



دائرة الصحة
DEPARTMENT OF HEALTH

DOH GUIDELINES FOR MALARIA
PREVENTION ADVICE IN
TRAVELERS FROM ABU DHABI
TO MALARIA ENDEMIC AREAS
October 2018

PUBLIC

عام



Document Title:	DOH Guidelines for Malaria Prevention Advice in Travelers from Abu Dhabi to Malaria Endemic Areas		
Document Ref. Number:	DOH/Guidelines/PH/1.0	Version	.09
Approval Date:	31 st October 2018	Effectiveness Date:	5 th November 2018
Revision History:	n/a		
For Further Advice Contact:	Public Health Division, Communicable Diseases Department		
Applies To	All Healthcare Facilities and Healthcare Professionals in the Emirate of Abu Dhabi		
Document Owner/ Control	This document shall be reviewed and updated by Public Health Division		



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1. Purpose

- 1.1. These Guidelines seek to support Abu Dhabi Licensed Healthcare Facilities and Professionals that advise Abu Dhabi based travelers to malaria endemic areas. Concerned geographical areas can be found in Appendix 1.

2. Scope

- 2.1. These Guidelines are intended for use by Abu Dhabi Licensed Healthcare Facilities and Professionals that advise Abu Dhabi based travelers to malaria endemic areas but may also be of use to prospective travelers who wish to read about the options themselves.

3. Definitions

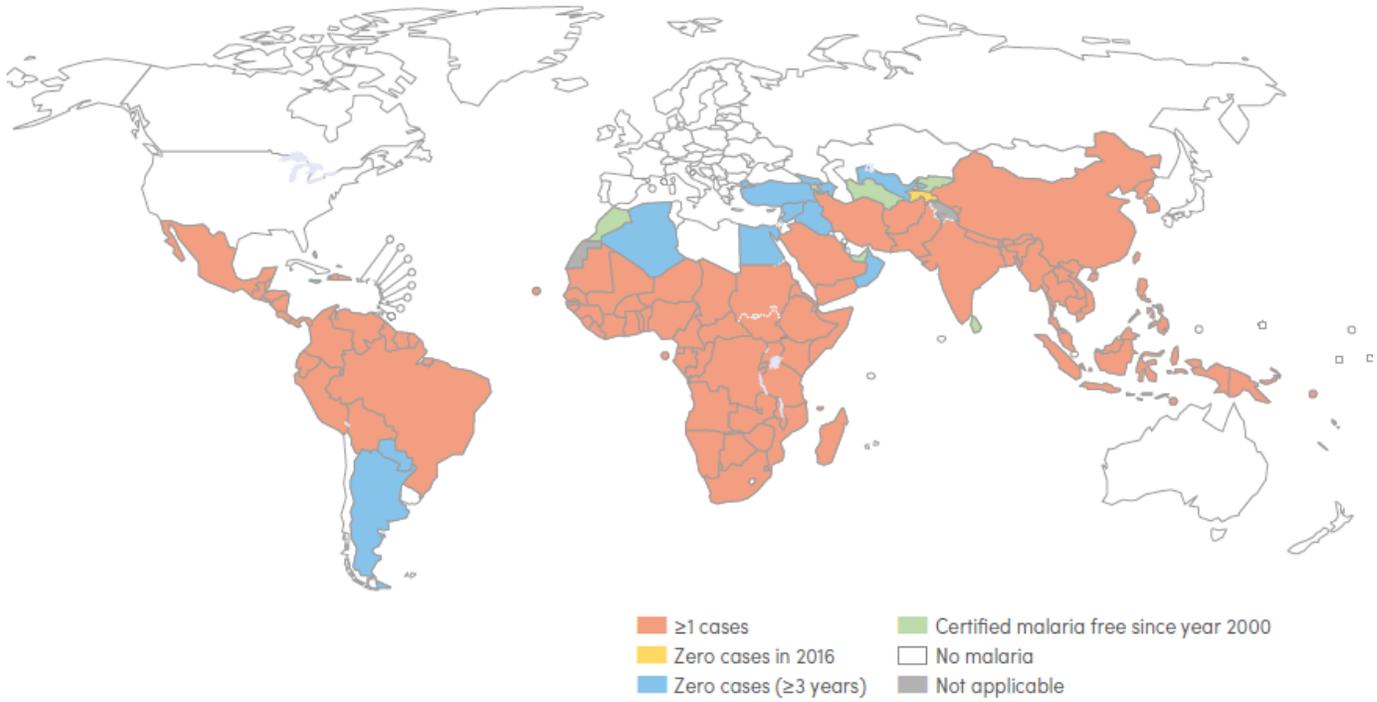
- 3.1. **Pre-travel advice** is the information provided to the traveler by healthcare professional prior to their travel.
- 3.2. **Malaria endemic areas** are defined by the World Health Organization (WHO) and subjected to change at any time (See Appendix 1).

