



INTERNATIONAL ASSOCIATION
FOR MEDICAL ASSISTANCE
TO TRAVELLERS

IAMAT

World Immunization Chart

(Required and recommended immunizations, and specific immunizations for selected groups of travellers and persons on working assignments: including the geographical distribution of hepatitis B, Japanese encephalitis, plague, rabies, tick-borne encephalitis and yellow fever.)

Status as at March 15, 2002

Canada: 40 Regal Road, Guelph, Ontario N1K 1B5
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World Immunization Chart

Status as at March 15, 2002

Afghanistan	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL14	Bosnia and Herzegovina	V1, RI	Christmas Island (Indian Ocean)	Y6γ, RI
Albania	V6γ, V4: RI, HA8, TF8 SV: HB36	Botswana	V2: RI, PO3, HA8, TF8 SV: HB36, PL14, RA16	Colombia	Y38ε, V2: RI, C9, HA8, TF8
Algeria	Y6γ, V4: RI, HA8, TF8 SV: RA16	Brazil	Y6β,35ε, V4: RI, C9, HA7, TF7 SV: PL13, RA16	Comoros	V2: RI, C9, HA8, TF8 SV: HB36
American Samoa	Y6γ, V4: RI, HA8, TF8 SV: HB36	Brunei Darussalam	Y6γ,30, V4: RI, C9, HA8, TF8 SV: HB36	Congo	Y5γ, V4: RI, PO3, C9, HA8, TF8 SV: HB36
Andorra	V1, RI	Bulgaria	V2: RI, HA8, TF8 SV: HB36	Congo, Dem. Rep. (formerly Zaire)	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, PL13, RA16, T18
Angola	Y6γ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, PL14	Burkina Faso	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16	Cook Islands	V2: RI, HA8, TF8 SV: HB36
Anguilla	Y6γ, RI	Burundi	Y6γ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36, T18	Costa Rica	V2: RI, C9, HA8, TF7
Antigua and Barbuda	Y6γ, RI	Cambodia	Y6δ, V4: RI, C9, HA8, TF8 SV: JE37, PL14	Côte d'Ivoire	Y5γ, V4: RI, C9, PO3, HA8, M29, TF8 SV: HB36
Argentina	V2: RI, HA7, TF7	Cameroon	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16	Croatia	V1, RI SV: TBE20
Armenia	V2: RI, HA8, TF8 SV: HB36, PL14	Canada	V1, RI SV: HB25	Cuba	V1, RI
Australia	Y6γ, 30, RI SV: HB24	Canary Islands	V1, RI	Cyprus	V2: RI, HA7, TF7 SV: HB36
Austria	V1, RI SV: TBE20	Cape Verde	Y6γ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36	Czech Republic	V1, RI SV: TBE20
Azerbaijan	V2: RI, PO3, HA8, TF8 SV: HB36, PL14	Cayman Islands	V1, RI	Denmark	V1, RI
Azores	Y6γ,19, RI	Central African Republic	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16	Djibouti	Y6γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36
Bahamas	Y6γ, RI	Chad	Y8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16	Dominica	Y6γ, RI
Bahrain	V2: RI, HA8, TF8	Chile	V2: RI, HA7, TF7	Dominican Republic	V2: RI, HA8, TF7 SV: HB36, RA16
Bangladesh	Y6δ,30, V4: RI, PO3, HA8, TF8 SV: HB36, JE37, RA16	China – Mainland	Y6δ, V4: RI, C9, HA8, TF8 SV: HB36, JE37, PL13	East Timor	V41
Barbados	Y6γ, RI	– Macao	V2: RI, HA8, TF8 SV: HB36	Ecuador	Y6γ,8ε, V4: RI, C9, HA8, TF8 SV: PL13, RA16, T18
Belarus	V2: RI, HA7, TF7 SV: TBE20	– Hong Kong	V2: RI, HA8, TF8 SV: HB36, JE37	Egypt	Y6γ, 31, V4: RI, PO3, HA8, TF8 SV: HB36, RA16
Belgium	V1, RI	– Taiwan	Y6δ, V4: RI, HA8, TF8 SV: HB36, JE37	El Salvador	Y6α, V4: RI, C9, HA8, TF7 SV: RA16
Belize	Y6δ, V4: RI, C9, HA8, TF8			Equatorial Guinea	Y6δ,8ε, V4: RI, PO3, HA8, TF8 SV: HB36
Benin	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36			Eritrea	Y6δ, V4: RI, PO3, HA8, M29, TF8 SV: HB36, RA16, T18
Bermuda	V1, RI				
Bhutan	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, RA16				
Bolivia	Y6δ,8ε, V4: RI, C9, HA8, TF8 SV: PL13, RA16, T18				

