

Current Affairs  
in Pet Health  
**2016**

THE  
**VET  
REPORT**

**CAT LIFESTYLES**

INDOORS VERSUS OUTDOORS

**VACCINATIONS**

WHAT IS RIGHT FOR MY PET?

THE PROBLEM WITH

**ANTIBIOTICS**

**ANAESTHESIA**

WHAT DOES IT INVOLVE?

**OBESITY**

A BIG PROBLEM FOR PETS



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# Welcome

The past two years have demonstrated the effectiveness of The Vet Report in delivering the messages it contains to millions of people through various media including print, online, social media, radio and TV. A readership of 48 million have become aware of the signs of Alabama Rot, whilst seven and a half million have learned about the daily threat that territorial aggression poses to people such as postal workers. The benefits of microchipping were demonstrated to 26 million people<sup>1</sup>.

This year's Report has taken a significant step on the journey towards our vision of The Report acting as the channel through which the veterinary profession can communicate with pet owners and the public about current affairs in pet health. We engaged with key professional bodies and charities, and surveyed small animal veterinarians across the UK to learn the key issues they felt were a priority. This produced a long list of topics, but there were a number which

received widespread support, and the content of this year's Report has been shaped by this information. To maintain the high quality of the information presented in The Report we have worked with authors from organisations such as PDSA, International Cat Care and Northwest Surgeons.

We hope that you find this year's Vet Report informative and useful and, as always, if you have any ideas or suggestions for what you would like to see in future editions please contact us at [editor@vetreport.co.uk](mailto:editor@vetreport.co.uk).

Kind regards

**Dr Huw Stacey**  
**BVetMed DipAS(CABC) MRCVS**  
**Director of Clinical Services**



- 03 The Antibiotic Problem
- 13 Cat Lifestyles
- 23 Obesity
- 39 Vaccination
- 49 Anaesthesia
- 61 Microchipping Update
- 69 Alabama Rot Update
- 72 Acknowledgements

References 1. Alabama Rot, Territorial Aggression and Microchipping PR Campaigns Precise Data (2016) Bugler Smith

# THE ANTIBIOTIC PROBLEM

“Whilst there are many patients who do need antibiotics to help them get better, there are too many instances where a pet is prescribed an antibiotic for a clinical problem that is rarely, if ever, caused by a bacterial infection”

**Professor Jill Maddison**

BVSc DipVetClinStud PhD FACVSc  
MRCVS SFHEA

Professor of General Practice, Royal  
Veterinary College, London

Jill is a graduate of the University of Sydney. She has been a clinician and lecturer at the Royal Veterinary College (RVC), London since 2002, where she is currently Professor of General Practice, Director of Professional Development and Director of Extramural Studies.

Jill is actively involved in teaching small animal medicine, clinical problem solving and clinical pharmacology to undergraduates at the RVC, and has lectured extensively around the world in these fields. She is also responsible for the RVC's Continuing Professional Development (CPD) programme.

Throughout her career, Jill has remained in touch with the realities of working in private general and specialist practice. She still consults at a local veterinary practice and at the RVC's first opinion practice, the Beaumont Sainsbury Animal Hospital.



Jill has published  
**MORE THAN 60**  
research papers

# PRESCRIBING OUR PETS ANTIBIOTICS

Antibiotics are defined as drugs which kill or inhibit the growth of bacteria. Bacteria are microscopic, living organisms that occur everywhere and live on, in or around every living and non-living thing. They play a hugely beneficial role in our world.

A single, but very important, example is the role that bacteria play in the intestine (called the microbiome). The interaction of these bacteria with the immune system is very important in the development and regulation of the immune system. It is now believed that disturbing this bacterial population through the use of antibiotics can cause health problems, including inflammatory bowel disease and other immune disorders.

Of course there are also bacteria that cause disease – the 'bad bugs'. They can cause illness ranging from minor to life-changing or

life-threatening, and it is for these infections that antibiotics are prescribed. The purpose of using antibiotics is to help the body eliminate a bacterial infection, without causing toxicity to the patient. The key word here is 'help'.

Antibiotic therapy is most effective when it assists the natural defence mechanisms, rather than acts as the sole means of infection control. It's difficult to manage infections in pets who do not have a fully functional immune system, e.g. the very young, those with infections such as FIV (feline AIDS) or those being treated with certain cancer therapies.



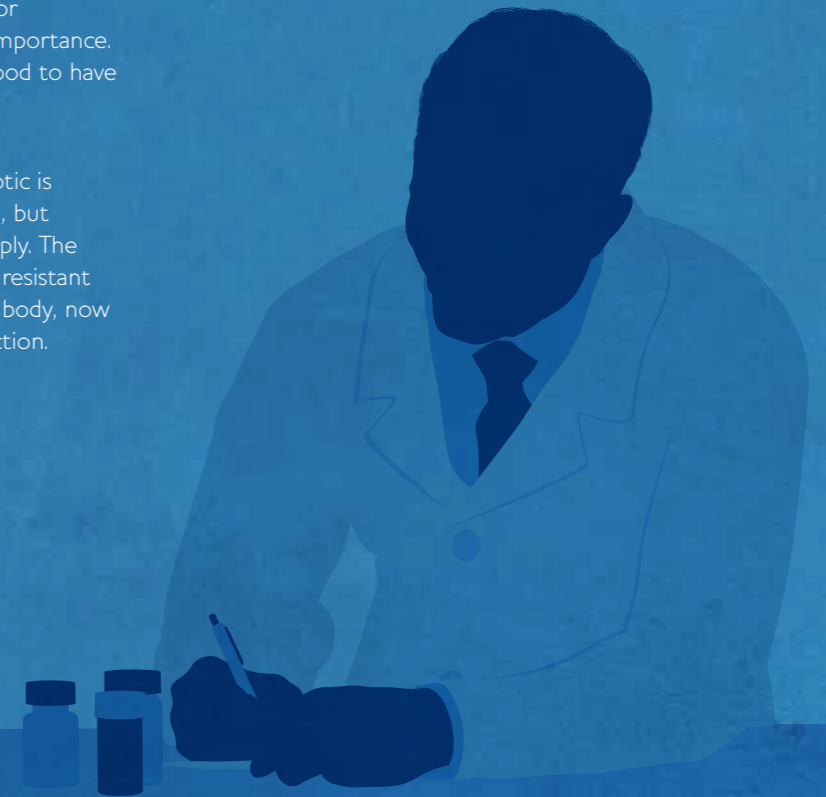
Vets must take into account some important considerations when prescribing or administering antibiotic treatment. Antibiotics either kill bacteria (bactericidal antibiotics) or prevent their growth (bacteriostatic antibiotics). When bacteriostatic drugs are used, they stop bacterial growth allowing the body to kill off the infection itself; the antibiotics work alongside the body's defences.

There are a number of ways in which antibiotics kill bacteria or hinder their growth depending on the drug. Some antibiotics need to be in the bloodstream and at the site of an infection for all of the treatment time (time-dependent), but for concentration-dependent antibiotics, time is of less importance. These need to achieve a high concentration in the blood to have maximum impact.

Problems can arise if, for whatever reason, the antibiotic is only partially effective. The weakest bacteria are killed, but the stronger ones, who can fight off the attack, multiply. The bacterial population now contains stronger and more resistant bacteria than it did before treatment started and the body, now working alone, may not be able to eliminate the infection.



The goal of antibacterial therapy in any species is to help the body eliminate a bacterial infection without causing toxicity to the patient



# WHAT FACTORS MAKE TREATMENT LESS EFFECTIVE THAN IT SHOULD BE?



Prescribing the wrong antibiotic for the infection



Giving an inappropriately low dose. For example, skin infections require higher concentrations of most antibiotics than bladder infections do



Failure to use the antibiotics exactly as directed by the vet. This is especially important for time-dependent antibiotics



Stopping the treatment too early, before there has been full resolution of the problem



Failure to recognise and treat concurrent problems that will hamper the antibiotic's ability to kill or slow the growth of the bacteria. For example, persistent infections may be perpetuated by the presence of a foreign body, this could be a grass seed in a soft tissue infection or a stone in a pet's bladder, leading to recurrent urinary tract infections



## ANTIMICROBIAL RESISTANCE

Resistance of bacteria to antibiotics (antimicrobial resistance or AMR) is becoming an increasingly serious health concern. We have been warned by bodies including the World Health Organisation<sup>1</sup>, that resistance to antibiotics is increasing and in the future we may enter an era where there is no effective treatment for serious bacterial infections.

This will mean relatively minor infections, that are currently easily treated, may kill in the future because there is no drug available to treat them. In addition, overuse of antibiotics can result in the emergence of drug-resistant infections in pets, and drug-resistant bacteria may be transferable from pets to owners and vice versa.

