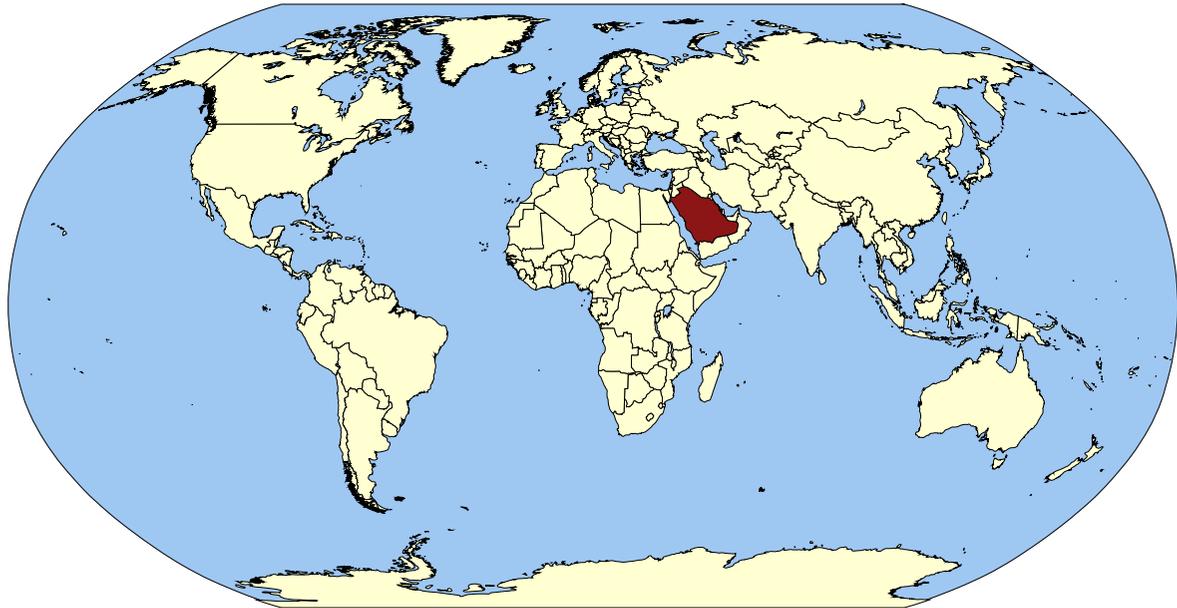


# Saudi Arabia

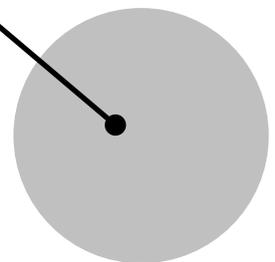


## The History of Schistosomiasis in Saudi Arabia

Schistosomiasis has been documented in Saudi Arabia since the first *Schistosoma haematobium* case was detected in 1887 in Muslim pilgrims returning from Mecca, but is believed to have been endemic since the 10th century [1]. Following its first detection, many *S. haematobium* and *S. mansoni* cases were reported throughout the country, and there was some speculation that the disease was endemic across the whole region. The first comprehensive survey of the disease and snail distribution was carried out in 1967, and resulted in an estimated countrywide prevalence of 17%. It must be noted, however, that subsequent surveyors suggest that this may have been an over-estimation considering the relative absence of disease in urban centers and the Eastern region, and the focal nature of the disease in rural areas [2].

## Schistosomiasis in Saudi Arabia [5]

Saudi Arabia **did not require preventative chemotherapy** in 2013, as a result of a successful control program



## Overview of Saudi Arabia [6]

- » Population in 2015: 27,752,316
- » Official Language: Arabic
- » Capital: Riyadh
- » Monarchy
- » Percentage of Population with Access to Improved Drinking Water in 2015: 97%
- » Percentage of Population with Access to Improved Sanitation in 2015: 100%

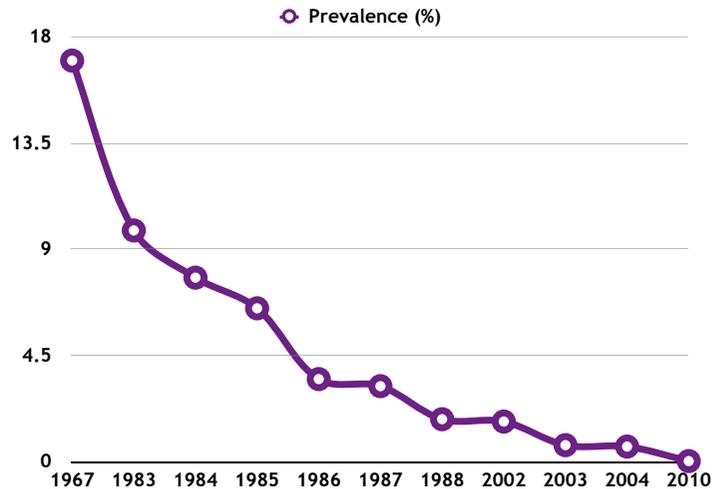
## Intermediate Hosts (Snails) of Schistosomiasis in Saudi Arabia

There are four species of intermediate snail hosts that harbor *Schistosoma* infection in Saudi Arabia: (1) *Biomphalaria pfeifferi* - found in perennial and intermittent streams, reservoirs of dams, springs and wells in northern, northwestern, southwestern, midnorthern, and midsouthern areas; (2) *Bulinus beccarii* - found in shallow slow running perennial and intermittent streams, wells, and man-made bodies of water in Western and southern provinces; (3) *Bulinus truncatus* - found in residual pools and springs with rocky bottoms and rich algal growth (still present in the Midwest); (4) *Bulinus wrighti* - present in very few habitats far from human settlements, and therefore unlikely important in human transmission; confined to small pools and springs with narrow ecological requirements [2].

## Control Programs

The Ministry of Health began planning the first control program in 1971 and began implementation in 1979. The program focused on case detection and treatment, snail control, and health education. The Ministry of Health used copper sulfate and mechanical measures to control snails. At the time, available drugs to treat people included antimonials, niridazole or metrifonate. Praziquantel replaced these drugs in 1982, and from that point onward, Saudi Arabia observed significant reductions in prevalence, from 9.8% in 1983 to 0.6% in 2004, due to their use of praziquantel alongside regular treatment of snail-infested water [2,3].

In 2005 a control program aiming for the complete elimination of schistosomiasis in Saudi Arabia was initiated in the 12 remaining focal transmission sites. The strategy for elimination included: annual case detection and treatment of 80-100% of endemic population; biannual treatment of 80-100% of school aged children; potable water and good sanitation availability to endemic communities; molluscicide and mechanical control of snails; and finally, health education [3].



## Current Infection Rates, and Looking Ahead

Schistosomiasis prevalence rates in Saudi Arabia have rapidly declined, thanks to effective control. As of 2010, the estimated prevalence dropped to 0.025% [4]. Remaining challenges to the complete control of schistosomiasis include other mammalian reservoir hosts (most notably the hamadryas baboon), disease overflow from Yemen, and the construction of dams and irrigation schemes facilitating the establishment of snail populations that can breed year round [2].

## References

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