

Cats and pregnant women – Toxoplasmosis



CATS PROTECTION
VETERINARY GUIDE 20



What is toxoplasmosis?

Toxoplasmosis is a disease caused by a microscopic parasite called *Toxoplasma gondii* (*T gondii*). As it is a disease that can affect unborn babies, many pregnant women are understandably concerned. However, recent studies have shown that – contrary to some misguided beliefs – while cats are involved in part of the parasite's life cycle, human contact with cats does not increase the risk of infection with the parasite. In fact, vets working with cats are no more likely to be infected with *T gondii* than the public, including people who are not even in contact with cats. This leaflet aims to explain a little more about *T gondii* and cats.

What causes toxoplasmosis?

Toxoplasmosis is caused by infection with a commonly found parasite called *Toxoplasma gondii*.

Life cycle of *T gondii*

The parasite's life cycle is complex, but understanding it is helpful when considering how infection may arise.

Cats usually become infected by eating meat that contains *T gondii* cysts – this includes infected rodents – and raw or undercooked meat. After a cat has eaten infected meat, it starts shedding particles called 'oocysts' in its faeces. The cat's immune system quickly responds to this infection and stops the parasite from reproducing, so shedding of oocysts stops by 10-14 days of infection. Shedding again after this is extremely rare and if it does occur, only small numbers of oocysts are passed.

The oocysts passed in the cat's faeces are not infectious immediately – it takes up to five days for them to form into spores – called sporulation. Sporulated oocysts can then survive for up to 18 months and can be spread indirectly by objects. The parasite can also be spread in dogs' faeces if the oocysts are inadvertently eaten by them.

Almost all warm-blooded mammals – including humans, sheep and mice – can be infected by inadvertently eating these *sporulated oocysts*. However, the parasite doesn't reproduce in their intestines so they don't produce oocysts – this only happens in cats. Instead, following infection cysts may develop elsewhere in the body. These cysts become a source of infection if the meat from these mammals is eaten.

A cat's risk of becoming infected with *T gondii* depends on their lifestyle. Cats which are successful hunters are more at risk from eating infected rodents. Many cats will become infected when they are young, on their early hunting expeditions. Cats can also pick up *T gondii* from eating infected raw or undercooked meat.



How do people become infected with toxoplasmosis?

Most cases of toxoplasmosis in people are believed to occur as a result of eating raw or undercooked, contaminated meat. Meats such as beef, pork or lamb may contain infectious tissue cysts and fresh meat is more of a risk than frozen, because freezing will usually kill *T gondii*. Eating cured, uncooked meats such as salami and Parma ham also carries a greater risk of infection.

A common way people pick up toxoplasmosis is from ingesting contaminated soil – from touching the mouth when gardening, or eating unwashed fruit and vegetables.

Unpasteurised goat's milk and associated products such as goat's cheese may also be a source of infection.

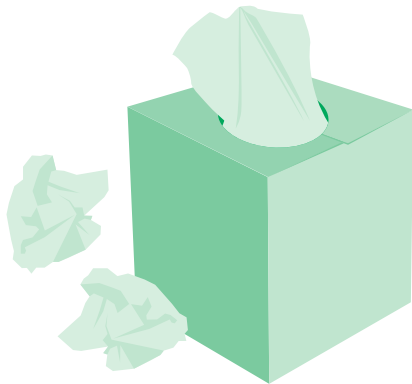
Less commonly, *T gondii* cysts may be ingested through contaminated water, or more rarely through inhalation of dust particles.

Contrary to popular opinion, contact with cats does not increase the risk of people becoming infected with *T gondii*. Certainly good hygiene is important for lots of reasons, but contact with cats is not a risk factor for toxoplasmosis infection. Cats only shed oocysts in their faeces for 10-14 days after their first exposure, and once passed, the oocysts only become infectious to people after sporulation which takes one to five days. So, hygienic disposal of cat faeces at least once daily and regular disinfection of the litter tray minimises the risks for cat owners.

The effects of *T gondii* infection in people

Human infection with *T gondii* is actually very common. It is estimated that, approximately 20-30 per cent of people in the UK have already had *T gondii* infection and most will now have lifelong immunity to it. The majority of people infected with *T gondii* will be unaware of it because infection usually goes unnoticed, or causes mild flu symptoms. However in people with an impaired immune system such as those undergoing treatment for cancer, transplant patients, those suffering from AIDS, the very young or the elderly, toxoplasmosis infection may be more serious.

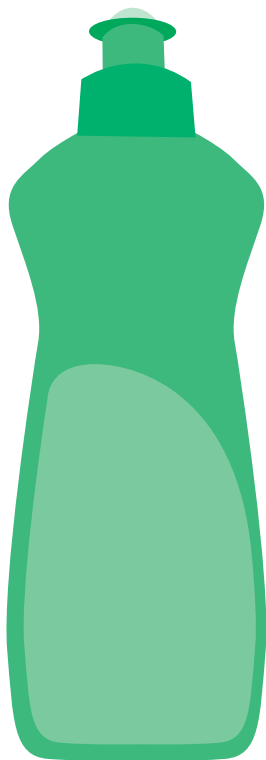
If a previously unexposed woman becomes infected with *T gondii* during pregnancy, her unborn baby may be at risk and miscarriage could occur particularly if infection occurs during the first trimester. However, it is estimated that only between 0.2 and 1.6 per cent of women become infected while pregnant and congenital toxoplasmosis – when the baby is born infected – is very rare, occurring in one in 100,000 babies born in the UK.