Estonia	V1, RI SV: TBE20
Ethiopia	Y6γ,8ε, V4: RI, PO3, HA8, M29, TF8 SV: HB36, RA16, T18
Falkland Islands	V1, RI
Faroe Islands	V1, RI
Fiji	Y6γ,30, V4: RI, HA8, TF8 SV: HB36
Finland	V1, RI SV: TBE20
France	V1, RI
French Guiana	Y5γ, V4: RI, C9, HA8, TF8
French Polynesia	Y6γ, V4: RI, HA8, TF8 SV: HB36
Gabon	Y5γ, V4: RI, PO3, HA8, TF8 SV: HB36
Gambia	Y6γ,8ε, V4: RI, PO3, HA8, M29, TF8 SV: HB36
Georgia	V2: RI, HA8, TF8 SV: HB36, PL14
Germany	V1, RI SV: TBE20
Ghana	Y5δ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Gibraltar	V1, RI
Greece	Y6α, RI SV: HB36
Greenland	V1, RI SV: HB26
Grenada	Y6γ, RI
Guadeloupe	Y6γ, RI
Guam	V2: RI, HA8, TF8 SV: HB36
Guatemala	Y6γ, V4: RI, C9, HA8, TF8 SV: RA16, T18
Guinea	Y6γ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Guinea-Bissau	Y6γ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Guyana	Y6δ,8ε, V4: RI, C9, HA8, TF8
Haiti	Y6δ, V4: RI, HA8, TF8 SV: HB36, RA16
Honduras	Y6δ, V4: RI, C9, HA8, TF8 SV: RA16
Hungary	V1, RI SV: TBE20
Iceland	V1, RI
India	Y6α, 30, V4: RI, PO3, C9, HA8, TF8 SV: HB36, JE37, PL13, RA16
Indonesia	Y6δ, V4: RI, PO3, HA8, TF8 SV: HB36, JE37, PL14, RA16
Iran	V2: RI, PO3, C9, HA8, TF8 SV: HB36, PL14, RA16
Iraq	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL14, RA16
Ireland	V1, RI
Israel	V1, RI
Italy	V1, RI
Jamaica	Y6γ, RI
Japan	V1, RI SV: JE37
Jordan	Y6γ, V4: RI, HA8, TF8 SV: HB36, RA16
Kazakhstan	Y6δ, V4: RI, HA8, TF8 SV: HB36, PL13
Kenya	Y6γ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL14, T18

Kiribati (formerly Gilbert Islands)	Y6γ, V4: RI, HA8, TF8 SV: HB36
Korea, Dem. People's Rep. (North)	V2: RI, HA8, TF8 SV: HB36, JE37
Korea, Rep. of (South)	V2: RI, HA8, TF8 SV: HB36, JE37
Kuwait	V2: RI, HA8, TF8
Kyrgyzstan	V2: RI, HA8, TF8 SV: HB36
Lao People's Dem. Republic	Y6δ, V4: RI, C9, HA8, TF8 SV: HB36, JE37, PL14, RA16
Latvia	V1, RI SV: TBE20
Lebanon	Y6δ, V4: RI, HA8, TF8 SV: HB36
Lesotho	Y6δ, V4: RI, PO3, HA8, TF8 SV: HB36, PL14, RA16
Liberia	Y5γ, V4: RI, PO3, C9, HA8, TF8 SV: HB36
Libyan Arab Jamahiriya	Y6δ, V4: RI, HA8, TF8 SV: PL13, RA16
Liechtenstein	V1, RI SV: TBE20
Lithuania	V1, RI SV: TBE20
Luxembourg	V1, RI
Macedonia	V1, RI
Madagascar	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13, RA16
Madeira Islands	Y6γ,19, RI
Malawi	Y6δ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13, RA16
Malaysia	Y6γ, V4: RI, C9, HA8, TF8 SV: HB36, JE37
Maldives	Y6δ, V4: RI, HA8, TF8
Mali	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Malta	Y6β, 33, RI
Marianas, Commonwealth of Northern	V2: RI, HA8, TF8 SV: HB36
Marshall Islands	V2: RI, C9, HA8, TF8 SV: HB36
Martinique	V1, RI
Mauritania	Y5γ,12,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Mauritius	Y6γ, RI
Mayotte & French Territorial Islands	V2: RI, PO3, HA8, TF8 SV: HB36
Mexico	V2: RI, C9, HA8, TF7 SV: RA16
Micronesia, Federated States of	V2: RI, C9, HA8, TF8
Moldava	V2: RI, HA7, TF7
Monaco	V1, RI
Mongolia	V2: RI, HA8, TF8 SV: HB36, PL13, RA16
Montserrat	V1, RI
Morocco	V2: RI, HA8, TF8 SV: RA16
Mozambique	Y6γ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13, RA16, T18
Myanmar (formerly Burma)	Y6δ,10, V4: RI, PO3, C9, HA8, TF8 SV: HB36, JE37, PL13, RA16
Namibia	Y6γ,11,33, V4: RI, PO3, HA8, TF8 SV: HB36, PL13
Nauru	Y6γ, V4: RI, HA8, TF8 SV: HB36

Nepal	Y6δ, V4: RI, PO3, C9, HA8, M7, TF8 SV: HB36, JE37, PL14, RA16
Netherlands	V1, RI
Netherlands Antilles	Y6α, RI
New Caledonia and Dependencies	Y6γ, V4: RI, HA8, TF8 SV: HB36
New Zealand	V1, RI SV: HB23
Nicaragua	Y6γ, V4: RI, C9, HA8, TF8
Niger	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16
Nigeria	Y6γ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36, RA16, T18
Niue	Y6γ, V4: RI, HA8, TF8 SV: HB36
Norway	V1, RI SV: TBE20
Oman	Y6δ, V4: RI, HA8, TF8 SV: HB36
Pacific Islands Trust Territory of the U.S.A.	V1, RI
Pakistan	Y6δ,32ε, V4: RI, PO3, HA8, TF8 SV: HB36, PL14, RA16
Palau	Y6γ, V4: RI, HA8, TF8 SV: HB36
Panama	Y34ε, V4: RI, C9, HA8, TF8
Papua New Guinea	Y6γ, V4: RI, HA8, TF8 SV: HB36
Paraguay	Y6δ,15, V4: RI, HA7, TF7 SV: RA16
Peru	Y6α,21ε, V4: RI, C9, HA8, TF8 SV: PL13, RA16, T18
Philippines	Y6γ, V4: RI, C9, HA8, TF8 SV: HB36, JE37, RA16
Pitcairn Island	Y6γ, RI
Poland	V1, RI SV: TBE20
Portugal	Y6γ,19, RI
Puerto Rico	V1, RI
Qatar	V2: RI, HA8, TF8 SV: HB36
Reunion	Y6γ, RI
Romania	V2: RI, HA8, TF8 SV: HB36, TBE20
Russia	V2: RI, HA7, TF7 SV: JE37, TBE20
Rwanda	Y5γ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, RA16, T18
Saint Helena	Y6γ, RI
St. Kitts and Nevis	Y6γ, RI
Saint Lucia	Y6γ, RI
Saint Pierre and Miquelon	V1, RI
Saint Vincent and the Grenadines	Y6γ, RI
Samoa (formerly Western Samoa)	Y6γ, V4: RI, HA8, TF8 SV: HB36
San Marino	V1, RI
São Tomé and Príncipe	Y5γ, V4: RI, PO3, C9, HA8, TF8 SV: HB36
Saudi Arabia	Y6δ, V4: RI, HA8, M39, TF8 SV: HB36, RA16
Senegal	Y6δ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36
Seychelles	Y6γ,30, V4: RI
Sierra Leone	Y6δ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36

