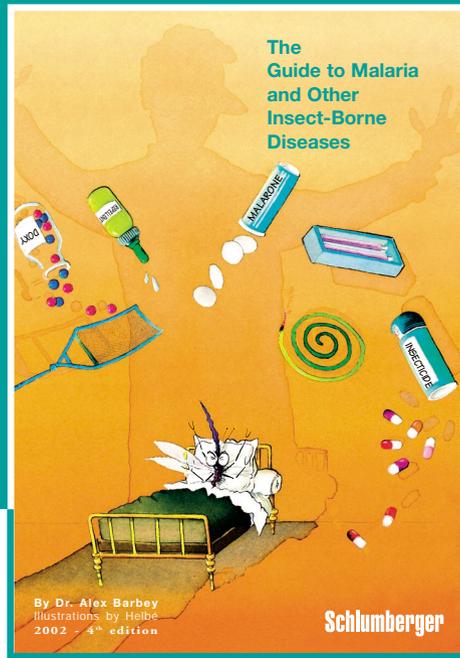


Addendum to The Guide to Malaria and Other Insect-Borne Diseases

January 2003 Dr. Alex Barbey



This addendum summarizes revisions to the guidelines for preventive and curative malaria medications provided by Schlumberger to employees and treatment procedures to follow if malaria is suspected, including a new Malaria HOTLINE. All employees and their dependents working, living or traveling in high-malaria-risk countries are covered by these recommendations for prevention and treatment, per Oilfield Services QHSE Standard S-06: Health.

Revision of the malaria prevention and treatment recommendations detailed in “The Guide to Malaria and Other Insect Borne Diseases” was sparked by four employee deaths from malaria in the past year and a half—the most recent fatality coincided with distribution of the 2002 edition of “The Guide” in July. In addition to these tragic events, not a week goes by in the Schlumberger world without at least one employee ill with malaria. In response, a Malaria Task Force was formed of leading QHSE managers and Schlumberger physicians to analyze common threads and patterns among the four deaths and determine why this disease continues to kill in our company. The task force’s findings and conclusions, which are included in this addendum, were used to revise the malaria prevention and treatment recommendations and to formulate clear, directive guidelines.

High-Malaria-Risk Countries Where Prevention and Treatment Guidelines Apply

Whether you work or live in a country with a high malaria risk or even simply travel through one, you must follow these revised Schlumberger guidelines for the prevention and treatment of malaria.

Business Area	High-Malaria-Risk Countries
ECA	Equatorial Guinea, Chad, Angola, Congo, Gabon, Nigeria, Ivory Coast, Cameroon
MEA	Thailand, Myanmar, Vietnam, Cambodia, Indonesia, Sudan
NSA	Amazon basin (jungles of Peru, Ecuador, Colombia, Brazil)

Employees must be aware that pregnant women and children under 3 are at a higher risk of contracting malaria and pose greater problems in terms of treatment. They should consult a medical professional before making choices about preventive and curative malaria medications. Only certain medications can be used by women who are pregnant or breastfeeding.

Recommended Preventive Malaria Medications

Schlumberger will provide to all its employees and their dependents who work, live or travel in high-malaria-risk countries one of the following preventive medications. Which preventive medication is prescribed should be determined by a medical consultation before the country is entered. The dosages for a child differ from those for an adult and are based on the child's weight.

Treatment	Preventive			
Medicine	Savarine®	Lariam® (Mefloquine)	Doxycycline	Malarone®
Recommended dosage	1 tablet/day	1 tablet/week	1 tablet/day	1 tablet/day
Treatment must start	1 day before departure	1 week before departure	1 day before departure	1 day before departure
Treatment must not stop until	4 weeks after leaving the malaria-risk region	4 weeks after leaving the malaria-risk region	4 weeks after leaving the malaria-risk region	7 days after leaving the malaria-risk region
Potential side effects*	Digestive, allergies, eyes	Neurological	Digestive, skin photosensitivity	Digestive, headaches
Protection level	75%	90%	90%	95%
Comments	Cannot be used in Chad or Equatorial Guinea	Caution required if operating machinery or driving	Avoid prolonged and excessive exposure to sunlight	

*For details on potential side effects, see "The Guide to Malaria and Other Insect-Borne Diseases" (4th edition, 2002).

For long or repeated stays in high-malaria-risk countries continuing preventive treatment is encouraged, because immunity cannot be presumed to develop.



Recommended Curative Malaria Medications

Only two curative malaria medications are company approved.

Treatment	Curative Medication	
Medicine	Malarone®	Coartem® or Riamet® *
Recommended dosage	4 tablets/day for 3 consecutive days (total of 12 tablets)	4 tablets morning and evening for 3 consecutive days (total of 24 tablets)
Treatment must start	Immediately when malaria is suspected	Immediately when malaria is suspected
Treatment must not stop until	Treatment taken for 3 days only	Treatment taken for 3 days only
Potential side effects**	Digestive	Minor digestive
Comments	Cannot be taken as a curative medication if the preventive medication was Malarone	Can be taken following any preventive medication

*Medication's name may vary from one country to another.