Reducing the risk of *T gondii* transmission

There are a number of sensible precautions that can be taken to reduce the risk of contracting toxoplasmosis – particularly if you are pregnant or immuno-suppressed. These include:

- wearing gloves when handling raw meat, fruit and vegetables and washing hands thoroughly afterwards
- cooking all meat thoroughly to at least 70°C for 15 minutes. Freezing meat at – 12°C for several days also kills oocysts
- avoiding consuming cured and raw meats, or unpasteurised dairy products – including goat's milk
- washing all fruit and vegetables thoroughly including ready-prepared salads, to remove any traces of soil
- washing all utensils, chopping boards and surfaces with hot water and detergent after handling raw meat, fruit and vegetables
- boiling or filtering surface water before drinking



- wearing gloves when gardening – avoid putting hands or gloves to your mouth and wash hands thoroughly after contact with soil, which may contain sporulated oocysts
- wearing gloves to clean out cat litter trays – avoid putting hands or gloves to your mouth – and wash hands thoroughly afterwards
- emptying cat litter trays daily, to prevent oocysts having time to sporulate and become infectious
- avoiding cleaning out litter trays if pregnant or immunosuppressed – get someone else to do it, if possible. If you have to, wear gloves and wash your hands afterwards
- periodically washing litter trays out with detergent or cat-safe disinfectant and boiling water – soak for five to 10 minutes
- covering children's sandpits to prevent cats soiling in them
- avoid feeding cats raw or undercooked meat – or unpasteurised products
- avoiding contact with sheep and newborn lambs at lambing time



Summary

- contact with cats does not increase the risk of infection with *T gondii*
- cats usually only shed oocysts in their faeces for 10-14 days after they first become infected and usually do not shed again
- Oocysts only become infectious between one and five days after being passed in the faeces
- the most likely source of infection to people is believed to be through ingesting contaminated soil, or eating raw or undercooked meat
- infection in people is common and does not usually lead to significant disease
- sensible hygiene precautions as detailed above are recommended for minimising the risk of infection

FAQs

Is it safe to handle cats when pregnant or immuno-suppressed?

It's important to remember that contact with cats is not a risk factor for *T gondii* infection – see study in the *British Medical Journal* (Cook et al. 2000). Cats are most at risk of getting infected when they are young kittens on an early hunting expedition. Even then, the kitten only sheds *T gondii* oocysts for a couple of weeks.

Following infection, a cat is extremely unlikely to shed again, unless it becomes ill with a serious disease such as feline leukaemia virus (FeLV) or feline immunodeficiency virus (FIV) when there is a possibility that shedding may recur. This means that healthy, adult cats are unlikely to present any threat to their owner, or an unborn child.

Even if shedding does occur, as long as the rules of hygiene are observed and the advice above is followed, pregnant women and people whose immune defences are weakened should have nothing to fear from contact with their cat.

If you own an older cat, it may have already been infected with *T gondii* and is therefore unlikely to be a risk to you. It's possible to get a blood test carried out to see if your cat has been previously infected – so speak to your vet. Don't forget that pet ownership itself is associated with many health benefits and there are really very few instances where a pet needs to be rehomed to safeguard their owner's health. See Cats Protection's [Essential Guide: Cats and people](#) for more information on why pet ownership is good for you.

Can I get toxoplasmosis from stroking my cat?

Studies show that stroking a cat does not spread infection to people. In fact, even when cats are shedding oocysts in their faeces, oocysts have not been found on their coats.

How can I tell if my cat is infected with *T gondii*?

It is possible to have a blood test carried out to show if your cat has previously been infected with *T gondii*. The blood test will look for antibodies produced by the cat in response to infection. However, the blood test will not make a diagnosis of toxoplasmosis, nor will it indicate whether your cat is currently shedding oocysts in its faeces – a positive result will only show that the cat has been exposed to *T gondii* at some point in the past. Following infection, a cat is likely to have developed immunity to future infections, so it can give some peace of mind. If you would like to have your cat tested, it is best to speak to your vet about it.

Can my cat be treated for toxoplasmosis?

While many *T gondii* infections in cats go unnoticed, sometimes it can cause feline disease. There is treatment available for cats which have clinical disease associated with toxoplasmosis and some cats will respond well to treatment. However if there is an underlying disease, it can cause your cat's immune response to be low and the prognosis for your cat may be less certain. Some vets will recommend testing your cat for *T gondii* antibodies before prescribing medication for other disease in your feline if those drugs may suppress their immune system.

Further information:

See The Cat Group policy statement on Toxoplasmosis at www.thecatgroup.org.uk

Learn more about your cat online!

Take a look at our free interactive tool to help you understand cats' origins and their behaviour within our homes. <http://learnonline.cats.org.uk/content/ufo>



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For more information about Cats Protection or to make a donation, please visit www.cats.org.uk or phone our Helpline on 03000 12 12 12.

Reg Charity 203644 (England and Wales) and SC037711 (Scotland)

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