Singapore	Y6γ,30, RI SV: HB36, JE37
Slovakia	V1, RI SV: TBE20
Slovenia	V1, RI SV: TBE20
Solomon Islands	Y6δ, V4: RI, HA8, TF8 SV: HB36
Somalia	Y6δ,8ε, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36
South Africa	Y6γ, V4: RI, C9, PO3, HA7, TF7 SV: PL14
Spain	V1, RI
Sri Lanka	Y6γ, V4: RI, C9, HA8, TF8 SV: HB36, JE37, RA16
Sudan	Y6γ,17ε, V4: RI, PO3, HA8, M29, TF8 SV: HB36, RA16
Suriname	Y6δ,8ε, V4: RI, C9, HA8, TF8
Swaziland	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36
Sweden	V1, RI SV: TBE20
Switzerland	V1, RI SV: TBE20
Syrian Arab Republic	Y6δ, V4: RI, HA8, TF8 SV: HB36, PL14, RA16

Tajikistan	V2: RI, HA8, TF8 SV: HB36
Tanzania	Y6γ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13, RA16
Thailand	Y6γ, V4: RI, PO3, HA8, TF8 SV: HB36, JE37, RA16
Togo	Y5γ, V4: RI, PO3, C9, HA8, M29, TF8 SV: HB36
Tokelau	V2: RI, HA8, TF8 SV: HB36
Tonga	Y6γ, V4: RI, HA8, TF8 SV: HB36
Trinidad and Tobago	Y6γ, RI
Tunisia	Y6γ, V4: RI, HA8, TF8 SV: RA16
Turkey	V2: RI, HA7, TF7 SV: HB36, RA16
Turkmenistan	V2: RI, HA8, TF8 SV: HB36, PL13
Turks and Caicos	Y6γ, RI
Tuvalu (formerly Ellice Islands)	V2: RI, HA8, TF8 SV: HB36
Uganda	Y6γ,8ε, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13, RA16, T18
Ukraine	V2: RI, HA7, TF7

United Arab Emirates	V2: RI, HA8, TF8 SV: HB36, RA16
United Kingdom	V1, RI
United States of America	V1, RI, L40 SV: HB27, PL13
Uruguay	V2: RI, HA7, TF7
Uzbekistan	V2: RI, HA8, TF8 SV: HB36
Vanuatu	V2: RI, HA8, TF8 SV: HB36
Venezuela	V2: RI, C9, HA7, TF7, Y7ε SV: HB28, RA16
Vietnam	Y6γ, V4: RI, C9, HA8, TF8 SV: HB36, JE37, PL13, RA16
Virgin Islands (British)	V1, RI
Virgin Islands (U.S.A.)	V1, RI
Wake Island	V1, RI
Yemen	Y6γ, V4: RI, PO3, HA8, TF8 SV: HB36, RA16
Yugoslavia	V1, RI
Zambia	V2: RI, PO3, C9, HA8, TF8, Y2 SV: HB36, P13, RA16
Zimbabwe	Y6δ, V4: RI, PO3, C9, HA8, TF8 SV: HB36, PL13

Immunization Code (for details on immunization schedules see IAMAT's publication IMMUNIZATION SCHEDULE FOR THE INTERNATIONAL TRAVELLER)

C = Cholera
HA = Viral hepatitis A (immune globulin or vaccine)
HB = Viral hepatitis B
JE = Japanese encephalitis
L = Lyme Disease
M = Meningococcal meningitis
PL = Plague

PO = Poliomyelitis
RA = Rabies
RI* = Routine immunizations
SV = Selective vaccination/s
 (These apply only to specific groups of travellers or persons on specific working assignments.)

T = Louse-borne typhus
TBE = Tick-borne encephalitis (central European encephalitis)
TF = Typhoid fever
V = Vaccination/s
Y = Yellow fever

α = A vaccination certificate is required for children over six months of age. †
 β = A vaccination certificate is required for children over nine months of age.
 γ = A vaccination certificate is required for children over one year of age.
 δ = A vaccination certificate is required for children of all ages. †
 ε = Vaccination is not advised for children under one year of age.
 ζ = A cholera vaccination certificate is required for children over six months of age.

† Children under one year of age should not be vaccinated, since cases of encephalitis (inflammation of the brain) have been reported in this age group following the administration of yellow fever vaccine. If the travel itinerary includes a country which is regarded as infected the safest plan is to postpone travel until the child reaches one year of age. If travel is unavoidable and the child's physician considers vaccination unwise, ask for a certificate on the physician's own stationery stating age less than one year as a contraindication to vaccination. Although this is in accordance with the WHO resolutions (Official Record No. 56, page 54/1954), some countries may not honor such a certificate and the infant would then be put under surveillance.

