

Yellow Fever in Brazil

Warning - Level 3, Avoid Nonessential Travel

Alert - Level 2, Practice Enhanced Precautions

Watch - Level 1, Practice Usual Precautions

What is the current situation?

The Brazilian Ministry of Health has reported an ongoing outbreak of yellow fever starting in December 2016. The first cases were reported in the state of Minas Gerais, but cases have since been reported in the neighboring states of Espírito Santo and Sao Paulo. Cases have occurred mainly in rural areas, with most cases being reported from Minas Gerais state. Some cases have resulted in death. Health authorities in the affected states, with assistance from the Brazilian Ministry of Health, are conducting mass vaccination campaigns among unvaccinated residents of affected areas.

In response to this outbreak, health authorities have recently expanded the list of areas in which yellow fever vaccination is recommended for travelers. For a list of these municipalities and a [map \(http://www.who.int/entity/csr/don/27-january-2017-yellow-fever-risk-map-brazil.png?ua=1\)](http://www.who.int/entity/csr/don/27-january-2017-yellow-fever-risk-map-brazil.png?ua=1) showing the existing and new yellow fever risk areas in Brazil, see the World Health Organization's [most recent update \(http://www.who.int/csr/don/27-january-2017-yellow-fever-brazil/en/\)](http://www.who.int/csr/don/27-january-2017-yellow-fever-brazil/en/) (scroll down on linked page for the list).

The Brazilian Ministry of Health maintains a list of all other municipalities in Brazil for which yellow fever vaccination continues to be recommended (not including recently added municipalities). It is located at <http://portalsaude.saude.gov.br/images/pdf/2015/novembro/19/Lista-de-Municipios-ACRV-Febre-Amarela-Set-2015.pdf> (<http://portalsaude.saude.gov.br/images/pdf/2015/novembro/19/Lista-de-Municipios-ACRV-Febre-Amarela-Set-2015.pdf>).

Anyone 9 months or older who travels to these areas should be vaccinated against yellow fever. People who have never been vaccinated against yellow fever should not travel to areas with ongoing outbreaks. CDC no longer recommends booster doses of yellow fever vaccine for most travelers. However, a booster dose may be given to travelers who received their last dose of yellow fever vaccine at least 10 years ago and who will be in a higher-risk setting, including areas with ongoing outbreaks. Because of the ongoing outbreak, travelers to the Brazilian states of Minas Gerais, Espírito Santo, and parts of Bahia, Sao Paulo, and Rio de Janeiro states may consider getting a booster if their last yellow fever vaccination was more than 10 years ago. Travelers should consult with a yellow fever vaccine provider to determine if they should be vaccinated. For more information on booster shots, see "Clinician Information," below.

Because of a [shortage of yellow fever vaccine](#), travelers may need to contact a yellow fever vaccine provider well in advance of travel.

What is yellow fever?

Yellow fever is a disease caused by a virus spread by mosquito bites. [Symptoms \(http://www.cdc.gov/yellowfever/symptoms/index.html\)](http://www.cdc.gov/yellowfever/symptoms/index.html) take 3–6 days to develop and include fever, chills, headache, backache, and muscle aches. About 15% of people who get yellow fever develop serious illness that can lead to bleeding, shock, organ failure, and sometimes death.

How can travelers protect themselves?

Get yellow fever vaccine:

- Visit a [yellow fever vaccination \(travel\) clinic \(https://wwwnc.cdc.gov/travel/yellow-fever-vaccination-clinics/search\)](https://wwwnc.cdc.gov/travel/yellow-fever-vaccination-clinics/search) and ask for a yellow fever vaccine.
 - You should receive this vaccine at least 10 days before your trip.
 - After receiving the vaccine, you will receive a signed and stamped International Certificate of Vaccination or Prophylaxis (ICVP, sometimes called the "yellow card"), which you must bring with you on your trip.
 - For most travelers, one dose of the vaccine lasts for a lifetime. Consult a travel medicine provider to see if additional doses of vaccine may be recommended for you based on specific risk factors.
 - In rare cases, the yellow fever vaccine can have serious and sometimes fatal side effects. People older than 60 years and people with weakened immune systems might be at higher risk of developing these side effects. Also, there are special concerns for pregnant and nursing women. Talk to your doctor about whether you should get the vaccine.

