PulseServices
Travel Vaccinations & Malaria Prophylaxis

Destination	Typhoid	Hepatitis A	Cholera	Polio	Diphtheria	Tuberculosis	Hepatitis B	Rabies	Yellow fever	Mening/ACWY	Jap B enceph	Tick-borne encephalitis	Malaria: Risk areas and seasons	Recommended regimen	Less satisfactory regimen	Main parasitic hazards
Abu Dhabi		R			S		S	S		C			No			Le
Afghanistan	R	R	S	R	R	S	S	S	C				Yes, below 2000m,May- Nov	PC	DRF	Le
Albania	S	R			R		S		C			S	No			Le
Algeria	S	R			R	S	S	S	C				Yes, area around Illizi	W		Sh Le
Angola	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Antigua & Barbuda		R			S		S		C				No			
Argentina	S	R			S	S	S	S	S				Yes, rural areas near N border only	C	P	
Armenia		R			R	S	S	S				S	Variable risk close to junction of Turkish and Iranian borders	C	P	
Australia									C		S		No			
Austria												S	No			
Azerbaijan	S	R			R	S	S	S				S	Variable risk at S border, Jun-Oct	C	P	Le
Bahamas		R			S		S		C				No			
Bahrain		R			S	S	S	S					No			Le
Bali	R	R		R	R	S	S	S	C		S		Yes, low risk	W		
Bangladesh	R	R	S	R	R	S	S	S	C		S		Yes, Chittagong Hill tracts only Elsewhere, low risk	ME or DO or MON W	*	Le
Barbados		R			S		S		C				No			
Belarus	S	R			R	S	S	S				S	No			
Belize	S	R			S	S	S	S	C				Variable risk, low risk Belize City	C	P	
Benin Republic	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Le
Bermuda		S					S						No			
Bhutan	R	R		R	R	S	S	S	C		S		Yes, Southern districts	PC	DRF	Le
Bolivia	R	R			S	S	S	S	R				Yes, high risk in Amazon basin Yes, other rural below 2500m	ME or DO or MON PC	PC DRF	
Borneo	R	R			R	S	S	S	C		S		Low risk coastal areas of Malaysian Sarawak and Sabah, Indonesian Kalimantan high risk all areas	ME or DO or MON PC	PC *	
Bosnia		R			S	S	S	S				S	No			Le
Botswana	R	R	S		S	S	S	S	C				Yes, northern half only Nov-June	ME or DO or MON	PC	Sh Ta
Brazil	S	R			R	S	S	S	R				Yes, high risk in Amazonia States Elsewhere, very low	ME or DO or MON W	PC	Sh Le Tc
Brunei	S	R			S	S	S	S	C		S		No			
Bulgaria		R			S	S	S	S				S	No			
Burkina Faso	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Le Ta
Burundi	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Cambodia	R	R			R	S	S	S	C		S		Yes, high risk in Western Provinces, Yes, significant risk elsewhere (No risk Phnom Penh)	DOor MON ME or DO or MON W	* *	
Cameroon	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Canada													No			
Cape Verde Islands	R	R			R	S	S		C				Yes, low risk	W		Le
Cayman Islands		R			S		S						No			
Central African Rep.	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Chad	R	R	S	R	R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Chile	S	R			S		S	S					No			Tc
China (Mainland)	S	R	S		R	S	S	S	C		S	S	Yes, risk in Yunnan & Hainan Yes, low risk remote rural areas Very low risk main tourist areas, including Yangtze cruises	ME or DO or MON C W	PC P	Sh
China (Hong Kong)	S	S			S	S	S						No			
China (Macao)	S	R			R	S	S	S			S		No			
Colombia	S	R	S		S	S	S	S	R				Yes, high risk most area below 800m	ME or DO or MON	PC	Le Ta
Comoros	R	R	S		R	S	S	S		S			Yes, high risk	ME or DO or MON	PC	Le
Congo	R	R	S		R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Congo-Dem. Rep.	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Cook Islands	R	R			S		S						No			
Costa Rica	S	R			S		S	S	C				Limited variable risk area borders NE Coast & Panama Rest of country, low risk	C W	P	Le Tc
Croatia		R			R	S	S	S				S	No			Le
Cuba		R			S		S	S					No			
Cyprus		S											No			Le
Czech Republic		S										S	No			
Djibouti	R	R	S		R	S	S	S	C	S			Yes, high risk	ME or DO or MON	*	Sh Le
Dominican Republic	S	R			R	S	S	S					Yes, low risk	C	P	Sh Le