* **Your journey is a good occasion for a reminder to keep your routine immunizations up-dated.** It is now becoming apparent that most adults (80%) in the western world have not maintained their immunization status since their school years. If you belong to this group, the following vaccinations are recommended before leaving the country:

TETANUS-DIPHTHERIA (Tetanus-Diphtheria toxoids, adult type) booster, given in a single injection, is recommended for all adult travellers and children over seven years of age, regardless of destination. A primary series is required for those not previously vaccinated.

POLIOMYELITIS booster is recommended for all travellers regardless of age and destination. It is particularly important when the risk of exposure to the polio-virus is increased, such as when travelling to developing countries or developed countries in which small localized outbreaks occasionally occur. Recommendations listed by country are based on the incidence and rate of immunization in the country. A primary series is necessary for those not previously or partially vaccinated. Adults who have been fully vaccinated as children should receive a polio booster once.

MEASLES vaccine is not required for persons born before 1957, who are regarded as immune as a result of previous

illness or clinically inapparent infections when the organism circulated freely among the population before the advent of the vaccine. Unvaccinated adolescents and young adults with no documented history of measles infection should be vaccinated, since mass vaccination in the US, Canada and some other countries, interrupting transmission of the organism, makes them susceptible to the disease. If such persons become infected overseas, upon return they may cause outbreaks in schools, on University campuses and in other congregational places. Adolescents and young adults immunized before 1980 should receive a booster before travelling to developing countries.

MUMPS vaccine is indicated for adolescents and children approaching puberty. Adults can be considered immune as a result of previous illness or clinically inapparent infections acquired when the virus was widely circulating among the population before the availability of the vaccine.

RUBELLA vaccine is recommended for women of child-bearing age who are not immune (after bloodtesting for rubella antibodies) provided they are not pregnant. Women who are vaccinated under these conditions should be advised not to become pregnant for the three months following vaccination.

INFLUENZA vaccine is recommended for persons with risk of serious complications, such as the elderly traveller and those of any age debilitated by chronic chest, heart, and renal disorders, severe diabetes or cancer.

PNEUMOCOCCAL vaccine is recommended for the group described above, since pneumonia, ear infections or meningitis are more severe in such cases.

INFANTS AND CHILDREN up to their 7th birthday must follow the recommended immunization schedule for diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella and hemophilus b meningitis, varicella, and viral hepatitis B.

The recommendations for immunizations outlined in this document are intended as guidelines only. Your immunization needs depend on your health status, previous immunizations received, and your travel itinerary. Seek further advice from your physician or travel medicine clinic. © Copyright 2002 IAMAT

- 1 = No vaccinations are required to enter this country.
- 2 = No vaccinations are required to enter this country. The vaccinations listed for this country are recommended for the traveller's protection.
- 3 = A poliomyelitis booster is indicated for this country (see RI¹).
- 4 = The following vaccination/s listed for this country is/are recommended for the traveller's protection.
- 5 = A vaccination certificate is required on arrival from all countries.
- 6 = A vaccination certificate is required for travellers coming from or in transit through infected countries. (This vaccination requirement is imposed by this country as protection against the introduction of the disease as the vector mosquito, *Aedes aegypti*, occurs in its territory.)

THE FOLLOWING COUNTRIES AND AREAS ARE REGARDED AS INFECTED:

- Africa:** Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mali, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Sierra Leone, Somalia, Sudan (south of 15° N. latitude), Tanzania, Togo, Uganda, Zaire, Zambia (area west of 25° longitude East).
- Americas:** Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname and Venezuela. (In addition to the above list of yellow fever endemic countries, the following require a vaccination certificate from travellers coming from the following formerly endemic areas:
- BANGLADESH:** Africa: Malawi, Mauritania, Zambia; Americas: Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Trinidad and Tobago.
- EGYPT:** Africa: Botswana, Malawi, Mauritania, Zambia; Americas: Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Trinidad and Tobago.
- GUINEA-BISSAU:** Africa: Cape Verde, Djibouti, Madagascar, Mauritania, Mozambique, Zambia.
- GUYANA:** Americas: Belize, Costa Rica, Guatemala, Honduras, Nicaragua.
- INDIA:** Africa: Zambia; Americas: Trinidad & Tobago.
- 7 = Vaccination is recommended when travelling outside the areas usually visited by tourists, travelling extensively in the interior of the country (trekkers, hikers) and for persons on working assignments in remote areas.
 - 8 = Vaccination is highly recommended for all travellers for their protection.
 - 9 = On June 14, 1991 the World Health Organization announced that a cholera vaccination certificate is no longer required by any country or territory. Although at present cholera is active in parts of this country, the risk of cholera for western travellers is low and vaccination is advised only for medical and rescue personnel working in endemic areas. The best protection is to avoid potentially contaminated water and food. Drink carbonated bottled water, hot tea, and coffee, or international brands of soft drinks. Eat only hot food and fruits you can peel yourself. (See IAMAT's 24 WORLD CLIMATE CHARTS describing the sanitary condition of water, milk and food in 1440 cities.) Person living and working under inadequate sanitary conditions and those with impaired defense mechanisms (deficient production of gastric acid due to surgery for duodenal or gastric ulcer), persons on anticid therapy, and users of cannabis (smoking marijuana reduces acid secretion of the stomach) are more susceptible to cholera infection and meticulous food and water hygiene are essential when travelling in endemic areas.
 - 10 = Nationals and residents leaving this country are required to have certificates of vaccination on their departure for an infected area.
 - 11 = Travellers on scheduled airlines whose flights have originated outside the areas regarded as infected and who are in transit through these areas are not required to possess a certificate provided they have remained at the scheduled airport or in the adjacent town during transit.
 - 12 = Except: travellers arriving from a non-infected area and staying less than two weeks in the country.
 - 13 = Vaccination is recommended only for persons who may be occupationally exposed to wild rodents (anthropologists, archeologists, geologists, medical personnel, missionaries, spelunkers, etc.) The standard vaccination course must be completed before entering the plaque-infested area. Geographical distribution of risk for each country is listed below.

