

Welcome to Darwin Veterinary Centre's Spring / Summer 2015 Newsletter. With the worst of the Winter weather hopefully behind us now, our thoughts at the practice are turning to the warmer days of Spring and Summer. So in keeping, this issue brings you seasonal advice on preventing Kennel Cough in dogs, repelling ticks in cats and dogs, watching out for parasites in chickens, as well as information on preventing vitamin C deficiency in guinea pigs. This issue also contains a feature article on heart disease in pets, together with our regular Darwin Court Circular, and a new feature, a book review. We hope you enjoy it!

Tick season is here!

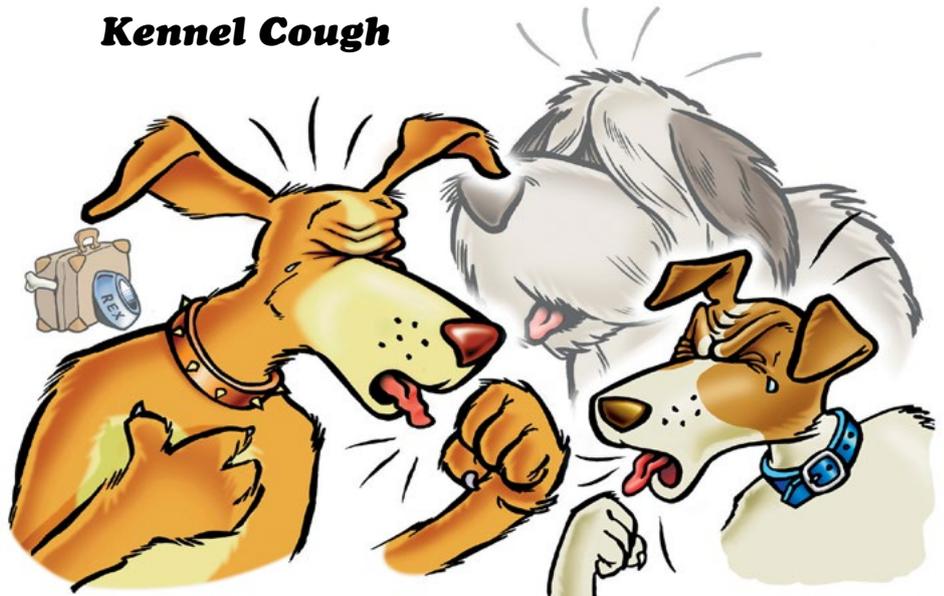
Spring is upon us, and so unfortunately that also means the beginning of the tick season! Ticks are parasitic arthropods that feed on the blood of their hosts. They can be found anywhere, but tend to hide in tall grass or plants in wooded areas, waiting for animal hosts to walk by. Once a host is found, the tick climbs on and attaches its mouthparts into the skin. Once they have begun a blood meal they will remain locked in place until the meal is complete, which can take several hours to days!

Apart from the obvious 'ick' factor, ticks cause irritation, can cause skin infections/ abscesses, but more worryingly they also transmit parasites and bacteria that can cause disease. These maladies include Lyme disease, Ehrlichiosis, Babesiosis and Anaplasmosis. These are more commonly known as "vector-borne" diseases, and are important as they can cause severe illness such as anaemia or paralysis, but frequently the signs are vague and difficult to recognise.

Most tick-borne diseases will take several hours to transmit to a host, so the sooner a tick is located and removed the lower the risk of disease. If you find an embedded tick, be sure to remove it promptly and correctly! One of the most effective ways to keep ticks off your dog is to directly apply a tick prevention product specifically designed for pets. **Seresto collars effectively repel and kill ticks to provide 8 months of continuous protection, so put on now, they will protect your pet right through until the end of the tick season, Autumn.**



Kennel Cough



Kennel cough, or to give it its full name, 'Canine Infectious Tracheobronchitis', is a highly contagious respiratory disease of dogs. It is caused by a variety of viruses and a bacterium, Bordetella bronchiseptica, which pass from dog to dog very easily wherever they meet, via air-borne droplets.

Affected dogs typically develop a dry, harsh hacking cough, which frequently sounds more like a choking noise rather than a cough. While some dogs recover very quickly, others can show symptoms for several weeks and antibiotics may be required. In old, weak or very young dogs more serious complications can occur such as pneumonia.

