

for every type of animal; e.g. products containing Permethrin can be very harmful to cats, causing Feline Permethrin Toxicosis which is potentially fatal. Cases of poisoning most commonly occur when people mistakenly use a product on their cat which is intended for dogs. Poisoning can also occur when the cat comes into contact with treated soft furnishings (e.g. carpets and pet bedding). Sometimes cross-contamination occurs when a cat has close contact with a treated dog. Use caution if buying over-the-counter products without veterinary guidance (even if non-chemical) and always read the manufacturers' instructions carefully.

When grooming your pet, make sure that you search thoroughly for any attached ticks as they can be very tiny, even when fully engorged. Brush against, as well as with, the hair-growth to see any ticks that are close to the skin. Check around and inside the ears, around the eyes, and the muzzle, as well as between pads and toes. Horses and ponies that are turned out can be vulnerable. Ticks will not only latch onto a horse's legs as it walks through vegetation, they will also latch on to its head as it grazes. From there they will look for a spot that is secure and where they are unlikely to be dislodged. Ticks can often be found hidden under the mane, inside the ears, inside the nostrils, around the dock of the tail and on genitalia. Check the legs thoroughly, particularly around the chestnuts and fetlocks. If your animal is stabled, it is still advisable to do a check when untacking after a ride in tick habitat.

### HOW DO I REMOVE A TICK?

Correct tick removal is vital in helping to avoid transmission of infective organisms. Freezing or burning a tick can cause it to regurgitate its blood meal (which may contain infective agents), as can smothering it in substances such as spirits, oil/butter, nail varnish or petroleum jelly. Squashing or scratching off a tick can spill infective fluids and leave mouth parts behind in the skin, causing abscesses and scarring. Compressing a tick's body can cause infective fluids to be squeezed into the host. Never remove a tick with your fingers or handle it with bare hands as some infective agents can enter through breaks in the skin or through mucous membranes (touching eyes, nostrils or mouth).



### CORRECT METHODS OF TICK REMOVAL

Ideally, wear plastic gloves and preferably use a tick removal tool. Be aware that not all types of tool are as safe as they claim to be and can cause damage or compression to the tick. A study, comparing four removal devices, demonstrated that the O'Tom Hook (or Tick Twister) was the most efficient at removing ticks without causing damage or compression (Vet Rec 2006; 159: 526-529). O'Tom hooks are available from BADA-UK, or from some veterinary surgeries and pet stores.

In the absence of a tick-removal tool, use fine-pointed tweezers. Approach the tick from the side to avoid compressing its body. Grasp it as close to the skin as possible. Gently pull/lever upwards until the tick detaches. Do not twist as tweezers exert too much pressure on the mouth parts and they may break off.

After removal, disinfect the bite site thoroughly and check for any remaining parts (these may be removed with a sterile needle when possible). Wash hands with soap and water or disinfect them. Dispose of the tick in the dustbin or flush it away.

For comprehensive information on tick-borne diseases in people and pets, and for tick-removal and -repellent products, please visit our website ([www.bada-uk.org](http://www.bada-uk.org)), where copies of our leaflets are also available.

Alternatively, please send a first class A5 SAE to  
**BADA-UK, PO Box 544, Wath upon Dearne,  
Rotherham, S63 3DW.**

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# Ticks in the UK

## Are Your Pets Protected?

### WHAT ARE TICKS?

Ticks belong to the spider family. They feed on blood from a host (a chosen animal or human). Unfed, they are generally flat and sesame-seed-shaped. Depending on its species, age and sex, an unfed tick can be as tiny as a full stop, 0.5mm, up to about 3mm. Once fed, it is much larger. A fully-fed adult female can be as big as a coffee bean. It can take several days for a tick to become fully engorged and this is when we tend to see them protruding from our pet's fur, like a pink, grey-blue or purple balloon.





