

CP **Clinic**

The feline magazine from Cats Protection for veterinary professionals

Anaemia

Demystifying this
feline condition

People allergic to cats

A novel cat food may be the solution

Neighbourhood cats

Behavioural considerations
for urban cats



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Meet the team



Alison Richards BVSc, MRCVS

How long have you worked for Cats Protection? Two years

What did you do before working for Cats Protection? I worked as a vet in private practice, both in independent and corporate practices. I was an educational volunteer for Cats Protection for three years before joining as an employee.

What is your role within Cats Protection? I am the Senior Field Veterinary Officer, covering the West of England, Wales and Northern Ireland. In my role I am the veterinary support for our centres and branches in this region, working alongside Cats Protection employees and private vet practices to help decide on the best treatments for cats in our care.

What do you like most about your job? I enjoy working with a variety of people across the charity and the vet profession – it is lovely to speak to other people passionate about achieving the best for our cats. I also love working up the more weird and wonderful cases that we do see in a shelter environment.

What is your most memorable Cats Protection moment? The change to a virtual way of working has been really interesting this year and putting on our first virtual centre vet meeting was very exciting.

Do you/did you have a pet/pets? I have a Yorkshire Terrier, Teddy, and a black-and-white moggy called Smartie, both rescues.

What are your hobbies/other interests? I love all things arty and creative and love painting and drawing. I'm also a keen swimmer and during the madness of 2020 have really got into sea swimming.

Where is your favourite place to visit? If there's a beach I'm generally keen; Ibiza, Devon and Cornwall are probably my favourite beachy places.

If I wasn't doing this, I'd probably... Be writing a sitcom about working in vet practice!



Demystifying feline anaemia

Anaemia is defined as a reduced red blood cell (RBC) mass, decreased haemoglobin level, and/or lowered packed cell volume (PCV) such that these values fall below the species-specific reference range.

The comparatively low feline RBC lifespan of 70 days (relative to other species) and a lower circulating blood volume, predispose cats to developing anaemia. Due to a unique type of haemoglobin however, they are better able to tolerate anaemia, particularly if the onset has been steady and chronic. In such instances, clinical signs may only be recognised once the anaemia has reached a severe level (PCV <10%). Cats are also, as a species, particularly prone to oxidative RBC damage. For the most part, non-regenerative feline anaemias predominate, over those with a haemorrhagic or haemolytic cause.

Cats with anaemia may show clinical signs that include pallor, weakness and lethargy, alongside a compensatory tachycardia and tachypnoea. Pyrexia, pica, a soft haemic heart murmur and splenomegaly may also be detected, the latter potentially reflecting haemolytic activity, extramedullary haemopoiesis or erythrocyte sequestration. Other clinical signs that reflect the underlying disease may also be present. >

Important factors relating to anaemia in cats

There are various key points and considerations that are useful to remember when dealing with a case of feline anaemia. It is an area of medicine where the need for a clear, systematic and logical approach is essential and where thorough yet relevant diagnostic investigations are justified.

Just as in other areas of medicine, it is only by obtaining a definitive diagnosis that appropriate treatments and a prognosis may be given. Most small animal veterinarians are comfortable with the differentiation of regenerative versus non-regenerative anaemia (which remains the most useful starting point) but may become uncertain at which tests and investigations are subsequently relevant and should be prioritised.

Of these key points, the veterinarian should first appreciate that cats may show multiple causes of anaemia concurrently. The origins of anaemia can therefore be complex, while various mechanisms may contribute to its development. This can certainly complicate the picture! For example, in FeLV infection, there may co-exist bone marrow suppression, myelodysplasia, myelophthisis (through lymphoma/leukaemia development) and additionally, immune mediated haemolysis. As a result, there may be difficulty both interpreting diagnostic findings and classifying the nature of the anaemia.

On a not dissimilar note, any inter-concurrent disease may impair the expected regenerative response. This is particularly the case for the regenerative anaemias with haemorrhagic or haemolytic aetiologies. The presence of FeLV infection, or an inflammatory or infectious disease may suppress a regenerative anaemia to appear minimally, or even non-regenerative. A FeLV-positive cat with coinfection of haemotropic mycoplasma organisms for example, may not develop an adequately regenerative response.