Fortunately, Kennel Cough can be prevented with a vaccination which is trickled up the nose rather than being injected under the skin. This is not part of the routine annual vaccination but can be given at the same appointment, and will give protection for 12 months.

Vaccination is recommended for those most at risk, such as the young or elderly, and those which mix with other dogs, e.g. in the park, at training or agility classes, grooming parlours or boarding kennels. Most reputable kennels will insist that dogs are vaccinated to prevent Kennel Cough! We recommend that vaccination is given at least 2 weeks in advance of attending kennels or classes.

Since there are multiple viruses that can cause Kennel Cough, rather like Influenza in humans, the vaccination does not provide solid immunity, but in those rare cases where infection still takes place the symptoms are much milder, resolve more quickly and without complications.

There is no specific cure for Kennel Cough. Symptoms can frequently last for 4-6 weeks and your dog will be contagious to other dogs for up to 3 months! As with all diseases "prevention is better than cure"!

If you have any queries or concerns about Kennel Cough, please do not hesitate to contact us at the practice.



For further information on any of the subjects contained in this newsletter, please contact the practice on 01959 541153 or visit [facebook.com/darwinvets](https://www.facebook.com/darwinvets)



Heart Disease in our pets

In the UK, it is estimated that 15% of cats and dogs have heart disease, which can occur at any age, and as Figure 1 shows, affects a wide variety of breeds. Unlike us humans, our pets do not have a sudden heart attack as a result of heart disease, but instead the disease usually progresses over many months or years, and can cause a variety of vague symptoms which are easily overlooked, or falsely attributed to 'ageing'.

A pet with heart disease may appear completely normal because the heart compensates for the disease for a while. However, 'heart failure' is the term vets use once an animal has clinical signs of heart disease – see Figure 2. Once a pet is in heart failure, the heart can no longer compensate, and is not sending enough oxygen-carrying blood around the body. Fortunately there are a variety of medicines which can be used to support the heart and give our pets with heart disease and/or failure a good quality of life for many months or years. As always, early diagnosis of heart disease, before it has developed into heart failure, gives your pet the best prognosis for a happy life.

Dogs: Cavalier, Yorkie, Cairn Terrier, Jack Russell Terrier, Yorkshire Terrier, Doberman, Great Dane, Newfoundland, Labrador Retriever, Golden Retriever, St. Bernard, English Cocker Spaniel, American Cocker Spaniel, Whippet, Boxer, Dalmatian

Cats: Maine Coone, Abyssinian, British Short Hair, Persian, Ragdoll, Siamese, Domestic Short Hair, Domestic Long Hair, Burmese, Sphinx

Figure 1: Breeds prone to heart disease

So how is Heart Disease diagnosed?

If heart disease is suspected in your pet, we have several means of investigation:

Clinical History: This is constructed by vets from the information you provide about your pet during a consultation. For instance, you may have noticed that your dog is starting to lag behind when out walking, or that your cat no longer has a 'mad 5 minutes'. We may ask questions about the symptoms listed in Figure 2, or any other changes you may have noticed in your pet's health or activity.

Lethargy, weight loss, loss of appetite, exercise intolerance, coughing, wheezing, pale gums, fainting, swollen/ fluid-filled abdomen, increased respiratory rates, bluish colour to tongue, laboured breathing.

Figure 2: Symptoms of Heart Failure

Examination: A good clinical examination is key in the diagnosis of heart disease. By checking your pet's gum colour and refill time, pulse frequency and strength, as well as listening or 'auscultating' your pet's heart and lungs with a stethoscope, we are able to get lots of useful information about how well your pet's heart is working. These tests are performed routinely as part of your pet's annual health check at the time of vaccination, as well as when illness occurs. A thorough examination of heart function is conducted as part of our 'congenital health check' of all puppies and kittens at their first appointment.

Radiography: An x-ray of your pet's chest allows us to assess their heart's size, shape and position, as well as to detect any complications which may occur secondarily in your pet's lungs. Figure 3 shows both a radiograph of a normal heart, and one where heart disease is present – note the difference in heart size.

