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Cat scratch disease

Cat scratch disease is a bacterial infection caused by cat scratches or bites. It causes swollen lymph nodes and other symptoms such as a fever. It usually goes away without treatment, but antibiotics are often used to help clear the infection quicker.

What is cat scratch disease?

Cat scratch disease is an infection caused by a bacterium called *Bartonella henselae*. Some cats, especially kittens, carry *Bartonella* bacteria in their blood and saliva, and can spread it to humans, by biting, scratching, or licking an open wound. It's usually fairly mild and eventually goes away without any treatment, although it can take several months.

Cat scratch disease symptoms

Most people who get cat scratch disease start by getting little spots where their skin has been in contact with a cat's saliva – so a scratch or a bite nasty enough to have broken the skin is the usual cause. If a cat has licked an open wound, it can cause infection in that way too.

- The spots start as just small red marks.
- Then they become fluid-filled, like little blisters.
- Finally they crust over and scab.
- Sometimes they can be yellow, pus-filled spots.
- It is common to think that they are insect bites.
- They appear sometime between 3 and 12 days after being scratched or bitten (or licked if there is a cut or graze) by a kitten or a cat.

The next symptom to develop is a swollen gland (lymph node) or glands.

- Lymph nodes are part of the body's immune system which defends the body against infection.
- The lymph node that is nearest the place where the spots developed is the one that swells, although others may swell too.
- The swelling usually starts about two weeks after the scratch.
- The most common lymph nodes to swell are the ones in the armpit (axilla) and in the head and neck.
- The swollen lymph node or nodes can get very large - bigger than a tennis ball.
- Any affected lymph node is painful, hot, red and tender.
- Sometimes the lymph node can fester and discharge pus (suppurate) - this affects 2 or 3 people out of every 10 who get cat scratch disease.

What causes cat scratch disease?

Cat scratch disease is caused by a germ (bacterium) called *Bartonella henselae* (*B. henselae*). It used to be called *Rochalimaea henselae*.

Most cats in the world are infected by *B. henselae* at some point in their lives, usually when they are kittens less than a year old. It doesn't cause them any problems at all, except very rarely. They catch it from fleas that have picked it up from another cat. They can also catch it directly from an infected cat if they have been fighting.

Most people who get cat scratch disease have caught it from a cat and can remember a scratch, bite or a lick from a cat in the previous week to two months. Very occasionally the affected person doesn't remember any contact with a cat.

It is possible they have caught it from an infected cat flea. Some people think it can be caught from other animals such as dogs and rabbits, but this hasn't been proven.

Who gets cat scratch disease?

Cat scratch disease is quite rare. One study from the USA estimated that one person out of every 20,000 to 25,000 seeks medical advice for cat scratch disease every year. That study found it was more frequent amongst people who lived in the Southern USA, where cat fleas are more common as it is warmer.

Anyone can get it, but it particularly affects children aged 5-9. This may be because they are more likely to play with a cat or kitten in a way that encourages it to scratch them.

Is cat scratch disease contagious?

Bartonella henselae, the bacteria that causes cat scratch disease, can be spread from cats to humans through cat scratches, cat bites, or a cat licking a human wound.

It can't spread from human-to-human, though.

What other symptoms can you get with cat scratch disease?

About half the people who get cat scratch disease only get swollen lymph nodes. The other half can feel generally unwell, with symptoms such as:

- Aching.
- Malaise and exhaustion.
- Going off food.
- Headache.

About 1 in 10 get a slight temperature (fever), painful joints (arthralgia) and muscle pain (myalgia).

Rarely it can cause:

- Sudden loss of sight.
- Tummy (abdominal) pain.

- Pain in a bone.
- Confusion.
- Epileptic fits.
- Severe headache and being sick (vomiting).

What are the symptoms if my immune system isn't working properly?

Having an immune system which isn't working properly is called immunodeficiency. People with immunodeficiency, such as people with [HIV or AIDS](#), or taking treatment that suppresses the immune system, such as [chemotherapy](#), can get worse symptoms from cat scratch disease, and are more likely to feel ill. It can be very serious and even life-threatening if not treated.

The symptoms are similar to those listed above, although may be more severe. People with immunodeficiency are also more likely to develop a red or purple rash, caused by growths of blood vessels, which can bleed when knocked.

How is cat scratch disease diagnosed?