The responsibility to prescribe antibiotics appropriately is therefore crucial. It is also helpful if vets' clients have an understanding of why such caution is important.



The majority of kennel cough cases are caused by viruses, not bacteria, and will resolve **IN 5-7 DAYS** regardless of treatment

## HOW DOES RESISTANCE OCCUR?

It is generally accepted that bacterial resistance is increasing in human and veterinary health because antibiotics are being prescribed to too many patients who do not need them. Up until around the 1990s, new antibiotics had been developed as the older ones became less effective. However, there have been no truly new antibiotics developed for quite some time, which means we have to make the most of, and preserve the value of, the antibiotics we already have.

The difficulty vets face is in being certain whether a patient does or does not have a bacterial infection. They may be concerned that if they don't prescribe an antibiotic to a patient who does turn out to have a bacterial infection, then that patient could be more unwell than they might have been, or could even die. However, whilst there are many patients who do need antibiotics to help them get better, there are too many instances where a

pet is prescribed an antibiotic for a clinical problem that is rarely, if ever, caused by a bacterial infection. Common examples include a dog vomiting or having diarrhoea after raiding the bin, or eating something disgusting in the park; and the vast majority of cats younger than ten years old and showing signs of cystitis – which is most commonly stress related. Other common situations where antibiotics are overprescribed are in dogs with kennel cough infection, and where antibiotics are used routinely for 'clean' surgeries, such as neuters, and treatment of superficial wounds.

References: 1. <http://www.who.int/mediacentre/commentaries/superbugs-action-now/en/>

Clinical problems such as vomiting, diarrhoea, cystitis in cats and various wounds can clear up or heal regardless of, or even despite, treatment.

This can make it seem as though a pet has got better because it was given antibiotics, and the cycle of inappropriate prescribing continues. Antibiotics don't often cause particularly obvious side-effects so it is tempting to prescribe them 'just in case', but this thinking is flawed. The impact of overuse on an individual animal, and on the population as a whole, may be subtle, but it still exists. In time this could lead to more bacteria becoming resistant to antibiotics.

Antibiotics can without doubt be life-saving. They are essential for the successful management of many bacterial diseases. However, many relatively minor infections can be treated and cured without involving antibiotics. Use of appropriate medicated shampoos to treat superficial skin infections, drainage and flushing of uncomplicated cat bite abscesses, and use of ear cleaners to treat mild ear infections, are all examples of where a bacterial infection can be managed successfully without antibiotic treatment.

Some bacterial infections can actually be made worse through inappropriate use of antibiotics. In cases of intestinal infections with *Salmonella* bacteria, antibiotic therapy can prolong infection and increase the length of time the body takes to stop shedding bacteria.



In the next  
**10 YEARS**  
we will know far more  
about the bacterial  
world within us

One challenge facing vets is that clinical signs of bacterial or viral diseases can look similar. Viruses are not affected by antibiotics, so their use in a viral infection is not only a waste of time and money, but may also disturb the patient's normal bacterial balance in the gut and contribute to the development of drug-resistant strains of 'bad' bacteria.

Antibiotics are life-saving drugs and a post-antibiotic world is a very scary place to contemplate. It is up to all of us to recognise that they should be used carefully, thoughtfully and appropriately.

**Not every pet health problem can be fixed by antibiotics.**

If antibiotics are prescribed for your pet, please ensure you give them according to the instructions from your vet.



## CASE STUDY

**Daisy was an ex-racing Greyhound who had been adopted from a rescue centre by a lovely new owner. Nothing was known of her past, and she had a discharging wound on her left thigh that never seemed to heal up.**

When bacteria from the wound were analysed they were found to be Methicillin Resistant *Staphylococcus aureus*, or MRSA, commonly referred to as a 'hospital superbug', which is resistant to a wide range of antibiotics.

The obvious solution to this would be to find an antibiotic that the bacteria were still susceptible to and to treat them with that. However, an

X-ray of Daisy's leg revealed the real problem — at some point in her life she must have broken her femur and needed to have orthopaedic surgery and metal implants. Whilst the main implant, which had probably been a metal plate, had been removed, a broken piece of screw had been left behind in Daisy's leg. If an infection takes hold around a foreign object like this piece of metal, it is almost impossible for the immune system or any amount of antibiotics to clear it.

The treatment for Daisy's infection was to perform surgery to find and remove the broken screw. Once this had been done the wound healed, the infection cleared up beautifully and Daisy was left a much happier and healthier dog.

## CASE STUDY

**Flossy the Golden Retriever had a sticky, swollen, painful, infected ear that just wasn't getting better after a week of antibiotic ear drops. Her owner agreed that more needed to be done, and Flossy was admitted to the clinic for the day.**

Under general anaesthesia, Flossy's ear was thoroughly flushed out and swabs of material from her ear were taken for analysis. Looking at the samples under the microscope, her vet was suspicious that a bacterium called *Pseudomonas*

was involved. This was confirmed by the laboratory, which also tested which antibiotics the infection would be susceptible to.

Armed with this information, Flossy's vet was able to devise a tailored combination of antibiotics and ear cleaners that would tackle the problem. Treatment was necessary for several weeks, during which time Flossy had regular check-ups with her vet to make sure that progress was being made. On the last visit, her vet was able to confirm that the infection had finally cleared.



## CASE STUDY

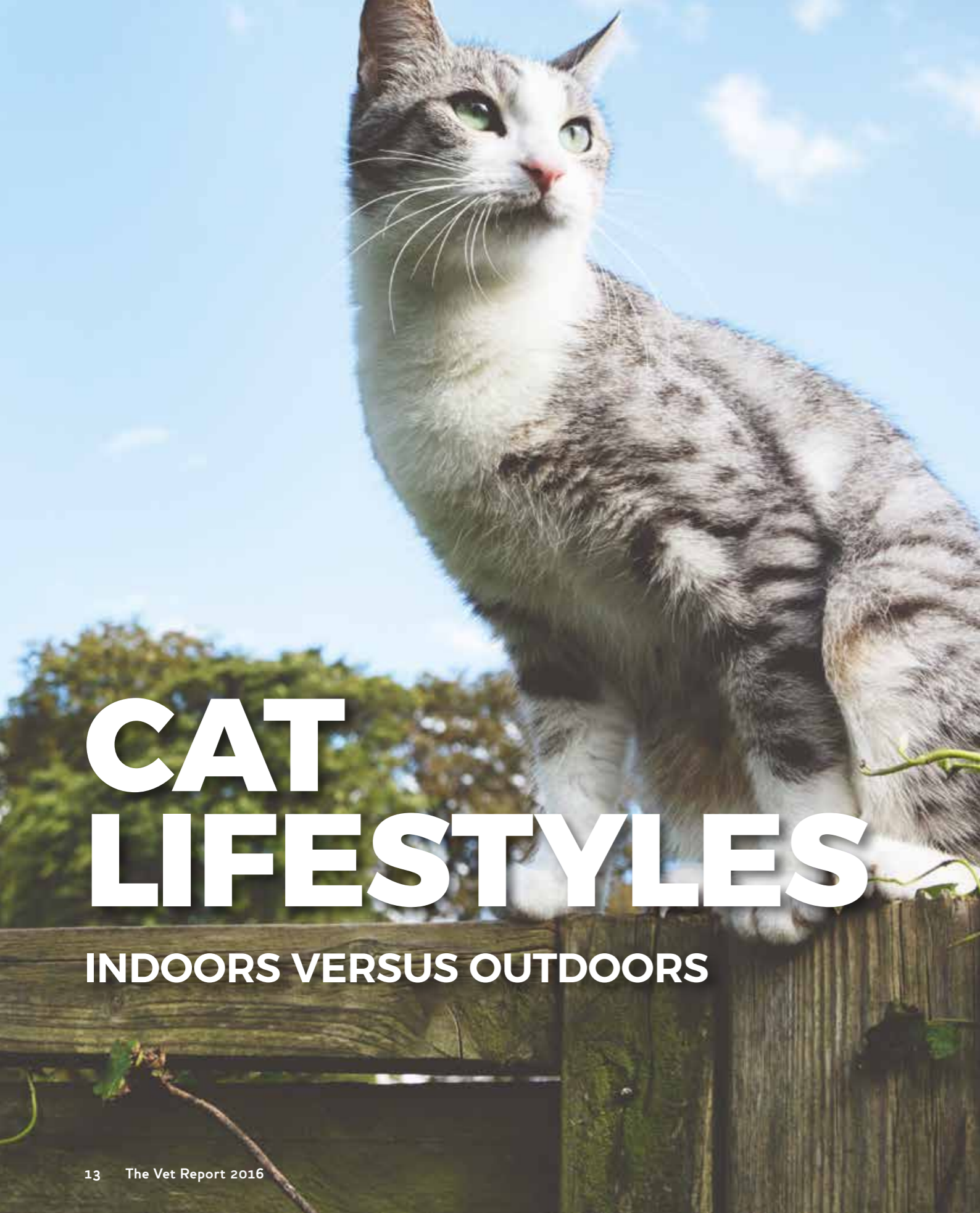
**Millie was an anxious little two-year-old cat. Although she had a cat flap she rarely chose to go out, and even the sight of the outside world seemed to worry her.**

One day her owners noticed that Millie seemed to have urinated on their bed, and on closer inspection the stain looked blood-tinged. Fearing that Millie had a bladder infection, her owners took her straight to the vet for a check-up.