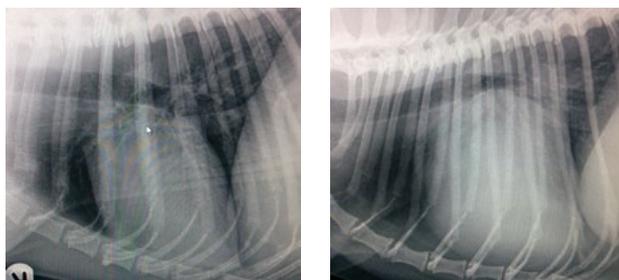


Figure 3: Radiographs showing normal heart (left) and enlarged diseased heart (right).

ECG: Electrocardiography is a recording of the electrical activity of the heart. It is a safe, non-invasive procedure that uses clips placed on the skin over the chest and legs. ECGs are usually performed to evaluate the heart rhythm and identify abnormalities or 'arrhythmias' in the heart beat.

Echocardiography : Specialised and very expensive equipment is required to perform an ultrasound examination of the heart, known as 'echocardiography'. It is a non-invasive procedure, which in most animals can be performed without the need for sedation or anaesthesia, and is similar to a pregnancy scan in humans. The ultrasound probe is placed on the skin of the chest, usually whilst the pet lies on a comfy cushion. The image obtained permits close examination of the muscle,

chambers and valves of the heart in action, visualisation of incorrect blood flow, and complex measurements to be made. Many practices are unable to offer this investigation, but we are fortunate in having a state-of-the-art ultrasonography scanner, and most heart investigations are undertaken within the practice, without the need for you and your pet to travel to a specialist, and without the associated level of expense.

Common types of heart disease

Mitral Valve Disease (MVD) is the most common form of heart disease that we see at our practice. It affects many of the smaller dog breeds, such as Yorkies, Shelties, Terriers and Whippets, as well as Border collies and cross-breed dogs. However, sadly MVD is particularly common in King Charles Cavalier Spaniels, with as many as 80% of 6 year old Cavaliers being affected. The disease occurs when one of the heart's four valves, the 'mitral valve', fails to close correctly, resulting in blood leaking backwards through the valve in the wrong direction. The resulting turbulence in blood flow is audible with a stethoscope as a heart 'murmur', and may be seen on colour Doppler echocardiography as an abnormal jet of blood. Murmurs are graded from 1-6 by volume and severity. Fortunately, with early diagnosis, and medication when indicated, most dogs with MVD can lead a full and happy life.

Hypertrophic Cardiomyopathy (HCM) is the most common form of heart disease in cats, and occurs when the heart muscle becomes thickened. This reduces the volume of blood within the heart, and interferes with the heart's ability to relax properly between contractions, causing a reduction in the amount of blood which the heart pumps. Sadly this condition is known as a 'silent killer', as many affected cats show no symptoms at all, then suddenly deteriorate very rapidly. Because cats are not exercised like dogs, it can be particularly difficult to detect that they have reduced exercise ability. Heart murmurs or 'gallop' heart rhythms may be detected during your cat's annual health check, and require further investigation.

In cats, the most commonly seen sign of heart failure is the development of difficulty breathing, or more rapid breathing, caused by a build up of fluid around or within the lungs. Some cats may also have cold extremities, e.g. ears and paws, due to poor circulation, or even a bluish colour to the membranes of their mouth and eyes. Sadly **Feline Aortic Thromboembolism (FATE)** is sometimes the first indicator of underlying heart disease in cats with HCM. It occurs when a clot or 'thrombus' develops in the heart chambers, which are no longer contracting correctly. Part of the thrombus breaks off and enters the circulation, where it is known as an 'embolus', and can block major arteries. This complication of heart failure most commonly causes a sudden onset of paralysis to one or both back legs, with severe pain and considerable distress and carries a grave prognosis.



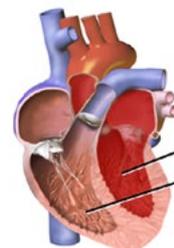
HCM is most commonly seen in cats, especially in large breeds such as Maine Coons

This pattern of occurrence suggests that a hereditary component may play a role in this disease, but no one gene has been found in affected dogs of different breeds, although much research is currently being conducted in this area of canine health. DCM is also seen in dogs who receive inadequate levels of the amino acid taurine during puppyhood, and in dogs who are infected by parvovirus when just 2-4 weeks of age.

