

Clinic

The feline magazine from Cats Protection for veterinary professionals

Behaviour

Clawing furniture – how to successfully redirect scratching behaviours in the home

Medicine

Anaemia –
treatment concepts

Surgery

Case study – a simple surgical approach to treat a collar injury

Anthrozoology

What's in it for the cat?



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The conference will take place virtually. Please keep an eye on the 'For vets and nurses' section on our website for further details.

www.cats.org.uk/cat-behaviour-conference



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Meet the editor



Sarah Elliott
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Hello, and welcome to your new edition of *Clinic by Cats Protection*! I'm Sarah and I'm delighted to introduce myself as your new Editor for the magazine.

I love that this magazine is feline-focussed and encompasses all aspects of cat welfare, behaviour, medicine and surgery – all from a charity perspective. I'm really excited to take this magazine forward, attracting as many new readers and contributors as I can along the way!

I've been working for Cats Protection for just over six years now, initially as a Field Veterinary Officer and now as the Central Veterinary Officer based at the headquarters at the National Cat Centre. I am an RVC grad, who initially worked in private practice until a job at the PDSA ignited my interest in the charity sector. Cats Protection gave me the opportunity to combine a life-long love of cats alongside charity work and that ticked all of the boxes for me! My role here sees me providing veterinary advice for the charity's network of around 210 branches and 37 centres. I help to develop veterinary policies and protocols and I really enjoy speaking to the vets overseeing the clinical care of Cats Protection's cats across the UK. In addition to editing this magazine, I also contribute to Cats Protection's long-standing public-facing publication, *The Cat* magazine.

Clinic by Cats Protection began as the *CP Newsletter* originally, before it was rebranded in 2009. Over the years the magazine has stood alone as the only publication in the UK to be solely focussed on the feline charity setting, covering medicine, surgery, welfare and behaviour. *Clinic by Cats Protection* has always been dedicated to offering reliable, evidence-based information with a cost-conscious bias and with cat welfare at its heart. Because of this, the magazine has remained as relevant as ever for those working directly in a charity or shelter setting as well as for the budget-conscious private practitioner.

Looking ahead, I'd like to welcome as many new contributors to *Clinic by Cats Protection* as I can – please look out for a call for articles in this edition and please don't be shy in coming forward! Also, I'd like to let you know that this will be the penultimate edition for paper copies, as the magazine moves to a solely digital format later in the year. It's free to sign up for your digital copy of *Clinic by Cats Protection* – all you have to do is email CPClinic@cats.org.uk

Wishing you a very warm welcome to the 2021 spring edition!

Treatment concepts for feline anaemia

The treatment of feline anaemia can be broadly classified into both supportive and specific, the latter of which is clearly dependent on the underlying cause. While it is beyond the scope of this article to discuss the treatment of every singular cause of anaemia, some common disease presentations will be considered. As was discussed in the first part of this article (published winter 2020), having established a definitive diagnosis, the relevant and appropriate treatment can commence.

Blood transfusion

The need for a supportive blood transfusion will be dependent on two factors. Firstly, the magnitude of the anaemia and secondly, the rate at which it has formed and how the body has been able to compensate. A slow and gradual onset anaemia will be well tolerated until severe. This is due to both the cat's ability to behaviourally adapt its activity and lifestyle, while simultaneously increasing their heart rate and physiologically altering the haemoglobin structure.

A cat with either severe anaemia (PCV <12%), rapid onset anaemia, or those cats who are either collapsed/weak/show respiratory signs because of their anaemia, are all cases that will benefit from a transfusion.

Given the poor availability of feline blood donors in first opinion practice, it is vital that before performing a blood transfusion a reasonable medium to long-term prognosis should be expected for the anaemic cat. A regenerative anaemia will have a potentially better outlook and prognosis than say, a non-regenerative anaemia secondary to advanced bone marrow disease. It is questionable and possibly unjustifiable to allow a cat with a terminal illness (such as neoplasia, FeLV infection or myelophthisis) to receive more than one blood transfusion, particularly in terms of risk to the donor, which is not negligible. Such risk relates to volume depletion of the donor, who may potentially have undiagnosed or pre-clinical disease such as occult cardiomyopathy or chronic kidney disease.

It may however, be acceptable for a cat with suspected bone marrow disease to receive a blood transfusion ahead of a planned GA for a diagnostic bone marrow biopsy. A pre-procedure transfusion in such circumstances will likely improve patient stability and survival while under the anaesthetic. Staff cats, where available, have historically often been used for this role, or sibling cats within a household. Referral centres may also offer additional sources of blood and blood products.

Due to the presence of naturally occurring feline RBC antibodies, donor and recipient cats must be blood typed ahead of transfusion to ensure compatibility. Where possible, a cross match should also be performed to check for any additional, newly recognised erythrocyte antigens such as MiK. Auto-agglutination within the crossmatch suggests a transfusion reaction will occur. Blood type A remains the most common group within the UK, however blood group prevalence will be dependent on both breed and geographical distribution. For full and thorough details regarding practical blood transfusion, the reader is directed to the BSAVA Manual of Feline Practice.

Blood products may become increasingly available in the future for cats (as they are in dogs), and would offer more tailored therapy. For example, fresh frozen plasma would provide a source of coagulation factors as maybe required for cats with liver disease or rodenticide toxicity. >



Figure 1: Post blood donation, the donor cat should receive an equivalent volume of crystalloid fluid (as that donated) and be allowed to recover, while continually monitored, in a quiet and stress-free environment. Credit: Rebecca Martin



General supportive treatments

Additional supportive measures for an anaemic cat would include avoiding stress (such as that experienced within the clinic), given this will act to increase oxygen requirements. Correcting for any underlying fluid or electrolyte deficits is also desirable to optimise patient care. While fluid therapy may act to 'dilute' the PCV further, it will not affect the haemoglobin level, and as such, is unlikely to detrimentally influence the oxygen carrying capacity of blood.

