

THE PRE-TRAVEL CONSULTATION

Dr. Becky Reece, MD

Lead physician at Lifespan Center of Excellence for
Tick-borne Diseases

Newport Hospital

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Some Slides from Dr. Kojic, Director of The Miriam Hospital Travel clinic

Overview



- Epidemiology
- General recommendations
 - ▣ The traveller
 - ▣ Diseases
 - ▣ Diarrhea
 - ▣ Vector and animal bite prevention
- Immunizations
- Other travel related recommendations

Travelers' Health Risks

Of 100,000 travelers to a developing country for 1 month:

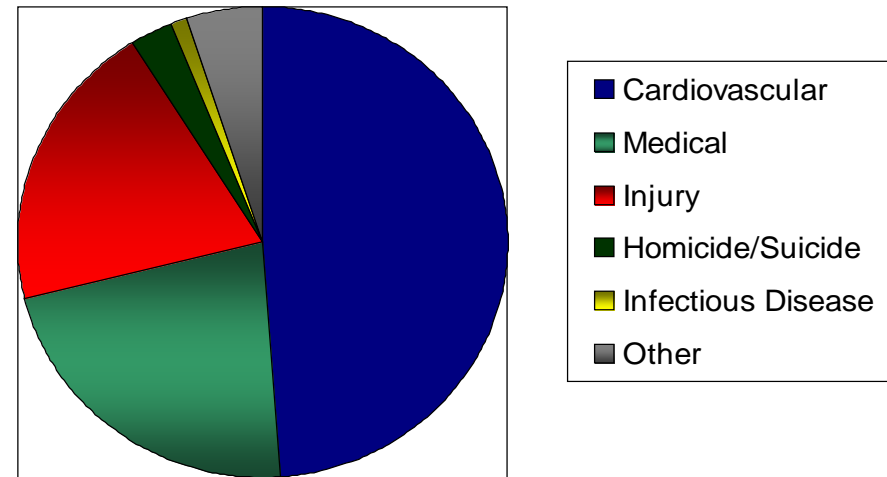
- ▣ 50,000 will develop some health problem**
 - ▣ 8,000 will see a physician**
 - ▣ 5,000 will be confined to bed**
 - ▣ 1,100 will be incapacitated in their work**
 - ▣ 300 will be admitted to hospital**
 - ▣ 50 will be air evacuated**
 - ▣ 1 will die**
- ▣ Among more than 42,000 ill returned travelers seen between 2007 and 2011 in the GeoSentinel surveillance network, the most common syndromic diagnoses were:**
 - ▣ gastrointestinal (34%)**
 - ▣ febrile illnesses (23%)**
 - ▣ dermatologic illnesses (19%)**
- ▣ Asia (32%) and sub-Saharan Africa (25%) were the most common regions where illnesses were acquired.**
- ▣ Approximately 40 percent of ill travelers reported pretravel medical visits.**
- ▣ Travelers visiting friends and relatives in their country of origin had a disproportionately high burden of serious febrile illness and very low rate of advice prior to travel.**

Steffen R et al. J Infect Dis 1987. 156:84-91

GeoSentinel Surveillance of Illness in Returned Travelers, 2007–2011 Leder K, Torresi J, Libman MD, et al Ann Intern Med. 2013;6(158):456.

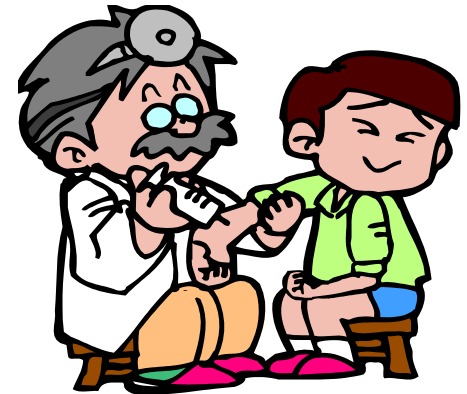
Causes of death

- Cardiovascular deaths 49%
- Injuries, accidents 22%
 - top on list Egypt, Kenya, India
- Medical illnesses 13.7%
- Infectious causes 1%
- Other



The Traveller: Medical Issues

- **Age-specific issues**
- **Underlying illness, immunosuppression**
- **Systems review**
- **Medical history**
- **Medication use**
- **Vaccination history**
- **Allergies**
- **Contraindications to vaccines and medications**



Allergies

Vaccines: don't use if allergic to...