After examining her, Millie's vet agreed that she did have an inflamed bladder, which is known as cystitis. Millie's urine was tested to rule out possible medical causes for her discomfort, and none were found.

In cats under about ten years old, cystitis is rarely caused by bacteria, even though antibiotics have traditionally been prescribed for it in the past. We now know that such cases are often caused by stress, and that the correct way to improve the situation is to prescribe pain relief for the short-term discomfort, whilst making changes to the cat's diet, environment and lifestyle to minimise stress and reduce the risk of recurrence.

Cystitis can recur, but with the right changes in place Millie has a good chance of having few further problems.



# CAT LIFESTYLES

## INDOORS VERSUS OUTDOORS

“ Keeping a cat successfully indoors requires a motivated owner who can provide opportunities for play, exploration and expression of natural behaviours ”

**Sam Taylor**  
BVetMed CertSAM DipECVIM-CA  
MRCVS  
RCVS Specialist in Feline Medicine



Samantha Taylor graduated from the Royal Veterinary College in 2002. She worked in a large referral centre at first, then moved to a first-opinion practice where her interest in cats led her to develop a dedicated cat clinic.

In 2005 Sam returned to referral practice. She obtained the RCVS Certificate in Internal Medicine the following year, and began a residency at Bristol University which was funded by International Cat Care, the global charity for cat health and welfare. Sam was awarded the European Diploma in Veterinary Internal Medicine in 2009. In 2011 she became a Royal College of Veterinary Surgeons (RCVS) Recognised Specialist in Feline Medicine.



Sam is a Distance Education Coordinator for  
**INTERNATIONAL CAT CARE**

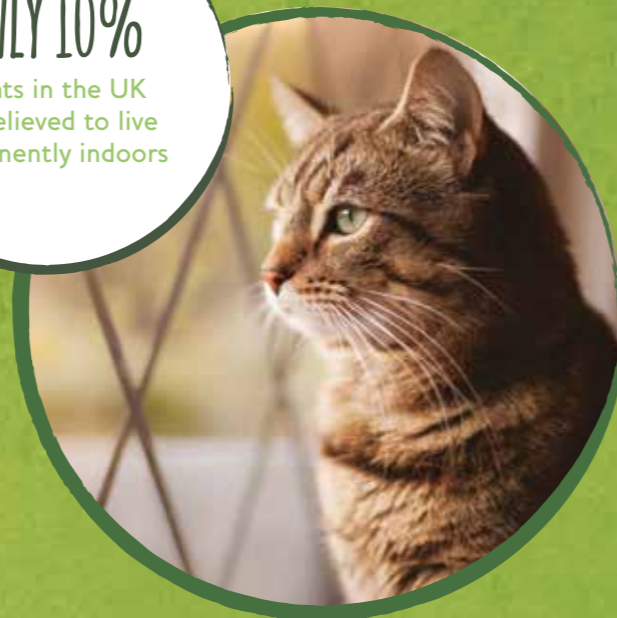


# INDOORS VERSUS OUTDOORS

Most cat owners in Europe allow their cats the freedom of the great outdoors while caring for, feeding and interacting with them when they return home. Until fairly recently, cats had to be able to get outside in order to relieve themselves.

The introduction of cat litter in the 1950s gave cat owners the choice of keeping their cats wholly indoors. This coincided with a gradual change in the cat's status from vermin catcher to companion; a greater value was placed upon the cat, and there was increased concern for the cat's health and welfare.

**ONLY 10%**  
of cats in the UK  
are believed to live  
permanently indoors



## WHY DO PEOPLE KEEP THEIR CATS INDOORS?

As city living becomes more and more common, cats living in high-rise apartments may simply not be able to get outdoors. Other owners may prefer to keep their cats indoors because of concerns for their physical safety; going outside may expose cats to threats posed by traffic and other animals. The risks to indoors-only cats, such as stress caused by sharing space with incompatible cats, or from boredom and frustration linked to the lack of opportunity for many natural behaviours like hunting and exploration, may be less easily recognised by owners. Choosing a cat's lifestyle can be a difficult decision and should be made according to the individual cat's home environment, dangers in the local area, physical health and temperament. This article discusses some of the pros and cons of both ways of keeping cats.

# WHAT ARE THE BENEFITS OF BEING ALLOWED OUTDOORS?

Given what we know about cats' highly evolved senses, many people feel cats should be allowed outside to express normal behaviours such as hunting, and marking and patrolling territory. We have a duty of care to allow cats the freedom to express normal behaviours, as defined in the Animal Welfare Act 2006. The many benefits of cats having outdoor access include:



**Regular exercise:** Hunting, climbing and patrolling territory all provide opportunities for exercise. Cats with outdoor access tend to be slimmer than their indoor counterparts, which puts them at a relatively lower risk of developing health problems such as diabetes and obesity



**Opportunities to satisfy behavioural needs:** Outdoor cats can scratch-mark territorial features such as tree trunks, and can choose where to urinate and defecate. They can also establish, mark and defend territory



**A larger home territory for cats from multi-cat households:** Cats are self-sufficient and territorial. Many behavioural problems are the result of being kept in close proximity to other cats. Outdoor access allows cats to get away from each other and to establish their own individual territories involving the garden and wider area (or to be able to timeshare space more easily)



**Ease of care:** Owners of a cat that goes outdoors to the toilet and to scratch, have less mess to clear up at home. Keeping an indoor cat, or cats, happy takes a lot of work. Cleaning out litter trays, and providing the mental stimulation and exercise the cat would get from going outside, requires time and effort from an owner



**More control:** A cat which has outdoor access has more control over its situation. Less confinement can lead to reduced frustration

# HOW RISKY IS IT TO LET CATS OUTDOORS?

Road traffic deaths are at their highest during a cat's **1<sup>ST</sup> YEAR OF LIFE**

The majority of accidents occur at night, and often just outside or very near a cat's home

Unneutered male cats are at relatively greater risk, presumably because they roam further



## ADDITIONAL RISKS & DANGERS OUTDOORS



**POISONING**  
although this can also occur in the home



**FIGHTS**  
with other animals (predominantly cats)



**PARASITES & DISEASE**  
catching these from other cats or animals



**LOST OR STUCK**  
for example getting shut in sheds or garages

If a cat survives its first year and learns about the dangers in its environment, it is very likely to live a long life of

**15 OR EVEN 20 YEARS AND BEYOND**

# KEEPING CATS WITH OUTDOOR ACCESS SAFE

If a cat is allowed outdoors there are many things owners can do to keep it as safe as possible. These include:

- **Neutering:** Neutered cats stay closer to home, so are less likely to cross roads or get into fights with other cats
- **Microchipping:** This simple form of identification has many advantages over a collar, which can be lost or result in injury should it get caught on a fence
- **Providing preventative healthcare:** Outside cats may have more opportunity for contact with infectious diseases and parasites, so should be regularly vaccinated, wormed and treated for fleas and ticks
- **Confining indoors at night:** Most road accidents and fights occur at night, so training a cat to come inside during the evening is always a good idea (see page 19)
- **Providing a safe, reflective collar:** Reflective collars can improve visibility in low light on roads, but the collar must be of the 'quick release' type in case it gets caught in a fence or hedge
- **Keeping the cat in the garden only:** This can be achieved by using cat-proof fencing designed to prevent a cat climbing out, or by building an enclosure in the garden. If a cat is to be confined to a relatively small area, then it is important to attempt to meet as many of its needs as possible within these limitations. The home and garden can be environmentally enriched to provide opportunities to play, hide, climb and perch, and owners should play with their cat to make sure the cat gets enough exercise and stimulation
- **Keeping the indoor environment secure:** Installing cat flaps which can be programmed only to open for cats wearing particular microchips will prevent unwanted cat visitors in the home and will ensure it feels safe for the cat who lives there



## TRAINING A CAT TO COME INDOORS AT NIGHT

If you keep your cat inside at night always provide a litter tray. If the cat isn't used to staying inside, then gradually introduce it to being indoors rather than simply changing the routine in one day. Practice getting your cat to come to you when called at night. Start in the house and offer a tasty treat as a reward if the cat comes to you. If the cat is not motivated by food, then the reward could be a game with a favourite toy. Gradually progress to practising this when the cat is in the garden, then further afield. Your cat will learn that when you call it at night, coming home is rewarding and it will be motivated to keep performing this behaviour. This technique can also be used to encourage cats indoors during times of higher risk, such as when traffic is heavy or during firework displays. See International Cat Care's YouTube video on training your cat to come when called, at <https://youtu.be/gcABqz47C10>



# AN INDOOR LIFE: CAN A CAT BE A CAT?

'Domestication' of the cat began approximately 13 million years ago. However, some would say cats are not truly domesticated, as they could survive without us and do not have a shared history with humans in the same way dogs do. Cats are quick and agile, and have excellent eyesight, hearing and sense of smell (even better than many dogs). Should these athletic hunters be confined to a house all day?