Of particular note with administration of a blood transfusion (or any aggressive fluid therapy) is the risk of volume overload. This exists due to the haemodynamic compensatory responses that have occurred during chronically severe anaemia. If either whole blood or crystalloid fluids are administered too rapidly to a chronic or severely anaemic cat, congestive heart failure may result. Cats with an underlying (or undiagnosed) cardiomyopathy or renal disease are at greatest risk.

Anaemia due to haemorrhage

In an anaemia caused by haemorrhage, blood loss should first be controlled where possible. This may be obvious if associated with trauma or external losses are present, yet may be harder to confirm if originating from the GI tract. If GI losses are suspected, endoscopy may be warranted to visually examine the mucosa of the GI tract and to obtain biopsies for histopathological examination. Neoplasia, IBD and ulceration secondary to NSAID use are all possible causes of GI haemorrhage in an adult cat and once diagnosed, can usually be medically managed.

Body cavity effusions or masses causing blood loss should be picked up on thoracic and abdominal imaging. Persistent urinary blood loss is unlikely to cause anaemia.

Anaemia due to haemolysis

IMHA should where possible be determined as either primary or secondary, based on testing described in the first article. By elimination of the common causes of secondary IMHA (where treatment would address the underlying cause or disease), treatment for primary IMHA can be commenced.

Specific therapy for primary IMHA involves glucocorticoids at immunosuppressive doses acting to reduce the inappropriate destruction of RBCs. Oral prednisolone given at 2-4mg/kg per day is advised while monitoring the haematological response. Once the PCV is stable within the low normal range (or above), titration of the dose can begin. Practically, a dose reduction of steroid by 25% every three to four weeks, having ensured remission is first sustained, is appropriate. Once doses have reached physiological levels (0.25mg/kg prednisolone per day) therapy can be stopped and the response subsequently re-assessed.

If steroids are either inadequate on their own, or unsuitable for use in a particular individual, alternative suitable immunosuppressants such as chlorambucil, cyclosporin or cyclophosphamide can be used. Combination therapy may sometimes be required for PRCA. With this condition, effective control of the immune mediated attack of RBC precursors within the bone marrow may take weeks.

Complications of IMHA, such as PTE or DIC, seem fortunately rare in cats. The prognosis depends on both the presence of any underlying disease and upon the response to treatment.

If a non-immune mediated cause of haemolytic anaemia is suspected, removal of any known exposure to oxidative or medicinal toxins should occur. >

Feline infectious anaemia (FIA)

The most pathogenic species remains *Mycoplasma haemofelis*, yet the most commonly diagnosed is *Candidatus Mycoplasma haemominutum*. This latter species may not cause clinically significant disease however, unless co-infection (such as FeLV) is present. It follows therefore, that if a cat is found to be significantly anaemic and only positive for this particular organism, a search for a predisposing underlying condition should be undertaken.

The third cause of FIA, *Candidatus Mycoplasma turicensis*, appears also to behave with less pathogenicity.

Traditionally, doxycycline at 10mg/kg SID for at least 21 days (and up to 42 days) was prescribed, with consideration to ensuring that the medication was appropriately swallowed/washed down afterwards to reduce the risk of oesophageal stricture formation. Specialised compounding laboratories are now able to provide doxycycline as a monohydrate paste, which is preferable given this formulation is less likely to cause oesophagitis. Despite appropriate treatment and apparent recovery with doxycycline however, some cats may remain sub-clinically affected with persistently positive PCR testing longer term. Some authors have questioned the need to treat the lesser two pathogenic species and have noted that they also may have a variable response to any treatment.

Fluoroquinolones are potentially more efficacious than doxycycline at clearing *Mycoplasma* infections. Their safety is improved when either marbofloxacin (2mg/kg SID) or pradofloxacin (5mg/kg SID) are chosen over enrofloxacin. Monitoring the haemogram and the quantitative PCR level should reflect an improving trend with treatment whichever antibiotic is chosen.

Given fleas have been implicated in transmission, adequate flea control should be maintained and consideration given to reducing inter-cat conflict, which may increase the risk of direct blood borne transmission (another considered route of infection).

Prednisolone at 2mg/kg/day may be required to control the immune mediated component of the disease. A good prognosis exists for recovery albeit this is compromised if co-infection with FeLV is present.

Anaemia of bone marrow origin

The most 'treatable' of all bone marrow disease is (non-FeLV associated) PRCA. Treatment has already been discussed above, and essentially involves one or a combination of immunosuppressive drugs. A slow clinical response is typically seen and not infrequently the PCV may only return to a low normal level.

For all other bone marrow disease, a FeLV PCR test should have been performed on a bone marrow biopsy as part of the diagnostic work-up. FeLV has significant causal links to pathology within the bone marrow that include MDS and myelophthisis. Additionally, its presence confers a worse prognosis in any given case.

Unfortunately, many bone marrow diseases (excluding drug reactions) are poorly responsive to therapy and have poor prognoses associated with them. Supportive blood transfusions, corticosteroids (for an immune mediated component of anaemia) and antibiotics (for any leucopaenia) may be the only viable treatments. Survival times are typically short and the quality of life should be borne in mind.



Figure 2: A blood donation in progress. Typically, around 10ml/kg of blood is donated and an equivalent volume of crystalloid fluid provided back to the donor over a two to four-hour period. Note the patient sedation. Credit: Rebecca Martin



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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).