It should be remembered also that haemoconcentration may mask the true degree of anaemia and as such, RBC indices should be assessed once dehydration has been corrected. A patient with a PCV at a borderline low level of 25% may develop a moderate anaemia once rehydration has occurred.

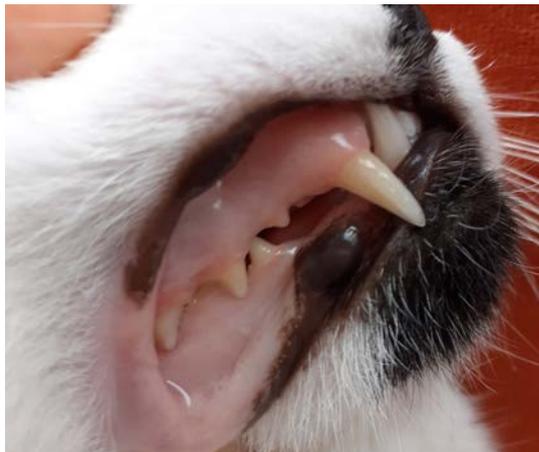


Figure 1: Photo showing pale mucous membranes in a young cat with mild anaemia

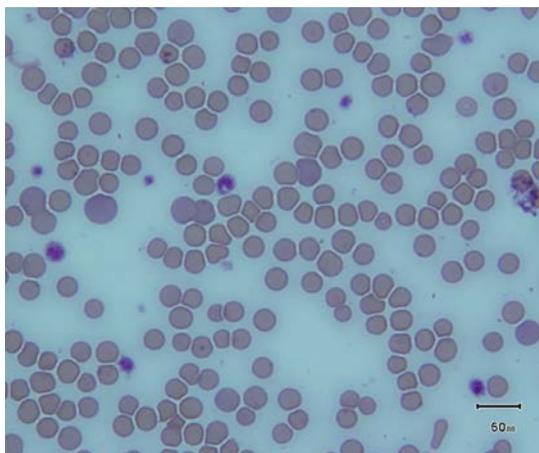


Figure 2: Blood smear showing features of a regenerative anaemia and ghost cells (Credit: Axiom Veterinary Laboratories)

Equally, following blood loss, PCV will not drop initially given both RBC and plasma are lost simultaneously (unless fluid replacement is given). It is only after 12-24 hours, once there has been fluid shift from the interstitium into the intravascular space, that anaemia will become apparent. >

Assessment of regeneration and red blood cell features

Any anaemia that has been detected should first be classified as mild, moderate or severe. The next logical step is to ascertain whether the anaemia is regenerative.

To classify the level of regeneration, morphological RBC changes can be assessed alongside an assessment of the adequacy of the RBC regenerative level (using a quantitative adjusted formula such as the absolute reticulocyte count (ARC)).

Firstly, however, remember that the bone marrow will take three to five days to generate a response to any anaemia (peaking at five to seven days). In the first instance therefore, a seemingly non-regenerative anaemia needs to be confirmed as such, with a follow up haematology performed a few days later.

If regeneration occurs after five to seven days (as depicted by an ARC $>60,000/\text{mCL}$), then the first sample can be retrospectively classified as pre-regenerative. In cats only the aggregate reticulocytes are counted since these reflect the recent bone marrow red cell production. Importantly, the magnitude of the ARC should be adequately appropriate and relatively proportional, to the degree of the anaemia. For example, with severe acute blood loss anaemia, after a few days the regenerative response (with a healthy bone marrow) should reach $>200,000/\text{mCL}$ and be categorised as substantial. If this is not the case, then the suspicion for bone marrow pathology would be increased.

Typical RBC features that are associated with a regenerative response include polychromasia, anisocytosis and nucleated RBCs. In cats however, nucleated RBCs are unique in that they may be evident without any increase in erythropoiesis. They may also reflect systemic disease or splenic inactivity.