For a cat, scratching and urine marking are actually normal behaviours but, when expressed inside the home, these can become a problem for owners. Indoor cats are more prone to obesity, diabetes and other health problems, including lower urinary tract disease. The home is not without dangers: cats like to nibble grass, but indoor cats will instead chew flowers and houseplants. This can result in a cat being poisoned by toxic plants such as lilies.

Frustration and boredom are certainly more of an issue in indoor cats, and can result in inappropriate behaviours such as aggression, or house soiling. Confinement indoors with an incompatible cat can lead to chronic distress when the cats have to share physical space and resources, such as litter trays, beds and food bowls. Keeping a cat successfully indoors requires a motivated owner who can provide opportunities for play, exploration and expression of natural behaviours.

Nervous cats may find the outdoors daunting, and interactions with other cats outside may cause them stress. In 'cat dense' residential areas, these cats may actually choose to stay indoors, however they still need opportunities to express normal behaviours.

Cats who may actually choose to stay indoors still need opportunities to express normal behaviours



# KEEPING INDOOR CATS HAPPY

The main problem faced by the indoor cat is the lack of opportunities to display its wide range of normal behaviours. Considering the cat is a natural hunter, owners must be creative and provide toys and games to keep their cat mentally and physically stimulated. Areas to consider include:

- **Mimicking hunting opportunities**  
Cats are switched on to hunting mode by watching moving toys, so use feather toys, play mice and fishing toys to stimulate stalking and pouncing behaviour
- **Ensure you have enough resources**  
If you have two or more cats, make sure they don't have to share. Providing one litter tray per cat, plus one extra, and offering food and water in more than one quiet location can help avoid competition for resources
- **Make the environment interesting**  
Provide opportunities to climb, and use 3D space where cats can hide and play. For example, cardboard boxes with toys inside can be great fun
- **Make feeding more complex and challenging**  
Providing puzzle feeders can help with this
- **Provide cat grass**  
Cats like to nibble grass, so a tray of cat grass may reduce the desire to eat houseplants
- **The opportunity to scratch and climb**  
Scratching posts are essential and should be located in areas of the house frequented by cats and humans. Ensure they are stable and made of tough material
- **Cat-proof your home**  
Indoor hazards can be minimised by ensuring all flowers and houseplants are non-toxic and by keeping cleaning products locked away



Owners must be creative and provide toys and games to keep their cat mentally and physically stimulated

# CONCLUSION

Weighing up the pros and cons of the different lifestyle choices will help owners decide what is best for their cat. Whatever owners choose, there is agreement that if a cat has to stay indoors, then owners need to work hard to compensate for the stimulation the cat would have got outside.

It is better to opt for an indoor lifestyle for a cat right from the outset than to try to convert an outdoor cat into an indoor one. If confined, an outdoor cat is more likely to experience frustration related to denial of access to activities it used to relish.

While owners of indoor cats do not have to put up with the daily receipt of offerings from successful hunts, they must balance this against the indoor cat's lack of freedom to express its natural hunting behaviours. Providing alternative opportunities for the cat to practice these will help. Much will depend on the temperament of the individual cat and on the owner's circumstances. For further information on cat behaviour, health and welfare please visit [www.icatcare.org](http://www.icatcare.org).



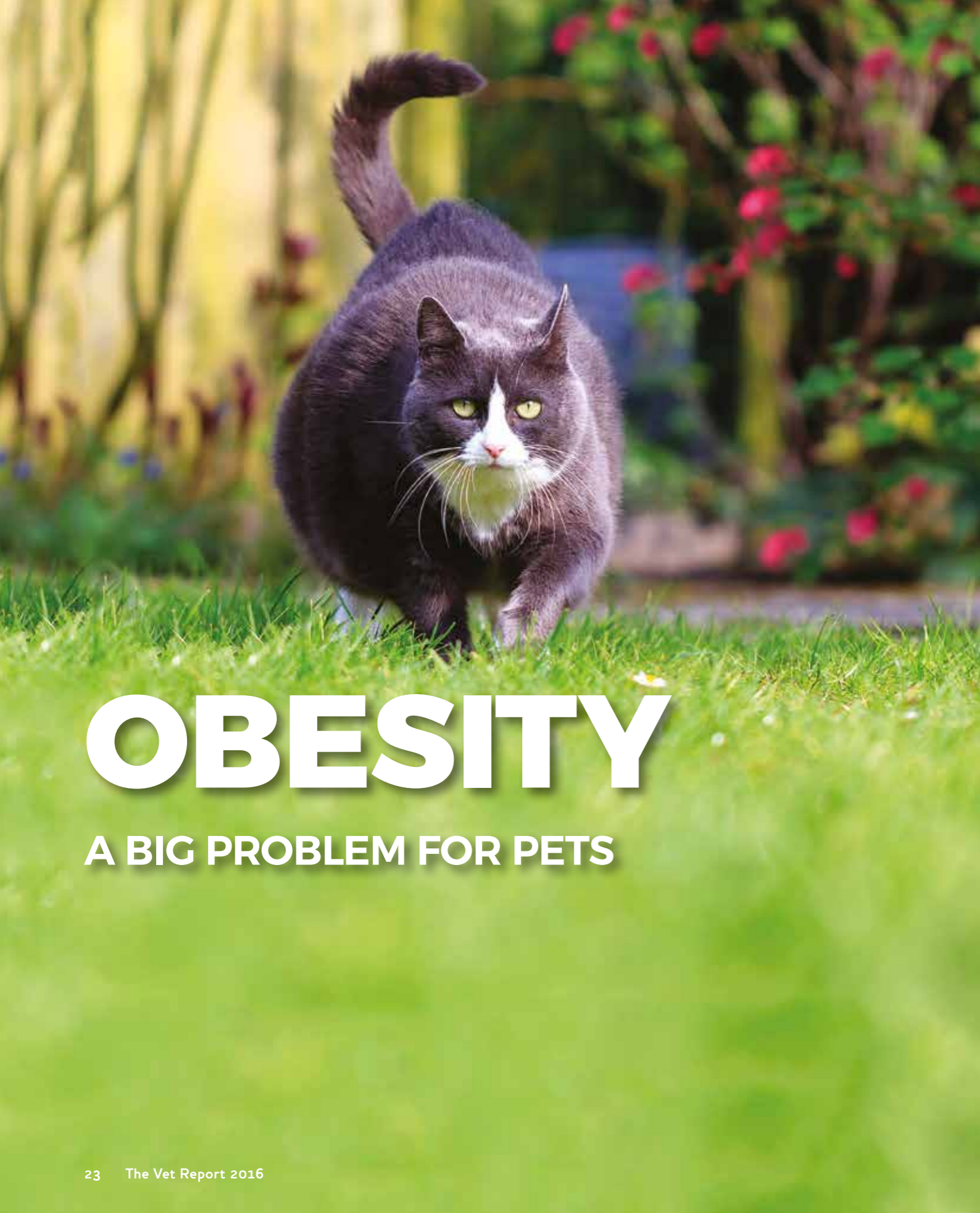
The benefits of keeping a cat away from possible dangers outdoors have to be weighed up against the possible negative effects on the cat's behaviour

## Further Information

For more information on indoor cats see [www.icatcare.org/advice/satisfying-needs-indoor-cat](http://www.icatcare.org/advice/satisfying-needs-indoor-cat)

American Association of Feline Practitioners (AAFP) and International Society of Feline Medicine (ISFM) Feline Environmental Needs Guidelines <http://jfm.sagepub.com/content/15/3/219.full.pdf+html>

ISFM Guide to Feline Stress and Health <http://icatcare.org/product/isfm-guide-feline-stress-and-health>



# OBESITY

## A BIG PROBLEM FOR PETS

“Overweight and obese pets are more susceptible to a range of associated medical conditions, including osteoarthritis and certain types of cancer”

**Sean Wensley**

BVSc MSc Grad DMS MRCVS  
Senior Veterinary Surgeon, PDSA



Sean Wensley is Senior Veterinary Surgeon for Communication and Education at the UK's leading veterinary charity, PDSA, and Senior Vice President of the British Veterinary Association (BVA).