Prevent mosquito bites:

- Cover exposed skin by wearing long-sleeved shirts and pants.
- Use an [EPA-registered insect repellent \(https://www.epa.gov/insect-repellents/find-insect-repellent-right-you\)](https://www.epa.gov/insect-repellents/find-insect-repellent-right-you) containing DEET, picaridin, oil of lemon eucalyptus (OLE), or IR3535. Always use as directed.
 - If you are also using sunscreen, apply sunscreen first and insect repellent second.
 - Pregnant and breastfeeding women can use all EPA-registered insect repellents, including DEET, according to the product label.
 - Most repellents, including DEET, can be used on children older than 2 months.
 - Follow package directions when [applying repellent on children \(http://www.fda.gov/Drugs/EmergencyPreparedness/ucm085277.htm\)](http://www.fda.gov/Drugs/EmergencyPreparedness/ucm085277.htm). Avoid applying repellent to children's hands, eyes, or mouth.

- Use [permethrin-treated \(clothing \(http://npic.orst.edu/pest/mosquito/ptc.html\)\)](http://npic.orst.edu/pest/mosquito/ptc.html) and gear (such as boots, pants, socks, and tents). You can buy pre-treated clothing and gear or treat them yourself:
 - Treated clothing remains protective after multiple washings. See the product information to find out how long the protection will last.
 - If treating items yourself, follow the product instructions carefully.
 - Do not use permethrin directly on skin.
 - Stay and sleep in screened or air conditioned rooms.
 - Use a bed net if the area where you are sleeping is exposed to the outdoors.

Clinician Information:

- [Yellow Fever Vaccine Booster Doses: Recommendations of the Advisory Committee on Immunization Practices, 2015 \(https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6423a5.htm\)](https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6423a5.htm)
- [Yellow Fever in CDC Health Information for International Travel -"Yellow Book" Clinical and Laboratory Guidance \(http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-ClinLabEval.html\)](http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-ClinLabEval.html)
- [Diagnostic Testing \(http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-Diagnostic.html\)](http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-Diagnostic.html)
- [Testing for Vaccine Adverse Events \(http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-VacAdverseEv.html\)](http://www.cdc.gov/yellowfever/healthCareProviders/healthCareProviders-VacAdverseEv.html)

Additional Information:

- [FAQ's about Yellow Fever \(http://www.cdc.gov/yellowfever/qa/index.html\)](http://www.cdc.gov/yellowfever/qa/index.html)
- [Avoid Bug Bites-Information for travelers \(https://wwwnc.cdc.gov/travel/page/avoid-bug-bites\)](https://wwwnc.cdc.gov/travel/page/avoid-bug-bites)
- [Insect Repellent Use and Safety \(https://www.cdc.gov/westnile/faq/repellent.html\)](https://www.cdc.gov/westnile/faq/repellent.html)
- [Yellow Fever Vaccine Information Statement \(VIS\) \(https://www.cdc.gov/vaccines/hcp/vis/vis-statements/yf.html\)](https://www.cdc.gov/vaccines/hcp/vis/vis-statements/yf.html)
- [Authorized U.S. Yellow Fever Vaccine Centers](#)

File Formats Help:

How do I view different file formats (PDF, DOC, PPT, MPEG) on this site? (<http://www.cdc.gov/Other/plugins/>)

(<http://www.cdc.gov/Other/plugins/#pdf>)

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National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (<http://www.cdc.gov/ncezid/index.html>)

Division of Global Migration and Quarantine (DGMQ) (<http://www.cdc.gov/ncezid/dgmq/index.html>)