WHAT IS IT?
● Typhoid fever is an infectious disease caused by the typhoid bacillus Salmonella enterica serovar typhi (S. typhi).
● It only affects humans.

INCIDENCE
● Typhoid is common in the developing world. Globally there are 13–17 million cases a year with 600,000 deaths (Macnair, 2004).
● About 150 cases of typhoid are reported each year in England and Wales.

TRANSMISSION
● People with typhoid carry the bacteria in their bloodstream and intestinal tract.
● The organisms are passed in human faeces and urine and acquired through heavily contaminated food and water (Health Protection Agency, 2004).
● The disease can be transmitted as long as the bacteria remain in a person’s system.
● A minority of people (about two to five per cent) although symptom free, still carry the bacteria, continuing to shed it in their waste.

SYMPTOMS
● Sudden fever.
● Severe headache.
● Nausea.
● Abdominal pain.
● Loss of appetite.
● Constipation followed by diarrhoea.
● A rash called ‘rose spots’ is present in some cases.
● General discomfort.
● Bloody stools.
● Lethargy.
● Nosebleed.
● Chills.
● Delirium.
● Hallucinations.
● Symptoms can be very severe – there is a mortality rate of one in ten unless treatment is given (Macnair, 2004).

DIAGNOSIS
● Typhoid is diagnosed by finding bacilli in blood, urine and/or faeces.
● Blood tests can show an elevated white blood cell count.
● A blood culture during the first week of fever can show S. typhi.
● A stool culture can isolate S. typhi in the faeces.
● An enzyme-linked immunosorbent assay (ELISA) test on urine can show Vi (virulence) antigen, which is specific for typhoid.
● A platelet count can show decreased platelets.
● A fluorescent antibody study can also demonstrate the presence of Vi antigen.

TREATMENT
● Antibiotics are used in the treatment of typhoid and they considerably reduce mortality.
● Stool cultures are used to monitor the progress of treatment.
● It is important for patients to be advised to do the following.
   ● Take the entire course of prescribed antibiotics;
   ● Wash hands carefully after using the toilet;
   ● Do not prepare food for others.

RESISTANCE
● Recently S. typhi has acquired resistance to antibiotics, including chloramphenicol, trimethoprim, ampicillin, and tetracycline.
● In Vietnam up to 93 per cent of S. typhi strains are reported to be multidrug-resistant.
● In Tajikistan antimicrobial resistance is extending to new drugs such as cephalosporins and quinolones (World Health Organization, 2004).

PREVENTION
● Both injectable and oral vaccines are available.
● Precautions for food and water hygiene include the following:
   ● Drink bottled water. Carbonated water is safer than uncarbonated water;
   ● Take drinks without ice and avoid ice lollies;
   ● Ensure food is thoroughly cooked;
   ● Avoid raw vegetables and fruits that cannot be peeled;
   ● Avoid food from street vendors.

REFERENCES
Health Protection Agency (2004)
Typhoid. HPA website: www.hpa.org.uk/infections/topics_az/typhoid/menu.htm


Online resource: www.who.int/vaccines/en/typhoid.shtml