poderse ajustar debajo del colchón.
 - Los mosquiteros tratados con permetrina proporcionan mayor protección que los mosquiteros no tratados.
 - Permetrina es un insecticida que mata mosquitos y otros insectos.
 - No lave los mosquiteros ni los esponja a la luz solar. Esto inactivará el insecticida más rápido.
- Para obtener más información sobre los mosquiteros, consulte: www.cdc.gov/malaria/malaria_worlwide/reduction/tn.html

¡Cúbrase!

- Use camisas de manga larga y pantalones largos.
- Los mosquitos pueden picarle a través de la ropa delgada. Trate la ropa con permetrina u otro insecticida que esté registrado en la Agencia de Protección Ambiental de los EE.UU. (EPA, por sus siglas en inglés) para obtener protección adicional.

Solo use repelente de insectos registrados en la EPA

- Considere llevar un repelente de insectos.
- Siempre siga las instrucciones en la etiqueta del producto.
- Reapliquese el repelente de insectos cada pocas horas.
 - No se aplique repelente en la piel debajo de la ropa.
 - Si también usa un filtro solar, aplíquese primero y luego el repelente de insectos.
- Para más información, visite: www2.epa.gov/insect-repellents

Repelentes de insectos naturales **no** registrados en la EPA

- La EPA no ha evaluado la eficacia de los repelentes de insectos naturales más comunes en los Estados Unidos.
 - Algunos ejemplos de ingredientes usados en repelentes de insectos que no han sido registrados incluyen aceite de citronela, aceite de cedro, aceite de geranio, aceite de menta, aceite de eucalipto limón puro o aceite de soja.
- Los CDC recomiendan que utilice un repelente de insectos que contenga un ingrediente activo que se haya comprobado que es seguro y eficaz.

January 14, 2016 | 1/16-001

Use un repelente de insectos con uno de los siguientes ingredientes activos:

Ingrediente activo	Algunos ejemplos de marcas comerciales*
DEET Los porcentajes más altos de ingredientes activos ofrecen una protección más prolongada	Off!, Cuties, Sawyer, Ultrathon
Picaridina, también conocido como KBR 3023, Bayrepel, o Icaridina	Skin So Soft Bug Guard Plus, Axan (fuera de los Estados Unidos)
Acetato de eucalipto limón (OLE) o para-metano-diol (PMD)	Repel
IR3535	Skin So Soft Bug Guard Plus Expedition, Skin Smart

(En el extranjero los repelentes de insectos pueden ser vendidos bajo diferentes nombres comerciales.)

Si viaja con un bebé o un niño:

- Siempre siga las instrucciones del producto al aplicar repelente de insectos a los niños.
- **No utilice** repelente de insectos en bebés menores de dos meses.
- Mejor, vista a su bebé o niño pequeño con ropa que le cubra los brazos y las piernas, o cubra la cuna, el coche y el portabebés con un mosquitero.
 - Adultos: Rocíen el repelente de insectos en sus manos y luego aplíquelo en la cara del niño. No apliquen repelente de insectos en las manos, la boca o la piel irritada o cortada de un niño.

Trate la ropa y el equipo

- Use permetrina para tratar la ropa y el equipo (como botas, pantalones, calcetines y tiendas de campaña) o compre ropa y equipo ya tratados con permetrina. Lea la información del producto para saber cuánto tiempo durará la protección.
- Si usted va a aplicar el tratamiento, siga las instrucciones del producto.
- **No use** productos con permetrina directamente sobre la piel.

* El uso de las marcas comerciales de repelentes de insectos se ofrecen para proveer información sobre el producto; no implica respaldo de estos productos por parte de los Centros para el Control y la Prevención de Enfermedades ni del Departamento de Salud y Servicios Humanos de los Estados Unidos.

www.cdc.gov/features/StopMosquitoes



Mosquito Bite Protection in Florida

FloridaHealth.gov • Florida Department of Health

Not all mosquitoes are the same. Different mosquitoes spread different viruses and bite at different times of the day. Some mosquito species bite during the day, such as those mosquitoes that can spread chikungunya, dengue, and Zika viruses. Other species of mosquitoes bite most often at dawn and dusk, including those that can transmit West Nile virus.

Mosquitoes can live indoors and will bite at any time, day or night.

Use Environmental Protection Agency (EPA)-registered insect repellents

Wear repellent when you are outdoors. Use products with active ingredients that are safe and effective.

- Always follow the product label instructions.
- Do not spray repellent on skin under clothing.
- If you use sunscreen, put sunscreen on first and insect repellent second.
- It is safe for pregnant or nursing women to use EPA-approved repellents if applied according to package label instructions.
- Learn more: www2.epa.gov/insect-repellents.