- Eggs -> YF-vax, flu
- Other excipients -> check ImmunoFacts®

Medications: don't use if allergic to...

- Sulfa -> acetazolamide, Fansidar
- Antibiotics -> FQs
- Chrysanthemums -> permethrin (?)

Prescription/OTC History

□ Drug-disease interactions

- ▣ PPIs or H2 blockers increase risk of developing traveler's diarrhea
- ▣ Minocycline lacks proven malaria protection – consider doxycycline

□ Drug-drug interactions

- ▣ Antimicrobials can interfere with PO Typhoid vaccine, oral contraceptives
- ▣ Bismuth subsalicylate can bind quinolones
- ▣ Warfarin and doxycycline/mefloquine □ increase anticoagulant effect

Examples of Medical Conditions and Travel Health Recommendations

Drug Depression  **Mefloquine**

BPH  **Scopolamine**


Precautions

- Mefloquine is known to exacerbate neuropsychiatric conditions, such as depression even in those successfully treated in the past. **July 2013** FDA updated warnings regarding neurologic and psychiatric side effects associated with mefloquine:

****Neurologic side effects can occur at any time during drug use, and can last for months to years after the drug is stopped or can be permanent.****

- Scopolamine is a strong anticholinergic agent that can augment urinary retention in patients with BPH

Examples of Medical Conditions and Travel Health Recommendations

Ulcerative colitis  **Traveler's diarrhea**

Liver disease  **Hepatitis A, B, E**

- Patients with UC or other intestinal disorders are not more likely to acquire TD, but are more likely to have severe TD
- Pre-existing liver disease is an indication to vaccinate against hepatitis A and B to lessen other liver insults

COPD  **High altitude**

Diabetes  **Insulin storage**

Travel Preparation

- ❑ **Travel health insurance**
 - ❑ **Medical care**
 - ❑ **Hospitalization**
 - ❑ **Evacuation**
- ❑ **Obtaining medical care abroad**
- ❑ **Awareness of travel notices**
- ❑ **Hand washing and hygiene**
- ❑ **Check airline regulations**
- ❑ **Get a PPD placed**



Travel Emergency Kit – If it sounds too good, think twice



MIAMI MASSAGE

**RECOVER FROM
DEMENTIA, STROKE,
KIDNEY FAILURE AND
PARKINSON IN JUST 3
WEEKS OR 100% OF YOUR
MONEY BACK. STRICTLY
WITHOUT SURGERY
ALSO,
ALL CANCERS, FIBROID,
INFERTILITY,
IMPOTENCE, PROSTATE
ENLARGEMENT,
SPONDYLOSIS, SCIATICA,
BURNS, HERNIA, SKIN
DISORDERS, DIABETES,
HYPERTENSION, ETC**

**Tel: 0303-931-525
0554-024-922**

Location:
Opposite 3rd Link, Sakumono Village
Road, near Vulcanizer Junction

**Mon. - Fri. 8a.m. - 8p.m.
Sat - 8a.m. - 2p.m.
Sunday - Emergencies/appointments only**

Miami Massage -World's No 1

Travel Emergency Kit

- ❑ **Copy of medical records and extra pair of glasses**
- ❑ **Prescription medications**
- ❑ **Over-the counter medicines and supplies**
 - ❑ **Analgesics**
 - ❑ **Decongestant, cold medicine, cough suppressant**
 - ❑ **Antibiotic/antifungal/hydrocortisone creams**
 - ❑ **Pepto-Bismol tablets, antacid, imodium**
 - ❑ **Band-Aids, gauze bandages, tape, Ace wraps**
 - ❑ **Insect repellant, sunscreen, lip balm**
 - ❑ **Tweezers, scissors, thermometer**



