“Travel Vaccines: Shots or Not?”

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August 24, 2011 12-1pm ET

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Program Guidelines

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Any questions!

Q & A session will be held at the end of the presentation.
Objectives

- Identify travel vaccines within three categories: Routine, Recommended and Required
- Describe the factors included in an individual’s travel Risk Assessment
- Identify the Referral sources for pre-travel consultations
- Identify Resources for travel vaccination information

Travel Health – More than Shots

Leading Causes of Death in Americans Traveling in Developing Countries

1. Cardiovascular Disease – same as if they stayed home
2. Motor Vehicle Accidents – passenger, driver or pedestrian; stay off rural roads after dark
3. Infectious Disease – most common
   Traveler’s Diarrhea; second is Respiratory infections

Infectious Disease Prevention Tools

- Tablets, UV light, Filters, Boiling for safe water
- Immunizations & Insect repellants
- Medications
- Education on Insect, Food/Water, and Animal precautions

It all takes TIME which you may not have in the hospital, primary care office or grocery store...

What’s the big deal with infectious disease for foreign travel?

1. Developing Countries
2. Tropical Countries
3. Not your hometown germs

Sarah Schoof, FNP- C is the sole owner of Safari Health in Slingerlands NY. Safari Health provides travel health services to individuals and groups on a private pay basis.

www.nursetip.org
What shots do I need for Timbuktu?
What can I do about Delhi Belly, Montezuma’s Revenge, Turkey Trots?

Does John need Malaria medicine in Tanzania?

Is it safe for my daughter to spend a semester in Peru?
Where can I get a yellow fever shot for India?

Will insurance pay for typhoid shots?

Vaccines for International Travel

1. Routine – Things you maybe would/should/could have gotten even if staying home. Risk of some of these increases with travel, and besides it’s a good excuse to update.

2. Recommended – Vaccines not usually recommended in the US (or not in adults), but recommended because of chosen destination.

3. Required – Quite limited, just Yellow Fever and Meningococcal.

Routine:

Influenza
Measles (MMR)
Pneumococcal
Tdap
Varicella

Influenza

• Where: Northern Hemisphere, Southern Hemisphere, Tropical different times of year (map)
• Who: Anyone traveling to, from or through an area in their flu season, especially if higher risk of complications from flu
• Why: Increased exposure on airplanes; worse to be sick while traveling; don’t bring it to remote people
• When: > 2 weeks before traveling; lasts about a year
• What: This year flu strains the same in Northern & Southern Hemisphere vaccines

Measles (MMR)

• Where: Anywhere, but Measles outbreaks recently noted in Europe and parts of Africa
• Who: Anyone born after 1956 who has not had 2 doses, even age 6-15 months; Not pregnant nor immunosuppressed
• Why: Outbreaks in other countries; Increased exposure on planes and in crowds; Worse to be sick while traveling; Bringing Measles back with you to others in the US
• When: Same day or 28 days apart from other live viral vaccines (Yellow Fever, Chicken Pox/Varicella)
Pneumococcal

- Where: Anywhere in the world
- Who: Patients over 65, with chronic illness or immunosuppressed
- Why: Serious airborne disease; increased exposure on airplanes; worse to be sick while traveling
- When: > 2 weeks before travel; if first dose is given < age 65, give a second dose after age 65, 5 years or more after the first

Tdap

- Where: Anywhere in the world
- Who: Adolescents and adults with >5 years since Td or DTaP
- Why: Tetanus risk may be higher in developing countries and less convenient to get booster in case of deep & dirty wound; Diphtheria & Pertussis airborne so risk higher during travel, and worse to be sick while traveling
- When: 1 dose before travel if > 5 years since the last Td; For better protection against Pertussis, may give if > 2 years since last Td

Varicella

- Where: Anywhere in the world
- Who: Adults or children who have not had chicken pox or received 2 doses of vaccine
- Why: Airborne so risk higher on airplanes, and worse to be sick while traveling
- When: Same day or 28 days apart from other live viral vaccines (Yellow Fever, MMR); 2 doses at least 28 days apart, or give second dose if already had first

Recommended

- Hepatitis A
- Hepatitis B
- Japanese Encephalitis
- Meningococcal
- Polio
- Rabies
- Typhoid
**Hepatitis A**

- **Where:** Anywhere, but more common in developing countries (see map – darker areas have higher incidence)
- **Who:** Anyone over 1 year
- **Why:** Food and water borne; adults usually sick for several weeks
- **When:** > 2 weeks before travel if possible; 1 dose gives good protection ~ 1 year, second dose given > 6 months after first protects ~ 30 years
- **What:** Inactivated vaccine (Havrix or Vaqta); HepA/HepB combined (Twinrix) needs different schedule; Immune Globulin rarely used anymore

**Hepatitis B**

- **Where:** Anywhere in the world
- **Who:** Anyone traveling in developing countries, especially longer term or those whose behaviors put them in higher risk in relation to sex/blood/needles
- **Why:** Serious acute and chronic illness which can result in cirrhosis, cancer or death; In developing countries disease incidence higher, and practices and regulations can be less protective with tattoos, piercings, manicure/pedicures, acupuncture
- **When:** Series of 3 before travel if possible, takes 4 months; Engerix-B alternative 4 dose schedule 0, 1, 2 and 12 months with good protection after 3rd dose
- **What:** Recombinant vaccine (Engerix-B or Recombivax HB); HepA/HepB combined (Twinrix) given same schedule as Hepatitis B (Engerix-B), or with an accelerated schedule (0, 7, and 21-30 days before travel plus 1 year booster for long term protection)

