



## Prevention and Treatment of Tropical disease

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### DESCRIPTION

Diseases that are common or specific to tropical and subtropical climates are referred to as tropical diseases. The presence of a cold season, which drives insects into hibernation to reduce their population, is one reason why diseases are less common in temperate regions. Yet, before the modern understanding of disease causation, many were present in northern Europe and Northern America in the 17<sup>th</sup> and 18<sup>th</sup> centuries. The original motivation for tropical medicine was to safeguard colonial settlers' health, particularly in India during the British Raj. By far, the most frequent disease vectors are insects like flies and mosquitoes. These insects may be infected with a virus, bacteria, or parasite that is contagious to both people and animals. Most frequently, an insect bite results in the spread of an infectious agent by subcutaneous blood exchange. Most of the illnesses listed here do not have vaccines, and many do not have treatments.

Exploration of tropical rainforests by humans, deforestation, increased immigration, international air travel, and other forms of tropical tourism have all contributed to an increase in the occurrence of these diseases in non-tropical nations.

Travelers, explorers, and medical professionals have long made notice of the supposedly "exotic" diseases that exist in the tropics. One obvious explanation is that the hot climate that prevails throughout the year and the heavier rainfall have a direct impact on breeding grounds, the quantity and variety of natural reservoirs, animal diseases that can infect humans (zoonosis), and the greatest number of potential insect disease vectors. Furthermore, it's probable that hotter environments encourage pathogenic pathogens to replicate both within and outside of

living things. Given that the majority of the world's poorest countries are located in the tropics, socioeconomic issues may possibly be at play. Tropical nations like Brazil that have improved their socioeconomic conditions and made investments in public health, hygiene, and the fight against transmissible diseases have seen remarkable reductions or extinction of numerous endemic tropical diseases on their soil.

The spread of tropical diseases and their vectors to higher altitudes in mountainous areas and to higher latitudes that were previously spared, such as the Southern United States, the Mediterranean region, etc., is possibly being facilitated by climate change, global warming brought on by the greenhouse effect, and the resulting increase in global temperatures. For instance, as a result of global warming, Chytridiomycosis, a tropical disease, flourished in Costa Rica's Monteverde cloud forest, decimating amphibian populations of the Monteverde Harlequin frog. In this case, global warming increased the heights at which orographic clouds formed, creating cloud cover that would enable the best possible growing conditions for the pathogen, *B. dendrobatidis*.

Humans or animals can contract diseases from one another through the help of vectors, which are live creatures. The mosquito, which transmits the tropical diseases dengue and malaria, is the vector that spreads the most diseases. These disorders have been treated and prevented using a variety of strategies. Because of NIH-funded research, mosquitoes that cannot transmit diseases like malaria have been genetically altered. Global accessibility to genetic engineering technology is a drawback of this strategy; over 50% of scientists working in the field lack access to information on current genetically modified mosquito experiments.

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**Received:** 01-Mar-2023, Manuscript No. TPMS-23-20030; **Editor assigned:** 06-Mar-2023, Pre QC No. TPMS-23-20030 (PQ); **Reviewed:** 20-Mar-2023, QC No. TPMS-23-20030; **Revised:** 27-Mar-2023, Manuscript No. TPMS-23-20030 (R); **Published:** 03-Apr-2023, DOI: 10.35248/2329-9088.23.11:295.

**Citation:** Williams T (2023) Prevention and Treatment of Tropical disease with respect to climate. Trop Med Surg.11:295.

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