

There is an ever growing list of health threats that the international traveler may face, ranging from mosquito-borne infections (including but not limited to malaria and yellow fever) to food- and water-borne diarrheal illnesses that are so common among tourists that they have inspired the terms “Aztec two step” or “Bombay belly.” Changes in health risks are closely monitored by the WCTM clinic staff, allowing for up-to-date advice for each traveler. While avian flu, MERS, and Ebola seem (almost) forgotten, chikungunya and Zika viruses are on many people’s minds in 2015 and 2016 and it seems likely that new emerging infections will be added to the list soon.

■ *WCTM offers the full roster of required and recommended travel-related immunizations against the following pathogens:*

- | | |
|---------------------------------|---------------------------|
| – Hepatitis A, Hepatitis B | – Poliovirus |
| – Influenza | – Rabies |
| – Japanese Encephalitis | – Shingles |
| – Meningococcus | – Tetanus-diphtheria/TdaP |
| – MMR (Measles, Mumps, Rubella) | – Typhoid Fever |
| – Pneumococcus | – Varicella |
| | – Yellow Fever |

Q&A: Fun Facts About Mosquitoes and Mosquito-borne Illnesses

1. What does the name mosquito mean?
2. How many species of mosquitoes exist and how many of them bite humans?
3. How long does a female mosquito live?
4. When bitten by a mosquito, some people can have an allergic reaction in the form of an itchy rash. What causes this itchy rash?
5. Do you know why some people are bitten by mosquitoes more often than others?
6. What is the Zika virus named after?
7. What chemical is most often used to treat mosquito nets?
8. What is the latest mosquito-borne illness to emerge in the Americas?
9. What is the most infamous mosquito-borne illness?
10. For how many years have mosquitoes been around?
11. What is a “crepuscular” mosquito?
12. Which mosquitoes bite humans?

**Weill Cornell
Medicine**

First Stop – Weill Cornell Travel Medicine (WCTM)



■ *We recommend that clients be seen at WCTM at least 6 weeks prior to traveling. While most vaccines become fully effective within two weeks of a single dose, some require two or more doses prior to departure.*

Depending on the destination, we may also prescribe malaria chemoprophylaxis and empiric treatment of traveler’s diarrhea and/or altitude sickness.

■ *Preventative methods will go a long way in making your trip safer and more enjoyable.*

(1) little fly (2) approximately 3,500 (only a small fraction bite humans) (3) usually less than 14 days (4) the mosquito’s saliva (which is needed to avoid clotting of the blood) (5) Several theories include: Type O blood is preferred by mosquitoes; certain bacteria on the skin; heavy breathers; increased body heat; unknown genetic factors. (6) African forest in Uganda near Lake Victoria where the illness was first found. (7) Permethrin, an effective insecticide, is for use on clothing and nets. It should not be applied to skin. (8) Zika virus (9) malaria (10) More than 30 million years (11) A mosquito species that feeds primarily at twilight (the period after dark and before dawn), classic example is the anopheles mosquito that transmits malaria. (12) Only the females (they need nutrients for their eggs)

 **Weill Cornell Medicine**

Weill Cornell Travel Medicine (WCTM)
Weill Cornell Medicine
1305 York Avenue, Weill Greenberg Center, 4th Floor
New York, NY 10021
Phone: (646) 962-TRIP (8747) Fax: (646) 962-0152



Whether traveling for pleasure, work, or embarking on a humanitarian mission, it is vital to make a “first stop” with a travel medicine expert prior to leaving. This will ensure that you have a safe trip and return in good health. The Division of Infectious Diseases at Weill Cornell Medicine has been home to a premier clinic that serves this purpose: Weill Cornell Travel Medicine (WCTM), which was co-founded in 1980 by **Dr. Henry W. Murray**, Arthur R. Ashe Jr. Professor of Medicine, who to this day sees travelers on a regular basis. Recognized nationally and internationally, WCTM has counseled thousands of travelers over the decades, providing services for a wide range of clients. Our highly experienced team, under the leadership of its current Medical Director, **Dr. Ole Vielemeyer**, works with international travelers with a broad range of itineraries.