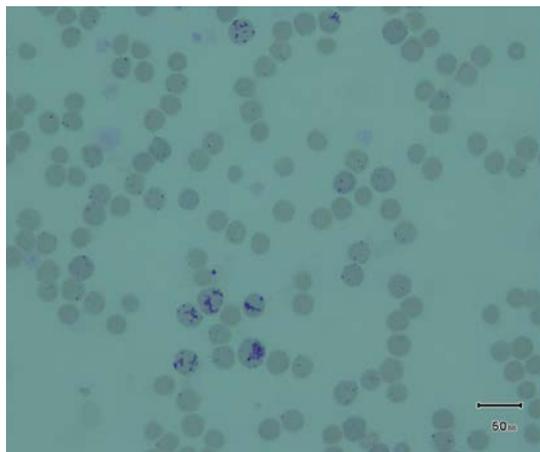


Figure 3: Blood smear stained with New Methylene Blue (NMB) to determine presence of aggregate reticulocytes (Credit: Axiom Veterinary Laboratories)

The value an expert haematologist (typically located at an external laboratory) can offer in terms of evaluating the blood smear for detailed morphological information should not be underestimated. This applies not only to the red cells, but also white blood cells and platelets too. Detection of potential neoplastic cells and infectious agents, in context of any one case, can help with identifying the cause of the anaemia.

Mean cell volume (MCV) may be a useful parameter to interrogate. It is typically high (macrocytosis) with regenerative anaemias, indicating the presence of larger, immature reticulocytes. It may however also be increased specifically with FeLV infection and myelodysplastic syndrome (MDS) which should be borne in mind. >

Figure 4: Kittens with large parasite burdens may in time develop iron deficiency anaemia due to chronic GI blood loss



Mean cell haemoglobin concentration (MCHC) will be decreased (hypochromasia) with regenerative anaemias also, given reticulocytes contain a lower haemoglobin concentration than mature RBCs. A portosystemic shunt in a young animal however, could be a differential for a normocytic, hypochromic anaemia.

However, while potentially useful, neither MCV nor MCHC should be wholly relied upon as indicators of regeneration as they may remain within the reference ranges despite a regenerative anaemia.

Red cell distribution width (RDW) as an index of the variation in size of the RBC population, and, if increased, suggests morphological changes in the red cells.

Spherocytes, while helpful in identifying dogs with immune mediated haemolytic anaemia, are difficult to accurately identify in cats given the smaller size of red cells and their lack of central pallor. As a result, spherocytes cannot be reliably found in cases of feline immune mediated haemolytic anaemia (IMHA). A positive slide agglutination test and or positive Coombs test are more typical features of IMHA in cats, both of which indicate the presence of RBC bound antibodies. Cats will generally not show a leucocytosis and neutrophilia with left shift when affected with IMHA.

Rouleaux (a normal 'stacked coins' appearance to RBCs) should be differentiated from erythrocyte clumping caused by autoagglutination, by washing the red blood cells in saline.

A high number (>30%) of Heinz Bodies would suggest oxidative damage to red cells and could manifest as a non-immune mediated haemolytic anaemia.

Genetic defects (such as pyruvate kinase deficiency), fragmentation or mechanical damage to RBCs and vascular disease/disseminated intravascular coagulation (DIC) can also precipitate non-immune mediated haemolytic disease.

A situation where immune mediated haemolytic disease could appear non-regenerative however, is if the attack is directed at the RBC precursors within the bone marrow (pure red cell aplasia).

With chronic blood loss, there will typically be a poorly regenerative, microcytic hypochromic anaemia due to the eventual development of iron deficiency. Kittens with a large parasite burden or adult cats with chronic gastrointestinal (GI) blood loss could represent typical cases. Assessment of iron and ferritin levels can be useful to interrogate further and differentiate this from anaemia of inflammatory disease.

