

## Typhoid Fever

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Typhoid fever is an important global health problem with an estimated 16 million cases and 600 000 deaths each year.<sup>1</sup> It is endemic worldwide but most cases occur in areas of Africa, Asia, and Latin America where sanitation is poor. The disease is caused by *Salmonella* serotype *Typhi*, the only species of *Salmonella* with humans as the sole reservoir host. It is transmitted from person to person via food or water contaminated by feces or urine from a typhoid patient or carrier. The infectious dose is small.<sup>2</sup>

The disease presents as a systemic illness because, rather than multiplying in the intestinal lining like other *Salmonella*, the bacteria migrate through the intestinal cells and spread to the liver, spleen and bone marrow. Typical symptoms include: sustained fever (103° to 104° F), severe headache, malaise, anorexia and constipation. Rose colored spots on the trunk are seen in ca 25% of white patients. The incubation period is 3-60 days. *Salmonella typhi* are shed through urine and feces throughout the convalescent period. About 10% of untreated individuals shed bacteria several months after onset of symptoms and two to five percent become permanent *S typhi* carriers. Many chronic carriers have experienced clinical symptoms from their infection but it is also possible to become a carrier after a mild or subclinical illness. Carriers are more common among middle age persons, especially women with gall stones or other biliary tract problems.<sup>2</sup>

Typhoid fever is a rare disease in the United States where approximately 400 cases are reported each year. The majority of these people (> 70%) have a recent travel history to a typhoid fever endemic area of the world. The mortality rate is low (< 1%). Among the cases acquired domestically between 1985-1994, 95% were sporadic and 5% associated with outbreaks.<sup>3</sup>

In Florida, on average 24 cases of typhoid were reported annually between 1987-1998. The mean age was 22.7 years. Forty-five percent of the patients were white, 31% black, 9% of Asian decent and 30% hispanic. Between 1992-1998, 46% of the cases were acquired in Florida. Outbreaks in the state have been linked to sewage leakage into a poorly chlorinated water supply of a migrant camp (1973)<sup>4</sup> and an imported fruit product (1998). The source of an outbreak in Dade county in 1993-1994 was never determined.<sup>5</sup>

## References

10/26/99

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