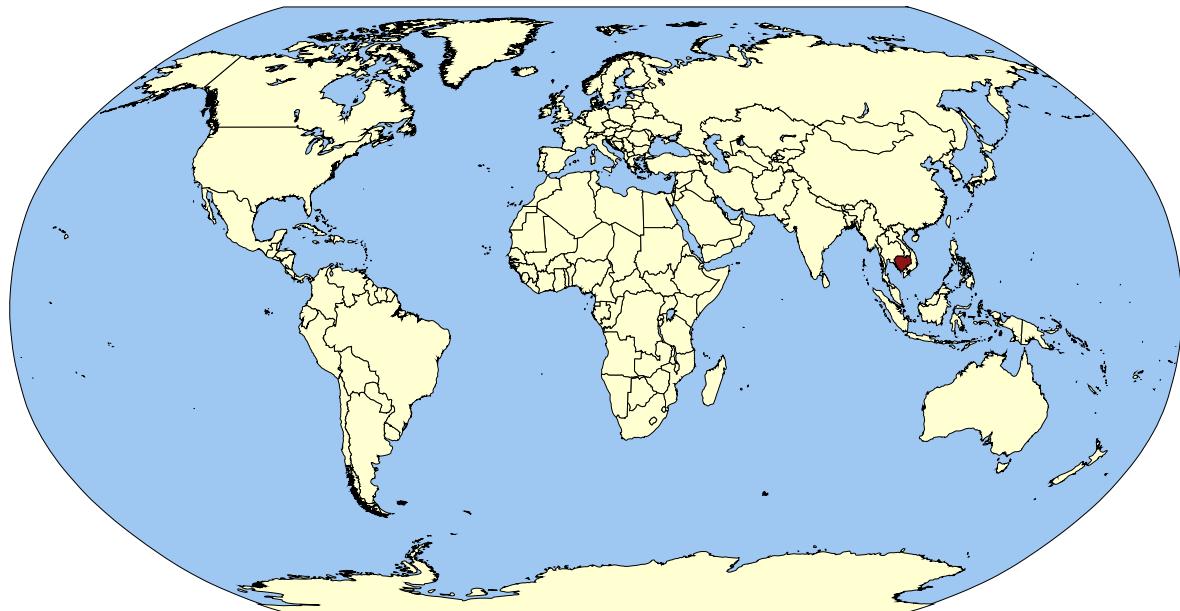


Cambodia



The History of Schistosomiasis in Cambodia

In Cambodia, schistosomiasis has generally been found in the northeast along the Mekong River (Kratie and Stung Treng provinces) [1]. As with other countries in the region, *Schistosoma mekongi* is the active schistosome, and *Neotricula aperta* is its host snail [2]. The first recorded case of schistosomiasis in Cambodia was found in Kratie province in 1968 [3], and ‘low endemicity’ was reported in the country in 1969 [4]. Unfortunately schistosomiasis research and control efforts were largely abandoned from the 1960s into the 1980s due to “political and economical confusion” [3] Cambodia was used to harbor North Vietnamese forces in the 1960s, and a purportedly US-backed military coup in 1970 launched the country into civil war and fighting with North Vietnam, followed by the frighteningly violent regime of Pol Pot in the 1980s. In 1986, there were an estimated 50,000 Cambodians infected with schistosomiasis and 500,000 at risk of infection [5].

Schistosomiasis in Cambodia [10]

Over 42,000 people required schistosomiasis treatment in 2014

<1% of the population requires preventative chemotherapy for schistosomiasis

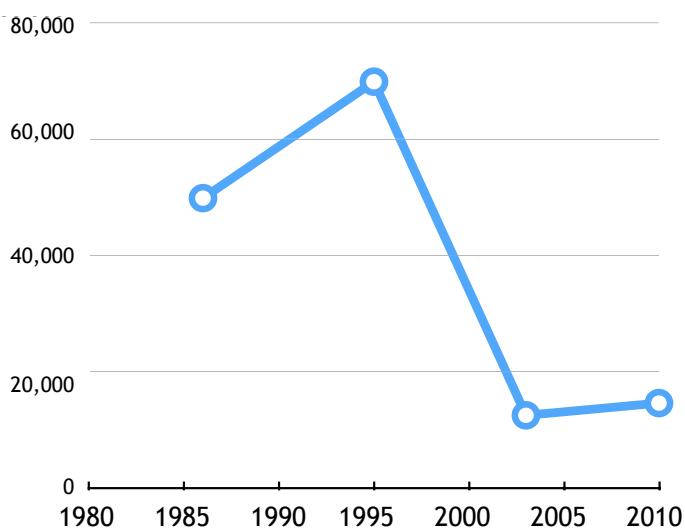
Reported number of school-age children treated for schistosomiasis in 2014:
14,926

Overview of Cambodia [11]

- » Population in 2015: 15,708,756
- » Official Language: Khmer
- » Capital: Phnom Penh
- » Constitutional Monarchy
- » Percentage of Population with Access to Improved Drinking Water in 2012: 71.3%
- » Percentage of Population with Access to Improved Sanitation in 2012: 36.8%

The Disease Surges

Schistosomiasis research resumed after the abatement of this political strife. In 1993, the large impact of schistosomiasis on northern Cambodia was acknowledged, [1] and around that time, a survey of 1,021 people in the area north of Kratie town found 27.3% prevalence [6]. A more comprehensive survey carried out in villages along the Mekong between 1994 and 1995 found 49.3% of 1396 individuals from a household survey positive for schistosomiasis, and 40.0% of 2,391 schoolchildren tested positive [7]. In 1995, approximately 70,000 Cambodians were infected with schistosomiasis and 700,000 were at risk [8].