4. Guidelines on How to Give the Advice

- 4.1. Emphasize to the traveler the **ABCD** of malaria *Prophylaxis*: **A**wareness of risk, **B**ite prevention, **C**hemoprophylaxis, **P**rompt **D**iagnosis and treatment.
- 4.2. Emphasize that whilst no regimen is 100% effective, the combination of preventive measures advised will give significant protection against malaria.
- 4.3. Discuss the choices of chemoprophylaxis regimens and their individual advantages and disadvantages.
- 4.4. Provide the traveler with written information on malaria and its prevention preferably in Arabic, English, Urdu and Hindi.
- 4.5. Consult where possible with internationally accepted best practice (such as CDC) website: <http://wwwnc.cdc.gov/travel/diseases/malaria> and Public Health England http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1203496943523 and World Health Organization <http://www.who.int/ith/2017-ith-chapter7.pdf?ua=1&ua=1>
- 4.6. Discuss the choice of Chemoprophylaxis in accordance with DoH recommendation (Appendix 2 & 3) and internationally accepted best practice. See CDC website: <http://www.cdc.gov/malaria/travellers/drugs.html>.
- 4.7. Refer where possible to World Health Organization for drug resistance and response http://www.who.int/malaria/areas/drug_resistance/en/



5. Appendix 1: Malaria Risk Areas



Source: World Malaria Report WHO (2017),
<http://apps.who.int/iris/bitstream/handle/10665/259492/9789241565523-eng.pdf?sequence=1>



Appendix 2: Drugs Used for *Chemoprophylaxis* for Malaria

Drug	Reason that might make you consider this drug	Reasons that might make you avoid using this drug
Atovaquone/Proguanil (Malarone)	<ul style="list-style-type: none"> • Good for last-minute travellers because the drug is started 1-2 days before traveling to an area where malaria transmission occurs • Some people prefer to take a daily medicine • Good choice for shorter trips because you only have to take the medicine during the stay and for 7 days after leaving the area rather than 4 weeks • Very well tolerated medicine – side effects uncommon • Paediatric tablets are available and may be more convenient 	<ul style="list-style-type: none"> • Cannot be used by women who are pregnant or breastfeeding a child less than 5 kg • Cannot be taken by people with severe renal impairment • Tends to be more expensive than some of the other options (especially for trips of long duration) • Some people (including children) would rather not take a medicine every day
Chloroquine	<ul style="list-style-type: none"> • Some people would rather take medicine weekly • Good choice for long trips because it is taken only weekly • Can be used in all trimesters of pregnancy 	<ul style="list-style-type: none"> • Cannot be used in areas with chloroquine or mefloquine resistance • May exacerbate psoriasis • Some people would rather not take a weekly medication • For trips of short duration, some people would rather not take medication for 4 weeks after travel
Doxycycline	<ul style="list-style-type: none"> • Some people prefer to take a daily medicine • Good for last-minute travellers because the drug is started 1-2 days before traveling to an area where malaria transmission occurs • Tends to be the least expensive antimalarial • Some people are already taking doxycycline chronically for prevention of acne. In those instances, they do not have to take an additional medicine • Doxycycline also can prevent some additional infections (e.g., Rickettsiae and leptospirosis) and so it may be preferred by people planning to do lots of hiking, camping, and wading and swimming in fresh water 	<ul style="list-style-type: none"> • Cannot be used by pregnant women and children <8 years old • Some people would rather not take a medicine every day • For trips of short duration, some people would rather not take medication for 4 weeks after leaving the area • Women prone to getting vaginal yeast infections when taking antibiotics may prefer taking a different medicine • Persons planning on considerable sun exposure may want to avoid the increased risk of sun sensitivity • Some people are concerned about the potential of getting an upset stomach from doxycycline



Drug	Reason that might make you consider this drug	Reasons that might make you avoid using this drug
Mefloquine	<ul style="list-style-type: none"> • Some people would rather take medicine weekly • Good choice for long trips because it is taken only weekly • Can be used during pregnancy 	<ul style="list-style-type: none"> • Cannot be used in areas with mefloquine resistance • Cannot be used in patients with certain psychiatric conditions • Cannot be used in patients with a seizure disorder • Not recommended for persons with cardiac conduction abnormalities • Not a good choice for last-minute travellers because drug needs to be started at least 2 weeks prior to travel • Some people would rather not take a weekly medication • For trips of short duration, some people would rather not take medication for 4 weeks after travel
Primaquine	<ul style="list-style-type: none"> • It is the most effective medicine for preventing <i>P. vivax</i> and so it is a good choice for travel to places with > 90% <i>P. vivax</i> • Good choice for shorter trips because you only have to take the medicine for 7 days after traveling rather than 4 weeks • Good for last-minute travellers because the drug is started 1-2 days before traveling to an area where malaria transmission occurs • Some people prefer to take a daily medicine 	<ul style="list-style-type: none"> • Cannot be used in patients with glucose-6-phosphatase dehydrogenase (G6PD) deficiency • Cannot be used in patients who have not been tested for G6PD deficiency • There are costs and delays associated with getting a G6PD test done; however, it only has to be done once. Once a normal G6PD level is verified and documented, the test does not have to be repeated the next time primaquine is considered • Cannot be used by pregnant women • Cannot be used by women who are breastfeeding unless the infant has also been tested for G6PD deficiency • Some people (including children) would rather not take a medicine every day • Some people are concerned about the potential of getting an upset stomach from primaquine