Doctors are likely to suspect cat scratch disease from the symptoms and what they find when they examine you or your child. It's really important that you tell your doctor if you have a cat or a kitten, especially if they have recently scratched you or your child.

Blood tests are used to confirm the diagnosis. This is usually a test to look for antibodies against *B. henselae*, the bacteria that causes cat scratch disease. A high level of antibodies suggests a recent infection. Sometimes, the antibody test is repeated if the initial result is not clear.

What other tests will I need?

If the diagnosis is clear – such as if there are typical signs and symptoms of cat scratch disease and a positive antibody test – then other tests may not be needed.

Sometimes, though, other tests are needed if it's not clear whether someone has cat scratch disease or not. Many of the symptoms of cat scratch disease can be caused by other conditions, including types of cancer, and tests may help to rule out other diseases.

[See separate leaflet called Swollen Lymph Glands for more information.](#)

Other tests that might be needed could include:

- Lymph node biopsy – a small amount of tissue is removed from a gland (lymph node). It is then looked at under a microscope to make sure there aren't any cancer cells in it and it is also tested for germs. [See separate leaflet called Biopsy for more information.](#)
 - [Computerised tomography \(CT\) scan.](#)
 - [Ultrasound scan.](#)
 - [Magnetic resonance imaging \(MRI\) scan.](#)
 - [Lumbar puncture.](#)
 - [Electroencephalogram \(EEG\).](#)
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Catch scratch disease treatment

Treatment isn't always needed for cat scratch disease. The body is usually good at getting rid of the germ (bacterium) that causes cat scratch disease on its own. Some people get cat scratch disease and get better again without even knowing that they had it.

However, for most people it can take time for the body to get rid of the infection. In the meantime, simple painkillers, such as paracetamol, can be used to treat pain and fever.

[Antibiotics](#), such as [azithromycin](#) and [doxycycline](#), can be used to treat cat scratch disease. Antibiotics might shorten the illness, but aren't absolutely necessary for most people, as they will still clear the infection with time. It's not known if antibiotics prevent severe complications from occurring.

Antibiotics are more likely to be recommended for:

- People with more severe symptoms, such as lots of swollen lymph nodes.
- People with complications of cat scratch disease, such as infection of the eyes or other organs.
- People with a [weakened immune system](#), as a precaution.

Complications of cat scratch disease

Complications can occur if the infection gets into the eye or if it spreads to other parts of the body. Some of the complications include:

- Parinaud's oculoglandular syndrome - occurs when the germ gets into the eye and spreads to the gland (lymph node) in front of the ear.
- Neuroretinitis - occurs when the nerve that takes messages to and from the eye to the brain (the optic nerve) is damaged by the infection.
- [Osteomyelitis](#) - when the infection spreads to the bone. This is rare.
- Pseudo-malignancy - occurs when the symptoms and changes in the body make the infection look like there is a cancer present.

Some complications can be potentially life-threatening:

- Bacillary angiomatosis - is a rare complication in which blood vessels grow out of control in the skin and in organs inside the body. It mostly affects people who have AIDS or HIV.
- Hepatitis and splenitis (bacillary peliosis) - occurs when the germ infects the liver and the spleen.
- Infective endocarditis - can occur if infection spreads to the heart.
- [Encephalitis](#) and/or [meningitis](#) - inflammation of the brain (encephalitis) and/or the covering of the brain (meningitis) - is rare.

What is the outlook if you have cat scratch disease?

Most people make a complete recovery in 2–5 months. People with cat scratch disease should be seen again to make sure that the affected lymph gland has gone back to normal.

The outlook (prognosis) is different if someone has developed one of the rare complications. The outlook will then depend on the particular complication and it will be different for different people, according to their age and any other illnesses they have.

How can cat scratch disease be prevented?

Cat scratch disease is preventable. It is rare and most people who get it have a mild illness from which they recover completely. However, not everyone does, so why take the risk? There are some simple things that you can do to reduce the chances of you or a member of your family catching it. To prevent cat scratch disease:

- Wash cat bites and scratches well with soap and clean, running water.
- Don't allow cats or kittens to lick your wounds.
- Make sure you have good flea control for your cats, particularly in households with children.
- Avoid rough play with your cats.
- Wash your hands after contact with cats and teach your children to do the same. This is so as to remove cat flea poo that could be infected with *B. henselae*. Otherwise the germ could get into little breaks in the skin.

Further reading

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