

# Health during Travel: Challenges and Preventive Measures



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International travel is undertaken by large, and ever-increasing numbers of people for different purposes like professional, social, recreational, and humanitarian purposes. These travelers may encounter sudden and significant changes in altitude, humidity, and temperature, and they are exposed to many health hazards of international travel which is a result of a variety of infectious diseases (1,2).

As recommended by WHO, travelers should review the entry requirements for destination countries before travel because some countries require proof of vaccination for travelers wishing to enter or exit the country. Some of the travel-related diseases are vaccine-preventable and others can be prevented by taking a prophylactic treatment (2). In Lebanon, the preventive medicine department at the Ministry of Public Health has issued a list of circulars to limit and control the international spread of diseases and other hazards including poliomyelitis, measles, meningococcal disease, yellow fever, malaria, and rabies....

In this article, we will focus on three major travel-related diseases:

## 1- Malaria:

Malaria is a parasitic disease transmitted from the bite of an infected mosquito and does not spread from person to person. It is a severe, life-threatening illness that kills around half a million people every year. Symptoms can

be mild like fever, chills and headache or life-threatening, causing extreme tiredness and fatigue, convulsion, difficulty breathing, dark or bloody urine, jaundice and abnormal bleeding and can lead to death (4).

The main way to protect from this disease is to take prophylaxis medication, as well as mosquito bite avoidance measures, such as the use of repellents, using bed nets during sleep, and wearing long sleeves and long pants of a light color (5).

All cases reported in Lebanon are exported and no local cases have been observed in Lebanon for many years.

Travelers to endemic areas are at a high risk of contracting the infection unless they take precautions, travelers may need to take preventive free medication (chemoprophylaxis) from the Malaria Program department – Karantina Governmental Hospital- at least a few days to one week before travel depending on the type of medication (Malarone or Mefloquine) and should continue taking these medications weeks after returning.

## 2- Meningococcal Disease:

Meningococcal disease is caused by the bacterium *Neisseria meningitis*. Some of the Meningococcal Serogroups are of increasing concern as they cause outbreaks, particularly in Saudi Arabia and several Sub-Saharan African countries. Transmission occurs by direct person-to-person contact and through respiratory droplets from the nose and pharynx of infected individuals, patients, or asymptomatic carriers (1).

Most infections do not cause clinical disease and many infected people become asymptomatic carriers of the bacteria and serve as a reservoir and source of infection for others.

Furthermore, some adult travelers can carry the disease and transmit it to their children upon return to their home countries.

Meningococcal meningitis has a sudden onset of intense headache, fever, nausea, vomiting, photophobia, and stiff neck, leading to septicemia and neurological sequelae. The

disease is fatal in 5–10% of cases (1).

Following close contact with an individual suffering from meningococcal disease, medical advice should be sought regarding possible chemoprophylaxis and vaccination (1). Pilgrims to Mecca are at particular risk and the tetravalent vaccine, (A, C, Y, W-135) is currently required by the health authority in Saudi Arabia for pilgrims visiting Mecca for the Hajj (annual pilgrimage) or the Umrah (1). All Pilgrims traveling for Umrah and Hajj should take the Meningococcal vaccine at least 10 days before departure.

## 3- Yellow Fever:

Yellow Fever is a virus acquired from the bite of an infected mosquito (*Aedes aegypti*). Although most infections are asymptomatic, some lead to an acute illness characterized by two phases. Initially, there is fever, muscular pain, headache, chills, anorexia, nausea and/or vomiting, often with bradycardia. About 15% of infected people progress to a second phase after a few days, with the resurgence of fever, development of jaundice, abdominal pain, vomiting and hemorrhagic manifestations; up to half of these patients die 10–14 days after the onset of illness (1).

In this regard, it is recommended to get yellow fever vaccination for travelers who are likely to be exposed to yellow fever to stop the importation of the virus into countries that have the relevant vectors (3).

In Lebanon, all citizens traveling to specific countries in Africa and Latin America where the disease is present (according to a regularly updated list by the World Health Organization) must be vaccinated at least ten days before departure, knowing that, as per the latest WHO recommendations one dose of vaccine is effective for life.

## International Vaccination Card delivery:

The vaccine is not available at Ministry of Health and travelers who get Meningococcal or yellow fever vaccine in the private sector are requested to bring an official medical report from the vaccination center (including the batch Number of the used vial), the empty vial, and a passport copy to get the free-of-charge international vaccination card from the MOPH Quarantine center at Rafic Hariri International Airport, and from different MOPH Governorate centers across Lebanon (particularly for pilgrims).

In conclusion, preventive measures like vaccination and chemoprophylaxis are essential against travel-related



diseases. Enhancing awareness (frequent handwashing, avoiding overcrowding, avoiding contact with animals...), and advocating for comprehensive preventive measures are essential for safeguarding travelers' health.

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