Sean has contributed to animal welfare and conservation projects in East Africa, China, India, Europe and the Caribbean. He is an Honorary Lecturer in Animal Welfare at the University of Nottingham and a committee member of the Animal Welfare Science, Ethics and Law Veterinary Association (AWSELVA).

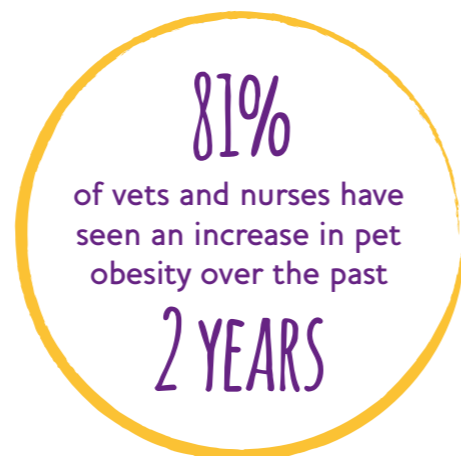
He holds a Masters degree in Applied Animal Behaviour and Animal Welfare.



Overweight cats are **3 TIMES MORE LIKELY** to develop diabetes

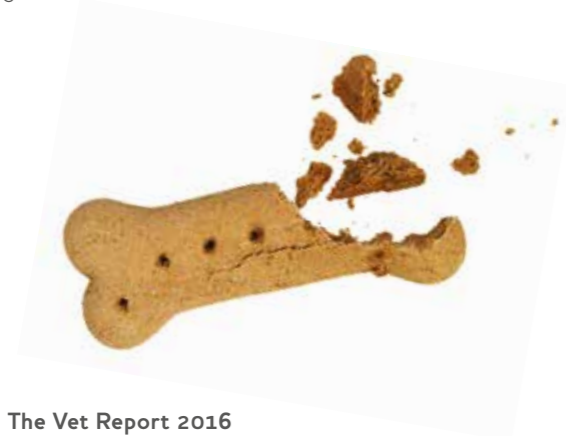
## THE VETERINARY PROFESSION REGARDS OBESITY AS THE TOP WELFARE ISSUE THAT NEEDS ADDRESSING

Obesity is currently one of the most serious welfare problems affecting pets, with an estimated one in three dogs, one in four cats and one in four rabbits considered as either overweight or obese. The PDSA Animal Wellbeing (PAW) Report, the UK's largest annual assessment of pet wellbeing, revealed that pet obesity is a major concern for vets and vet nurses, with 81 per cent stating they have seen an increase in levels of pet obesity over the last two years.



### FAT ISN'T FUNNY

The idea of obesity being an animal welfare problem may be surprising to some, but attitudes are now changing. It has always been the case that very underweight pets are viewed as animals with poor health and wellbeing, who have potentially received poor care (unless they have an underlying medical condition that is being investigated or treated). On the other hand, overweight pets have not always been viewed so critically, with some people finding them funny, or others describing them in positive ways, such as 'cute' or 'cuddly'. However, after recent awareness-raising initiatives such as PDSA's Pet Fit Club, public views are changing. Many people now recognise that overweight and obese animals, just like underweight pets, have poor wellbeing, which could potentially last throughout their life.



### WHY IS OBESITY A PROBLEM?

Being overweight mainly affects animals in one of two ways:

- First, just like in humans, overweight and obese pets are more susceptible to a range of associated medical conditions, including osteoarthritis and certain types of cancer. The risk of diabetes in overweight cats is, for example, three times greater than in healthy-weight cats. Overweight rabbits can suffer from breathing difficulties and bladder stones. This is because the fat stored inside their body can push on their diaphragm, which impairs their breathing, and on their bladder, preventing it from emptying properly. Overall, obese pets typically die younger than healthy-weight pets
- The second type of problem is the impact of being overweight on an animal's general quality of life. Due to the extra weight they are continually carrying around, overweight animals are less energetic, less willing to play and generally get less enjoyment out of life. Some of the most satisfying comments vets and vet nurses hear from pet owners when a pet has been helped to lose weight are, 'She's like a kitten again!', or 'It's like having our old dog back!'. Often, when weight has crept on over months and years, owners do not register their pet's gradual slowing down and loss of vitality

## IS MY PET A HEALTHY WEIGHT?

Weight gain can be very gradual, which means owners are not always aware that their pet has become overweight or obese. Also, since there are now so many overweight pets, being obese or overweight is starting to be seen as normal. Sometimes, owners of healthy-weight dogs say they are asked whether their pet is alright, because they seem thin in comparison to other dogs in the area. How, then, do we know whether our pets are a healthy weight or not?



To assess whether their pet is a healthy shape, owners can use the same method as vets and vet nurses do. This method is called 'body condition scoring', and involves using your eyes and hands to look at and feel the key areas where fat can be stored. Dogs and cats, for example, should have a clearly defined waist that tucks in behind their ribs when looked at from above. From the side, their waist should follow a clear line upwards behind their ribs, and should not be level or sagging. Owners should be able to easily feel the ribs of dogs, cats or rabbits by running their hands gently over them. In obese animals it can be difficult to feel the ribs, as they are buried under layers of fat, whereas in underweight animals they will be clearly visible and very obvious to feel. To help owners body condition score their pets, PDSA provides helpful leaflets and posters with pictures which can be downloaded for free via [www.pdsa.org.uk/petfitclub](http://www.pdsa.org.uk/petfitclub).

Owners should always ask their vet or vet nurse to share their assessment of a pet's weight and body condition score when attending routine health visits (e.g. annual vaccination), or make an appointment sooner if they are concerned that a pet may be overweight.



1 IN 3 DOGS



1 IN 4 CATS



1 IN 4 RABBITS

are considered to be overweight or obese<sup>1</sup>

# WHY DO PETS BECOME OVERWEIGHT?

If a pet is diagnosed as being overweight or obese, the approach to treatment involves addressing the underlying causes. Obesity develops when the body consumes more calories than it uses, over a significant period of time. Therefore, to understand why any animal is gaining weight, vets must first examine their diet and exercise regime.

Complete pet foods contain all the nutrients that a pet needs

## DIET

Advances in the nutritional quality of pet foods have led to many pets being fed complete, commercial diets. This has generally been good for pets' health, but 'complete' means the food contains all of the nutrients that a pet needs, in the correct quantities, and two feeding practices can cause problems with this:

1. OVERFEEDING
2. GIVING TREATS AND SNACKS



If too much food is provided each day, it could eventually lead to obesity.

The PAW Report found that many owners rely on past experience or 'common sense', rather than following the manufacturer's feeding guidelines or asking a vet or vet nurse for their recommendations on how much to feed their pet. It is more reliable to look at the guidelines, and weigh out the daily food allowance to divide across your pet's meals. Even if this is only done from time to time it can help to remind owners of the correct amount of food to give to their pet.

Giving treats and snacks in addition to a pet's main meals is the other problematic feeding practice. Complete food contains all the nutrients that are needed, which means a pet's body needs to do something with all the extra calories from the treat. Inevitably most of these extra calories won't be used and so will be turned into fat.

Feeding treats is a common way for owners to show their pets love, but can sadly be a classic case of 'killing with kindness' when it leads to obesity and associated health problems.

The PAW Report found that 5.5 million pets get treats as part of their daily diet, including crisps, cake, cheese, chips and takeaways. A common problem is that different family members may each be giving tidbits on a regular basis. The total soon adds up, which is why everyone who has contact with a pet needs to understand their daily food allowance, especially if they are on a weight-loss programme. Many pets are motivated by food rewards when training. As long as you reduce your pet's main meals on days when you are giving lots of training treats, it shouldn't cause a problem.

In rabbits, a key cause of obesity is feeding rabbit 'muesli' (a mix of seeds and flakes) or overfeeding rabbit nuggets. Rabbit muesli should not be fed at all, as it is linked to dental and digestive disorders, as well as to obesity<sup>2</sup>. Nuggets should only be fed in very small quantities. Further rabbit feeding information, written by PDSA vets, can be downloaded for free at [www.pdsa.org.uk/rabbitdiet](http://www.pdsa.org.uk/rabbitdiet).