Bolivia: areas of risk are present along the border with Peru (middle third) north of Lake Titicaca (province of La Paz) and the Cordillera Oriental between the provinces of Cochabamba and Santa Cruz.

Brazil: risk is present in the northeastern part of the country in the states of Bahia, Ceara and Paraíba. A small foci of risk is present in the area of Redonda (southern part of Minas Gerais).

China: areas of risk are present in the following provinces: Xinjiang, Heilongjiang, Jilin, the eastern part of Qinghai, the southern part of Gansu, and the southern parts of Hunan and Jiangxi.

Congo, Dem. Rep.: areas of risk are present in the north-eastern part of the country in the areas of Mts. Bleus (Haute Zaire) and Mts. Mitumba (Kivu). An outbreak occurred

- recently in the region of Turi (Haute Zaire) around the towns of Bunia and Magagi.
- Ecuador:** known areas of infection are present in the southern part of the country in Loja province.
- India:** Recent outbreaks have occurred in the city of Surat, Gujarat State, and in Beed District, Maharashtra State. Known risk areas are present in the north: Himachal Pradesh state and the northern part of Uttar Pradesh; in the south: the northwestern part of Tamil Nadu.
- Kazakhstan:** Risk is present in the region of Gur'Yev on the northern shore of the Caspian Sea and in the Taldy Kurgan region south of lake Balkash.
- Laos:** an outbreak of human plague has been reported for the first time since decades. No official details have been made available.
- Madagascar:** areas of risk are present in the central highlands. Recent outbreaks have been reported from the following provinces: Antananarivo, Antsirana, Fianarantsoa, Mahajanga and Toamasina.
- Malawi:** Risk is present along the border with Mozambique, Nsanje, Chikwawa and Ntchisi districts.
- Mongolia:** areas of risk are scattered throughout the country, recent outbreaks of Plague occurred in the districts of Bayanhongor, Bayan-Olgii, Govialtay and Dzavhan.
- Mozambique:** Known areas of risk are present in the north of the country: Niassa, Tete and Zambezia provinces. The latest outbreaks occurred in Mutarara District (Tete) and in Murumbala District (Zambezia).
- Myanmar:** outbreaks of plague have recently been reported from the districts of Magway, Mandalay and Sagaing in central Myanmar.
- Namibia:** known areas of risk are present in the north (Etosha National Park) and along the eastern border with Botswana and South Africa.
- Peru:** Risk is present in the northern part of the country: Cajamarca Department: Chota, San Miguel, San Pablo Provinces; La Libertad Department; Lambayeque Department; Piura Department: Ayabaca, Huancabamba and Piura Provinces and the southern part of Ancash Department.
- Tanzania:** known areas of risk are present south of Lake Victoria (Shinyanga and Tabora provinces) and along the eastern part of the border with Kenya (including Kilimanjaro area). Recent outbreaks have been reported from this area: Lushoto and Tanga districts (Tanga Province).
- Turkmenistan:** A large focus of risk is present in the area east of the Caspian Sea.
- Uganda:** Areas of risk are present along the border with Zaire and Sudan. Recent outbreaks occurred in Nebbi District of Western Region, and Arua District of Northern Region.
- USA:** known areas of risk are present in remote areas of the following states: Arizona: northeastern part of the state; California: all areas bordering Nevada, from lake Tahoe to the Mexican border; Colorado: the central part of the state with scattered areas in the south bordering New Mexico; Idaho: areas bordering the southern part of western Montana and areas bordering Wyoming; Montana: southwest part of the state; Nevada: northeastern part of the state; New Mexico: the entire state; Oregon: all areas of bordering California and Idaho; Texas: areas extending from the city of Lubbock to the border with New Mexico; Utah: scattered areas in the central and southern parts of the state; Washington: central and eastern parts of the state; Wyoming: the southern half and in the north areas around the Big Horn Mountains.
- Vietnam:** Risk is present in the central provinces from Quang Nam — Da Nang Province extending south to Lam Dong Province. Recent outbreaks occurred in Gia-Lai-Cong Tum, Lam Dong and Phu-Khan provinces.
- Zambia:** Risk is present in the district of Namwala (Southern Prov.); the towns of Katengwa, Makobo, Chilala and Kabulamwanda were affected in the latest outbreak.
- Zimbabwe:** Risk is present in the western part of the country, where recent outbreaks occurred in Lupane and Nkayi districts north of Bulawayo.
- 14 = No plague cases have been reported in this country during the last ten years. Because of outbreaks in the past, persons who may be occupationally exposed to wild rodents (anthropologists, archeologists, geologists, medical personnel, missionaries, spelunkers, etc.) should be aware of a possible recurrence. Geographical distribution of risk for each country is listed below.

Afghanistan: small area of risk is present in the extreme north-eastern part of the country.

Angola: areas of risk are present in the southern part of the country along the border with Namibia (middle third).

Armenia: Areas of risk are scattered throughout Armenia.

Azerbaijan: Areas of risk are scattered throughout Azerbaijan.

Botswana: risk is present in the northern part of the country. The latest outbreak occurred in the district of Boteti.