CKD and anaemia of inflammatory disease

As mentioned in the first article, many cats with end-stage CKD become anaemic. Such anaemia is multifactorial in nature, albeit the largest contributing factor is EPO deficiency. It follows that replacement of EPO (using erythrocyte stimulating agents ESAs) alongside minimising blood loss (GI bleeding and frequent blood sampling) is paramount. H2 receptor blockers or sucralfate can be considered, alongside use of the least antigenic human form of ESA available darbepoetin alfa. This should be considered in cats with a PCV of persistently less than 20% or when quality of life is affected.

Weekly injections of 1ug/kg darbepoetin SC are required until the PCV enters the low end of the reference range, at which point injection frequency is reduced to the lowest effective dose, typically q2-3weeks. Reticulocyte counts can also be monitored alongside the patient's PCV. The treatment works well albeit consideration should be given to the most problematic of all side effects, antibody production against the darbepoetin molecule (recognised by the cat's immune system as a foreign particle). If formed, these antibodies are capable of cross reacting with the cat's endogenous EPO – risking a severe, life threatening RBC aplasia. Recovery can occur, but typically takes months. Fortunately, the development of such antibodies with darbepoetin is rare and considerably less likely than with former ESAs.

An additional side effect of ESAs is induced hypertension. Regular monitoring of BP is required for all cats on this treatment. Potentially, local or systemic reactions and seizures may also be seen.

Iron dextrans (50mg per cat) at the start of therapy with ESAs, and repeated monthly if required, should also be supplemented. This is because the rapid increase in erythropoiesis with the use of ESAs can lead to the use of large amounts of iron. If not supplemented, this may result in an iron deficiency anaemia. Failure of an anaemia to respond to this regime should prompt the clinician to search for additional disease processes. **C**



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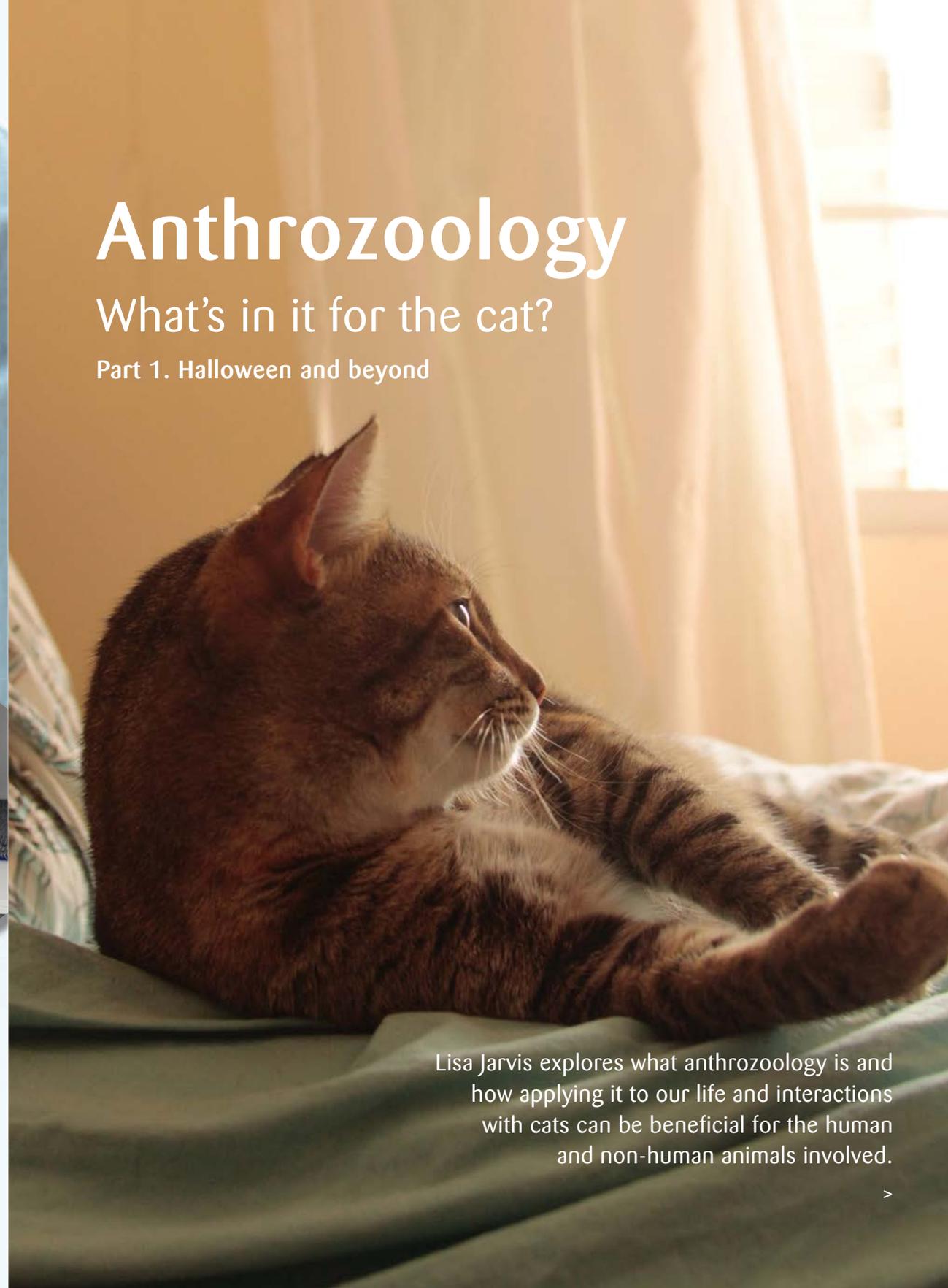
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Anthrozoology

What's in it for the cat?

Part 1. Halloween and beyond



Lisa Jarvis explores what anthrozoology is and how applying it to our life and interactions with cats can be beneficial for the human and non-human animals involved.