**For details on potential side effects, see "The Guide to Malaria and Other Insect-Borne Diseases" (4th edition, 2002).

Schlumberger will provide a Curative Malaria Kit to all employees before they depart from a high-malaria-risk country. The **Schlumberger Curative Malaria Kit** contains

- curative medication: **Coartem® or Riamet®** (this medication is provided because it can safely be taken no matter which preventive medication was previously taken)
- Three **malaria diagnostic tests** specific for the deadly form of malaria that occurs in Africa, South America and Asia (the parasite *Plasmodium falciparum*)
- **Malaria HOTLINE telephone number call card and stickers**
- **Health Alert Card** to remind your doctor of the malaria risk

The symptoms of malaria resemble the flu:

- fever (even moderate)
- aches and pains
- diarrhea
- vomiting.

If you develop any of these symptoms while in or within weeks of traveling in a high-malaria-risk country, immediately use the Curative Malaria Kit.

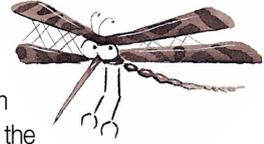
1 Take 4 tablets of Coartem® or Riamet® immediately to avoid losing critical treatment time. The side effects are rare and minor (nausea, heartburn).

Do not take Coartem® or Riamet® preventively if you have no symptoms. Coartem® or Riamet® is not a preventive medication against malaria.

Once treatment has begun with Coartem® or Riamet® it MUST CONTINUE for 3 days, with 4 tablets morning and evening.

Even if you begin to feel better, DO NOT STOP TAKING COARTEM® OR RIAMET® UNTIL THE 3 DAYS OF TREATMENT ARE COMPLETED. The entire curative treatment requires 24 tablets of Coartem® or Riamet® taken over 3 days. At worst, you will have taken 3 days of medication—At best, you will have saved your life if the symptoms were those of malaria.

2 See a doctor as soon as possible. Bring the Curative Malaria Kit with you and show him or her the **Health Alert Card** and the **Malaria HOTLINE** telephone number.



Do not hesitate to call the Schlumberger Malaria HOTLINE if the doctor or you have questions concerning the recommended Schlumberger procedure. In more than 40 countries around the world, you can call the Schlumberger Malaria HOTLINE by using the following toll-free number:

**+ 800 MALARIA 0
(+ 800 62 52 74 20)**

In countries where this number does not directly connect, place a **Collect Call** that will automatically be accepted (**free of charge to you**) to the following number: **+33 1 55 92 12 74**

The Malaria HOTLINE operates **24 hours a day, 7 days a week**. A multilingual staff of doctors is standing by to provide medical advice, assist you with using your Curative Malaria Kit and provide support to your doctor.

3 The doctor will perform a malaria test with one of the tests in the Curative Malaria Kit. If you are far away from a medical facility or unable to see a doctor quickly, you can perform the malaria test yourself.

If the first test is negative, a second test must be performed 12 hours later. If the second test is negative, a third test must be performed 12 hours later (24 hours after the first test). Taking Coartem® or Riamet® will not interfere with the test diagnosis.

Even if the first two tests are negative, continue taking Coartem® or Riamet® for the full 3 days of treatment, with 4 tablets morning and evening. A negative test result does not guarantee that you do not have malaria, and the curative treatment requires the full dose of 24 tablets.

In case of symptoms, think malaria first. Do not hesitate to start curative treatment or call the Malaria HOTLINE for guidance and assistance.



Schlumberger Malaria Task Force Findings

Common threads of the four malaria deaths

- The four employees died of *Plasmodium falciparum* contracted while working for Schlumberger in high-malaria-risk countries.
- In all cases, the employee was a commuter. None was a home country national.
- Time was lost by the individual, the medical system in the country of residence or both by delaying diagnosis and treatment.
- The malaria blood test either was not performed properly or led to an incorrect diagnosis of benign malaria.
- None had curative treatment at hand, and the curative treatment in the country of residence was either nonexistent or inadequate to cure the deadly *P. falciparum* form of the disease.



Patterns that occurred in the four malaria cases

- Malaria awareness was generally high at the work location.
- When the employees were away from the work location they switched to a “days off” mentality and their awareness of the malaria risk decreased.
- The variable incubation period, which ranges from 7 to 60 days, delayed onset of the symptoms until the employees had left the work location.
- The unspecific symptoms of malaria that resemble the flu were a serious hindrance to early diagnosis by the employees and their doctors, unfortunately resulting in death.

Apparent barriers to adequate prophylaxis

- Fear of side effects.
- Constraints imposed by preventive medication.
- False belief that people from a high-malaria-risk country are immune to the disease.
- Ambiguity in medical recommendations (CDC versus WHO, Savarine versus Malarone, etc.).
- Complexity of preventive malaria medication: many names for the same drug and incompatibilities between certain preventive and curative drugs.
- Nonavailability of adapted preventive medication in the country of origin.
- High cost of preventive medication in certain countries.

Conclusions

“The Guide to Malaria and Other Insect-Borne Diseases,” first published in 1992, is meant to be an informative document, providing advice and recommendations aimed at encouraging employees to take preventive medication and to quickly respond to symptoms and seek medical treatment.

Unfortunately, providing information is not enough, and too few employees heed the advice in the brochure. The Schlumberger Malaria Task Force, after long discussion and research, agreed that malaria prophylaxis and treatment must be a company-controlled solution, as described in this addendum to “The Guide.”

Schlumberger-specific requirements for malaria prevention have been incorporated in the latest revision of OFS QHSE Standard S-06: Health. Line management with the support of the QHSE function is responsible for establishing full compliance to these requirements, and employees working in or visiting high-risk countries are also required to follow them.