Cambodia: areas of risk are scattered throughout the country.

Georgia: scattered areas of risk are present.

Indonesia: risk is present on the island of Java south of Surakarta.

Iran: known areas of risk are present in the northwest of the country in the areas around Manjil where the Talish Mountains meet the Elburz Mountains.

Iraq: known areas of risk are present in the eastern part of the country, with a major focus of activity around Khanaqin.

Kenya: risk is present around Nairobi, the District of Machakos (Eastern Province) and the area southward to the border with Tanzania including the areas of Amboseli and Tsavo National Parks.

Lesotho: risk is present in the western half of the country.

Libya: Risk is present in the areas around Tobruk (north-eastern part of the country) and the areas around Sidra.

Nepal: risk is present in the western half of the country.

Pakistan: risk is present in northern Kashmir.

South Africa: known areas of risk are present along the northern and western border with Lesotho and in Mountain Zebra National Park north of Port Elizabeth.

Syria: known areas of risk are present in the northern and eastern parts of the country bordering Iraq.
 - 15 = A certificate of vaccination is required for travellers leaving Paraguay for an endemic area (see list of countries under code 6).
 - 16 = In this country, where rabies is a constant threat, a pre-exposure rabies vaccination series is advised

- for persons planning an extended stay or on working assignment (naturalists, agricultural advisors, archeologists, geologists, spelunkers, etc.). Although this provides adequate initial protection, a person bitten by a potentially rabid animal would still require additional inoculations. Children should be cautioned not to pet dogs, cats or other mammals.
- 17 = A vaccination certificate may be required from travellers leaving Sudan as part of Sudan lies within the yellow fever endemic zone. Vaccination is recommended for all travellers especially those travelling south of 15° North latitude.
 - 18 = Louse-borne typhus is cosmopolitan in distribution and is present wherever groups of persons are crowded together under conditions of poor sanitation and malnutrition. Louse-borne typhus outbreaks have occurred in this country and risk exists for persons living or working in remote areas of the country (anthropologists, archeologists, geologists, medical personnel, missionaries, etc.) Freedom from louse infestation is the most effective protection against typhus. Production of typhus vaccine has been discontinued throughout the world. Treatment with tetracyclines will cure typhus completely.
 - 19 = The requirement applies only to travellers arriving in or destined for the Azores and Madeira. However, no certificate is required from transit passengers at Funchal, Porto Santo and Santa Maria.
 - 20 = Vaccination is recommended for persons involved in recreational activities in forested areas (camping, hiking) or working in forestry occupations. Risk season: March to November.

Austria: risk is present in all forested areas of southern, eastern, and northern Austria (areas around Klagenfurt, Graz, Wiener Neustadt, Vienna, and Linz, extending to the border with Germany along the Danube).

Belarus: Risk is present in all forested areas bordering Poland.

Croatia: risk is present in the forested areas north and east of Zagreb extending to the borders with Slovenia and Hungary.

Czech Republic: risk is present in forested areas south and west of Prague, north of Brno, and the areas west of Plzen (Pilsen).

Estonia: Risk is present in all wooded and forested areas, with high risk along the Gulf of Finland, the southern border areas with Latvia and a large belt along the shores of lake Peipus.

Finland: risk is present in forested areas along the coast of the Gulf of Finland from Kotka to the border with the USSR, and all the islands south of Turku including the Åland islands.

Germany: risk is present in forested areas around Karlsruhe and Pforzheim, Stuttgart and Tübingen, and in areas around Regensburg, extending south to Landshut and to Passau on the border with Austria, and in forested areas south of Rostock and Schwerin, and west of Frankfurt on the Oder, west of Erfurt including the areas of Gotha and Eisenach, the areas around Dresden and Zwickau.

Hungary: risk is present in forested areas extending from the Austrian border east to the outskirts of Budapest.

Latvia: Risk is present in all wooded and forested areas of the country, including city parks.

Liechtenstein: risk is present in the areas of Vaduz.

Lithuania: risk is present in the areas bordering Poland.

Norway: scattered areas of risk are present around Bergen.

Poland: risk is present in the northern part of the country extending from the forested areas around Gdansk south and eastward to the Russian border, including the areas around Bialystok. Other areas of risk are forested lands around Warsaw, Lodz and Lukow, and along the border with Czechoslovakia south of Wroclaw.

Romania: risk is present in forested areas in the western part of the country.

Russia: Risk is present in the western parts bordering Poland (Kaliningrad province) and throughout Siberia (Russian Far Eastern encephalitis).

Slovakia: Risk is present in all western and southern regions of the country, a focus is also present in the area of Považská Bystrica.