### WHERE ARE TICKS FOUND?

Ticks are usually found on low plants and in leaf litter. They wait on vegetation for a host to pass by, then latch on with hooked legs. They don't jump or fly. There are generally more ticks in forested areas, but they can also be found in fields and parkland, especially where there are livestock and deer. Some species live in the nests or burrows of their hosts, where working dogs and ferrets often pick them up. However, ticks can be found in many places, including town parks and gardens. They are more abundant in late spring to early summer, and again during autumn, but can be active all year round during milder weather (above 3.5°C).

### WHY SHOULD I BE CONCERNED ABOUT TICKS?

Ticks can transmit various infective organisms which are carried by wildlife. These organisms rarely make wildlife ill (unless they are old, weak, or already diseased) but they can make livestock, domestic pets and people ill because they have less resistance.

The most common tick-borne disease to affect people and their pets in the UK is Borreliosis (Lyme disease). Many dogs, cats and horses have antibodies to Borreliosis but without any apparent infection. However, symptomatic cases do occur.

Ticks can also carry Anaplasmosis, Babesiosis, Bartonellosis and the Louping-ill Virus (LIV). One bite can transmit these different organisms, sometimes resulting in multiple infections.

### WHAT ARE THE SYMPTOMS?

Symptoms of all these diseases can be similar, making diagnosis difficult. They may include behavioural changes (e.g. depression, lethargy and loss of appetite), fever, swollen lymph nodes, inflamed joints, and muscle stiffness. In cases of Borreliosis, cardiac symptoms can occur and neurological disease (called neuroborreliosis) can cause a loss of co-ordination, seizures and paralysis. In horses, Laminitis can also be a complication of infection.

Babesiosis and Anaplasmosis can also result in haemorrhages within tissues, blood in the urine, jaundice, and enlargement of the spleen. Fatalities are more likely to occur in animals without a spleen.

LIV normally occurs in sheep but can affect other animal species and humans. More recently, a number of outbreaks amongst horses have occurred. Symptoms usually result from brain swelling, which causes tremors, loss of coordination and seizures.

Testing for these infections usually involves looking for antibodies (serology) but this only indicates exposure to the organism and not necessarily an active infection. Additionally, in Borreliosis, some early cases of infection return a negative result because it can take time for the immune system to respond. Animals may also test positive for a long time following treatment, making it difficult to determine whether treatment has been successful. Other types of test include the examination of stained blood smears or the detection of the organism's DNA, but these too have drawbacks and false results can occur.

Treatment (except in the case of LIV) is with antibiotics or anti-protozoals, depending on the type of infection. However, two experimental studies of dogs with Borreliosis revealed that shorter courses of antibiotic treatment (30 days with Amoxicillin, Doxycycline, Ceftriaxone and Azithromycin) failed to eliminate infection. Longer courses of treatment may therefore be necessary, particularly in neuroborreliosis.

Antibiotics are not effective against LIV and treatment is supportive therapy. Anti-inflammatory drugs and sedation may be used for symptomatic relief.



### WHAT ARE THE RISKS ABROAD?

Tick-borne diseases are a worldwide issue. Under the Pet Travel Scheme (PETS), run by the Department for Environment Food and Rural Affairs (DEFRA), pet dogs and cats that are resident in qualifying countries can enter the UK without quarantine, providing they meet the rules of the scheme which include being treated against ticks. Despite the PETS regulations, animals have entered the UK carrying infected, foreign tick species.

If you are taking your pet abroad, it is advisable to maintain treatment against ticks at the appropriate intervals during your stay. Be aware that the interval between treatments for ticks is generally shorter than in the treatment of fleas.

For more information about the Pet Travel Scheme, please visit the PETS section of the Department for Environment Food and Rural Affairs (DEFRA) website ([www.defra.gov.uk](http://www.defra.gov.uk)), or ring the PETS helpline on 0870 241 1710.

### HOW CAN I PROTECT MY PET?

Not every tick is infected and not every bite will transmit disease. However, the longer the tick is allowed to feed, the more likely it is that an infection will result.

There are various licensed tick treatments available from your veterinary surgeon, which generally come in 'spot on' or spray on forms. Alternatively, there are chemically-treated collars available. These products must only be used on healthy animals and under veterinary guidance. Some products may be unsuitable for pregnant or nursing animals. Additionally, not all products are safe