Destination	Typhoid	Hepatitis A	Cholera	Polio	Diphtheria	Tuberculosis	Hepatitis B	Rabies	Yellow fever	Mening/ACWY	Jap B enceph	Tick-borne encephalitis	Malaria: Risk areas and seasons	Recommended regimen	Less satisfactory regimen	Main parasitic hazards
Dubai		R			S		S	S		C			No			Le
East Timor (Timor Leste)	R	R			R	S	S	S	C		S		Yes, high risk	ME or DO or MON	*	Le
Ecuador	R	R			R	S	S	S	R				Yes, high risk Esmeraldas and substantial rim bordering Colombia and Peru. Elsewhere low risk	ME or DO or MON W	PC	Tc
Egypt	R	R		R	R		S	S	C				(No risk tourist areas) Yes, very low in El Faiyum, June-Oct	W		Sh Le
El Salvador	R	R			S	S	S	S	C				Yes, border with Guatemala & Honduras. Elsewhere, low risk	C W	P	Le Tc
Equatorial Guinea	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Eritrea	R	R			R	S	S	S	C	S			Yes, high risk (no risk in Asmara)	ME or DO or MON	*	Sh Le
Estonia		R			R		S	S				S	No			
Ethiopia	R	R	S	R	R	S	S	S	R	S			Yes, high risk below 2000m (No risk in Addis Ababa)	ME or DO or MON	*	Sh
Falklands (Tristan da C.)													No			
Fiji	S	R			S		S		C				No			
Finland												S	No			
France												S	No			Le
French Guiana	S	R	S		S	S	S	S	M				High risk inland and border areas, coast and islands/low no risk	ME or DO or MON	PC	Sh Tc
French Polynesia	S	R			S		S		C				No			
Gabon	R	R	S		R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh
Gambia	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Georgia	S	R			R	S	S	S				S	Yes, v. low risk SE villages July-Oct	W		
Germany												S	No			
Ghana	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Goa	R	R		R	R	S	S	S	C		S		Yes, variable risk	PC.	DRF	Le
Greece and Islands		S										S	No			Le
Greenland								S					No			
Grenada		R			S		S	S	C				No			
Guadeloupe		R			S	S	S		C				No			
Guam	R	R		S	S	S	S						No			
Guatamala	S	R	S		S	S	S	S	C				Yes, some risk below 1500m	C	P	
Guinea	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Guinea Bissau	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Guyana	R	R			S	S	S	S	R				High risk all areas except coastal cities	ME or DO or MON	*	Sh
Haiti	R	R			R	S	S	S	C				Yes, some risk	C	P	
Hawaii													No			
Honduras	R	R			S	S	S	S	C				Yes, risk variable	C	P	Le
Hungary												S	No			
India	R	R	S	R	R	S	S	S	C		S		Yes, high risk Assam Yes, low risk in southern states, Delhi, Jaipur, Agra, Mumbai Elsewhere	ME or DO or MON W PC	PC DRF	Le
Indonesia	R	R			R	S	S	S	C		S		Yes, high in Lombok V. low Bali and cities; Yes variable elsewhere	ME or DO or MON W PC	PC DRF	Sh
Iran	S	R	S		R		S	S	C				Yes, rural SE provinces Mar-Nov Yes, risk low, northern border with Azerbaijan May-Oct	PC C	DRF P	Le
Iraq	R	R	S		R	S	S	S	C				Rural north and Basrah province May-Nov	C	P	Sh Le
Israel		R		S	S		S						No			Le
Italy		S										S	No			Le
Ivory Coast	R	R	S		R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Ta
Jamaica		R			S		S		C				No			
Japan							S				S		No			Sh
Jordan		R			R		S	S	C				No			Le
Kazakhstan	S	R			R	S	S	S	C			S	No			Le
Kenya	R	R	S	R	R	S	S	S	R	S			Yes, high risk) (Nairobi and highlands low risk)	ME or DO or MON	*	Sh Le Ta
Kiribati	R	R			S	S	S		C				No			
Korea (North)	R	R		R	S	S	S	S			S		Yes, some risk extreme S	W		
Korea (South)	S	S				S	S				S		Yes, some risk in extreme NW	W		
Kosovo		R			S		S	S				S	No			Le
Kuwait	S	R			S	S	S						No			
Kyrgystan	S	R			R	S	S	S				S	Yes, low risk some S & W areas Extreme SW of country, May-Oct	W C		Le
Laos	R	R			R	S	S	S	C		S		Yes, high risk (minimal risk Vientiane)	ME or DO or MON	*	
Latvia		R			R	S	S	S				S	No			
Lebanon	S	R			S	S	S		C				No			Le
Lesotho	R	R			R	S	S	S	C				No			Sh
Liberia	R	R	S		R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*	Sh Ta
Libya	S	R			S		S	S	C				No risk			Le