**Japanese Encephalitis**

- **Where:** Southern and Eastern Asia (map)
- **Who:** Particularly travel longer than 1 month, more time outdoors, more rural, where there’s an outbreak, or don’t know itinerary; Vaccine (Ixiaro) approved >17 years old at this point
- **Why:** Transmitted by mosquitoes that bite at night; JE has 25% mortality and up to half of survivors have permanent brain damage
- **When:** 2 doses 28 days apart finishing 1 week before travel if possible
Meningococcal Meningitis

- **Where:** Anywhere in the world; Most frequent epidemics are in Meningitis Belt of Africa (map)

- **Who:** Anyone over 2 years of age (3 mo to 2 yrs in special circumstances) traveling to high risk areas; consider in lower risk areas for Health Care Workers and people spending time in orphanages

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Polio

- **Endemic countries**
  - Polio-endemic countries have never stopped transmission of wild poliovirus.
  - Afghanistan
  - India
  - Nigeria
  - Pakistan

- **Countries with imported poliovirus**
  - Countries with imported poliovirus are experiencing ongoing outbreaks following an importation.
  - Congo
  - Kazakhstan
  - Libya
  - Mali
  - Mauritania
  - Nepal
  - Niger
  - Russian Federation
  - Senegal
  - Sierra Leone
  - Tajikistan
  - Turkmenistan
  - Uganda

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Rabies

- **Where:** Present in most countries of the world; Consider pre-exposure vaccination especially for travel to areas where quality medical care (including international standard rabies immune globulin) may not be available within 24 hours of being bitten or scratched by an animal

- **Who:** Especially important for people are at high risk of rabies exposure because of occupation or planned activities; children; joggers; long-term visitors

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continued on next slide
Rabies (cont)

• Why: Rabies is fatal – less than 10 people have survived once symptoms develop.

• When: 3 dose series pre-exposure takes 3-4 weeks; considered lifetime for most people; Post-exposure ASAP after a bite, a scratch, or a lick on a freshly bleeding wound.

• What: Pre-exposure 3 doses of Vaccine; Post-exposure 4 doses of Vaccine plus 1 dose of Rabies Immune Globulin if not previously vaccinated; Post-exposure 2 doses of vaccine to boost immunity if previously vaccinated with full series of modern rabies vaccine.

Typhoid

• Where: Most of the developing countries of the world; highest risk in southern Asia (map)

• Who: Almost all travelers to these areas over 2 years of age (oral vaccine approved over 6 years of age)

• Why: Food & Waterborne severe illness up to 30% fatal if not treated; can be treated with antibiotics, but sometimes hard to diagnose.

• When: Get shot or start oral vaccine at least 2 weeks before travel; no long term booster effect from either

Typhoid (cont)

• What: Either vaccination is about 75% effective;

• Shot lasts 2 years, easier to do, has minimal side effects which last 1-2 days;

• Oral vaccine lasts 5 years, 4 doses 48 hours apart with no food 2 hrs before and 1 hr after, kept in refrigerator, can’t take antibiotics during or several days before and after, side effects last about 1 week

Required:

Meningococcal Meningitis:
within 3 years for Hajj and Umrah Pilgrimages to Mecca (Saudi Arabia)

Yellow Fever:
requirements based on geographical history of disease AND location of appropriate mosquitos.
Yellow Fever

Where: (map)
- Required to get visa or enter the country
- Recommended to protect yourself

Who: Age 9 months to 59 years (or older); live virus vaccine; avoid in immunosuppressed patient

Why: Requirements; serious disease transmitted by mosquitoes that bite day and night; characterized by multiple organ system failure

Yellow Fever (cont)

When: First dose at least 10 days before travel; Booster dose q 10 yrs (if risk or requirement continues) effective immediately; same day or 28 days apart from other live viral vaccines (MMR, Varicella)

Risk Assessment

A. Factors to consider
  1. Patient
     • Age
     • Health/Medications/Allergies
     • Immunization History
     • Attitudes/Preferences
  2. Destination
  3. Season
  4. Length of Stay
  5. Accommodations
  6. Food & Water sources
  7. Plans

B. Common Scenarios

1. Brief Central America or China major tourist or business routes
   - Play
   - Pass

2. Extensive Equatorial Africa or Southern Asia
   - Play
   - Pass

3. Overseas Adoption
   - Play
   - Pass

4. Immune suppressed patient
   - Play
   - Pass

Images: www.cdc.gov
Referring your patients (friends & relatives)

1. For information & recommendations based on destination: [www.cdc.gov/travel](http://www.cdc.gov/travel)

2. For vaccinations, prescriptions and education:
   - Primary care provider – vaccines and expertise vary
   - Local Health Department – available services vary from County to County
   - Travel Medicine specialist – [www.istm.org](http://www.istm.org) Global Travel Clinic Locator

[www.cdc.gov](http://www.cdc.gov)

[www.immunize.org](http://www.immunize.org)

CDC Yellow Book:  
+ in print  
+ online (free)  
[www.cdc.gov/travel](http://www.cdc.gov/travel)
Vaccine Information Statement

Immunizations and other tools such as prescriptions and education are key to safer, healthier travel. When so much is invested in a journey, make the most of the time for business, adventure, education or service.

The World is Waiting. Are You Ready?

Any questions!

CNEs, CMEs, CECHs

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Give us your feedback:
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Thank You for participating!