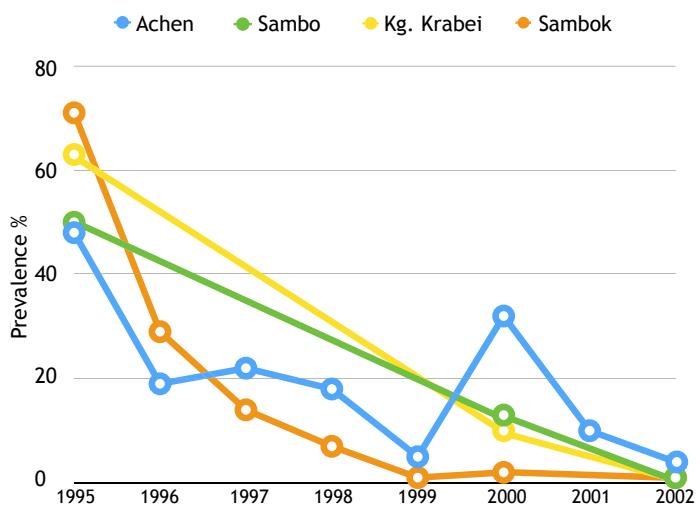
Disease Prevalence in Cambodia

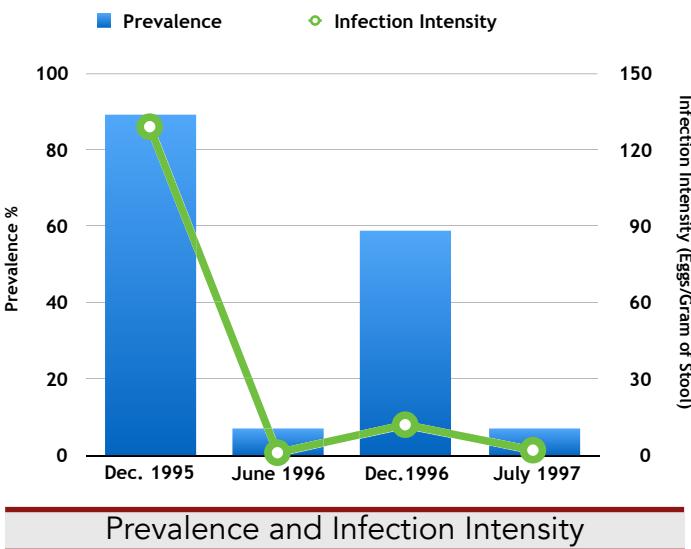
(Above) Schistosomiasis isn't eradicated -- but the number of national cases have been greatly reduced over the past few decades.

(Right) Schistosomiasis prevalence decreased during the 1994-2002 control program, especially in the targeted Kratie province [3].

A Control Program

Between 1994 and 2002, the Cambodian Ministry of Health, with assistance from Médecines sans Frontières and the World Health Organization, enacted a control program consisting mostly of mass chemotherapy in the endemic area with praziquantel [6]. Drugs were administered annually to villages in the Kratie and Stung Treng provinces and covered between 62% and 86% of the target population each year (except for 1998, when the program was suspended due to a lack of funds). In 1994, the program began with a target population of 45,000 in 20 villages, but expanded to 114 villages and a target population of 80,000 by 2002 [6]. Villages were provided with education on how to avoid schistosomiasis transmission, and were also treated with mebendazole to combat hookworm and other geohelminths [6]. Based on the program's yearly sampling, this chemotherapy was initially very effective: prevalence levels in randomly chosen villages fell from between 6-88% in 1997 and reached 0% in 2003 and 2004, with no cases reported out of Kratie or Stung Trang [6].





(Above) Both prevalence and infection intensity have decreased since the initiation of Cambodia's schistosomiasis control program, as demonstrated by measurements from a targeted village [6].

A Resurgence

However, schistosomiasis re-emerged in 2005, when 3 cases were found among the villages surveyed. Authors credited these cases to contamination from animal reservoirs (purportedly pigs and dogs), Laotian immigrants, or people not covered by the program and stated that “the new cases demonstrate also that all the conditions are in place for the resurgence of the disease if the control measures are interrupted. Experiences from Lao PDR demonstrated that, after a drastic reduction in prevalence, if the drug pressure is not maintained the parasite could easily return to original levels” [6]. Nationwide prevalence was estimated at 0.1% in both 2003 and 2010 [9], and about 80,000 individuals were still considered at risk of infection in 2007 [6].

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