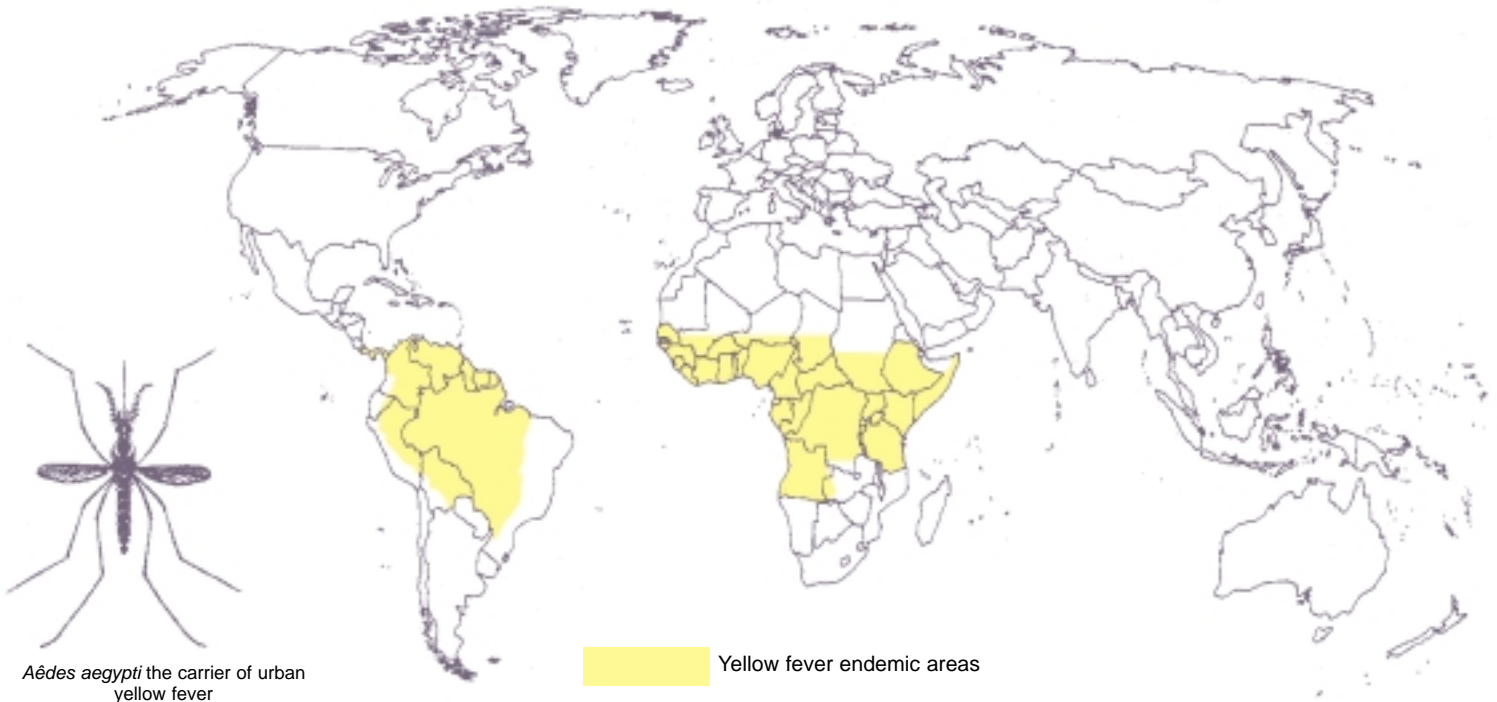
Slovenia: risk is present in all forested areas of the country.

Sweden: risk is present in an approximately 100 km deep coastal strip extending from the area of Uppsala southwards to Kristianstad, including the Archipelago around Stockholm and the islands of Gotland and Öland. Infection is also present in the wooded areas around Göteborg.

Switzerland: known areas of risk are present in the following Cantons: Schaffhausen: Hallau, Osterlingen, Stein am Rhein; Zürich: Unteres Glattal, Eglisau, Ellikon a. R., Ossingen, Rheinau, Horgen; Graubünden: Grusch, Seewis, Landquart; Bern: Erlenbach i. S., Thun, Steffisburg, Spiez, Grosses Moos, Belp; Luzern: Dagmersellen, Nebikon, Egolzwil (Santenberg).
 - 21 = Vaccination is highly recommended for travellers who intend to visit any rural areas of Peru, especially jungle areas below 2300 meters in the Amazon basin.
 - 22 = Travellers leaving Zambia may be required to possess a yellow fever vaccination certificate as part of Zambia (area west of 25° longitude bordering Angola) lies within the endemic zone. Vaccination is recommended for travellers to this area.
 - 23 = Because of the high rate of carriers of hepatitis B among Maori, vaccination is recommended for persons working in health care, education or in close contact with local Maori populations.
 - 24 = Because of the high rate of carriers of hepatitis B among the local Aboriginal population in the interior (mainly in the Warburton Creek area of central Australia), vaccination is recommended for persons working in health care, education or in close contact with them.