USE INSECT REPELLENT WITH ONE OF THESE ACTIVE INGREDIENTS	BRAND EXAMPLES* Overseas brand names may vary.
DEET →→→	OFF!, Cutter, Sawyer, Ultrathon
Picaridin (KBR 3023), Bayrepel and Icaridin →→→	Skin So Soft Bug Guard Plus, Avon Insect Shield (U.S.)
Oil of lemon eucalyptus (OLE) or para-methanediol (PMD) →→→	Repel
IR3535 →→→	Skin So Soft Bug Guard Plus Expedition, Skin Smart

*Higher percentages of active ingredient = longer protection.

If you have a baby or child:

- Always follow product instructions when applying insect repellent to children.
- Spray insect repellent onto your hands and then apply to a child's face.
- Do not apply insect repellent to a child's hands, mouth, cut or irritated skin.
- Do not use insect repellent on babies younger than 2 months.
- Dress babies or small children in clothing that covers arms and legs.
- Cover cribs, strollers or baby carriers with mosquito netting.

Cover up with clothing

- Wear long-sleeved shirts and long pants.
- Mosquitoes can bite through thin clothing. Treat clothes with permethrin or another EPA-registered insecticide for extra protection.

Use permethrin-treated clothing and gear.

- Permethrin is an insecticide that kills mosquitoes and other insects.
- Buy permethrin-treated clothing and gear (boots, pants, socks, tents), or use permethrin to treat clothing and gear—follow product instructions closely.
- Read product information to find out how long the permethrin will last.
- Do not use permethrin products directly on skin.

www.cdc.gov/features/StopMosquitoes

Keep mosquitoes outside

- Keep screens on all windows.
- Use the air conditioners.
- Repair holes in screens.
- Keep doors and windows shut.

Stop mosquitoes from breeding

Mosquitoes breed by laying eggs in & near standing water.

As little as one teaspoon or bottle cap of water standing for more than one week is enough for mosquitoes to breed and multiply.

At your house or business: Put away items that are outside and not being used because they could hold standing water.

In your garden: Keep flower pots and saucers free of standing water. Some plants hold water in their leaves—flush out water-holding plants with your hose once a week.

Around all buildings: At least once a week, empty, turn over or cover anything that could hold water:

- tires
- buckets
- trays
- potholes & pool covers
- birdhouses
- trash, trash containers and recycling bins
- boats or car covers
- roof gutters
- coolers
- pet dishes

www.cdc.gov/features/StopMosquitoes



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
 Aedes aegypti, Aedes albopictus	Chikungunya, Dengue, Zika	Daytime
 Culex species	West Nile	Dusk (evening) to dawn (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. All EPA-registered insect repellents are evaluated for safety and effectiveness.

Active ingredient	Some brand name examples*
DEET	Off!, Cutter, Sawyex, Ultrathon
Picaridin, also known as KBR 3023, Bayrepel, and icaridin	Cutter Advanced, Skin So Soft Bug Guard Plus, Auzan (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.

www.cdc.gov/features/StopMosquitoes



Prevención de picaduras de mosquitos (Estados Unidos)

No todos los mosquitos son iguales. Diferentes mosquitos transmiten distintos virus y pican en diferentes momentos del día.

Tipo de mosquito	Virus que transmiten	Hábitos al picar
<p><i>Aedes aegypti</i>, <i>Aedes albopictus</i></p>	<p>Chikungunya (chikunguña), dengue</p>	<p>Durante el día</p>
<p><i>Culex</i></p>	<p>Virus del Nilo Occidental</p>	<p>Desde el anochecer hasta el amanecer</p>

Protéjase y proteja a su familia de las picaduras de mosquitos

Use repelente de insectos

Use un repelente de insectos registrado en la Agencia de Protección Ambiental de los EE. UU. (EPA, por sus siglas en inglés) con uno de los siguientes ingredientes activos. Todos los repelentes de insectos registrados en la EPA han sido evaluados para determinar su seguridad y eficacia.

Ingrediente activo	Algunos ejemplos de marcas comerciales*
Los porcentajes más altos de ingrediente activo ofrecen una protección más prolongada.	
DEET	Off!, Cutter, Sawyer, Ultrathon
Picaridina, también conocida como KBR 3023, Bayrepel e icaridina	Cutter Advanced, Skin So Soft Bug Guard Plus, Autan (fuera de los Estados Unidos)
Aceite de eucalipto de limón (OLE) o para-metano diol (PMD)	Repel
IR3535	Skin So Soft Bug Guard Plus Expedition, SkinSmart

* Las marcas comerciales de repelentes de insectos se ofrecen para su información solamente. Los Centros para el Control y la Prevención de Enfermedades y el Departamento de Salud y Servicios Humanos de los Estados Unidos no pueden recomendar ni respaldar ningún producto de marca comercial.