Non-regenerative anaemias are common in the cat and are usually secondary to another disease process such as inflammatory disease, CKD, endocrine disease or chronic blood loss (often via the GI tract and with inflammatory bowel disease (IBD)). They are typically normocytic and normochromic. However, a primary bone marrow disease is a differential diagnosis for a non-regenerative anaemia. Such bone marrow aetiology may have progressed gradually yet will present as a severe anaemia, albeit in a haemodynamically stable patient. Affected cats may also present with a concurrent cytopaenia or thrombocytopenia. >

The utility of biochemistry results

Many systemic diseases may cause a mild (PCV >17%), often subclinical, normochromic, normocytic, non-regenerative anaemia; the 'anaemia of inflammatory disease'. As such, biochemistry and additional tests such as urinalysis, chest radiographs and abdominal ultrasound, must be assessed to look for concurrent illness. CKD infectious disease, inflammatory disease, endocrine disease and/or neoplasia are all potential causes. Up to 40% of cats with chronic azotaemia and end-stage CKD may become anaemic for example.

With blood loss, total protein would be expected to be reduced. This may not occur however, if blood loss has been peracute, or if it has been slow and internal (either at a low-grade level or in an intermittent fashion). Such slow and typically unappreciable blood loss may involve the GI or, more rarely, the urogenital tract.

Persisting anaemias alongside hypoproteinaemia therefore, would suggest continuing blood loss. With a GI bleed, urea levels may be increased.

Bilirubinaemia and or bilirubinuria seen in conjunction with anaemia, may indicate haemolysis (extravascular as the more common cause). Jaundice may also reflect concurrent liver disease. Haemoglobinaemia or haemoglobinuria depict severe intravascular haemolysis (rarer). With a haemolytic cause of anaemia, protein levels may be normal or increased and raised liver enzymes may reflect hypoxic damage.

Severe hypophosphataemia can precipitate haemolytic anaemia, albeit an associated underlying cause (such as diabetic ketoacidosis (DKA), re-feeding syndrome or hepatic lipidosis), is usually clinically apparent. >



Figure 5: Bilirubinaemia can be seen with extravascular immune mediated haemolytic anaemia. It may also represent underlying hepatic disease. (Reproduced courtesy of Brianna Wisniewski)

So, which tests next?

Having categorised an anaemia's severity, its level of regeneration and considered the likely causative process, additional tests are warranted. The following should be considered, assuming haematology (including both platelet and reticulocyte counts), biochemistry and urinalysis have already been performed as part of the minimum database.

For a haemorrhagic cause of anaemia

- Consider trauma, GI ulceration/parasites, thrombocytopaenia or coagulopathies, neoplasia, systemic amyloidosis and Menrath mouth ulcers
- Assess urine as a potential source of blood loss
- Consider assessment of coagulation status with one stage prothrombin time (OSPT), activated partial thromboplastin time (APTT) (which may indicate liver disease or rodenticide toxicity)
- Perform faecal parasitology (and consider free occult blood)
- Thoracic and abdominal imaging are recommended to look for cavity blood loss and to biopsy and perform cytology/histopathology on any abnormal masses

For a haemolytic cause of anaemia

- Remember to have assessed both urine and plasma for abnormal bilirubin/haemoglobin content. Think of IMHA but also consider non-immune mediated haemolytic anaemia such as breed specific inherited RBC defects (PK deficiency in Abyssinian or Somali cats), osmotic fragility, mechanical/vascular injury and oxidative damage in the form of toxicity (onions, paracetamol), or disease (DKA, DM, hyperthyroidism)
- A saline agglutination test (SAT) and/or a Coombs test will help to confirm an immune mediated haemolysis

- FeLV antigen, FIV antibody and FIP tests (FCoV antibody, analysis of effusions, positive immunostaining for FCoV antigen etc) will help rule out an association with infectious viral diseases
- PCR testing for *Mycoplasma haemofelis*, *Candidatus Mycoplasma haemominutum* and *Candidatus Mycoplasma turicensis* should be performed
- Perform thoracic and abdominal imaging to rule out an underlying cause for a secondary immune mediated haemolytic anaemia
- Consider whether bone marrow evaluation is required (non-regenerative anaemia with a positive Coombs/SAT)

For a non-regenerative cause of anaemia

- Assuming that mild anaemias of chronic/systemic diseases have been excluded, FeLV antigen and FIV antibody should be run and any suspicious test results followed up with confirmatory tests such as FeLV PCR and FIV western blot
- Perform a bone marrow aspirate and core biopsy and remember that a haematology sample must be submitted to the laboratory at the same time. Consider performing a FeLV PCR on bone marrow
- By evaluating results obtained from these tests, hopefully the causative aetiology of the anaemia can be established. Based on this information, appropriate treatment can be administered and a prognosis discussed **C**

Rebecca Martin *BVSc CertSAM MRCVS*

Advanced Practitioner in Small Animal Medicine

Rebecca qualified with distinction from the University of Bristol in 1998. She gained her RCVS Certificate in Small Animal Medicine in 2008 and in 2015, became a RCVS Advanced Practitioner.