Key

M = immunisation mandatory
R = immunisation recommended as risk of infection is substantial
S = immunisation sometimes recommended:
– for more than three visits in year
– a stay of more than three months in a rural area
– high-risk occupational groups
– backpackers staying more than one month
C = See Yellow fever, next column

Where **S** appears for cholera, it indicates that only high-risk travellers, usually health care workers in areas of known epidemics, should be immunised.

Vaccinations information

Tetanus
Five tetanus doses are considered protective for life by the DH, although there is no evidence base for this. Travellers at risk of tetanus-prone wounds should be given 10-yearly boosters if they are going to poorer countries in Africa, Asia and South America where specific immunoglobulin may be unavailable.

Polio
All travellers should have completed the British vaccination schedule for polio immunisation in childhood or as adults.

Yellow fever
● An international Certificate of Vaccination **C** is required for travellers from yellow fever zones who wish to enter countries bordering the margins of a yellow fever endemic area, or from more distant countries where a mosquito vector provides the potential for transmission. A certificate may also be required for travellers who have been in transit through yellow fever endemic zones.
● An International Certificate of Vaccination may be required (**M**=Mandatory) for all entering travellers over the age of 12 months. For further details see International Travel and Health Requirements and Health Advice, WHO, Geneva 2008. www.who.int.ith

Information source and updates
This chart is based on information from the UK TRAVAX website and other databases. TRAVAX is an information service provided by Health Protection Scotland (www.travax.scot.nhs.uk; telephone 0141 300 1130).

The chart is updated regularly. Readers are advised to use the latest chart only, to ensure that their practice reflects the most recent advice.

Travel vaccinations and malaria information author
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Specialist advice

For advice on complex itineraries and other queries, use the following helplines:
Birmingham 0121 424 0357/ 3354/2357
Edinburgh, Western General Hospital 0131 537 2822
London, Coppetts Wood Hospital 020 8883 9792
National Travel Health Network and Centre (Monday to Friday, 9am-12pm, 2pm-4.30pm) 0845 602 6712 (local call rate)
Manchester, Monsall Hospital 0161 720 2677

Parasitic infections

Short-term travellers staying in good conditions are usually at low risk of acquiring parasitic infections. Schistosomiasis is common and potentially serious. Leishmaniasis and trypanosomiasis are less common but potentially lethal. Expatriates in remote areas at risk of other rare diseases are not shown in this chart.

Sh = schistosomiasis. Travellers should avoid swimming in freshwater lakes and rivers in endemic areas.

Ta = African trypanosomiasis (sleeping sickness). Transmitted by tse-tse flies, and a risk in some African game parks and rural areas. Travellers should use insect repellents, close windows if fly swarms approach and seek medical attention for any signs of infection around bites one to three weeks later.