Anthrozoology

Anthrozoology simply defined is the dynamic study of the interactions, attitudes to and relationships between human and non-human animals. Widening the definition out we also consider the current and historical roles in different societies and cultures. Anthrozoology has an inter-disciplinary approach that brings in participants from across social, behavioural and biomedical sciences and so provides a wide range of opportunities for research, learning and application (Hurn, 2012 and Herzog, 2020) from the academic to everyday life with non-human animals.

Cats and life with humans – what’s in it for the cats?

Although familiar and popular pets or companion animals, the recent Cats Protection CATS survey reported cats inhabit 23% of the UK’s 27.8m households, but how well do we know our feline friends?

As human-animals our thinking is often anthropocentric where we place our human wants, perspective and emotions before those of non-human others (Serpell, 1996). Look at this picture, what do you see? Best friends or two cats accessing a heat source? This article explores how being able to think of what might be in it for the cats may enhance their welfare.



Cats as bunnies, pumpkins or puddings

At the time of writing Easter is rapidly approaching. As with other human holidays or festivities, there are multiple opportunities to spend money on our companion animals that are far removed from the origins of the celebration should you wish to dress your cat up as the Easter bunny, a chick or lamb. Similarly, Halloween has now become big business across the Atlantic with an estimated annual spend of \$400 million in the USA, of that pet costumes count for over \$9 million, and in the UK expenditure on Halloween has overtaken Bonfire Night (Moneyfacts.co.uk). Online articles in October promoted the ‘10 best Halloween costumes for your pet 2020’ (Standard.co.uk) and included; spider, bat-wings, pumpkins and spooky collars. Prompting the questions, when and why did our celebrations become about dressing up animals?

So, what’s in it for the cats in being dressed up? One could argue that the dressing up of companion animals is recognition of them as part of the family, similarly with ‘traditional’ family Christmas portraits, but with no functional purpose it can also be viewed as anthropomorphic (Hurn, 2011) in reducing their animality, one step ever closer to a fur-baby perhaps? In 2018, the BBC’s *Newsround* website ran a poll asking whether Halloween pet costumes were ‘cute or cruel’ with 44% of respondents agreeing with the statement ‘no – pets already have their own coat’ and commenting negatively on the restrictive nature of pet costumes and the risk of overheating.

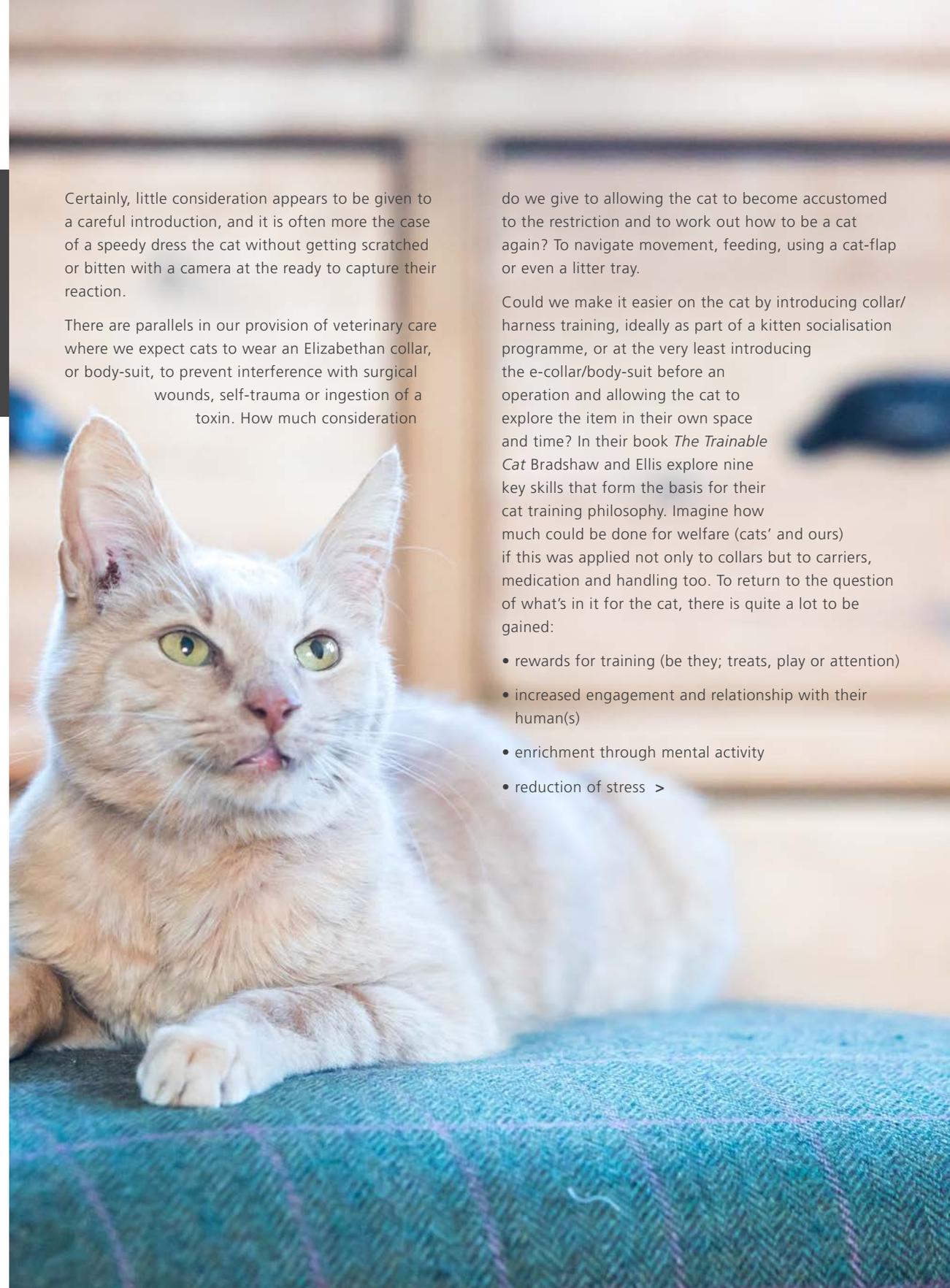
Certainly, little consideration appears to be given to a careful introduction, and it is often more the case of a speedy dress the cat without getting scratched or bitten with a camera at the ready to capture their reaction.