Her current role is that of senior medical vet within a busy, independent RCVS accredited practice in Surrey. Here she enjoys the challenge of complex medical cases alongside performing advanced ultrasonography and endoscopy.

Her wide-ranging interests include endocrinology, cardiology and haematology.

She is currently working towards membership of the Australian and New Zealand College of Veterinary Scientists (Medicine of Cats).





A breakthrough innovation in cat allergy management

Sensitivity to cat allergens is a commonly encountered problem. We are all likely to know someone who is affected – if it's not a member of our household precluding us from owning a cat, often it's a friend or family member who cannot visit without reaching for the antihistamines. The negative impacts for both the sensitised owner and the cat can be devastating – reducing or preventing interaction.

Now, a ground-breaking, new, safe and proven approach simply requires the cat owner to feed a tasty and nutritious cat food to neutralise the main allergen at its source. Neutralising the major feline allergen, without affecting the cat's biology, is a huge leap forwards in facilitating cat ownership and the human-companion animal bond for those sensitised to cat allergens. >

 **PURINA**
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Advancing Science for Pet Health

Cat allergens – a **common** and **increasing** problem

As many as one in five adults, worldwide have sensitivities to cat allergens ^{1,2}. In fact the global incidence of cat allergies has been reported to be rising sharply, with increasing rates of allergy being recorded as posing a major public health problem ^{3,4}. Many people think that cat hair is the cause of sensitivities, but it's actually mainly the Fel d 1 allergen – a protein in cat saliva – which is the source of the problem. Through grooming, cats transfer salivary Fel d 1 onto the hair coat and then shed this allergen, stuck to hair and dander, into the environment. While there are eight major feline allergens registered to date, 95% of people sensitised to cat allergens respond to Fel d 1 ⁵⁻⁷.

All cats produce Fel d 1 – there are no truly allergen-free or 'hypoallergenic' cat breeds ^{4,6-9}. However, Fel d 1 production can vary widely among individual cats even fluctuating within the same individual ^{5,6,10,11}. In a recent study, Bastien et al. observed an 80-fold difference in salivary Fel d 1 levels between the lowest-producing and highest-producing cats ¹¹. Studies have also shown that male cats produce three to five times less Fel d 1 after neutering ^{12,13}.

The challenges of **managing** cat allergens

Most of the current methods for control are designed to manage the allergens after they get into the environment ³. Reducing environmental allergens is effort-intensive, costly and has limitations. Fel d 1 is extremely light and can be carried by tiny particles ^{4,5}. It can be transferred on clothing ^{4,5,10,11} and as a result, the allergen is ubiquitous. It has been found in homes without cats, and on public transportation and buildings at levels that exceed the threshold value associated with sensitisation ^{4,5,14,15}.

Treatments for allergy sufferers, such as preventing the onset of symptoms by using medications such as antihistamines as well as immunotherapy, are common approaches which have limitations relating to both side effects and efficacy. Suggestions of bathing cats to reduce surface allergen have poor compliance ¹⁶, largely due to cats' aversion to bathing and only transient effectiveness as allergen levels return to normal within 24 hours of bathing ^{4, 17, 18}. >



One in five
adults worldwide
have sensitivities
to cat allergens

The negative impact on **cat welfare**

Interactions with cats directly impact the human-companion animal bond. Physical contact plays an important role in the strength and longevity of this bond ^{19,20}. Recommendations to keep the cat outside, out of the bedroom or restricted to a certain part of the house can also result in increased levels of stress for the cat. Stress-related diseases, such as feline idiopathic cystitis and overgrooming are common in cats. Consequently, reducing stressors is important both for their health and welfare.