Infectious Disease Risks to the Traveler

- ☐ **Malaria**
- ☐ **Diarrhea**
- ☐ **Hepatitis A**
- ☐ **Typhoid fever**
- ☐ **Cholera**
- ☐ **Leishmaniasis**
- ☐ **Rabies**
- ☐ **Dengue**
- ☐ **Chikungunya**
- ☐ **Meningococcal Meningitis**
- ☐ **Schistosomiasis**
- ☐ **Tuberculosis**
- ☐ **Leptospirosis**
- ☐ **Polio**
- ☐ **Measles**
- ☐ **Yellow Fever**
- ☐ **JEV**
- ☐ **Zika**

ETC.

Travel Itinerary

- **Full itinerary**

- Dates, duration, stopovers
- Seasonal considerations

- **Styles of travel**

- Rural vs. urban
- Budget vs. luxury

- **Accommodation**

- Hotel vs. camping

- **Activities**

- Business vs. tourism
- Adventure, safari
- Missionary/Humanitarian/NGO



The 3 “R’s” of Immunization

Routine

- **Childhood, adolescent, adult**

Required (World Health Organization)

- **Yellow Fever vaccine may be required by W.H.O. regulations for certain countries**

Recommended – depending on...

- **Geographic destination**
- **Activities planned during travel**
- **Individual traveler’s underlying health**

Routine Vaccines

Tetanus-diphtheria and pertussis (IM) TDap

- Routine boost q10 yrs; 5 yrs minimum
- Contains pertussis antigen for adults/adolescents

Influenza (IM or intranasal)

- Same indications/contraindications as for domestic use

****MMR (SQ)****

- Travelers should have 2 doses of MMR
- Can give to children <1 yr, but then need 2 doses after 1 year & before school

Update other routine vaccines

- Pneumococcal (≥ 65 yrs + other indications) – IM/SC
- Zoster vaccine (≥ 50 yrs) - SC

Recommended-Required Immunizations

Depending on region and risk of exposure:

