

Medicine for Managers

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Toxoplasmosis

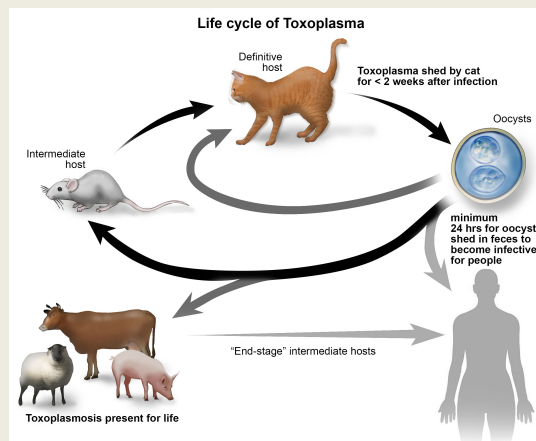
Toxoplasmosis is not well-known in the lexicon of medical terms but it is, in fact, an important disease. The Advisory Committee on the Microbiological Safety of Food states that, In the UK, there are about 350,000 cases a year, 36% in males and 64% in females. It is caused by a parasite called *Toxoplasma gondii*, and is acquired most commonly from eating undercooked meat or from contact with infected cat faeces.

Most people would not know if they had the disease and only about 10-15% of those infected have any symptoms. Commonly the symptoms are mild and the infection is assumed to be some sort of virus.

HIV/AIDS, those who are under chemotherapy treatment for cancer, those taking high dose steroids and those with a transplanted organ taking anti-rejection medication.

They include:

- Fever
- Headache
- Lassitude and weakness
- Muscle aching
- Skin Rash
- Swollen lymph nodes that may persist for weeks



Patients with poor and weakened immunity may suffer complications of the disease including:

- Eye disease resulting in damage to the inner part of the eye and causing eye pain and visual deterioration
- Severe lung symptoms including cough, fever and breathlessness
- Encephalitis (inflammation of the brain) causing loss of concentration, confusion, weakness and poor co-ordination and seizures

In the large majority of people with normal immunity, the disease is not serious, but in patients with compromised immunity the symptoms are often more severe. People with this risk include those living with

The parasite passes through several stages before reaching the human carrier, as illustrated.

Affect on an unborn child.

The parasite may pass from mother to child during pregnancy, and during the first trimester (up to 13 weeks) may lead to miscarriage. If later in pregnancy, the child may suffer symptoms at birth or in early infancy with abnormalities of the brain, eye and the liver and spleen.

Hearing and visual loss may occur, with seizures, heart rhythm disorders and failure and rash. However most babies do not show any overt signs of toxoplasmosis, although in some, eye and hearing problems, disturbed fine movement and difficulty learning and with memory may appear in later childhood or adolescence.

Acquiring the Infection

Toxoplasma is a parasite. It can infect birds and animals, but can only complete its reproductive cycle in domestic and wild cats which are its host.

Parasite eggs may be found in cat faeces. They can pass from there into soil and water and thence on to plants, animals and humans. Once a new host is achieved the reproductive cycle continues leading to infection.

An individual in good health acquiring the parasite, will normally keep the parasites under control. The organisms remain in the body but are not active and the immunity provided is lifelong. A further exposure to the parasite is quickly overcome by the immune response.

Deterioration in the immune system can expose the host to a new active infection and complications.

The infection may be acquired by:

- **Cat faeces.** Cats that hunt or eat raw meat are most likely to carry parasites. Infection may occur by touching anything that has contacted infected cat faeces
- **Contaminated food or water.** Undercooked meat, chicken and shellfish, unpasteurised milk and untreated drinking water may be carriers
- **Unwashed fruit and vegetables**
- **Infected transfused blood**

Treatment of toxoplasmosis

Treatment is directed at the intermediate stages of parasite development and the drug **pyrimethamine** is considered to be the most effective drug, usually combined with a sulphonamide antibiotic such as **sulfadiazine** (or clindamycin if allergic to sulphonamides)

In pregnant women, the greatest potential risk of toxoplasmosis in terms of severity is if acquired in the first thirteen weeks of gestation. It is unclear whether, in pregnancy, the use of pyrimethamine and a sulphonamide reduces the risk of foetal infection. Newborn babies with toxoplasmosis are treated with antibiotic and often with other drugs.

As a footnote it is important to remember that having a cat as a pet does not put one at risk of catching toxoplasmosis and nor does contacting someone who is infected.

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