- Located on the 4th floor of the Weill Greenberg Building at 1305 York Avenue, conveniently across from New York Presbyterian Hospital.
- Open during normal business as well as evening hours.
- Staffed by highly experienced physicians, nurses, as well as a family nurse practitioner.

Services include:

- A thorough risk assessment
- Routine and travel-specific vaccines as needed
- Prescriptions for necessary medications including malaria prophylaxis
- Counseling on varying prevention methods
- Educational guidance
- Up-to-date travel advice for both adults and children



The WCTM team will assess the overall health status of the traveler and then **carefully review his or her itinerary**, specific destination, length-of-stay, and level of planned physical exertion during the trip.



In anticipation of any potential travel-related risk, the WCTM team will assess the overall health status of the traveler and then carefully review his or her itinerary, specific destination, length-of-stay, and level of planned physical exertion during the trip. Although the majority of clients seen at WCTM are healthy, some have underlying health conditions and/or a compromised immune system. Since WCTM is integrated into the larger Weill Cornell Medicine physician network, each health condition will be evaluated with care and if needed in collaboration with other physicians at Weill Cornell.

All medical providers working at the WCTM not only see travelers but also remain active in taking care of patients in the in- and outpatient setting.

- WCTM physicians are engaged in research and medical education, which adds to the wealth of knowledge and expertise provided.
- WCTM is equipped to provide seamless follow-up care, giving guidance to clients while abroad and/or post-travel clinic visits if needed.
- **The clinic sees adults and children (above the age of 6 years) and some providers accept major insurance plans to allow for at least partial coverage of services provided depending on the individual insurance policy.**

Mosquitoes and Mosquito-borne Illnesses

Mosquitoes are found on every continent except for Antarctica and despite their small size are often considered to be the deadliest animal family in the world. Most times they are harmless and even beneficial as they are pollinating flowers in search of nectar, or when birds eat them for food. The danger exists, when during her short lifespan, the female mosquito has to take a blood meal in order to gain enough nutrients for her eggs. While very little blood is taken, there is enough contact for a pathogen -- ranging from viruses to parasites (including worms) -- to be transmitted to an unsuspecting human.

Malaria

Of the many mosquito-borne illnesses, malaria is the most lethal, and found in many tropical and sub-tropical regions of the world. In fact, in the first part of the last century the disease was still endemic in North America and only eradicated in 1951 through concerted efforts of mosquito control. Today malaria kills several hundred thousand people annually in Africa alone.

West Nile, Chikungunya, and Zika Viruses

Since the eradication of malaria, mosquito bites have been regarded as simply a nuisance in the U.S. This changed with the emergence of West Nile virus infections in New York City in 1999. Today, more than 40,000 cases have been documented countrywide, resulting in over 1,700 deaths -- mostly due to brain infections. More recently, two additional mosquito-related threats have emerged in the Americas: chikungunya, a virus that causes fever and sometimes serious joint problems, and Zika, linked to severe birth defects in newborns when it affects pregnant women.



Prevention and Treatment for Mosquito-borne Illnesses

- *Very effective preventative measures are taken at WCTM for several of the travel-related mosquito-borne illnesses, including malaria, yellow fever, and Japanese encephalitis.*
- *Unfortunately, there are no effective vaccines or antivirals available to date to combat West Nile, chikungunya, or Zika viruses.*
- *WCTM provides all-encompassing recommendations on how to best avoid mosquito and tick bites including:*
 - education on the feeding habits of different mosquito species - daytime vs. crepuscular (twilight) biters
 - use of highly effective insect repellents
 - role of protective clothing and treatment of garments
 - use of chemically-treated mosquito nets