Hepatitis A - IM

Hepatitis B - IM

Hepatitis A + B (Twinrix) – IM

Japanese encephalitis

Meningococcal meningitis A,C,Y,W-135

– MCV4 (Menactra) – IM, MPSV4 (Menomune) - SC

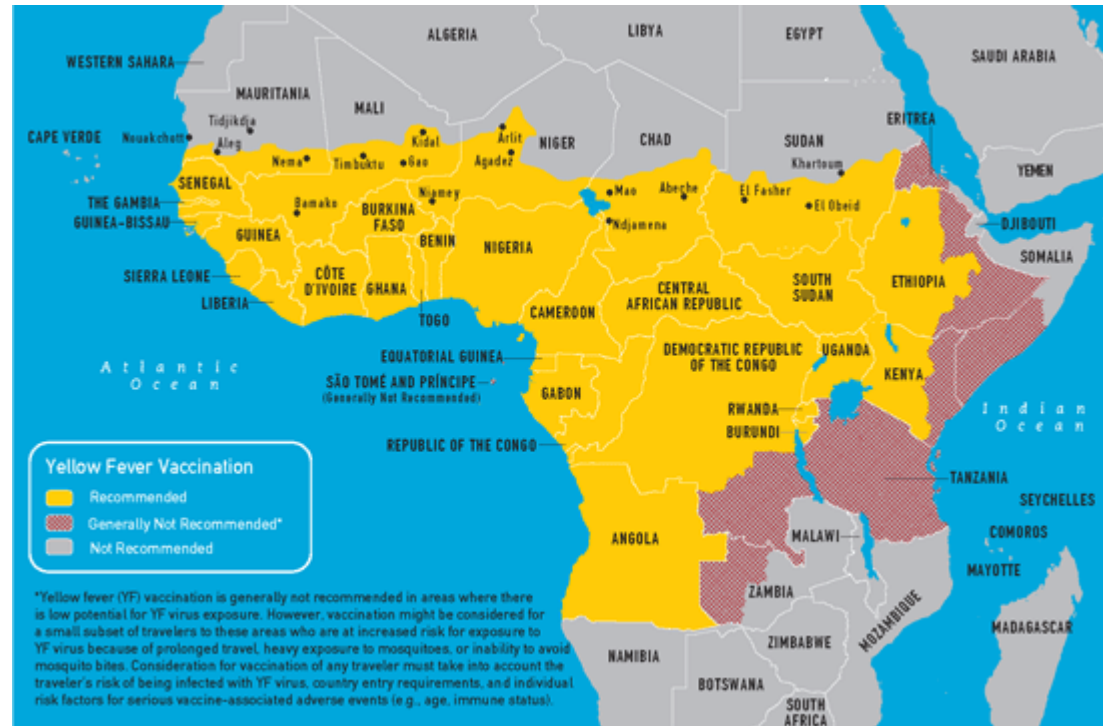
Polio - IM

Rabies - IM

Typhoid Fever (PO/IM)

Yellow Fever - SC

Yellow Fever Endemic Zones



Reference: CDC. *CDC Health Information for International Travel 2014*(The Yellow Book). Chapter 3: Infectious Diseases Related to Travel. Atlanta: US Department of Health and Human Services, Public Health Service, May 2013.

Meningitis Belt of Sub-Saharan Africa¹



CDC. *CDC Health Information for International Travel 2014*(The Yellow Book). Chapter 3: Infectious Diseases Related to Travel. Atlanta: US Department of Health and Human Services, Public Health Service, May 2013

Traveler's Diarrhea (TD)

Montezuma's revenge, Aztec two-step, Delhi belly, Turkey trots

- >3 unformed stools/day
- N/V, abdominal cramps, low-grade fever
- Most likely within the first 14 days of travel
- More associated with food than water
- Highest incidence in children/adolescents
- Self-limiting, 3-5 days

Food Precautions

“Boil it, peel it, cook it, or forget it!”



Okay to eat...

- Well-cooked meats, vegetables and other foods, served piping hot
- Freshly boiled foods such as beans, soups, rice and pasta, served hot
- Breads, tortillas and other baked goods
- Fruits, nuts and vegetables with thick skins or shells which you have removed yourself
- Canned foods

NOT okay to eat...

- uncooked vegetables and salads
- unpasteurized dairy products
- chutneys or salsas
- food from street vendors

Water Precautions Abroad



What to drink...

- beverages made only with boiled water (such as coffee or tea)
- canned or commercially bottled carbonated water and other drinks

What NOT to drink...

- tap water or anything mixed with water
- anything with ice (including alcohol)
- don't rinse after brushing with tap water, use bottled water

TD Treatment

□ Antibiotics:

- Ciprofloxacin 500 mg BID x1-3 days (*Campylobacter* resistance developing)
- Azithromycin >90% 500mg x3d or 1 gm x1 d
- Rifaximin – non-invasive E coli, generally only used due to ddi

□ Antimotility Agents:

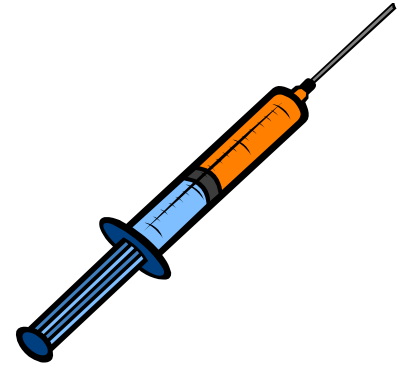
- safety of loperamide when used along with an antibiotic has been well established, even in cases of invasive pathogens.
- generally not recommended for patients with bloody diarrhea or those who have diarrhea and fever.