There are parallels in our provision of veterinary care where we expect cats to wear an Elizabethan collar, or body-suit, to prevent interference with surgical wounds, self-trauma or ingestion of a toxin. How much consideration

do we give to allowing the cat to become accustomed to the restriction and to work out how to be a cat again? To navigate movement, feeding, using a cat-flap or even a litter tray.

Could we make it easier on the cat by introducing collar/harness training, ideally as part of a kitten socialisation programme, or at the very least introducing the e-collar/body-suit before an operation and allowing the cat to explore the item in their own space and time? In their book *The Trainable Cat* Bradshaw and Ellis explore nine key skills that form the basis for their cat training philosophy. Imagine how much could be done for welfare (cats’ and ours) if this was applied not only to collars but to carriers, medication and handling too. To return to the question of what’s in it for the cat, there is quite a lot to be gained:

- rewards for training (be they; treats, play or attention)
- increased engagement and relationship with their human(s)
- enrichment through mental activity
- reduction of stress >



Our families and other cats

Do veterinary practices have a role in influencing existing and future cat guardians to think what's in it for their cats? Absolutely yes, but first we perhaps also need to consider the role we play in perpetuating the 'cats need friends' myth.

How many times have you heard your colleagues and friends in veterinary practice explain how they came to add another animal to their home, or have even done so yourself? You know; the wonky ones, the ones brought in for euthanasia, found as strays seriously injured or the tricky cases relinquished for treatment unaffordable to a client. Who better to scoop up the unclaimed, the unwanted, the rejected and those needing ongoing care than a veterinary professional? Perhaps concerns or complaints by the other humans sharing your home are heeded or ignored but how much consideration is given to the resident cats before another one is taken home? Does this then influence the advice we may give clients, friends and family when they ask about adding another cat to their home?

Cats and cats

If you spend any time on social media platforms (a questionable pastime I agree) a common theme can be seen of kittens/cats (or indeed puppies and dogs) being 'rescued' or bought and only after the event is advice sought on how to make their resident cat be friends with the interloper. These feline conflicts are a common occurrence as reported in research by Bradshaw, Casey and Brown which found that 50% of owners reported their cats sharing a home as either avoiding or fighting each other, arguably leading to prolonged stress and reduced welfare. The 2020 CATS survey reported that 37% of the 10,000+ respondents had more than one cat and that 45% of the cats were showing stress behaviours, one of which was fighting with other cats which was shown by 11%.

Cats are described as "the ultimate control freaks" by Bradshaw and Ellis and by taking a knowingly anthropomorphic view we can possibly start to comprehend the catastrophic effect the arrival of an uninvited house-guest may have. Do our experiences of the enforced prolonged confinement due to the COVID-19 lockdown, with family, friends or housemates, provide a greater insight in 2020? In her book exploring the ethics of keeping pets, bioethicist Jessica Pierce questions the welfare trade-off of being cared for against a loss of freedom, independence and control. Certainly cats voting with their feet and simply moving out is a known phenomenon although is often blamed on cats being cold, independent or fickle rather than recognising that something has gone wrong in their world to make them run away. A topic to return to in future articles with the shared experience of the restrictions of lockdown and loss of choice and control.

So, let's press pause and take the approach of thinking "What's in it for the cat?" before changes occur with the aim of improving the bond and welfare of all parties, human and non-human animals. **C**

References

- Bradshaw, JWS, Casey, R & Brown, S. (2012) The behaviour of the domestic cat. Wallingford, CABI; 2012
- Bradshaw, J and Ellis, S (2016). The Trainable Cat, Penguin, UK
- Daston, L, & Mitman, G (2005). Introduction: the how and why of thinking with animals. In Daston, L. & Mitman, G. (Eds.), *Thinking with animals: new perspectives on anthropomorphism* (pp. 1-14). New York: Columbia Univ. Press.
- Hurn, S (2011). *Dressing Down: Clothing animals, disguising animality?* *Civilisations*, 59(2), 109-124. Retrieved November 1, 2020, from www.jstor.org/stable/23346046
- Hurn, S (2010), What's in a name? *Anthrozoology, human-animal studies, animal studies or...?* *Anthropology Today*, VL - 26, IS - 3
- Pierce, J (2016). *Run, Spot, Run: The Ethics of Keeping Pets*, The University of Chicago Press, Chicago
- Serpell, J (1996). *In the Company of Animals: a study of human-animal relationships*. Cambridge University Press, Cambridge

Websites

- BBC *Newsround* 'Cute or Cruel? Should we dress up pets for Halloween?' www.bbc.co.uk/newsround/45951083, accessed 20.10.20
- CATS (Cats and Their Stats) first annual report, Cats Protection, www.cats.org.uk/stats, accessed 29.10.20
- Herzog, H (2020) *Britannia* blog: *Anthrozoology*, www.britannica.com/science/anthrozoology, accessed 19.10.20
- Macardle, L *Moneyfacts.co.uk* 'Halloween spending beats Guy Fawkes' www.moneyfacts.co.uk/news/money/halloween-spending-beats-guy-fawkes/, accessed 20.10.20



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• Case study

A simple surgical approach to treat a collar injury

Non-healing axillary wounds are a challenging presentation usually seen in cats following forelimb entrapment in a neck collar. In charity practice in particular, the management of these injuries must be carefully considered to ensure the fastest resolution, both for the welfare of the individual cat and due to the cost implications of prolonged or expensive treatments. This case report describes the successful closure of a chronic axilla wound using the technique of reconstructing the elbow skin fold (Brinkley, JSAP, 2007).

