

# Recommended Immunizations for International Travel

Destination ► Prophylaxis Against ▼	Zone 1: Western Europe, Canada, Australia, New Zealand, Japan	Zone 2: Central and South America, the Caribbean Islands and Pacific Islands, the former Soviet Union (NIS), Eastern Europe, Greenland	Zone 3: Africa, the Middle East, Asia (not including Japan), the Indian Subcontinent
Diphtheria, tetanus, pertussis	Travelers should have completed a primary series with a booster within 10 years.		
Measles, mumps, rubella	Vaccinate if traveler was born in 1957 or later and has had less than two doses.		
Varicella	Vaccinate if not immune.		
Influenza	Vaccinate if traveler is at risk for complications from disease and seasonal risk exists.		
Pneumococcal disease	Vaccinate if traveler is at risk of disease.		
Hepatitis A	Vaccinate and, if less than 4 weeks to travel, give IG.		
Hepatitis B	Vaccinate if traveler is at risk.		
Cholera	Vaccination not recommended, although may rarely be required.		
Malaria	Check current level of risk to traveler, including drug resistance.		
Meningococcal disease			Check risk, including current outbreaks.
Polio	Vaccinate travelers to developing countries (except Latin America)		
Rabies	Vaccinate if itinerary and/or activity places traveler at risk.		
Typhoid	Vaccinate if itinerary places traveler at risk.		
Japanese encephalitis	Vaccinate if itinerary places traveler at risk.		
Yellow fever	Vaccination may be required to or from countries in Africa and South America.		

## How to use this schedule

Provide medical and/or referral services as indicated by the zone traveled.

**Zone 1:** Give vaccines as indicated in chart above.

**Zone 2:** You may choose to either provide travel prophylaxis directly or refer your patient for an appointment at an International Travel Health Clinic\*, the only clinics authorized to give yellow fever vaccine. See box on other side for how to access up-to-date information.

**Zone 3:** Refer patients for an appointment at an International Travel Health Clinic\*.

## Routine vaccinations for all travelers

**Diphtheria, Tetanus, Pertussis (DTaP/DTP/Td):** All travelers should have completed a series of DTaP, DTP, or Td shots. If it's been 10 years since completion of primary series or since the last booster dose, administer a Td booster.

**Measles, Mumps, Rubella (MMR):** All travelers born in 1957 or later should have a history of MMR vaccine. Persons  $\geq 6$  years should have received 2 doses.

**Varicella:** Consider vaccination for travelers who do not have evidence of immunity to varicella zoster virus, especially if the traveler expects to have close personal contact with local populations. Provide one dose of vaccine to those 12 months -12 years; if  $\geq 13$  years, give 2 doses, 4-8 weeks apart.

**Influenza:** Give the most current influenza vaccine to those who want to reduce their chances of catching the flu during travel, if they were not vaccinated in the preceding fall or winter. Flu vaccine is especially recommended for those at risk of complications for the disease and those who are traveling to the tropics at any time of year or to Southern Hemisphere countries from April-September. For children  $< 9$  years, give 2 doses, 1 month apart; all others should receive 1 dose. Use split virus vaccine for children  $\leq 12$  years; use either whole or split virus vaccine for persons  $\geq 13$  years.

**Pneumococcal:** Unvaccinated persons  $\geq 2$  years of age at high risk of pneumococcal disease should receive vaccine.

\* A list of International Travel Health Clinics is available by calling the Minnesota Immunization Hotline, (800) 657-3970, or (612) 676-5100.

## Special use vaccines

**Hepatitis A:** Persons traveling to countries with high or intermediate endemicity of hepatitis A virus infection (zones 2 & 3) should be vaccinated. Children and adolescents  $\geq 2$  years of age should receive a 0.5 mL dose and adults should receive a 1.0 mL dose. All travelers should receive vaccine booster doses after 6 months for long-term protection. Give IG, in addition to vaccine, to persons traveling to high-risk areas with less than 4 weeks before departure. Children  $< 2$  years should receive IG alone.

**Hepatitis B:** Travelers at risk of hepatitis B virus (HBV) infection include health care workers, persons who might need medical care while traveling in endemic countries, those who expect to have sexual or other intimate contact with the local population in countries where HBV is endemic, and long-term travelers ( $> 6$  months) to endemic areas. Ideally, vaccination should be initiated 6 months prior to departure in order to complete a 3-dose schedule. If time does not permit, either 1 or 2 doses should be given and the remaining doses may be completed at a later date.

**Cholera:** For most destinations, the risk of cholera is low. Persons traveling to cholera-infected areas should avoid eating uncooked food (especially fish and shellfish), eat only peeled fruits, and drink bottled beverages. A vaccine for cholera is available; however, it provides only brief and incomplete immunity and is not recommended for travelers. No country or territory requires vaccination as a condition for entry, although some local authorities may require it. In such cases, 1 dose of vaccine will usually satisfy entry requirements. A complete series, consisting of 2 doses separated by 1-4 weeks, with a booster 6 months later should be given only for special high-risk groups that work and live in highly endemic areas under less than sanitary conditions.