□ Oral rehydration therapy:

- oral rehydration solution (ORS), prepared from packaged oral rehydration salts, such as those provided by the World Health Organization, which are widely available at stores and pharmacies in most developing countries. ORS is prepared by adding 1 packet to the indicated volume of boiled or treated water—generally 1 liter

Bloodborne and STD Precautions

- ❑ **Prevalence of**
 - ❑ **STDs**
 - ❑ **Hepatitis B**
 - ❑ **Hepatitis C**
 - ❑ **HIV**
- ❑ **Unprotected sexual activity**
- ❑ **Commercial sex workers**
- ❑ **Tattooing and body piercing**
- ❑ **Auto accidents**
- ❑ **Blood products**
- ❑ **Dental and surgical procedures**





Vector Precautions

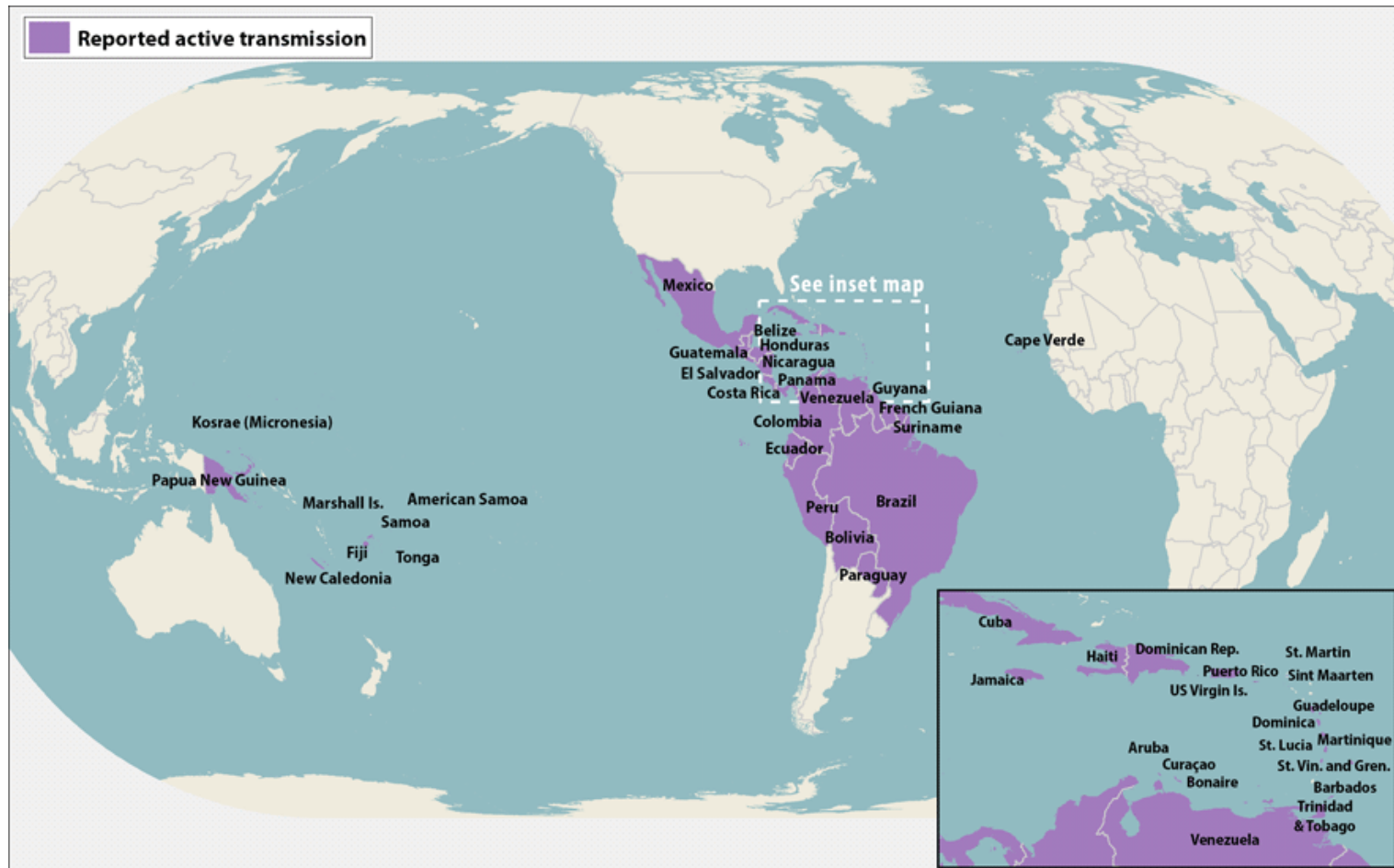


- ❑ **Covering exposed skin**
- ❑ **Insect repellent containing DEET 25 – 50%**
- ❑ **Treatment of outer clothing with permethrin**