Case presentation

'Mo' was a stray female domestic shorthair of unknown neuter status, estimated to be six years old. After being taken into Cats Protection (CP) care she was seen by a private veterinary surgeon and found to have a large wound in her right axilla, presumed to have been caused by collar entrapment. There were no other significant findings. Following CP's protocols, prior to further treatment she was tested for feline immunodeficiency virus and feline leukaemia virus and she tested negative for both. Mo was referred to the National Cat Adoption Centre (NCAC) veterinary clinic following three months of unsuccessful management with cephalexin, meloxicam and topical silver sulfadiazine (Flamazine).

On presentation to NCAC, Mo was bright and alert, in good body condition. Her clinical examination was unremarkable apart from a large wound in her right axilla measuring 4cm x 3cm. The wound had matted fur surrounding it and a purulent discharge was present.

Treatment

The area was clipped and cleaned with dilute chlorhexidine solution, and antibiotic treatment started with clavulanate potentiated amoxicillin at the standard dose rate of 12.5mg/kg orally BID. An Elizabethan collar was used to prevent self-trauma. One week later the wound was looking healthier with no purulent discharge present and Mo was taken to surgery. The cat was positioned in lateral recumbency with the affected axilla uppermost. The wound site was filled with water-soluble gel while the surrounding skin was shaved, including the skin of the shoulder, lateral thorax and forelimb to the carpus, before surgically preparing the area. Surgical repair was performed in three stages. Firstly, scar tissue and granulation tissue was excised by sharp dissection ensuring all had been removed. Secondly, the skin surrounding the wound that had become adhered to the caudal and medial brachium, as well as the skin of the lateral thorax were undermined by blunt dissection. This recreated the original elbow skin fold. Thirdly, primary closure of the wound was achieved using two layers of sutures, simple interrupted sutures of polyglactin 910 (Vicryl; Ethicon) in the subdermal fascia and cruciate sutures of polyamide (Supramid; SMI) in the skin, ensuring there was no tension across the wound. Before closure, a 6mm penrose drain was positioned in the dead space, exiting through a ventral stab incision and secured in place with a single suture.

>

Antibiotic therapy was continued post-operatively with clavulanate potentiated amoxicillin 12.5mg/kg orally BID for seven days. Analgesia was provided with buprenorphine 0.02mg/kg IM as part of the premedication, and continued every eight hours post-operatively for two days. Meloxicam 0.05mg/kg was given orally post-operatively for five days. An Elizabethan collar was advised post-operatively, however Mo persisted in removing this but did not traumatise the wound. The penrose drain was removed after three days, and the wound healed without complications. The skin sutures were removed 14 days after surgery. Mo was successfully rehomed a few days later.



Figure 1: Axilla wound prior to surgical preparation. Credit: Cats Protection



Figure 2: Axilla wound, showing large amount of scar tissue and loss of elbow skin fold. Credit: Cats Protection



Figure 3: Closure of wound with penrose drain placed in dead space. Credit: Cats Protection



Figure 4: Picture demonstrates that after surgery point of the elbow now able to move in recreated elbow skin fold, allowing sutured wound to heal without tension or movement across the wound. Credit: Cats Protection

Discussion

There are many reasons why feline axillary wounds do not heal, including infectious agents and the presence of foreign material. Injuries which are long standing such as in this case have fibrous granulation tissue present with a poor blood supply. This combined with tension, friction and motion across the joint cause a significant delay to healing. In contrast to dogs, cats have well developed elbow skin folds with considerable elasticity. This allows the cat's elbow to lie within a pocket between the forelimb and the trunk when the forelimb is fully flexed. Following an axilla collar injury the elbow fold becomes adherent to the medial brachium and lateral thorax and is lost along with normal function. By recreating it, the wound can heal without tension and friction, which is often the cause of breakdown when either healing by second intention or simple closure of these wounds is attempted. Other options for closure include axial skin pattern flaps, combined with surgical wound drains or an omental flap as a biological drain. However these require more extensive surgical knowledge, which can be daunting for a first opinion practitioner. This is particularly relevant to charity cases, where such procedures may require referral and therefore be cost prohibitive.

There are other considerations for managing axilla wounds in cats in a shelter environment. In this case a considerable amount of time was spent attempting medical management. This is nearly always unsuccessful, and becomes not only costly with ongoing medication, regular veterinary examinations and housing, it also compromises the cat's welfare in terms of both health and behaviour due to the time spent in a shelter environment, undergoing repeated procedures and administering medication and wearing an Elizabethan collar. This case was resolved within two weeks of surgical intervention, which would have reduced the financial and welfare cost had this approach been attempted when the cat was first presented. As with all aspects of shelter medicine, every test and procedure needs to be carefully considered to ensure the charity's money is being spent in the best way to give an optimal welfare outcome.