5.5 MILLION  
pets get treats as part of their daily diet



# CALORIE COMPARISON

The calories in food intended for humans when considered in dog or cat equivalents can be shocking. Here are some examples of some common foods given to pets and the human equivalent<sup>3</sup>:



1 biscuit



1 burger



1oz of cheese



1 ½ burgers



1 hot dog



2 ½ burgers



1 potato crisp



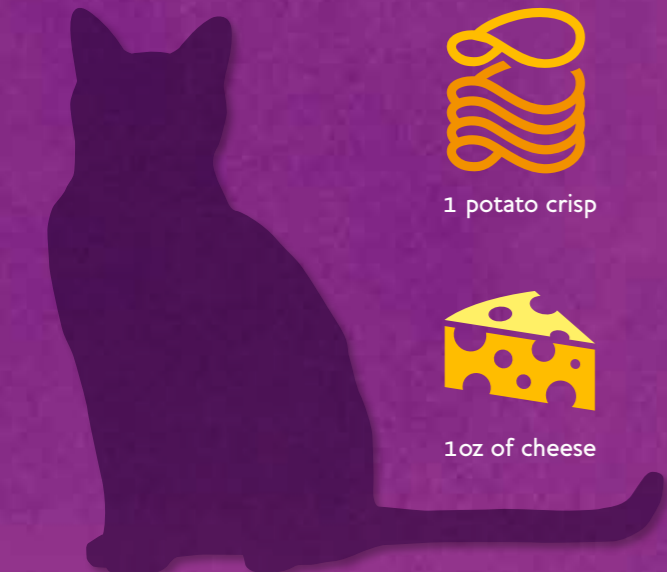
½ a burger



1oz of cheese



3 chocolate bars



# FEEDING YOUR RABBIT CORRECTLY

Vets recommend the following daily diet for rabbits:

1-2 tablespoons of pellets or nuggets per day (use as treats)

An adult-sized handful of suitable fresh greens, morning and evening

At least their own body size in volume of good quality hay each day (so if you put the daily amount of hay next to your rabbits, it should be at least as big as they are). As a rule, either fresh hay or growing grass (not grass clippings) should always be available to your rabbit



Sudden change can upset your rabbit's digestive system so make any changes to their diet gradually

**DON'T FEED RABBITS MUESLI (A MIX OF SEEDS AND FLAKES)**

The diet recommended above may be different to the way you are feeding your rabbit at the moment. If so, change their food gradually, as sudden change can upset their digestive system. If you currently feed rabbit muesli, gradually reduce the amount you give each day over two to four weeks, and replace it with the diet described above. If your rabbit doesn't appear interested in hay you should get them checked by a vet as this can be a sign of dental disease.



# EXERCISE AND ENERGY EXPENDITURE

Small pets should be provided with living areas that are as large as possible and have lots of opportunities for activities such as climbing, digging and exploring



Dogs need to be walked daily, with time spent safely off the lead, running and playing. Their exercise requirements are determined by their age, breed and health, so speak to your vet or vet nurse for advice specific to your dog



Cats typically meet their exercise requirements by roaming around their local neighbourhood, but a growing number of cats are now being housed permanently indoors. This can have a negative effect on their wellbeing, but where indoor living has been recommended (e.g. if they have been diagnosed with FIV, a virus that could transmit to other cats), their food portions should be reduced accordingly and they should be given daily opportunities to play and climb. Many cats, even as adults, enjoy chasing toys that provide rapid, unpredictable movement, such as fishing rod-type toys



Exercise opportunities for smaller pets, such as rabbits, guinea pigs and rats, come from the kind of living environment with which they are provided. These pets should be housed in living areas that are as large as possible to give them enough space to move around and exercise. Rabbits and guinea pigs that live outdoors should have a sizeable, permanently attached run on grass to provide lots of opportunities for activities such as climbing, digging and exploring. This can be achieved by providing tunnels, platforms, exercise wheels and digging trays



## CAN MY PET LOSE WEIGHT?

It is important to ensure that weight is lost safely and there isn't an underlying medical cause for the weight gain. To be safe, get your pet checked by your vet.

Certain medical conditions, including hypothyroidism (an under-active thyroid) can cause obesity, but this is rare, typically affecting less than one per cent of obesity cases.

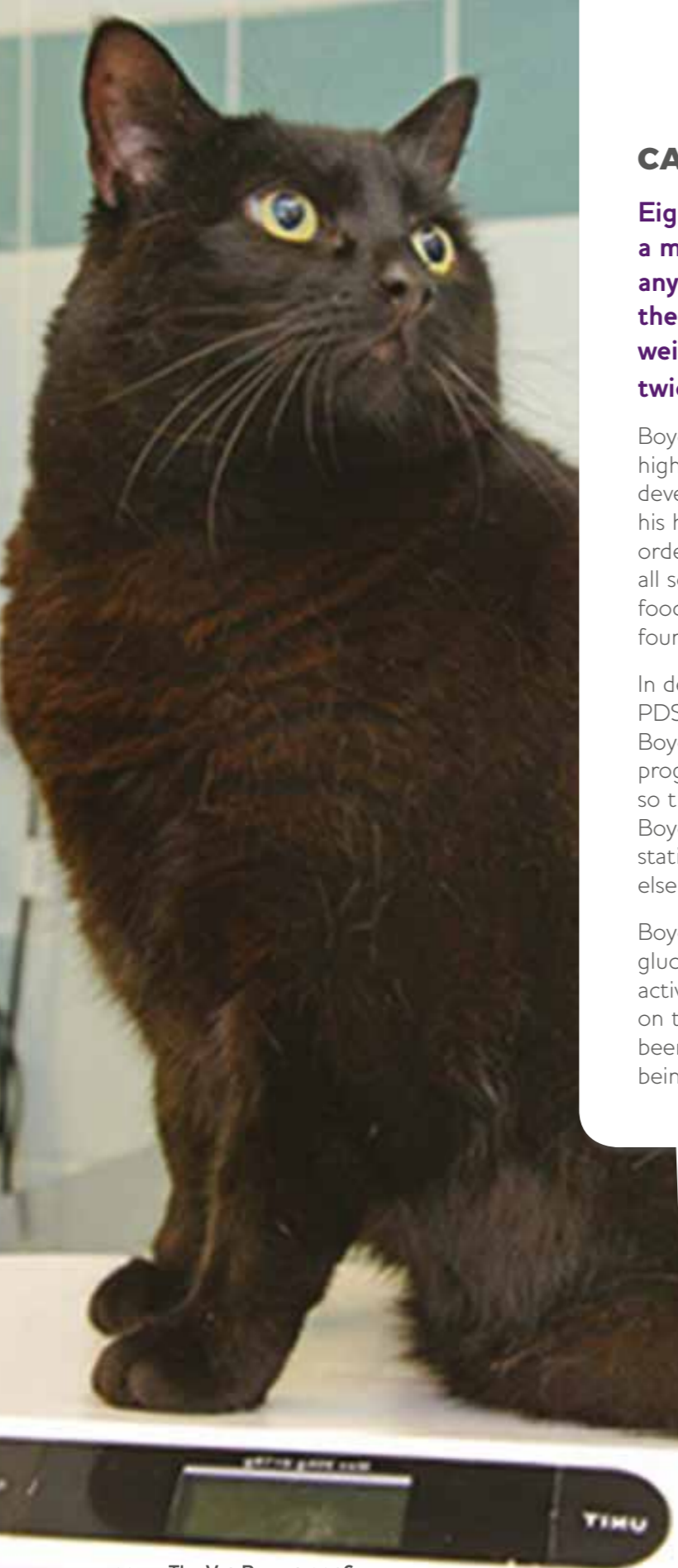
Physical activity should be increased gradually, in accordance with your pet's health, and any changes to diet portions and type must also be introduced slowly. This is especially important in cats and rabbits, as rapid weight loss in these pets can cause life-threatening complications. Most veterinary practices offer dedicated weight management clinics, which are an excellent place

to get regular advice, monitoring and encouragement. Some animals are more prone to becoming overweight, including breeds such as Labrador retrievers, Cavalier King Charles spaniels and Cocker spaniels, and pets that have been neutered.

Your veterinary practice team will look at your pet's existing feeding and exercise habits, advise you on the best approach to treats, and possibly prescribe a specially formulated weight-loss food that is designed to provide the right balance of nutrition, without making you feel as though you are 'starving' your pet.

Since 2005, the PDSA Pet Fit Club has helped 63 dogs, 26 cats and 6 rabbits to lose a grand total of 60 STONE 6 LBS!





## CASE STUDY

**Eight-year-old rescue cat Boycus lives in a multi-cat household. Boycus would eat anything in sight if he could, including all the other cats' dinners, which led to his weight reaching over 10kg – more than twice his ideal weight.**

Boycus was morbidly obese and, with persistently high blood glucose levels, he was in danger of developing diabetes. His owner was concerned for his health and had done everything she could in order to help him to lose weight, including trying all sorts of creative ways to prevent him access to food that wasn't intended for him, but he always found ways to get to food. He was unstoppable!

In desperation, Boycus' owner enrolled him in PDSA's Pet Fit Club. The support provided for Boycus included being given special feeders programmable with individual microchip numbers, so that each pet could eat only their own food. Boycus learnt quickly which was his feeding station and stopped trying to break into everyone else's dinner.

Boycus is gradually shedding the kilos, his blood glucose is coming down, and he's becoming more active. His owners are over the moon that he is on the way to being a healthy cat again and have been inspired to continue supporting him back to being a normal cat.