Protéjase y proteja a su familia de las picaduras de mosquitos (continuación)



- Siempre siga las instrucciones en la etiqueta del producto.
- Vuelva a aplicar el repelente de insectos cada cierta cantidad de horas, dependiendo del producto y la concentración que haya elegido.
 - No ponga repelente en la piel debajo de la ropa.
 - Si también usa un filtro solar, aplíquelo primero y luego el repelente de insectos.

Repelentes de insectos naturales (repelentes no registrados en la EPA)

- La EPA no ha evaluado la efectividad de los repelentes de insectos naturales.
 - Algunos ejemplos de ingredientes usados en repelentes de insectos que no han sido registrados incluyen aceite de citronela, aceite de cedro, aceite de geranio, aceite de menta o aceite de soja.

Si tiene un bebé o niño



- Siempre siga las instrucciones en la etiqueta del producto al aplicar repelente de insectos a los niños.
- No utilice repelente de insectos en bebés menores de dos meses.
- Vista a su hijo con ropa que le cubra los brazos y las piernas, o...
- Cubra la cuna, el coche y el portabebés con un mosquitero.
- No aplique repelente de insectos en las manos, los ojos, la boca, o la piel irritada o cortada de un niño.
 - Adultos: Rocíen el repelente de insectos en sus manos y luego aplíquenlo en la cara del niño.

Trate la ropa y el equipo



- Trate con permetrina los artículos como botas, pantalones, calcetines y tiendas de campaña o compre ropa y equipo ya tratados con permetrina.
 - La ropa tratada con permetrina lo protegerá luego de varias lavadas. Lea la información del producto para saber cuánto tiempo durará la protección.
 - Si usted va a aplicar el tratamiento, siga las instrucciones del producto.
 - No use productos con permetrina directamente sobre la piel.

Mantenga su hogar libre de mosquitos



- Use una malla o tela metálica en las puertas y ventanas. Repare los huecos que tenga la malla o tela metálica para mantener los mosquitos afuera.
- Use el aire acondicionado si está disponible.
- Evite que los mosquitos pongan huevos en agua acumulada.
 - Una vez a la semana, vacíe y restriegue, dé vuelta, cubra o bote los recipientes que acumulen agua, tales como neumáticos, baldes, floreros, macetas, juguetes, piscinas, baños para pájaros, tiestos o contenedores de basura. Revise dentro y fuera de su hogar.

www.cdc.gov/features/StopMosquitoes



Help Control Mosquitoes that Spread Dengue, Chikungunya, and Zika Viruses

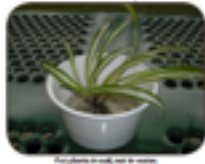
Bzzzz.

Aside from being itchy and annoying, the bite of an infected female mosquito (*Aedes aegypti* or *Aedes albopictus*) can spread dengue, chikungunya, or Zika viruses. People become infected with dengue, chikungunya, or Zika after being bitten by an infected mosquito.

- Female mosquitoes lay several hundred eggs on the walls of water-filled containers. Eggs stick to containers like glue and remain attached until they are scrubbed off. When water covers the eggs, they hatch and become adults in about a week.
- Adult mosquitoes live inside and outside.
- They prefer to bite during the day.
- A few infected mosquitoes can produce large outbreaks in a community and put your family at risk of becoming sick.

Protect Yourself, Your Family, and Community from Mosquitoes

- 1. Eliminate standing water in and 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.
 - Tightly cover water storage containers (buckets, cisterns, rain barrels) so that mosquitoes cannot get inside to lay eggs.
 - For containers without lids, use wire mesh with holes smaller than an adult mosquito.
- 2. If you have a septic tank, follow these steps:**
 - Repair cracks or gaps.
 - Cover open vent or plumbing pipes. Use wire mesh with holes smaller than an adult mosquito.
- 3. Keep mosquitoes out of your home:**
 - Use screens on windows and doors.
 - Repair holes in screens.
 - Use air conditioning when available.



National Center for Emerging and Zoonotic Infectious Diseases
Division of Vector-Borne Diseases



4.

Prevent mosquito bites:

- Use an Environmental Protection Agency (EPA)-registered insect repellent with one of the following active ingredients. All EPA-registered insect repellents are evaluated to make sure they are safe and effective.

Active Ingredient Higher percentages of active ingredient provide longer protection	Some brand name examples*
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)
IR3535	Skin So Soft Bug Guard Plus Expedition, SkinSmart
Oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD)	Repel

* 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.

- 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.
- Treat clothing and gear (such as boots, pants, socks, and tents) with permethrin or purchase permethrin-treated clothing and gear.
 - Treated clothing remains protective after multiple washings. See product information to find out how long the protection will last.
 - If treating items yourself, follow the product instructions carefully.
- Do **not** use permethrin products, intended to treat clothing, directly on skin.
- Wear long-sleeved shirts and long pants.