In some cases this may differ from the way we would approach cases in private practice. For example, it would be ideal in all chronic wound cases to take swabs for bacterial culture and sensitivity, however using a pragmatic approach we opted to trial broad-spectrum antibiotics first and assess the response to treatment, with the knowledge that we could revert to swabs if there was no improvement. However, there are some diagnostic tests that will ultimately affect the overall outcome of a case and so are worth doing before treatment commences, such as testing for retroviruses that could significantly delay healing or contribute to a cat being unsuitable for rehoming. Another example of managing surgical cases differently in a shelter environment would be considering amputation rather than repair of fractures or severe wounds and degloving injuries. A shelter vet should always aim to use the treatment that will provide the fastest resolution to allow a cat to be rehomed as quickly as possible, so that the cat and the charity can benefit from both the welfare and financial cost savings. **C**

References

Brinkley, CH (2007) Successful closure of feline axillary wounds by reconstruction of the elbow skin fold. *Journal of Small Animal Practice* 48, 111–115



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How to reduce
**unwanted
scratching
behaviours**
in the home

How often in cartoons, memes and GIFs does the horror of a cat scratching a curtain, sofa or door frame occur? Scratching is often a big worry and a big problem for owners given that it typically affects expensive items. Despite your client's experiences with cats and scratching, this scratching behaviour that most cats display daily is an important natural behaviour which cats should be allowed to practice.

Everything has its purpose

As with almost everything cats do, there is a reason behind it. Scratching serves a multi-faceted function for cats, the first purpose being that it helps a cat look after their claws. Plucking on appropriate surfaces helps with claw maintenance and removes the older parts of the claw keeping them new and sharp.

A second important function of scratching for cats is that it can be used as a form of communication. When cats leave long vertical claw marks down a surface, these marks can be used as a visual communication tool that marks out the individual cat's territory, ergo, communicating with other cats in the area. However, it is not only visually that scratching allows cats to communicate. Cats communicate largely with other cats through scent; between cats' toes are scent glands that release the individual cat's scent while scratching. These visual and olfactory 'messages' that cats leave help mark out their territory and provide information to other nearby cats.

One final consideration as to why cats practice this behaviour is simply that it can help stretch their body out, particularly after sleeping. If you have ever observed a cat after a period of rest you will often notice that soon after they awake, they stretch up to one of the nearest tall objects or out on the floor where they can catch carpet with their claws.

Make it a good scratch

When clients ask: "How do I stop my cat from scratching?", they are asking the wrong question. Scratching is an important natural behaviour that every cat needs an appropriate outlet for. Provide the right outlet for the cat and not only will this make for a happy cat, it will also make for a happy owner. If your cat is scratching what you want them to, they will be far less likely to scratch what you don't want them to.

As most cats raise up to scratch down, it is important that they have a scratching post that is a suitable size for their height. Owners that have a scratch post left over from kittenhood should probably swap it out for a bigger model. The cat should be able to stretch their claws all the way up on the scratch post, without reaching over the top, and the post should be sturdy enough to bear all of the cat's weight. A flimsy scratch post that suddenly moves when the cat rests all of their weight against it may spook the cat and the cat will be less likely to come back to it and possibly find an alternative, less desirable scratching post (like your new curtains).

The type of scratch post provided for a cat can have a big impact on whether or not it is used. Consider that when cats scratch vertically to leave their visual markers, their scratch post needs to be able to facilitate this behaviour. Where possible, encourage owners to source a scratch post that has a vertical thread so that the cat can have full scratch satisfaction. Although many cats do engage with it, some cats do not enjoy horizontal thread on their vertical scratch post as it doesn't allow for this behaviour. Therefore, an owner may have a cat that they think doesn't like scratch posts, but it might just be the case that the cat has not been provided with the right kind of post. >



Location, location, location

It's not only about having the right post, it's about having it in the right location too. As cats do like to stretch and scratch when they wake up, having a scratch post next to their favourite bed area is highly recommended. Alternatively, if a client is worried about the cat potentially scratching on a new or important piece of furniture, place a desirable scratching post close to this area. A final place to consider putting another scratch post is near points of entry as a cat may be more likely to scratch near here.



Undesirable scratching

As frustrating as it can be when a cat scratches an area that the owner does not want them to, it is important not to shout at or punish the cat, primarily because the cat is exhibiting an important, natural behaviour. Secondly, punishing the cat for the behaviour can have longer lasting behavioural and welfare implications for the cat. That being said, we don't want the cat to continue practicing this behaviour. As discussed, finding the right scratch post, in the right location for the cat is important. Often owners think their cat won't engage with a scratch post but there may just be a problem with that specific one. Encourage experimentation with different scratching resources to find a suitable one which the cat will enjoy. Covering up the existing area being scratched or blocking access to it for a few weeks is important. Wrap a heavy plastic around the side of the sofa or chair leg. Think of it as driving to work; if you drive the same route to work every day and it works, there's no need to change it. It isn't until the road is shut for road works that you try a different route and that route may be quicker than your previous route so you stick to using the new route. If an owner does get a new scratch post that is great, but the cat still has access to their old scratching point, they might not have to try the new post because the old spot works great. The ultimate goal is to have a cat which is able to exhibit their natural behaviours on the scratch post while you the owner gets to rest assured that their new furniture isn't being shredded.

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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.