## CASE STUDY

**Duke the two-year-old Labrador used to count among his favourite pastimes stealing sweets, munching crisps, and making puppy-dog eyes at his owners so that they would share their dinner with him.**

At 60kg, Duke was, quite literally, twice the dog he should have been, so his concerned owners decided it was time to change their habits as a family to help Duke to return to being the active young dog he could be.

Duke was enrolled in PDSA's Pet Fit Club. It wasn't easy holding off on all the treats Duke was used to getting, and making sure everybody stuck to the plan. Lots of support and encouragement from Duke's PDSA nurse, Karen, helped. When, after six months, Duke's weigh-in showed that he'd lost a whopping 5kg – or 8.3 per cent of his bodyweight – his family were spurred on to continue the health improvements they'd begun.

Now Duke has much more energy, and he gets really excited when he knows he's going for a walk. His owners are determined to help him the rest of the way to achieving his optimum weight.

# PREVENTION IS BETTER THAN CURE

One of the most effective strategies for addressing the animal welfare problem of pet obesity, is to prevent pets from becoming overweight in the first place.

Weight management strategies in human healthcare settings, where doctors are also grappling with an obesity epidemic, have been found to be more effective when they are designed around obesity prevention rather than weight loss. This is because, unfortunately, even when weight loss is successful, many people will gradually return to their unhealthy weight. The same can also be true for pets. Veterinary practices offer correct dietary and feeding advice to puppy and kitten owners, as well as specific advice and weight monitoring after a pet has been neutered. Establishing healthy feeding practices during early life is essential for a pet's future health.



## IS IT WORTH TRYING TO REDUCE MY PET'S WEIGHT?

Prevention and treatment of weight gain and obesity are vital because of the harmful impact being overweight has on a pet's health and overall quality of life.

Most people agree it's only fair that our pets should be able to enjoy a good quality of life in return for the huge enjoyment and companionship they bring to us. This principle is reflected in UK animal welfare legislation, which requires pet owners and keepers to meet their pet's five welfare needs, including the need for a suitable diet. Most importantly, the vast majority of pet owners love their pets and want them to be as healthy and happy as possible. Making sure we get their feeding right, and showing our appreciation in ways other than by using treats, is a huge step towards achieving this.



Reward your pet with praise or play instead of giving treats

## THE FIVE WELFARE NEEDS



More information on how to meet these five needs for different kinds of pets is available at [www.pdsa.org.uk/taking-care-of-your-pet](http://www.pdsa.org.uk/taking-care-of-your-pet)

References: 1. Sandoe P, Palmer C, Corr S, Astrup A, Bjornvad CR (2014) Canine and feline obesity: a One Health perspective. Veterinary Record 175:610-16 2. [http://www.ebrc.ac.uk/assets/case-studies/141215\\_case-study-RabbitDiet.pdf](http://www.ebrc.ac.uk/assets/case-studies/141215_case-study-RabbitDiet.pdf) 3. Dechra Veterinary Products Ltd



## CASE STUDY

Poppy's owner was determined to help her become the slim dog she used to be, after a visit to PDSA's PetCheck vehicle for a health check confirmed her suspicions that, at nearly 31kg – a third overweight – Poppy was at risk of health problems and a shortened lifespan.

Although Poppy was taken out for daily walks, too many treats and 'little extras' had tipped the balance towards weight gain. Support from PDSA's Pet Fit Club has helped Poppy's family to provide her with an alternative menu. Poppy now enjoys being given healthy snacks instead of cheese, and as her weight has reduced she's also become fitter and more energetic.

The highlight so far for Poppy was being awarded second place in Pet Fit Club 2015 for her impressive weight loss of over 7kg – that's nearly a quarter of her bodyweight. Her owners are overjoyed that Poppy's health is no longer at risk from being overweight, and every time friends comment on the difference in her appearance, Poppy's family are reminded what a great job they've done!



## CASE STUDY

**Bob, an elderly Beagle, was rescued from the streets of Romania and brought to the UK for a better life.**

However, a combination of lots of human food and little exercise caused his weight to soar to 32kg – twice the size he should have been – and he found himself back in a rehoming centre. Struggling to move because of his weight, he couldn't even wag his tail. He had a severe skin condition, a chronic ear infection and was in pain and miserable.

Bob's luck changed for the better when a new family adopted him. Expecting that the best they could hope for was to make his remaining few months more comfortable, Bob's family decided

nevertheless to do everything they could for him. By beginning a new healthy lifestyle for Bob, they managed to reduce his weight by almost 7kg.

Determined to help Bob to become the healthy dog they hoped he could be, his family enrolled him in PDSA's Pet Fit Club. The support they received, along with their own commitment, saw Bob's weight reduce over the next six months to less than 21kg – not far from his target weight of 18.6kg.

Bob is now a happy dog who looks forward to his walks. His ears and skin are healthy, and he's getting closer to his ideal weight. Even better, his tail never stops wagging!



# VACCINATION

WHAT IS RIGHT FOR MY PET?

“When deciding what is best for your pet it is vital to balance the benefits of vaccination against the risks. For the majority of pets the benefits far outweigh the risks”

**Dr Kit Sturgess**

MA VetMB PhD CertVR DSAM

CertVC FRCVS

RCVS Specialist in Internal

Medicine & Advanced Practitioner

in Veterinary Cardiology

Kit qualified from Cambridge in 1986 and spent the next six years in first opinion practice. Over the following ten years, he obtained his PhD and gained additional qualifications in diagnostic imaging, cardiology and internal medicine.

Kit has a particular interest in the fields of cardiorespiratory, gastrointestinal and urinary tract medicine. He has authored numerous articles and two textbooks, as well as presenting lectures and research abstracts at conferences across the globe.

Kit currently divides his time between performing clinical work at referral and first opinion practices, and writing, teaching and lecturing to a worldwide audience.



**KIT HOLDS A PHD**

in the effects of feline  
AIDS on immune function

# WHAT IS VACCINATION?



Vaccination of dogs, cats and rabbits is an essential part of routine health care. Choosing which vaccination to give to your pet, and how frequently to have booster vaccinations, is a more complex issue. It needs to be based on an understanding of your pet's lifestyle, the risks they may face and the benefits that vaccination can provide.

Vaccination is the use of a biological preparation (vaccine) that improves immunity to a specific infectious agent (pathogen). Vaccines can provide protection against a wide variety of pathogens – in the veterinary field the vast majority of vaccines protect against viral infections. In most cases, vaccination won't prevent infection, but will prevent the development of clinical signs of disease.

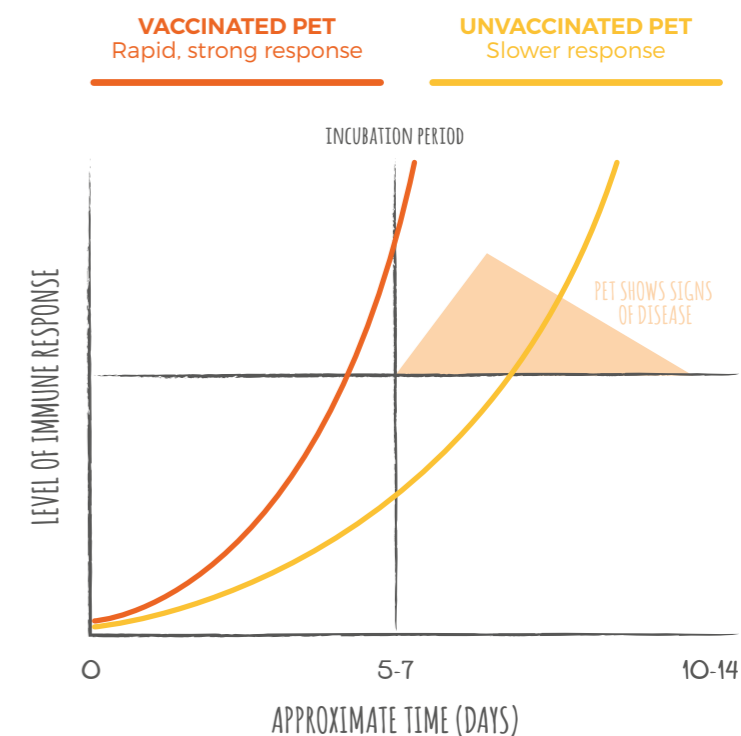


## THE INNATE AND ADAPTIVE IMMUNE RESPONSE

The innate immune system is a pet's defence mechanism which rapidly springs into action within hours of the appearance of an infectious agent in the body, and provides the initial response to infection.

This innate response is followed five to seven days later by a more specific adaptive response, which is focused directly against the particular pathogen involved. An important feature of the adaptive immune response is the induction of immunologic memory, which is critical to the way that vaccination works. Having seen an infection once, the adaptive immune response allows the body to mount a stronger, faster and more effective defence should it meet the same infection again in the future.