- ❑ **Use of permethrin-impregnated bed net**
- ❑ **Use of insect screens over open windows**
- ❑ **Air conditioned rooms**
- ❑ **Use of aerosol insecticide indoors**
- ❑ **Use of pyrethroid coils outdoors**
- ❑ **Inspection for ticks**

Zika virus

- Mosquito-borne virus, first identified in rhesus monkeys in Uganda in 1947
- Identified in human in Uganda and republic of Tanzania in 1952
- About 64 countries have reported outbreaks since 2007
- Transmitted by the *Aedes* mosquito (mainly *Aedes aegypti*) that bites during the day
- Other modes of transmission include blood transfusion, sex and perinatal transmission

Zika map – 5/16/16



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

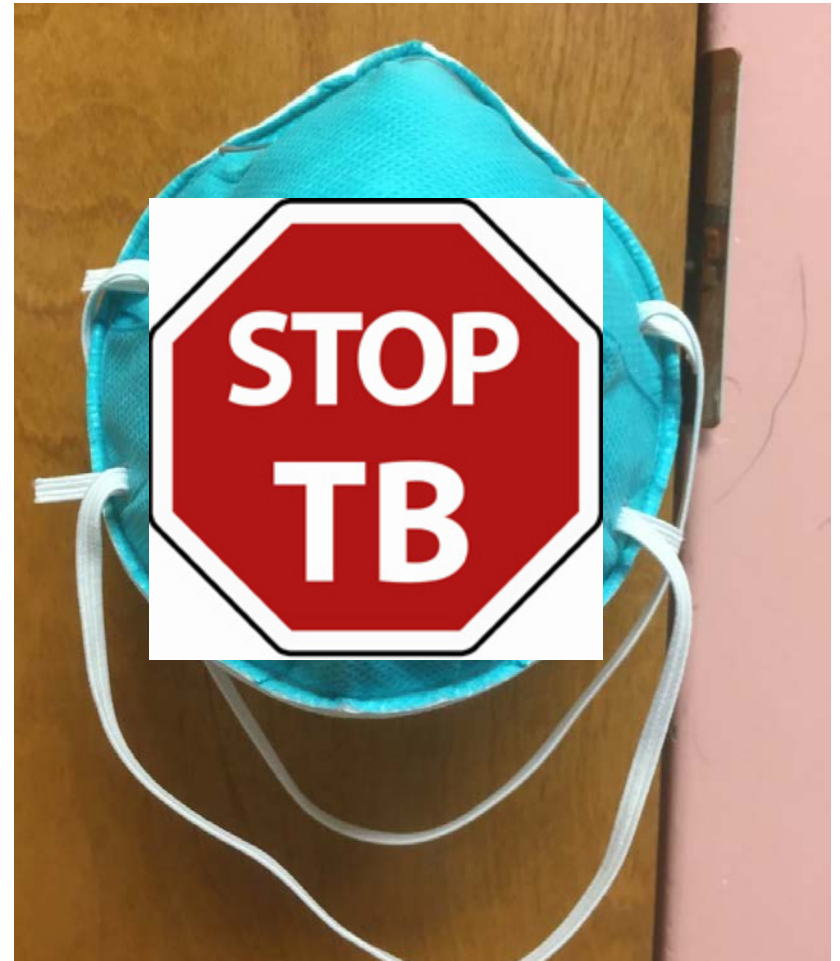
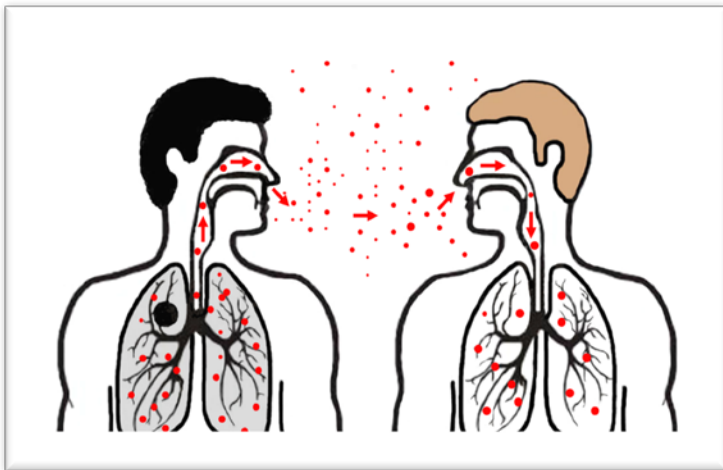
Zika virus disease – symptoms and signs