- 25 = Because of the high rate of carriers of hepatitis B among the local Inuit population of northern Canada, vaccination is recommended for persons working in health care, education or in close contact with them.
- 26 = Because of the high rate of carriers of hepatitis B among the local Inuit population, vaccination is recommended for persons working in health care, education or in close contact with them.
- 27 = Because of the high rate of carriers of hepatitis B among the local indigenous populations of Alaska, vaccination is recommended for persons working in health care, education or in close contact with them.
- 28 = Because of the high rate of carriers of hepatitis B among the local Yucpa Indian population of western Zulia State (on the Venezuela-Colombia border) vaccination is recommended for persons working in health care, education, or in close contact with them.
- 29 = Vaccination is advised for persons travelling extensively or on working assignments in the meningitis belt of Africa's northern Savannah. This semi-arid area extends from the Red Sea to the Atlantic including the following areas: Djibouti: the entire country; Eritrea: the entire country; Ethiopia: the entire country; Sudan: the southern two thirds; Chad: the southern half; Niger: the southern third; Burkina Faso: the entire country; Mali: the southern half; Mauritania: the southern third; Central African Republic: the northern half; Cameroon: the northern third; Nigeria: the northern half; Benin: the entire country; Togo: the entire country; Ghana: the areas bordering Burkina Faso; Côte d'Ivoire: the northern area bordering Mali and Burkina Faso; Guinea: the entire country; Guinea-Bissau: the entire country; Senegal: the entire country. Peak Season: March-April. Large outbreaks of meningococcal meningitis have recently occurred outside this endemic belt (Angola, Dem. Rep. Congo, Somalia). Check with IAMAT for outbreaks before travelling to Africa.
- 30 = Vaccination certificate is required for travellers who have been in or passed through an infected yellow fever area within six days prior to arrival. The countries listed under 6 are considered infected. (For Fiji read: 10 days).
- 31 = Air passengers in transit coming from infected countries or areas without a certificate (see Code 6 for infected areas), will be detained in the precincts of the airport until they resume their journey. All travellers arriving from Sudan must possess a vaccination certificate or a location certificate issued by a Sudanese official stating the traveller has not visited Sudan south of 15° N within the last 6 days.
- 32 = Infants under six months of age are exempt if the mother's vaccination certificate shows that she has been duly vaccinated prior to the birth of the child.
- 33 = Children under one year of age, coming from infected areas, are subject to isolation or surveillance if indicated on epidemiological grounds. (For Malta read: nine months.)
- 34 = Vaccination is highly recommended for travellers going to the provinces of Chepo, Darien and San Blas, and when travelling throughout the interior of the country.
- 35 = Vaccination is highly recommended for travellers to the following states and territories: Acre, Amapá, Amazonas, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Rondônia, Roraima, Tocantins, rural areas of Paraná and São Paulo.
- 36 = Because of the high rate of carriers of hepatitis B in this country, vaccination is recommended for persons on working assignments in the health care field (dentists, physicians, nurses, laboratory technicians) or working in close contact with the local population (teachers, missionaries, Peace Corps) or persons foreseeing sexual relations with local inhabitants.
- 37 = Vaccination is indicated for persons travelling extensively in rural areas or living and working near rice-growing rural and suburban areas and other irrigated land, where exposure to the disease-carrying mosquitoes is high. Children are especially susceptible to the infection.
Bangladesh: sporadic cases are reported throughout the country. Period of transmission: all year.
Cambodia: the disease is endemic throughout the country. Period of transmission: all year.
China: cases have been reported from all provinces except Xinzang (Tibet), Xinjiang (Sinkiang) and Qinghai. Disease is most prevalent in central and eastern China. Period of transmission: June to October. High-risk group: children under 15 years of age.
Commonwealth of Independent States: outbreaks occur occasionally in the southeast of Russia between the border with China and the Sea of Japan, with prevalence in the area of Vladivostok. Period of transmission: June to October.
Hong Kong: sporadic cases are reported. Period of transmission: all year.
India: the disease is most prevalent in the north, northeast and south. Period of transmission: all year. High-risk group: children under 15 years of age.
Indonesia: sporadic cases are reported throughout the country. Period of transmission: all year. High-risk group: children under 15 years of age.
Japan: outbreaks occur in western and southern Japan, especially on the islands of Kyūshū and Okinawa. Period of transmission: June to October. High-risk group: the elderly.
Myanmar: sporadic cases occur throughout the country. Period of transmission: all year. High-risk groups: all ages.
North Korea: outbreaks occur occasionally. Period of transmission: June to October.
South Korea: the disease is reported from all provinces, especially from the southwest. Period of transmission: June to October. High-risk groups: children and young adults.
Laos: the disease is endemic throughout the country. Period of transmission: all year.
Malaysia: sporadic cases are reported throughout the country. Period of transmission: all year.
- Nepal:** outbreaks occur occasionally in the southern plains bordering India (Terai Districts). Period of transmission: June to October. High-risk groups: all ages.
Philippines: sporadic cases are reported throughout the country. Period of transmission: all year.
Singapore: sporadic cases occur on the island. Period of transmission: all year.
Sri Lanka: sporadic cases occur throughout the country with prevalence in the west. Period of transmission: all year. High-risk group: children under 15 years of age.
Taiwan: occasional outbreaks occur throughout the country. Period of transmission: June to October.
Thailand: outbreaks occur mostly in the northern region (Chiang Mai valley), with sporadic cases reported from the areas of Sukhothai and Phitsanulok and the southern region. Period of transmission in the north: June to October; in the south; all year.
Vietnam: the disease is endemic throughout the country. Period of transmission: all year.
- 38 = Vaccination is highly recommended for any traveller visiting rural areas, particularly if travelling to the following areas which are considered endemic for Yellow Fever; the middle valley of the Magdalena river; eastern and western foothills of the Cordillera Oriental which extends from the border with Ecuador to the border with Venezuela; the entire southeast of the country, including the Amazon basin; and all areas bordering Panama (northern part of Choco and Urabá).
- 39 = All Hajj pilgrims to Mecca and "Umra" visitors and seasonal workers, are required to possess on arrival in Saudi Arabia a certificate of vaccination against meningococcal meningitis issued not more than 3 years and not less than ten days before date of arrival. Non pilgrim travellers may also be asked to produce a certificate of vaccination against meningococcal meningitis when travelling to Saudi Arabia during the yearly pilgrimage season. Persons without a certificate may be subjected to vaccination on arrival.
- 40 = Lyme disease vaccine is recommended for persons 15 to 70 years of age living in endemic areas, visiting endemic areas for outdoor recreational activities, (hiking, camping). Vaccination is also recommended for persons working in agricultural, forestry and outdoors professions in all areas where the disease occurs. High Risk areas: Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Wisconsin. States with moderate to high risk areas: Arkansas, Indiana, Iowa, Kansas, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, Oregon, Virginia, West Virginia, Wyoming. Lyme disease has been reported from all continental states except Alaska. Anti-tick measures such as long pants tucked into socks or boots, insecticidal sprays and daily checks for ticks should be taken when engaged in outdoor activities.
- 41 = No official requirements are available. Use vaccination recommendations as for Indonesia.

This information has been compiled from data gathered from World Health Organization publications and IAMAT's own research.



Aedes aegypti the carrier of urban yellow fever

Yellow fever endemic areas