Tc = South American trypanosomiasis (Chagas' disease). Transmitted by reduvid bugs that feed at night and reside in the thatch and crevices of rural dwellings. Travellers should avoid sleeping in huts.

Le = leishmaniasis. Transmitted by sandflies in arid areas (including Mediterranean coastal areas), mostly at night. Travellers should use insecticide-impregnated mosquito nets and insect repellent.

Travel medicine update

Death from rabies acquired in South Africa
Many travel medicine advisers have already been contacted by people worried by the recent rabies death in Northern Ireland. The Health Protection Agency posted a notice on 13 January[1] following the recent death from rabies of a young woman who was a volunteer at the Riverside Wildlife Rehabilitation and Environmental Education Centre in Limpopo in South Africa in December 2006 when she was thought to have sustained a dog bite. The centre has written to all those who have volunteered there since July 2006 as a precautionary measure, and HPA is working to trace about 230 at-risk UK citizens.

UK citizens who are worried and may have been at risk should contact their GP or NHS Direct. Post-exposure prophylaxis (PEP) is highly effective at preventing rabies, although the benefits decline with longer intervals from the exposure.

All travellers should avoid contact with dogs and wild animals, and if bitten, scratched or licked by a warm-blooded animal in a rabies-endemic country, should wash the exposure site with water, flush wounds with an alcohol-based solution and seek medical advice without delay, even if previously vaccinated. Rabies is not transmitted by touching or stroking an infected animal. Those not receiving PEP abroad should ask for help after return, even if some time has elapsed since the exposure event.

Rabies vaccine is not routinely advised for all travellers, but pre-exposure immunisation should be considered for voluntary work of this kind and is also recommended for those:
● working abroad who by the nature of their work are at risk of contact with rabid animals (such as veterinary staff or zoologists)
● living in or travelling for longer than a month to rabies-enzootic areas unless there is reliable access to vaccine and rabies immunoglobulin
● travelling for less than a month but who may be exposed because of travel activities
● who would have limited access to post-exposure medical care.

Reference
1 www.hpa.nhs.uk and click on 'Wildlife centre traces volunteers following death from rabies' in the News section