Dilated Cardiomyopathy (DCM) is a heart condition generally affecting dogs equal to or larger than Cocker Spaniels, particularly the giant breeds. It is almost exclusively seen in pedigree dogs, and is more common in males than females.

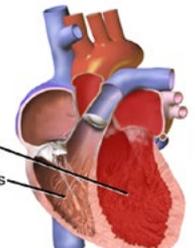
This pattern of occurrence suggests that a hereditary component may

Normal Heart



Chambers relax and fill, then contract and pump.

Heart with Dilated Cardiomyopathy



Muscle fibers have stretched. Heart chambers enlarge.

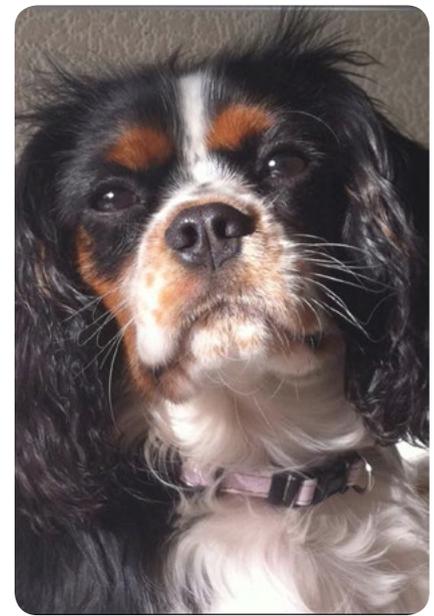
Figure 4: Dilated Cardiomyopathy

DCM tends to develop in dogs aged 4-10 years old, and causes thinning of the heart muscle, particularly of the left ventricle - see Figure 4. This leads to poor contractility of the heart and a reduction in the amount of oxygenated-blood which the heart pumps into the circulation. Most affected dogs have an 'occult phase', in which they appear fine and symptom free, but in which the heart is undergoing detrimental changes that can only be detected by ECG or echocardiography. Soft murmurs may sometimes be detected during an annual health check, but all too frequently the first indication of heart disease is the sudden onset of lethargy, breathlessness and an inability to undertake routine levels of exercise.

With advances in veterinary medicine, an early diagnosis of heart disease can ensure our pets enjoy a full and active life. If you'd like to know more, please feel free to contact Sonya, Daniela or Chloe at the practice.



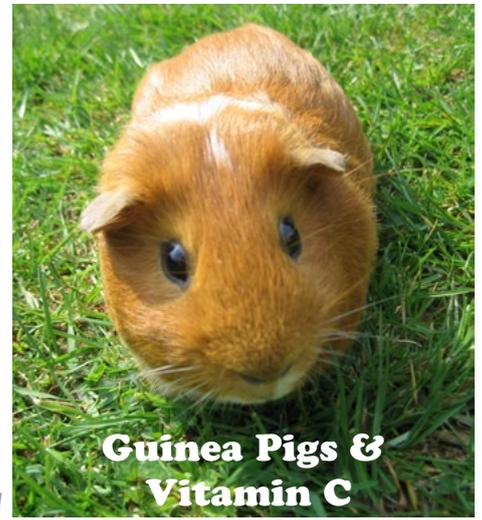
Chloe performing an echocardiogram at the practice



Mitrial Valve Disease is common in Cavaliers

Darwin Court Circular

Having passed her finals exams last Autumn, Alice recently attended her graduation ceremony where she was awarded her prestigious and much-coveted Registered Veterinary Nurse badge, seen here. The wearing of this badge signifies completion of many years of training, study and examination passing, and identifies RVNs from those just wearing a green uniform – wear it with pride Alice!



Guinea Pigs & Vitamin C

Like humans, guinea pigs are unable to synthesise their own vitamin C or 'ascorbic acid' and it is therefore essential that all guinea pigs receive vitamin C, either in their diets, or as a supplement. Guinea pigs who fail to receive adequate levels of vitamin C develop a variety of non-specific symptoms, which include:

- lethargy and weakness;
- poor appetite and weight loss;
- swollen joints;
- rough hair coat;
- diarrhoea;
- small wounds may bleed excessively, and skin bruises easily;
- sudden death, if left untreated.