- Symptoms similar to other arbovirus infections such as Dengue or Chikungunya
- Fever, skin rash, conjunctivitis, muscle and joint pain, malaise and headache
- Symptoms are usually mild and last 2 to 7 days
- Complications include Guillain-Barre syndrome, microcephaly in babies born to infected mother, other fetal malformations and neurological disorders
- Diagnosis is by testing for the presence of virus in blood
- There is no antiviral agent. Treat symptoms

Vector precautions is key



Tuberculosis (TB)



Environmental Precautions

- **Air Travel**
- **Jet Lag**
- **Sun Protection**
- **Extreme Heat and Cold**
 - ▣ dehydration, heat stroke
 - ▣ hypothermia, frostbite
- **Altitude**
- **Water recreation**
 - ▣ Drowning, boating & diving accidents
 - ▣ Risk of schistosomiasis or leptospirosis
 - ▣ Biological and chemical contamination



Animal Precautions

- **Animal avoidance**
- **Rabies**
 - ▣ **Specific animal threats**
 - ▣ **Medical evaluation of bites/scratches**
 - ▣ **Post exposure immunization and immunoglobulin**
- **Envenomations**
 - ▣ **Snakes, scorpions, spiders**
 - ▣ **Maritime animals**



Pay attention to warning signs



Post-Travel Care

- **Post-travel checkup**
 - ▣ **Long term travelers >1 month**
 - ▣ **Adventure travelers**
 - ▣ **Expatriates in developing world**

- **Post-travel care**
 - ▣ **Fever, chills, sweats**
 - ▣ **Persistent diarrhea**
 - ▣ **Weight loss**



Injury and Crime

- **Vehicles**
 - ▣ Risk of road and pedestrian accidents
 - ▣ Night travel
 - ▣ Seat belts and car seats

- **Use of drugs and alcohol**

- **Understanding local crime risks**
 - ▣ Scam awareness
 - ▣ Situational awareness
 - ▣ Location avoidance

