VACCINATION REQUIREMENTS AND MALARIA PROPHYLAXIS FOR INTERNATIONAL STAFF WORKING IN IRAQ

June 2003

Communicable Disease Working Group on Emergencies, HQ
Joint Medical Service, HQ
Division of Communicable Disease Control, EMRO
WORLD HEALTH ORGANIZATION
Acknowledgements

Edited by Dr Maire Connolly and Dr Katya Schemionek of the Programme on Communicable Diseases in Complex Emergencies at CDS/HQ and Dr Pascale Gilbert-Miguet of the WHO Joint Medical Service at HQ.

The purpose of this document is to provide up to date recommendations on vaccination requirements and malaria prophylaxis to international staff working in Iraq. The document is a collaboration between the Communicable Disease Working Group on Emergencies (CD-WGE) at WHO/HQ, the Joint Medical Services at WHO/HQ and the Division of Communicable Disease Control in EMRO. The Working Group supports Regional and Country Offices on communicable disease control issues in emergencies, and includes the Departments of Control, Prevention and Eradication (CPE), Surveillance and Response (CSR), Roll Back Malaria (RBM), Stop TB (STB) in the Communicable Diseases Cluster (CDS), Child and Adolescent Health and Development (CAH), Vaccines and Biologicals (VAB), HIV/AIDS (HIV) and Emergency and Humanitarian Action (EHA).

The following persons in WHO contributed to the development of this document and their technical input is gratefully acknowledged:

Dr Hoda Atta (EMRO/DCD), Dr Brad Hersh (HTP/VAB), Dr Claire-Lise Chaignat (CDS/CPE), Dr Charles Delacollette (CDS/MAL), Dr Michelle Gayer (CDS/CPE), Dr Frederic Maradon (CDS/CPE), Dr Francois Meslin (CDS/CPE), Dr William Perea (CDS/CSR), Dr Aafje Rietveld (CDS/CPE), Dr Cathy Roth (CDS/CSR), Dr Nadia Teleb (EMRO/DCD).
Routine vaccinations recommended - check vaccination history to ensure immunisations are up to date

- Diphtheria (booster every 10 years)
- Tetanus (booster every 10 years)
- Polio (booster every 10 years)
- Hepatitis A (10 years protection)
- Hepatitis B (at least 15 years protection)
- Typhoid fever IM (protection only for 3 years)

Recommendations on additional vaccines

- Meningococcal disease
  Meningococcal vaccine is recommended, as epidemics in Iraq cannot be excluded (protection only for 3 years).
  In 2000 and 2001 Saudi Arabia reported outbreaks of meningococcal disease among Haj pilgrims (due to W135 type of meningococcus serogroup). Following those outbreaks more than 16 countries reported cases of W135, all related to close contacts of Haj pilgrims. No cases of W135 have been reported from Iraq so far. However, spread of the W135 serogroup into the country is highly likely and vaccination of travellers with the polysaccharide tetravalent vaccine (A,C,Y & W135) is recommended. If tetravalent vaccine is not available, polysaccharide bivalent (A&C) vaccine should be adequate, as over recent years documented outbreaks of meningococcal disease in the Middle East have been in general caused by serogroup A.

- Rabies
  Rabies vaccine is recommended.
  Data from 2000 indicate that 10,780 persons have been treated for rabies in Iraq but not vaccinated; 12,000 have been treated and vaccinated. Because of the incomplete reporting, the number of cases occurring during the previous years is not clear but preventive immunization is recommended in any case. The potential for delay in accessing health care in the event of exposure due to the security situation puts international staff at high risk. Required post-exposure treatment might not be available. Therefore it is important to consider stockpiles of post exposure therapy and a plan for evacuation.

- Cholera
  Cholera vaccine is NOT recommended by WHO.
  Priority is preventive measures: safe water, proper food safety and personal hygiene including handwashing. However on a case-by-case basis, if individual international staff members wish to avail themselves of a cholera vaccine, there are two oral cholera vaccines (OCV) currently available. A single dose of a live ORV may be used (Orochol®) which elicits protective efficacy after 7 days. The two dose killed OCV (Dukoral®) given one week apart gives protection 10 days after the second dose. It is important to note that these vaccines have a protective efficacy of 85-90% leaving a certain percentage of vaccinees unprotected. Observance of classical preventive measures remains crucial to avoid infection not only due to cholera but also other food and water borne diseases. Cholera season in the Middle East is from May to October.