PULSE

Updated: February 2009
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Destination	Typhoid	Hepatitis A	Cholera	Polio	Diphtheria	Tuberculosis	Hepatitis B	Rabies	Yellow fever	Mening/ACWY	Jap B enceph	Tick-borne enceph	Malaria: Risk areas and seasons	Malaria: Recommended regimen	Malaria: Less satisfactory regimen	Main parasitic hazards: Recommended regimen	Main parasitic hazards: Less satisfactory regimen
Liechtenstein												S	No				
Lithuania		R			R	S	S	S				S	No				
Macedonia		R			S		S					S	No				Le
Madagascar	R	R	S		R	S	S	S	C				Yes, high risk	ME or DO or MON	*		Sh
Madeira		S							C				No				
Malawi	R	R	S		R	S	S	S	C	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Malaysia	S	R			S	S	S	S	C		S		Yes, high risk Sabah	ME or DO or MON			
													Yes, low risk deep forests of Malaysia	PC			
													Very low risk elsewhere	W			
Maldives	R	R			S	S	S	S	C				No				
Mali	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*		Ta
Malta and Gozo									C				No				Le
Martinique		R			S	S	S						No				Sh
Mauritania	R	R	S		R	S	S	S	M	S			Yes, risk all year in south	ME or DO or MON	PC		Sh Le
													Yes, variable risk in Central regions July-Oct. Low/no risk in far north				
Mauritius		R			S		S		C				Very low risk	W			
Mayotte	R	R			S	S	S	S					Yes, high risk	ME or DO or MON	PC		Le
Mexico	R	R			S		S	S					Southern rural areas only	C	P		Tc
													Elsewhere and tourist areas	W			
Moldova	S	R			R	S	S	S				S	No				
Mongolia	S	R			R	S	S	S		S		S	No				
Montenegro		R			S		S	S				S	No				Le
Montserrat		R			S		S		C				No				
Morocco	S	R			S	S	S	S					Yes, risk in few rural areas only	W			Le
Mozambique	R	R	S		R	S	S	S	C	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Myanmar (Burma)	R	R		R	R	S	S	S	C		S		Yes, east part of Shan State,	DO or MON	*		
													Yes, elsewhere	ME or DO or MON	PC		
Namibia	R	R	S	R	S	S	S	S	C	S			Yes, northern third only, Nov-Jun	ME or DO or MON	PC		Sh
													Yes, all year – along Kavango and Kunene Rivers				
Nepal	R	R	S	R	R	S	S	S	C	S	S		Yes, below 1500m (no risk in Kathmandu)	PC	DRF		Le
Neth Antilles	S	R			S		S	S	C				No				
Netherlands													No				
New Caledonia	S	R			S	S	S		C				No				
New Zealand							S						No				
Nicaragua	R	R			S	S	S	S	C				Yes, variable risk	C	P		Le Tc
Niger	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Nigeria	R	R	S	R	R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Norway													No				
Oman	R	R			S		S	S	C				No indigenous cases since 2001	W	DRF		Sh Le
Pakistan	R	R	S	R	R	S	S	S	C		S		Yes, significant below 2000m	PC	DRF		Le
Panama	R	R			S	S	S	S	R				Yes, east of Canal	PC	DRF		
													Yes, west of Canal	C	P		
Papua New Guinea	R	R			S	S	S	S	C		S		Yes, high risk below 1500m	ME or DO or MON	PC		
Paraguay	S	R			S	S	S	S	R				Yes, extreme eastern areas, Oct-May	C	P		Le Tc
Peru	R	R			S	S	S	S	R				Yes, high risk Amazon basin	ME or DO or MON	PC		Le Tc
													Yes, northern rural areas below 1500m	PC	DRF		
Philippines	R	R	S		R	S	S	S	C		S		Yes, many rural areas below 600m	PC	DRF		Sh
													No risk cities, Cebu, Bohol, Catanduanes	W			
Poland		S			S		S	S				S	No				
Portugal		S											No				
Puerto Rico	S	R			S		S	S					No				Sh Le
Qatar	S	R			S	S	S	S					No				Le
Reunion		R			R	S	S		C				No				Sh
Romania	S	R			R	S	S	S				S	No				
Russian Federation	S	R	S		R	S	S	S		S	S	S	No				
Rwanda	R	R	S		R	S	S	S	M				Yes, high risk	ME or DO or MON	*		Sh Ta
Sabah	S	R			S	S	S	S	C		S		Yes, high risk	ME or DO or MON	PC		