For more details, follow CDC link <http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/malaria>

6. Appendix 3: Recommended Use of Antimalarial Drugs for *Prophylaxis* in Travelers

Generic name	Dosage regimen	Duration of prophylaxis	Use in special group			Main contraindication	Comments
			pregnancy	Breast feeding	Children		
Atovaquone- proguanil combination tablet	One dose daily. 11-20kg: 62.5 atovaquone plus 25 mg proguanil (1 paediatric tablet) daily 21-30kg: 2 paediatric tablets daily 31-40kg: 3 paediatric tablets daily > 40kg: 1 adult tablet (250mg atovaquone plus 100 mg daily)	Start one day before departure and continue for 7 days after return	No data, not recommended	No data, not recommended	Not recommended under 11 kg because of limited data	Hypersensitivity to atovaquone and /or proguanil; severe renal insufficiency (creatinine clearance < 30 ml/min).	Registered in European countries and UAE for chemoprophylactic use with restriction in the duration of use (varying from 5 weeks to 1 year) plasma concentration reduced when it is -co administered with rifampicin, rifabutin, metachlorpromide or tetracycline
Chloroquine	5 mg base/kg weekly in one dose , adults dose: 300 mg chloroquine base daily in one dose	Start one week before departure and continue for 4 weeks after return. l	Safe	Safe	Safe	Hypersensitivity to chloroquine; history of epilepsy; psoriasis	Concurrent use of chloroquine may reduce the antibody response to intradermally administered human diploid - cell rabies vaccine



Generic name	Dosage regimen	Duration of prophylaxis	Use in special group			Main contraindication	Comments
			pregnancy	Breast feeding	Children		
Chloroquine - proguanil combination tablet	>50 kg. 100 mg chloroquine base plus 200 mg proguanil (1 tablet) daily	Start one day before departure and continue for 4 weeks after return	Safe	Safe	Tablet size not suitable for persons of <50 kg. body weight	Hypersensitivity to chloroquine and/or Proguanil; liver or kidney insufficiency; history of epilepsy; psoriasis.	Concurrent use of chloroquine may reduce the antibody response to intradermally administered human diploid-cell rabies vaccine
Generic name	Dosage regimen	Duration of prophylaxis	Pregnancy	Breast feeding	Children	Main contraindication	Comments
doxycycline	1.5 mg salt/kg daily <i>adult dose</i> : 1 tablet of 100 mg daily	Start one day before departure and continue for 4 days after return	Contra-indicated	Contra-indicated	Contra-indicated under 8 years of age	Hypersensitivity to tetracycline, liver dysfunction	Doxycycline make the skin more susceptible to sunburn. People with sensitive skin should use highly protective (UVA) sunscreen and avoid prolonged direct sunlight, or switch to another drug. Doxycycline should be taken with plenty of water to prevent esophageal irritation.



Generic name	Dosage regimen	Duration of prophylaxis	Use in special group			Main contraindication	Comments
			pregnancy	Breast feeding	Children		
Mefloquine	5 mg /kg weekly. <i>Adult dose:</i> 1 tablet of 250 mg weekly	Start at least one week (preferably 2-3 weeks) before departure and continue for 4 weeks after return.	Not recommended in the first trimester because of lack of data	Safe	Not recommended under 5 mg because lack of data	Hypersensitivity to mefloquine; psychiatric (including depression) or convulsive disorders; history of severe neuro-psychiatric disease; concomitant halofantrine treatment, treatment with mefloquine in last 4 weeks; not recommended in view of limited data for people performing activities requiring coordination e.g. pilots, machine operation.	Do not give mefloquine within 12 hours of quinine treatment. Mefloquine and other cardioactive drugs may be given concomitantly only under close medical supervision. Ampicillin, tetracycline, and metoclopramide may increase mefloquine blood levels.
Proguanil	3mg/kg daily <i>Adult dose:</i> 2 tablets of 100 mg daily	Start one day before departure and continue for 4 weeks after return	Safe	Safe	Safe	Liver or kidney dysfunction	Use only in combination with chloroquine. Proguanil may interfere with live typhoid vaccine

Source: WHO international travel www.who.int/ith/en/index.htm