

PREVENTION OF MOSQUITO BORNE ILLNESS IN MEXICO 2015

According to the CDC (Center for Disease Control in Atlanta, GA) there is NO RISK of mosquito borne illness anywhere in BAJA, Mexico. However, there is “very small” risk of two mosquito borne illnesses along the western coast of mainland Mexico: Malaria and Chikungunya.

Malaria

In the Mexican states of Sonora and Jalisco only mosquito avoidance precautions are recommended (see below). However, in the states of Sinaloa (Mazatlan), Nayarit (Puerto Vallarta), PROPHYLAXIS WITH MEDICATION IS RECOMMENDED. See the CDC website for details and consult your primary physician for details. To be effective, medication must be started before possible exposure and continued for a few days to two weeks after leaving the area of potential risk, depending on the particular medication used for prophylaxis.

Chikungunya

This is a mosquito borne viral illness possibly contacted along the western coast of mainland Mexico. Typical symptoms are fever & joint pains. Headache, swollen joints sometimes symmetric painful joints, especially in hands and feet, painful muscles, and rash may also occur. There is no immunization, no specific treatment. Supportive care is necessary, but diagnosis requires physician evaluation. Illness may last days to weeks, painful joints may be debilitating. This illness is MORE Likely, although still uncommon, in the USA and Alaska than Mexico. Prevention by mosquito avoidance is recommended. See below.

REPELLENTS FOR USE ON SKIN AND CLOTHING

CDC has evaluated information published in peer-reviewed scientific literature and data available from EPA to identify several types of EPA-registered products that provide repellent activity sufficient to help people reduce the bites of disease-carrying mosquitoes. Products containing the following active ingredients typically provide reasonably long-lasting protection:

- **DEET** (chemical name: N,N-diethyl-m-tolua-mide or N,N-diethyl-3-methyl-benzamide). Products containing DEET include, but are not limited to, Off!, Cutter, Sawyer, and Ultrathon.
- **Picaridin** (KBR 3023 [Bayrepel] and icaridin outside the United States; chemical name: 2-(2-hydroxyethyl)-1-piperidinecarboxylic acid 1-methylpropyl ester). Products containing picaridin include, but are not limited to, Cutter Advanced, Skin So Soft Bug Guard Plus, and Autan (outside the United States).

- **Oil of lemon eucalyptus (OLE) or PMD** (chemical name: para-menthane-3,8-diol), the synthesized version of OLE. Products containing OLE and PMD include, but are not limited to, Repel and Off! Botanicals. This recommendation refers to EPA-registered repellent products containing the active ingredient OLE (or PMD). “Pure” oil of lemon eucalyptus (essential oil not formulated as a repellent) is not recommended; it has not undergone similar, validated testing for safety and efficacy, is not registered with EPA as an insect repellent, and is not covered by this recommendation.
 - EPA characterizes the active ingredients DEET and picaridin as “conventional repellents” and OLE, PMD, and IR3535 as “biopesticide repellents,” which are either derived from or are synthetic versions of natural materials.
- *Repellent Efficacy*
 - Published data indicate that repellent efficacy and duration of protection vary considerably among products and among mosquito and tick species. Product efficacy and duration of protection are also markedly affected by ambient temperature, level of activity, amount of perspiration, exposure to water, abrasive removal, and other factors. In general, higher concentrations of active ingredient provide longer duration of protection, regardless of the active ingredient. Products with <10% active ingredient may offer only limited protection, often 1–2 hours. Products that offer sustained-release or controlled-release (microencapsulated) formulations, even with lower active ingredient concentrations, may provide longer protection times. Studies suggest that concentrations of DEET above approximately 50% do not offer a marked increase in protection time against mosquitoes; DEET efficacy tends to plateau at a concentration of approximately 50%. CDC recommends using products with ≥20% DEET on exposed skin to reduce biting by ticks that may spread disease. There are rare reports of DEET causing rashes or brain disorders.
 - Children should not use more than 30% DEET.
 - Maximum precautions from dawn to dusk with repellants and appropriate clothing: wear clothing that covers the arms and legs with pants tucked into stockings or shoes and shirtsleeves closed and avoid walking the shore at dusk. Spraying or soaking clothing with picaridin and letting them air-dry before use is helpful. Treating the brim of hats the same.

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