Unfortunately, there may also be a direct impact on cat welfare because this is a commonly cited reason for relinquishment of cats to shelters, as well as a barrier to cat adoption and ownership ^{21,22}. >

A breakthrough innovation to neutralise the allergen

In 2019, Purina scientists announced a breakthrough discovery in neutralising the Fel d 1 cat allergen. Following a decade of research, they developed an anti-Fel d 1 immunoglobulin Y (IgY) antibody-containing egg ingredient, which lowers active Fel d 1 allergen levels in cat saliva ²³.

“Inspired by pet allergen sensitivities experienced in my own family, our research team discovered a way to safely neutralise the active Fel d 1 in cats’ saliva before it can trigger allergen sensitivities in people.” Dr. Ebenezer Satyaraj, Director of Molecular Nutrition at Purina and lead investigator on the research explains. “We discovered that by using an egg product ingredient coated on cat food to neutralise Fel d 1 at its source in cats’ saliva, there was a reduction in the active allergen load transferred to a cat’s hair and dander as they groom. This ultimately reduces the active Fel d 1 shed into the environment” ²³.

Starting with the third week of simply feeding cats a diet with this key ingredient, there was a 47% reduction, on average, of active Fel d 1 on their hair and dander ²⁴. Based on the principle of allergen load reduction, complete elimination of Fel d 1 production is not necessary. This approach does not neutralise 100% of the cat’s Fel d 1. Instead, it converts cats with moderate and high levels of active Fel d 1 to cats with low or moderate levels of the allergen, the equivalent of taking a red pollen day to a green one. >

Feline friendly feeding

This discovery could be a game-changer for people sensitised to cat allergens because the neutralised Fel d 1 no longer triggers an allergen response – allowing cats and people to be closer together. The beauty is that this approach is feline friendly, as it does not impact the cat's physiology, and the cat continues to produce Fel d 1. The biological function of Fel d 1 is not known,^{4,9} so the potential health and welfare impacts of interfering with or stopping its production are also unknown.

Many cat owners view their cats as part of the family²⁵⁻²⁷ and sensitised owners will often compromise their own wellbeing to keep their cat. They are unlikely to accept approaches that they feel may put their cat's health and wellbeing at risk. The egg product ingredient containing anti-Fel d 1 is safe for the cat and is digested like any other protein once eaten.

This innovative approach offers healthcare providers an opportunity to reframe their conversations with cat-sensitised patients, allowing a focus on proactive measures without the emotional toll associated with recommending the restriction of interaction with, or removal from the home of, a beloved cat. **C**

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Libby Sheridan MVB MRCVS

Libby graduated from Dublin vet school and after 10 years working in mixed and small animal practice she entered industry working in pet nutrition. She then set up and ran her own company Mojo Consultancy, specialising in technical communications, PR and project management, before joining Purina Petcare in 2018 as Technical Affairs Manager for the UK & Ireland, where she is responsible for technical support and relationship building within the UK & Ireland veterinary profession.

During her industry career, Libby has built on her direct practice experience of client relationships with the development of professional and client support programmes, technical training programmes and roles in managing customer and consumer support teams, alongside regular contributions to veterinary and consumer publications on nutrition and client care topics.

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Neighbourhood cat



In a world of increasing population density combined with the fact that the domestic cat is one of the UK's most owned pets, there is the possibility that we are on course for seeing a continued rise in issues, both behavioural and veterinary, resulting from agonistic cat to cat interactions.

Why cats may not like their feline neighbours

If you have ever experienced a cat eager to greet you in the morning, as they tangle between your legs and purr, it can often be hard to remember that the genetic blueprint of our magnificent moggies is that of a solitary animal. Different to other domestic pets like dogs and rabbits, cats have evolved from a species that is solitary and maintains its own separate territory. This evolutionary path and genetic blueprint is seldom more easily identifiable than when cats encounter other cats in the neighbourhood. Domestic felines establish a territory, by leaving olfactory and visual cues. Cats do not perceive their world in the same way as humans, they tend not to respect the boundaries that humans create for their own territory. The fence separating one owner's garden from their neighbour's is not a boundary line for a cat as it is for a human.