**Malaria:** Travelers whose itinerary places them at risk of malaria should take measures to avoid mosquito bites, especially between dusk and dawn. Advise patients to wear protective clothing, remain in a well-screened area (if not possible, a bednet, preferably sprayed with permethrin, should be used while sleeping), use a repellent containing 30-35% DEET concentrations, receive an appropriate prophylactic medication, and seek immediate treatment if symptoms develop. Refer to *Health Information for International Travel* for chemoprophylaxis advice (see below).

**Meningococcal disease:** Vaccine is indicated for travelers to countries having epidemic meningococcal disease (e.g., the "meningitis belt" of sub-Saharan Africa) and is required for pilgrims to Mecca, Saudi Arabia, for the annual Hajj. Persons  $\geq 2$  years of age should receive a 0.5 mL dose of vaccine with boosters after 3-5 years, if traveler remains at risk of disease.

**Polio:** Travelers to areas where poliomyelitis is endemic should complete a series of IPV and/or OPV. Children and adults who have previously completed a primary series with any one or combination of vaccines should be given, **once**, a single additional dose of IPV or OPV. For unvaccinated adults, give vaccine as follows: if less than 4 weeks to travel, give 1 dose of IPV (preferably) or OPV; if 4-8 weeks, give 2 doses of IPV 4 weeks apart; if 8-12 weeks, give 3 doses of IPV 4 weeks apart; if 3 or more months, give 2 doses of IPV 4-8 weeks apart, and a 3rd dose 6-12 months after #2. Children and adults who have a history of incomplete IPV and/or OPV should be given the remaining doses.

**Rabies:** Preexposure vaccination for rabies is recommended for travelers planning to live in or visit ( $> 30$  days) areas of the world where dog rabies is endemic (e.g., parts of Central and South America, Asia, and Africa). Vaccination consists of 3 doses of human diploid cell rabies vaccine (HDCV), rabies vaccine adsorbed (RVA), or purified chick embryo cell culture (PCEC) on days 0, 7, and 21, or 28. If the traveler will be taking chloroquine or mefloquine for malaria prophylaxis, check the rabies vaccine package insert for possible precautions on the timing and route of administration of the vaccine. Advise travelers to seek immediate attention for an animal bite since preexposure vaccination does not eliminate the need for additional rabies post-exposure prophylaxis.

**Typhoid:** Vaccination against typhoid is recommended for travel to countries where there is a recognized risk of exposure to *Salmonella typhi*, such as the developing countries of Central and South America, Asia, and Africa. Three types of typhoid vaccine are available (Ty21a, ViCPS, and whole cell). Either live or inactivated vaccine may be given, depending on the age of the patient and the length of time remaining before departure. Booster doses every 2-5 years, depending on type of vaccine previously received, are indicated to maintain immunity. Refer to *Health Information for International Travel* for recommended prophylaxis (see below). Oral (Ty21a) vaccine is inhibited by various antibiotics and by mefloquine (for malaria prophylaxis). Patients should not be given Ty21a for 24 hours after receiving any of these drugs.

## Vaccines with limited availability

**Japanese encephalitis:** Vaccine is recommended for travelers planning to live in rural areas of Asia (China, Japan, Korea, India, Nepal, and eastern areas of Russia). A 3-dose series of inactivated viral vaccine should be given at 0, 7, and 30 days; booster doses, if needed, should be given 3 years after completion of primary series. Vaccine is available through International Travel Health Clinics.\*

**Yellow fever:** Vaccination against yellow fever may be required or recommended for entry into countries reporting yellow fever or within endemic zones (e.g., parts of Africa and South America). Patients needing vaccination must be referred to an International Travel Health Clinic.\*

### Further Resources on International Travel

- The Centers for Disease Control and Prevention (CDC) publishes *Health Information for International Travel* (annually) and *Summary of Health Information for International Travel* (biweekly). These documents are available on the Internet at the address listed below or for purchase by calling the U.S. Government Printing Office, (202) 512-1800.
- CDC provides updates on changes in vaccine requirements, disease outbreaks, drug availability, and emerging infections via:
  - Automated Fax Information System: **1 (888) 232-3299** to order a directory and up to 5 documents per call.
  - CDC Internet address: <http://www.cdc.gov/travel/>
- The U.S. State Department issues country-specific information for travelers, including warnings, terrorist threats, and other conditions which might jeopardize travelers' safety; health conditions; crime and security information; unusual immigration practices; location of the U.S. Embassy or Consulate, etc., at <http://travel.state.gov/>

Note: the Minnesota Department of Health does **not** provide consultative services on travel immunizations for individual patients.