A list of foods which are suitable for guinea pigs and which are rich in vitamin C are shown.

Red bell peppers	Broccoli
Kale	Carrots
Dandelion leaves	Fresh grass
Parsley	Cherry tomatoes
Peas	Kiwi fruit

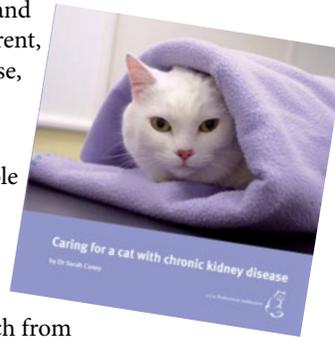
Vitamin C deficiency can also occur due to other illnesses, pregnancy or physical problems that are preventing a guinea pig from eating or absorbing adequate amounts of the vitamin C-rich food. The vitamin C content of dried guinea pig food is notoriously unstable, and will deteriorate over 9-12 weeks, resulting in deficiency problems if the dry food is stale. Hence it is important to observe the manufacturer's recommendations for shelf-life and storage conditions of the diet. Rabbit food is **not** suitable for guinea pigs as it does not contain adequate amounts of vitamin C to meet a guinea pig's requirements.

If your guinea pig is not a good eater, or is suffering from a condition likely to leave him or her deficient in vitamins, then vitamin C supplements can be used - either sprinkled onto food or dissolved in their drinking water. However you decide to give your guinea vitamin C, the important thing to remember is that you can't over supplement, as any excess is excreted in the urine.

Book Review

We all love the book series published by the Cat Professional and written by cat specialists. This series of five books covers different, common conditions in felines including chronic kidney disease, hyperthyroidism, lower urinary tract disease, overweight cats, and blind cats.

They are all fantastic books, very comprehensive, and accessible to owners that would like to know more about the condition that their pet has, and the different methods of managing these diseases. We now have a copy of each book in the series available for you to have on loan, but they are also available to buy both in hard copy and downloadable at around £10 each from www.catprofessional.com.



Chicken Parasites: Part 1 – External Pests

Chicken parasites are a given in most backyard coops. External parasites are the creepy-crawlies found on the outside of the chicken. These pests feed on feathers, dead skin, blood or scales and will cause reduced growth and egg production; however infestations can cause debilitating disease.

Lice: These are flat, yellow, and about 2 mm long. They may be seen especially around the vent or under wings; however they are very fast moving and quickly move out of the light when the feathers are parted. The louse eggs can more easily be seen attached to the base of the feathers and look like granulated sugar clumps. Infections are not life threatening, as the lice feed on dead feather and skin debris, however they will depress the bird and so infections should be kept under control with a suitable ectoparasite treatment, and feathers with eggs attached should be physically removed.



Red mites: 1 mm long and red in colour, these are nocturnal and live in the hen house during the day, so will not be seen on the bird. At night they migrate onto the birds and suck blood, causing anaemia, debilitation and sometimes death. Chickens become infected from wild birds, so minimising contact between the two will reduce the risk of infection. Unfortunately they are notoriously difficult to eradicate from housing. Both the chickens and their environment need to be treated. There is no licensed product for treatment of the bird, however eprinomectin can be used off-licence with appropriate egg and meat withdrawal periods. The environment should also be treated by blowtorching into crevices combined with spraying with permethrin, and the use of diatomaceous earth products.



Northern Fowl Mite: similar in size and colour to the red mite, this mite spends its entire life cycle on the bird and so will be seen at any time of day, and can also cause anaemia and death. Treatment of the bird is also the same, using off licence eprinomectin every 4 weeks with appropriate withdrawal periods.

Scaly leg mite: these mites cause intense irritation by burrowing under the scales of the legs. At first they produce a whitish film which turns to mounds of pale yellow debris firmly attached to the leg. Treatment is relatively straightforward, by dipping the legs in surgical spirit once a week for 3 weeks, or covering the legs with a thick layer of petroleum (Vaseline) to cut off the mites' air supply. Leg scales only moult annually so it can take up to a year for the legs to look normal again. All in-contact birds should also be treated!