1 Note: please contact your Medical Service at least 4 weeks before your travel. Some vaccinations require up to one month for follow-up doses to give you appropriate protection.
• **Measles**
  International staff should ensure that they are immune to measles. Persons who have received 2 doses of measles vaccine after their first birthday and/or have laboratory evidence of a past measles infection (anti-measles IgG) can be considered immune. While the majority of adult populations have immunity from natural measles infection in childhood, there are increasing numbers of young adults who have escaped both measles vaccination and measles disease and thus remain susceptible.

• **Yellow fever**
  A yellow fever vaccination certificate is required only from travellers coming from infected areas (countries in South America, Central and Southern Africa). There is no risk for Yellow fever in Iraq.

• **Malaria prophylaxis**
  Malaria risk is exclusively due to *P. vivax*—exists from May through November, principally in areas in the north below 1500 m (Duhok, Erbil, Ninawa, Sulaimaniya and Ta’nim provinces) but also in Basrah Province.

  Malaria prophylaxis should include chemoprophylaxis and protection against mosquito bites, especially between dusk and dawn.

  Recommended chemoprophylaxis given only *P.vivax* transmission: **chloroquine**.

  Chloroquine is taken in an adult dose of 300 mg chloroquine base weekly in one dose.

  Chloroquine should be started a week before arrival or before the beginning of the transmission season. Chemoprophylaxis should be continued for 4 weeks after departure from the endemic area.

  Travellers should be aware that there is no antimalarial prophylactic regimen which can give complete protection. Therefore, anyone who experiences a fever 1 week or more after entering an area of malaria risk should consult a physician or qualified malaria laboratory immediately to obtain diagnosis and treatment. Laboratory diagnosis can be made by microscope or with a rapid diagnostic test. Rapid diagnostic tests should specifically allow detection of vivax malaria.

  Late-onset vivax malaria may occur months after return from the area. It cannot be prevented with current chemoprophylaxis options, but it can be easily treated with chloroquine and primaquine.

  **Malaria standby emergency treatment:** Chloroquine 4+4+2 tablets (adult dose of 150mg chloroquine base) over 3 days. Urgent medical attention must be sought to confirm the diagnosis and adjust the treatment, and to exclude other causes of fever.
Malaria risk and recommended chemoprophylaxis for international staff travelling to countries surrounding Iraq


IRAN: Limited risk—exclusively due to *P. vivax*—exists in some areas north of the Zagros mountains and in western and south-western regions during the summer months. Malaria risk due to *P. falciparum* exists from March through November in rural areas of the provinces of Hormozgan, Kerman (tropical part) and Sistan–Baluchestan. *P. falciparum* resistant to chloroquine and sulfadoxine–pyrimethamine reported. Recommended prophylaxis: chloroquine in *P. vivax* risk areas; chloroquine plus proguanil in *P. falciparum* risk areas.

JORDAN: No malaria risk

KUWAIT: No malaria risk

SAUDI ARABIA: Malaria risk—predominantly due to *P. falciparum*—exists throughout the year in most of the Southern Region (except in the high-altitude areas of Asir Province) and in certain rural areas of the Western Region. No risk in Mecca or Medina. Chloroquine-resistant *P. falciparum* reported. Recommended prophylaxis in risk areas: chloroquine plus proguanil.

SYRIAN ARAB REPUBLIC: Limited malaria risk—exclusively due to *P. vivax*—exists from May through October in foci along the northern border, especially in the north-eastern part of the country. Recommended prophylaxis in risk areas: chloroquine.

TURKEY: Malaria risk—exclusively due to *P. vivax*—exists from May to October mainly in the south-eastern part of the country, and in Amikova and Çukurova Plain. There is no malaria risk in the main tourist areas in the west and south-west of the country. Recommended prophylaxis in risk areas: chloroquine.

If different risk areas are visited, follow the advice for the highest risk area (particularly *P. falciparum* risk).

Chloroquine is taken in an adult dose of 300 mg chloroquine base weekly in one dose. Proguanil is taken in an adult dose of 2 tablets of 100 mg daily. Dosing schedules for children should be based on body weight (see http://www.who.int/ith).

Chloroquine should be started a week before arrival or before the beginning of the transmission season; proguanil should be started the day before.

International staff with contraindications to chloroquine and/or proguanil can consider mefloquine (250mg weekly) or doxycycline (100 mg daily) as an alternative.