Safety



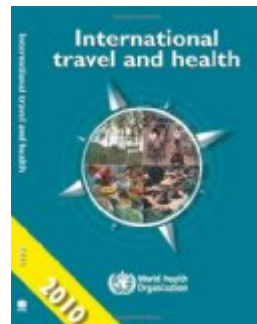
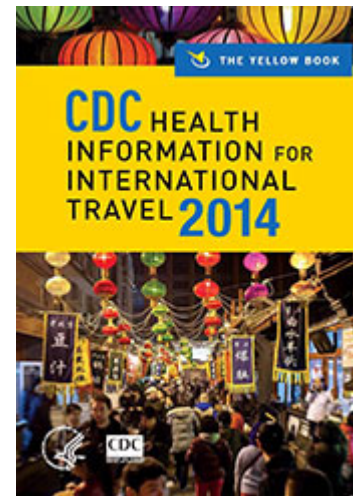
- Assess risk carefully
- Do some home work before you set off on local trips within country
- Avoid areas with violence and tensions
- Watch out for people offering services that you have not requested

Keep valuables safe and locked



Travel Health Resources

- **CDC Travelers' Health Website**
 - www.cdc.gov/travel
- **World Health Organization**
 - www.who.int/int
- **State Department**
 - travel.state.gov
- **International Society of Travel Medicine**
 - www.istm.org
- **Health Information for International Travel**
 - CDC “Yellow Book”
- **International Travel and Health**
 - WHO “Green Book”



Travelers' Health Website

www.cdc.gov/travel

CDC Home



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

- ☒ Travelers' Health
- ☐ All CDC Topics

Choose a topic above

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TRAVELERS' HEALTH

TRAVEL SAFE. TRAVEL SMART.

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Infographics

Diseases spread by mosquitoes, food and water safety, and more

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GOING TO THE CARIBBEAN?

MOSQUITOES spread diseases such as **CHIKUNGUNYA** and **DENGUE**.

Mosquitoes bite during the day and night.

DON'T LET MOSQUITOES RUIN YOUR TRIP.



VACCINES. MEDICINES. ADVICE.



For Travelers



Where are you going?

Afghanistan

What kind of traveler are you?
(optional)



For Clinicians



Destination

Afghanistan

Special population(s)
(optional)

Disease Directory

Learn more about travel-related diseases.

African Sleeping Sickness

Go




Before you travel make sure you speak with your doctor.

 Email page link

 Print page



 Our Twitter

 Our Facebook page

 Our Facebook page

 Get email updates

Contact Us:

 Centers for Disease Control and Prevention
1600 Clifton Rd
Atlanta, GA 30333
 800-CDC-INFO
(800-232-4636)
TTY: (888) 232-6348
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Travel Notices & Announcements

cdc.gov/travel/notices

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Travel Health Notices



Types of Notices

Warning Level 3, Avoid Nonessential Travel

Alert Level 2, Practice Enhanced Precautions

Watch Level 1, Practice Usual Precautions

[Read More](#)

Current Notices

Travel notices are designed to inform travelers and clinicians about current health issues related to specific destinations. These issues may arise from disease outbreaks, special events or gatherings, natural disasters, or other conditions that may affect travelers' health. [See below for more information](#) on our travel notice categories.

For country-specific information about Safety and Security, visit the US Department of State [Travel Alerts and Warnings](#) or page.

For country-specific information about weather conditions, visit the National Oceanic and Atmospheric Administration (NOAA) [International Weather Selector](#) or webpage.

For a list of all Zika virus travel notices by region, visit [Zika travel information](#).

Alert Level 2, Practice Enhanced Precautions

New

[Zika Virus in Peru](#)

May 05, 2016

Local mosquito transmission of Zika virus infection (Zika) has been reported. Local mosquito transmission means that mosquitoes in the area are infected with Zika virus and are spreading it to people.

[Read More >>](#)

Updated

[2016 Summer Olympics \(Rio 2016\)](#)

May 05, 2016

The 2016 Summer Olympics will take place in Rio de Janeiro, Brazil, from August 5 to August 21, 2016. The Paralympic Games is scheduled for September 7 to September 18, 2016. If you plan to travel to Brazil for the Olympics or Paralympics, follow CDC's recommendations to help you stay safe and healthy.

<http://wwwnc.cdc.gov/travel/notices>

Safe travels and thank you!