In a world of abundant space each cat would generally be able to have and maintain their own territory without conflict. However, in close urban surrounds, all too often cats are encroaching on each other's territories and this is where the problem lies. For some cats moving into the territory of another cat, they will quickly move out again if faced with the resident cat. Others however, may be more confrontational and remain, which may lead to direct fights with the resident cat or simply cause the resident cat stress which often manifests itself as unwanted behaviours in the eyes of humans.

Given their solitary nature, cats have not needed to develop complex direct communication tools. Cats have fewer facial muscles than dogs and are therefore less able to communicate with subtle facial cues to diffuse tension with another of the same species. When cats are face to face, often the fight or flight response is triggered rather than communications between the two animals. Both responses induce a stress response from the cat so even if your cat is not directly fighting with another cat, having to constantly flee from them can cause problems. Often times the flight or fight response will not appear instantly and cats will stare at each other. Their body language will be more rigid, they may switch between a fixed gaze and avoiding eye contact and it may be accompanied by a tense mouth and lip licking. These cats are not comfortable with each other either and it should not be perceived by owners as two cats coming together 'for a chat'.

Cats can form social bonds with other cats and happily share a core territory (ie a home) however the social nature of cats is complex and cats do not generalise the liking of cats. Therefore someone who has two cats that get on well together in a home, should not expect that their cats will automatically be comfortable with neighbourhood cats. >



Stop the cat coming to the garden

If a client is worried that their cat is involved in conflict with another cat or becoming more stressed because of a visiting cat to the property, there are a few strategies that can be implemented to try and stop the visiting cat coming in to the resident cat's territory.

Firstly, the owner could attempt to find out who owns the visiting cat, if they are indeed owned, and speak to the owner, explaining the concerns about the wellbeing of both cats as both owners have a role to play to ensure their cats' needs are met. Arranging a mutually beneficial schedule of when each cat can go out without the other being present can be an option between amicable parties.

Neutering has benefits for cats due to reduction in unwanted kittens and reduction in spread of disease, however, neutering can also play a huge role in the situation of a problematic neighbourhood cat. Neutered cats have smaller ranges and have less reason to stray than unneutered cats. Therefore, if a client has an unneutered cat there is a discussion to be had there from another angle. Neutering will not stop the cat from exploring but may reduce how far the cat goes.

Additionally, cat-proofing gardens so that it makes it difficult for cats to enter the garden is an option. This can either be done personally, or some companies specialise in producing humane animal fencing.

Making the resident cat feel more secure

Fitting a cat flap that only opens in the presence of the resident cat (magnetic or microchip) is the best way to prevent the neighbourhood cat from entering the house. Until such a system is installed the owner may need to temporarily block off the cat flap to prevent the neighbourhood cat from intimidating the resident

cat through the cat flap. The resident cat will need to be provided with owner-escorted access to the garden during this time.

If the cat likes to toilet outside, this may be affected because they are too fearful to toilet in their usual spot if the other cat may be near. Remedy this by creating a new latrine site in your garden close to the house. This means the cat won't have to travel as far up the garden or beyond and risk encountering the other cat. Dig a litter-tray-sized hole and fill it with children's play sand or fine soil. Owners could put plants or other visual barriers around the sides so it creates a safe toileting site for the cat. In addition, ensure that the cat always has access to a litter tray indoors.

If the client's garden is open, they may want to consider introducing more objects eg plant pots or ornaments to help the cat feel more secure as they can move up the garden while feeling they are not as exposed. Creating a den-like space with the addition of a converted shed could help make the cat feel more secure, especially if it is fitted with a microchip or magnetic cat flap. >

High-up opportunities for the cat to escape to would be perfect as it's well documented that cats like to get up high if they can when feeling scared.

Visiting cats can also cause stress for the cat when they are inside. Rifts with other resident cats in the home can be exacerbated by stress from an external cat. If the resident cat can see the visiting cat coming into the garden, try to restrict visual access for the cat, either by covering the window or reducing access to areas like the windowsill where the cat can see outside. Alternative high-up and hiding places will help the cat feel more secure in the home particularly if provided alongside a pheromone-based diffuser that aims to reduce stress.