For more information, visit:
www.cdc.gov/dengue, www.cdc.gov/chikungunya, www.cdc.gov/zika

August 2015



Ayude a controlar los mosquitos que transmiten los virus del dengue, chikungunya y Zika

BZZZZ.

Además de causar picor y molestia, la picadura de un mosquito hembra infectado (*Aedes aegypti* o *Aedes albopictus*) puede propagar los virus del dengue, chikungunya (chikunguña) o Zika. Las personas se infectan con el virus del dengue, del chikungunya o Zika al ser picadas por un mosquito infectado.

- Los mosquitos hembras ponen varios cientos de huevos en las paredes de envases con agua. Estos huevos se pegan a los envases como pegamento y permanecerán allí a menos que esos envases sean restregados. La próxima vez que el nivel del agua suba y cubra los huevos, las larvas nacerán, se convertirán en pupas y luego en mosquitos adultos en aproximadamente una semana.
- Los mosquitos viven dentro y fuera del hogar.
- Prefieren picar durante el día.
- Unos pocos mosquitos infectados pueden producir grandes brotes en la comunidad y poner a su familia en riesgo de enfermarse.

Protéjase y proteja a su familia y a la comunidad de los mosquitos

1. Elimine el agua acumulada en el interior y alrededor de su hogar:

- Una vez a la semana, vacíe y restriegue con un cepillo o esponja, dé vuelta, cubra o bote los recipientes que puedan acumular agua, tales como neumáticos, baldes, macetas, floreros, juguetes, piscinas, baños para pájaros, tastos o contenedores de basura. Revise dentro y fuera del hogar.
- Coloque una tapa ajustada en los recipientes para el agua (baldes, cisternas, barriles para agua de lluvia) para que los mosquitos no puedan entrar a poner huevos.
- Use una malla o tela metálica con agujeros más pequeños que un mosquito para cubrir los recipientes sin tapa.

2. Si tiene un pozo séptico, tome estas medidas:

- Repare las grietas y los huecos.
- Cubra el tubo de ventilación o respiradero con una malla o tela metálica con agujeros más pequeños que un mosquito.



National Center for Emerging and Zoonotic Infectious Diseases
Division of Vector-Borne Diseases



3.

Mantenga los mosquitos fuera de su hogar:

- Use una malla o tela metálica en las puertas y ventanas.
- Repare los orificios en la malla o tela metálica.
- Use el aire acondicionado si lo tiene disponible.

4.

Evite las picaduras de mosquitos:

- Use repelentes de insectos registrados en la Agencia de Protección Ambiental de los EE. UU. (EPA, por sus siglas en inglés) con uno de los siguientes ingredientes activos. Todos los repelentes de insectos registrados en la EPA han sido estudiados para asegurarse de que sean seguros y eficaces.

Ingrediente activo	Algunos ejemplos de marcas comerciales*
DEET	Off!, Cutter, Sawyer, Ultrathon
Picaridina, también conocido como KBR 3023, Bayrepel e icaridina.	Cutter Advanced!, Skin So Soft Bug Guard Plus, Aftan (fuera de los Estados Unidos)
IR3535	Skin So Soft Bug Guard Plus Expedition, SkinSmart
Aceite de eucalipto limón (OLE) o para-metano-diol (PMD)	Repel

* El uso de marcas comerciales de repelentes de insectos es con propósitos informativos solamente. Los Centros para el Control y la Prevención de Enfermedades y el Departamento de Salud y Servicios Humanos de los Estados Unidos no pueden recomendar ni respaldar ningún producto de marca comercial.

- Siempre siga las instrucciones en la etiqueta del producto.
- Vuelva a aplicar el repelente de insectos cada cierta cantidad de horas, dependiendo del producto y la concentración que haya elegido.
- No ponga repelente en la piel debajo de la ropa.
- Si también usa un filtro solar, aplíquese primero y luego el repelente de insectos.
- Trate la ropa y el equipo (como botas, pantalones, medias y tiendas de campaña o carpas) con permetrina o compre ropa y equipo tratados con permetrina.
 - La ropa tratada con permetrina continúa ofreciendo protección luego de varios lavados. Lea la información del producto para saber cuánto durará la protección.
 - Si usted mismo va a tratar con permetrina los artículos, siga las instrucciones del producto cuidadosamente.
 - **No** utilice productos con permetrina, destinados a tratar la ropa, directamente sobre la piel.
- Use camisas de manga larga y pantalones largos.

Para obtener más información, visite:
www.cdc.gov/dengue, www.cdc.gov/chikungunya, www.cdc.gov/zika