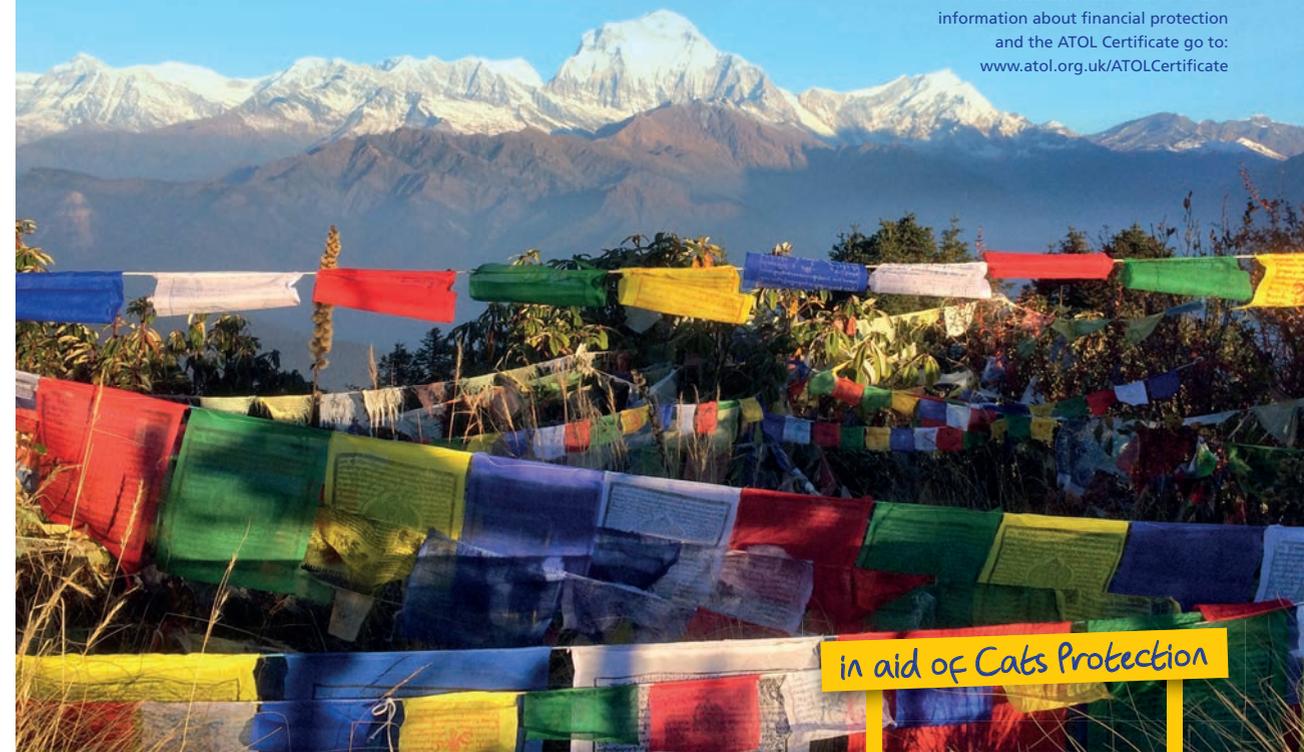
Nepal trek and tiger conservation

5 - 18 November 2022

This breathtaking charity trek climbs to the heights of the stunning Nepali Himalayas before visiting a tiger conservation project in the hope of spotting tigers in their natural habitat. Join Team Cats and put yourself to the test with this spectacular challenge.

To sign up or find out more, please go to www.cats.org.uk/nepal22 or email events@cats.org.uk or call Gina on 01825 741 960.

This trip is operated by The Different Travel Company (ATOL 6706) for Cats Protection (Reg Charity 203644 (England and Wales) and SC037711 (Scotland)). The Different Travel Company Ltd. is a company registered in England, number 05324268. All flights are financially protected by the ATOL scheme. When you pay you will be supplied with an ATOL Certificate. Please ask for it and check to ensure that everything you booked (flights, hotels and other services) is listed on it. Please see our booking conditions for further information or for more information about financial protection and the ATOL Certificate go to: www.atol.org.uk/ATOLCertificate



in aid of Cats Protection



news

Keep up-to-date with Cats Protection

Benefits of pre-pubertal neutering

CatKiND (formerly the CPCG) are pleased to share this brand new video resource discussing the benefits of pre-pubertal neutering. The link to the video is here: www.youtu.be/M5qvAa_iUJc

The key to preventing more unplanned litters of kittens being born is to make four-month neutering the 'norm' for pet cats.

A number of charities, including Cats Protection, are working together under the umbrella of the CatKiND to maximise the effectiveness of cat neutering through collaboration on research, joint projects and co-ordination of activities.

We have been working to provide a 'one-shop stop' for vets who are already neutering from four months or who are still neutering at six months but are keen to introduce four-month neutering. As part of this activity Cats Protection has launched the website KiND, and this site is about to go through a rebrand to become 'CatKiND'.

Cat Kind
Kitten neutering database



For more information on pre-pubertal neutering, including:

- links and articles to the scientific evidence supporting four-month neutering
- a suggested anaesthetic protocol in a quick reference format
- the public and veterinary Kitten Neutering Database
- resources to help you train your team

...visit www.kind.cats.org.uk

Compulsory microchipping of owned cats – campaign update

Cats Protection has consistently called for the microchipping of owned cats to be compulsory. In 2018, 62% of the cats taken in by Cats Protection's UK centres were not microchipped. This highlights the need for compulsory microchipping of owned cats to be introduced across the UK.

A big thank you to everyone who took part in Cats Protection's campaign calling for compulsory cat microchipping. The response was astonishing – over 22,000 emails were sent into the Westminster Government's consultation on cat microchipping in the first two months of this year.

The consultation has now closed and we anxiously await the outcome. In the meantime, to help us keep up the pressure, please consider signing and sharing our petition.

Sign our petition by visiting www.cats.org.uk/microchippingpetition



Write for Cats Protection Clinic magazine

We are on the lookout for contributors to provide articles or case reports for future editions of *Clinic by Cats Protection!*

We are looking for cat-based articles or case reports of no more than 1,000-1,500 words that would be helpful for the general practitioner. We are particularly interested in articles with photos, looking at treating cats on a limited budget or in a shelter environment using evidence-based medicine and surgery. We feature articles on feline medicine, surgery, welfare and behaviour and pay £250 for each article published.

If you would like further information, wish to submit an article, or would like to sign up to receive future digital copies of *Clinic by Cats Protection* free of charge, please do not hesitate to get in touch – we'd love to hear from you.

E: CPclinic@cats.org.uk • **T:** 01825 741991

Look out for the
next edition of

Clinic

by Cats Protection

coming
summer 2021



cpclinic@cats.org.uk

The feline magazine from Cats Protection
for veterinary professionals