Providing the cat with other forms of stimulation, particularly if the owner is reducing the amount of time the cat has outside, is important and it will engage the cat and help them release happy hormones which is important if the cat is feeling more stressed. Using feeding enrichment and food puzzle toys as part of a daily routine is strongly recommended. As is regular play that helps replicate hunting behaviours of the cat.

How problems with neighbourhood cats affect people

Often, changes in behaviour such as spraying or re-directed aggression can be the first indicator that a cat is feeling stressed by the neighbourhood cat. It is imperative that the owner understands that these behaviours are happening for a reason, a stress response due to the other cat, and they should not punish the cat for these behaviours. It is important to resolve the cause of the unwanted behaviours rather than simply target the resultant behaviours. From a

practical human perspective, if the cat is exhibiting the behaviour due to stress, punishing the cat will simply add to the stress so likely will create a vicious cycle which will mean the behaviour happens more often rather than less.

Struggles with neighbourhood cats can often be quite problematic. As population density increases, this will likely continue to be a developing issue. It is important, as traumatic as the events can be, not to anthropomorphise the neighbourhood cat and paint them as evil. Unfortunately, cats are simply built to more often be solitary and to cover a territory. It is our job to help these cats be cats in our human environment, in the safest and most comfortable way we can. **C**

Daniel L. Cummings **BSc (Hons), MSc (ASWEL)**

Daniel graduated with a degree in Zoology with Animal Behaviour from the University of Wales. Since then he has worked at some of the largest rescue and rehoming charities in the UK, most recently working as a behaviourist and trainer for Dogs Trust before becoming the Behaviour Officer with Cats Protection. As Behaviour Officer Daniel works with feline behaviour cases of all natures alongside educating the sector and the public about feline behaviour and welfare. Daniel recently completed a Masters in Animal Welfare Science, Ethics and Law.



news

Keep up-to-date with Cats Protection



Vanessa Howie gains MSc

After three years of juggling studying alongside working as the Head of Clinical Services for Cats Protection and family life with two young children, Vanessa Howie has successfully gained an MSc in International Animal Welfare, Ethics and Law from the University of Edinburgh.

Vanessa used the opportunity to carry out a research project on a topic that was very close to her heart. With a dissertation that was titled 'Identifying the indicators for assessing shelter cat welfare using the Delphi method', she gathered expert opinion to find out which welfare indicators were considered the most

important to include in a welfare assessment tool for individual shelter cats. After successfully carrying out a two-round Delphi consultation, Vanessa was able to create a list of the top 20 welfare indicators to include. This research has provided a valuable starting point for a follow-up study to further develop a practical, everyday welfare assessment tool to help improve the quality of life of cats living in shelters around the world. The most surprising finding from the research was how highly the resource-based indicators ranked for overall importance for inclusion, compared to the animal-based indicators. Vanessa is hoping to find the time to publish her research in the near future.

Young Vet Network talks

Two of Cats Protection's Field Veterinary Officers, Lucinda Alderton-Sell and Alison Richards, gave a webinar hosted by Sussex Young Vet Network on 10 November.

You can find more information at www.bva.co.uk/your-career/young-vet-network/

The talk explores shelter medicine principles and how these are relevant in both a charity and private practice setting: from dealing with diseases more common in multi-cat households to taking a pragmatic approach to case management. It also gives some background on the work Cats Protection does and how we are able to support vets working with cats in Cats Protection care.

CATS report

Our CATS (Cats and Their Stats) 2020 UK report is now available! We interviewed over 10,000 cat owners and non-cat owners and the fascinating results are in.

Key stats show that there are 10.2 million owned cats in the UK and nearly one in four households own a cat. Top ranking names are Bella and Bobby, almost half of the UK's owned cats are aged seven or older, 87% of owners agreed that their cats bring joy...and this is just a few of the stats within.

The report has been digitised and there are downloadable pdf versions for the UK, Wales, Scotland and Northern Ireland below.

Please share the report and any of the statistics within it. Use CATS 2020 for all things cat!

www.cats.org.uk/stats



Look out for the
next edition of

CP Clinic

coming

Spring 2021



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The feline magazine from Cats Protection for veterinary professionals