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Typhoid Fever: What is in the water?

A recent Typhoid fever outbreak in the City of Tshwane has sparked conversation about water safety and hygiene. This alert aims to provide information on Typhoid fever, outline the associated risks, and provide guidance on prevention and early detection. Typhoid fever is a serious bacterial infection that can become life-threatening if left untreated. Awareness and prompt action are essential to prevent further spread of the infection and to reduce the risk of severe illness and complications.

Overview and Recent Cases in South Africa

Typhoid fever, also known as "enteric fever" or simply "Typhoid", is a systemic illness caused by bacteria – specifically *Salmonella enterica* subspecies serotype *Typhi* or serotypes *Paratyphi A, B, or C*. Transmission occurs primarily through the ingestion of food or water contaminated with faeces or urine from an infected person. The disease remains endemic in many low-resource settings and is a notifiable condition in South Africa due to its outbreak potential. (1) (2)

The World Health Organisation (WHO) estimates around 9 million cases annually, with the highest incidence in Africa, South Asia and Latin America (up to 306 cases per 100,000 in some regions). (1) (3)

In South Africa, between January and October 2025, 147 laboratory-confirmed cases were reported nationally, Gauteng accounting for 59% of cases. An increase in cases in October 2025 led to an outbreak being declared in the City of Tshwane. Clusters were identified in Tshwane (48 cases), Bronkhorstspruit (22 cases), Hammanskraal (17 cases), Pretoria West (8 cases), and Pretoria East (1 case). Most individuals have fully recovered, and investigations indicate no contamination in municipal water supplies. (2)

According to the National Institute for Communicable Diseases (NICD), the likely source was untreated water from informal sources combined with poor hygiene practices. Fortunately, no fatalities were reported. (2)

Clinical Features and Key Prevention Tips

Typhoid fever symptoms vary among individuals but typically occur 1 to 3 weeks after exposure, gradually increasing in severity over time.

Common signs and symptoms include:

- Persistently high fever (up to 40°C)
- Headache and fatigue
- Abdominal pain
- Nausea and vomiting
- Constipation or diarrhoea
- Loss of appetite
- Occasionally, a rash of rose-coloured spots on the trunk. (1) (3)

Typhoid fever is a bacterial infection that can be treated with antibiotics such as fluoroquinolones (e.g., ciprofloxacin), cephalosporins (e.g.,ceftriaxone), or

macrolides (e.g., azithromycin). However, antibiotic resistance – when germs no longer respond to medicines that previously killed them, making infections harder to treat – is an increasing concern. This makes early diagnosis and adherence to the prescribed treatment regimen critical. (5) (6)

Typhoid fever infection and its spread can be prevented by drinking only safe, treated water and avoiding river or borehole water unless it has been boiled. After using the toilet, always wash hands thoroughly with soap and water – especially before eating or preparing food. Where water is scarce, hand sanitisers containing at least 60% alcohol can be used. Avoid raw or unwashed fruits and vegetables. (1) (6)

Vaccination is recommended for individuals travelling to high-risk areas or during outbreaks. Two main vaccines are available, namely oral live-attenuated (Vivotif®) and injectable polysaccharide (Typhim Vi®). The vaccines provide partial protection against Typhoid fever but do not guarantee complete immunity, so strict food and water hygiene measures remain essential. (1) (6) (7) (8)

Typhoid fever is a notifiable medical condition (NMC). This means that all healthcare providers must report confirmed cases to the relevant health authorities. Notification can be made electronically via the NMC App or a paper-based NMC Case Notification Form, submitted through approved channels. (9)

Key Take-Away Message:

While the outbreak in Tshwane is under control, vigilance remains essential.

Typhoid fever is preventable through proper hygiene, safe water practices, and timely medical care.

Anyone experiencing symptoms should seek immediate medical attention.

To prevent relapse and antibiotic-resistance, it is essential to complete the full antibiotic course.

Public cooperation is key to preventing further cases and safeguarding community health.

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