													Low risk Kota Kinabalu	W			
Samoa	S	R			S		S		C				No				
Sao Tome	R	R			R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*		Sh Le
Saudi Arabia	S	R			S	S	S	S	C	S/M			Yes, SW region, rural areas of W. region	PC	DRF		Sh Le
													Elsewhere (no risk Mecca, Medina Jeddah)	W			
Senegal	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Serbia		R			S		S	S				S	No				Le
Seychelles	S	R			S		S	S	C				No				
Sierra Leone	R	R	S		R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Singapore		S					S		C				No				
Slovakia		S			S		S	S				S	No				
Slovenia		R			S		S	S				S	No				
Solomon Islands	R	R			S	S	S		C				Yes, high risk	ME or DO or MON	PC		
Somalia	R	R	S	R	R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Le
South Africa	S	R	S		R	S	S	S	C				Yes, NE rim bordering Zimbabwe, Mozambique & Eastern Swaziland, including Kruger, Kosi Bay & Jozini	ME or DO or MON	PC		Sh Ta
Spain		S											No				No
Sri Lanka	S	R	S		S	S	S	S	C		S		Yes, far north of country only (north of Anuradhapura)	PC	DRF		
													Elsewhere (includes all tourist areas)	W			
St Helena & Ascension									C				No				
St Kitts & Nevis		R			S		S		C				No				
St Lucia		R			S		S		C				No				
St Vincent & Grenadines		R			S		S		C				No				
Sudan	R	R	S	R	R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Le
Surinam	S	R			S	S	S	S	R				Yes, risk (except Paramaribo and coast)	ME or DO or MON	PC		Sh Le
Swaziland	R	R	S		S	S	S	S	C				Yes, high risk, eastern areas	ME or DO or MON	*		Sh
Sweden											S		No				
Switzerland											S		No				
Syria	S	R			R		S	S	C				Yes, only rural north, May-Oct	C	P		Sh Le
Taiwan		R			S	S	S		C		S		No				
Tajikistan	R	R			R	S	S	S			S		Yes, Jun-Oct, esp S border	PC	*		Le
Tanzania	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Thailand	S	R			R	S	S	S	C		S		Yes, if staying Burma, Laos or Cambodia borders only	DO or MON			
													Elsewhere	W			
Tibet	S	R	S		R	S	S	S	C		S		No				
Tobago		R			S		S	S					No				Tc
Togo	R	R	S	R	R	S	S	S	M	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Trinidad		R			S		S	S	S				No				Tc
Tunisia	S	R			S		S	S	C				No				Le
Turkey	R	R			R		S	S					Yes, Syria border areas and plain around Adana Mar-Nov	C	P		Le
													Elsewhere (includes all tourist areas)	W			
Turkmenistan	S	R			R	S	S	S				S	Yes, June-Oct, in SE only	C	P		
Uganda	R	R	S		R	S	S	S	R	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Ukraine	S	R			R	S	S	S				S	No				
United Arab Emirates		R			S		S	S					No				Le
Uruguay		R			S		S	S	C				No				Tc
USA													No				
Uzbekistan	S	R			R	S	S	S				S	Yes, very low risk extreme SE	W			Le
Vanuatu	S	R			S	S	S						Yes, high risk	ME or DO or MON	PC		
Venezuela	S	R			S	S	S	S	R				Yes, Amazon basin, all areas to south and immediately to north of Orinoco River and Angel Falls	ME or DO or MON	PC		Sh Tc
													No risk Caracas or Margarita	W			
Vietnam	R	R			R	S	S	S	C		S		Low risk in cities, coast between Ho Chi Minh and Hanoi, Mekong Delta	W			
													Elsewhere	ME or DO or MON	*		
Virgin Islands		R			S		S						No				
West Papua (formerly Irian Jaya)	R	R		R	R	S	S	S	C		S		Yes, high risk	ME or DO or MON	PC		Sh Ta
Yemen	R	R		R	R	S	S	S	C				Yes, but no risk in Sana'a city	PC	DRF		Sh Le
Zambia	R	R	S		R	S	S	S	S	S			Yes, high risk	ME or DO or MON	*		Sh Ta
Zimbabwe	R	R	S		R	S	S	S	C				Yes, high risk Zambezi valley	ME or DO or MON	PC		Sh Ta
													Yes, elsewhere below 1200m Nov-Jun	ME or DO or MON	PC		
													Negligible risk Harare and Bulawayo	W			

Key to malaria prophylaxis regimens

Regimen MON
Malarone (atovaquone/proguanil), one tablet daily. Begin 1-2 days before departure, continue while in malarious area and for 7 days after return. ACMP suggest Malarone is safe for periods in continuous use of at least 1 year and possibly longer. Safety in pregnancy has not been established, and use in pregnancy should only be considered if benefit to the mother outweighs risk to fetus. Children use paediatric tablets.

Regimen PC
Proguanil (Paludrine) 200mg daily plus chloroquine 300mg or 310mg base weekly (=Avloclor 2x250mg. Begin 1 week before travel and continue for 4 weeks after return.

Regimen ME
Mefloquine, 1x250mg tablet weekly. ACMP suggest it is safe in continuous use for periods of at least 3 years. Begin at least 2½ weeks before travel (at least 3 doses before arriving in malarious area). Avoid in first trimester of pregnancy and do not start pregnancy until 3 months after stopping mefloquine. Inadvertent use in first trimester is *not* an indication for termination. If pregnant women must travel to chloroquine-resistant falciparum area seek expert advice and conduct careful risk-benefit analysis. Use in any trimester may be justified.

Regimen C
Chloroquine 300mg or 310mg base weekly (=Avloclor 2x250mg). Begin 1 week before travel and continue for 4 weeks after return.

Regimen P
Proguanil (Paludrine) 200mg daily. Begin 1-2 days before travel and continue for 4 weeks after return.

Regimen W
No chemoprophylaxis but be aware of risk. Avoid mosquito bites and carry standby treatment if going to be far from medical facilities.

Regimen DO
Doxycycline, 1 tablet of 100mg daily. Begin 1-2 days before travel and continue for 4 weeks after return. Not for children or pregnant women. Be aware of oesophageal ulceration, photosensitivity and very rare intracranial hypertension risk. Take with food or milk and avoid ingestion in late evening.

Regimen DRF
In the alternative regimen column, **DRF** is Drug-Resistant-Falciparum regimen. **DRF** = **ME** or **DO** or **MON**

Primaquine
A causal prophylactic that may be used when G6PD deficiency has been excluded in travellers with contra-indications to other anti-malarials. Active against all species. Adult dose 30mg daily. Start 1-2 days before departure and continue for 7 days after return.

Children's doses of antimalarial prophylactics

Weight in kg	Chloroquine Proguanil	Mefloquine	Age
Under 6.0	0.125 adult dose ¼ tablet	not recommended	term to 12 weeks
6.0 to 9.9	0.25 adult dose ½ tablet	0.25 adult dose ¼ tablet	3 months to 11 months
10.0 to 15.9	0.375 adult dose ¾ tablet	0.25 adult dose ¼ tablet	1 year to 3 years 11 months
16.0 to 24.9	0.5 adult dose 1 tablet	0.5 adult dose ½ tablet	4 years to 7 years 11 months
25.0 to 44.9	0.75 adult dose 1½ tablets	0.75 adult dose ¾ tablet	8 years to 12 years 11 months
45kg and over	Adult dose 2 tablets	Adult dose 1 tablet	13 years and over

Doxycycline only above 12 years and the adult dose is given

Children's doses

Paediatric Malarone for prophylaxis

Weight in kg	Number of tablets daily
11-20	1 paediatric tablet
21-30	2 paediatric tablets
31-40	3 paediatric tablets
Above 40	1 adult tablet

Specialist advice

For malaria advice: Malaria Reference Laboratory
020 7636 3924 (health professionals only)
Birmingham 0121 424 0357/ 3354/2357
Edinburgh 0131 537 2822
Glasgow 0141 300 1130
Liverpool 0151 708 9393
Oxford 01865 225 214

TIP OF THE MONTH

Brief exposure enough to cause schistosomiasis

A recent report draws attention again to the dangers of even brief contact with schistosomal-infected water in Sub-Saharan Africa[1]. Thirty-four Israeli travellers on a safari dipped once into the private freshwater pond at a luxury lodge in Tanzania in April 2007. The index case was a man who presented with fever four weeks later, and then with rash, pruritus, and blood eosinophilia. Some 22 travellers had evidence of schistosomiasis and 19 had acute schistosomal syndromes.

The 22 patients reported 258 visits to physicians, clinics and labs. Four were hospitalised. Working adults with symptoms lost a mean 7.8 work days, and children were absent from school for a mean of eight days. Although there were no severe outcomes, neurological manifestations are well described and spinal schistosomiasis may give rise to irreversible paraplegia.

Travellers to sub-Saharan Africa should be warned that even a brief dip may be enough to cause infection. The temptation may be hard to resist, however, and travellers who have indulged should apply 50% DEET to exposed parts of the body[2]. Shower water drawn from infected rivers or lakes may also pose a threat unless it has been stored for 36 hours.

References

1 Leshem E et al. Acute schistosomiasis outbreak: clinical features and economic impact. *Clin Infect Dis* 2008;47:1499-1506.

2 Jackson F, Doherty JF, Behrens RH. Schistosomiasis prophylaxis in vivo using N,N-Diethyl-m-toluamide (DEET). *Trans Roy Soc Trop Med and Hyg* 2003;97:449-50