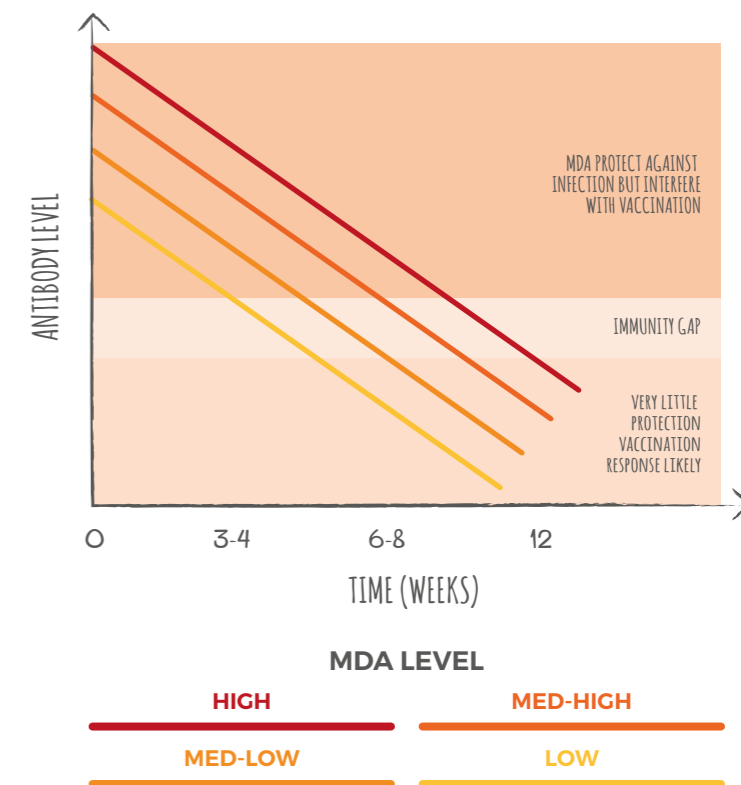
Vaccination is a means of priming the adaptive immune response to prepare for an encounter with an infectious agent that the animal has not yet been exposed to.



## MATERNALLY-DERIVED ANTIBODIES (MDA) AND THE IMMUNITY GAP

MDA are a vital stopgap defence for newborns whose immune systems are not yet mature enough to fight infection successfully. MDA are transferred when puppies or kittens (cat or rabbit) suckle on their first milk (colostrum). High levels of MDA can prevent an effective immune response to vaccination, resulting in a puppy or kitten not developing a protective immunity after being vaccinated. They are then left susceptible to disease when the MDA eventually wane.

The 'immunity gap' is the period of time when a puppy or kitten is susceptible to infection, but may not respond to vaccination. Newer, more advanced vaccines tend to be effective at higher levels of MDA, serving to narrow this immunity gap, however, the 'perfect' time for vaccination of a particular individual is difficult to gauge as levels of MDA vary between animals.



# WHAT ARE VACCINES?

Vaccines typically contain an agent that resembles a disease-causing microorganism (pathogen). They are made from a weakened or killed form of the pathogen or its toxins, or alternatively from some of its surface proteins (antigens).

The critical factor for any vaccine is its ability to excite the immune system. If it provokes a strong primary adaptive response, this leads to good immunologic memory and allows booster vaccinations to be given less frequently. In the majority of situations a modified live virus vaccine produces the most effective stimulation of the immune system.

Modified live vaccines have been made less pathogenic (disease-causing) than the normal (wild or field type) infection. This reduced pathogenicity is usually brought about by making the pathogen replicate more slowly, so that the immune response can outstrip the virus, and no clinical signs can develop.

Other options are either a killed, or a component protein (subunit) vaccine. In order to ensure an appropriate response to these vaccines, two approaches have been taken.

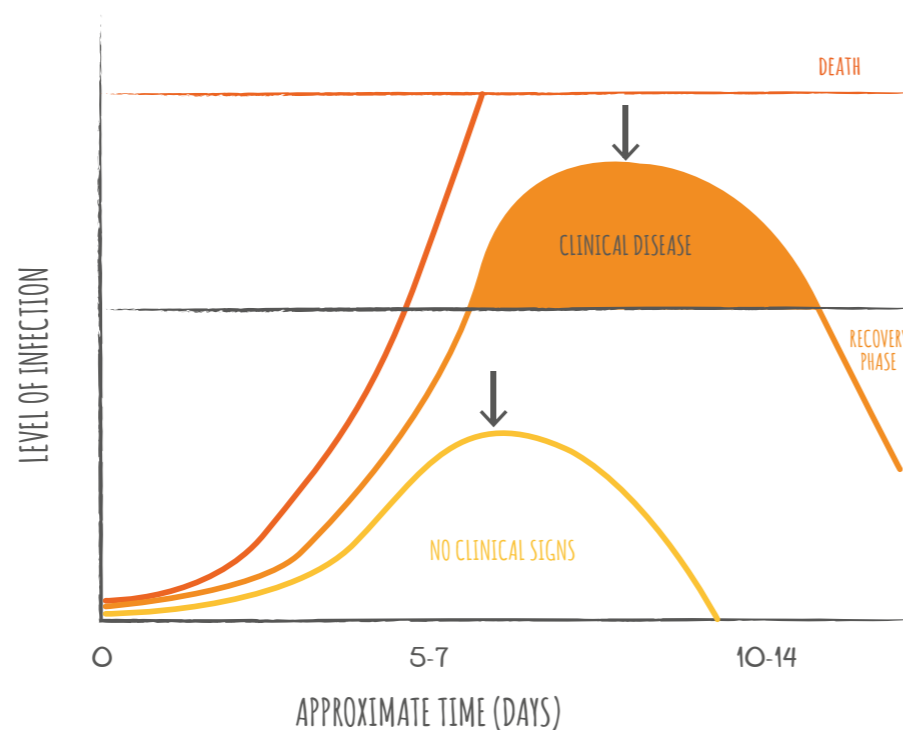
- Most commonly, an adjuvant is added into the vaccine. This additional constituent causes localised cell damage, and the damaged cells release 'danger signals' that stimulate the immune system
- In a few vaccines, viral protein subunits are incorporated into another virus that shows the proteins to the immune system in the 'correct way', thereby also triggering an immune response

'INFECTION' WITH MODIFIED LIVE VACCINE

MODERATE INFECTION (UNVACCINATED PATIENT)

SEVERE INFECTION (UNVACCINATED PATIENT)

IMMUNE SYSTEM OUTSTRIPS THE INFECTION



## WHAT VACCINES ARE AVAILABLE FOR MY PET?

The number of diseases for which there are now licensed vaccines in the UK has increased significantly over recent years. Vaccines are considered either 'core' or 'non-core'. Core vaccines protect against serious diseases that are likely to be widespread within a region, whereas non-core vaccines are only given to pets when there is a specific risk of infection.

## VACCINATING PREGNANT DOGS OR CATS

Most vaccines have not been tested for their safety in pregnancy and therefore vaccination during pregnancy or shortly after giving birth is not advisable unless specifically recommended by your veterinary team. If you are intending to breed from your doe, queen or bitch, then you should ensure their vaccinations are up-to-date and that any boosters are given at least two weeks prior to the expected mating date.

## SHOULD I VACCINATE MY RABBIT?

A combination vaccine is available to protect rabbits against two fatal infectious diseases, myxomatosis and rabbit haemorrhagic disease (RHD). Myxomatosis is a highly infectious and usually fatal viral disease that causes swelling and inflammation of the mucous membranes and discharge around the eyes. RHD is another extremely contagious condition with a high mortality rate. Vaccination should be considered for any rabbit that spends time outside.

## UPDATE ON RHD

A number of cases of a second strain of RHD (RHD2) have recently been reported in the UK. The licensed UK vaccine does not provide protection against RHD2, but there are RHD2 vaccines available in Europe that can be imported in to the UK under special licence. Ask your vet for more information about the risk of RHD2 in your area and the possibility of vaccinating against it.

## AVAILABLE VACCINES

FOR DOGS	
CORE	NON-CORE
Canine adenovirus	Bordetellosis
Canine parvovirus	Borreliosis
Distemper	Canine coronavirus
Leptospirosis	Canine herpesvirus
	Canine parainfluenza virus
	Leishmaniosis
	Rabies
FOR CATS	
CORE	NON-CORE
Feline calicivirus	Bordetellosis
Feline herpesvirus 1	Chlamydomphila psittaci
Feline parvovirus	Feline leukaemia virus
	Rabies



## BOOSTER FREQUENCY AND BLOOD TESTING

The first booster, given at around 15 months of age, is vitally important as it will catch any pet who has failed to respond to their primary vaccination course.

Many of the modified live virus vaccines produce a very strong immune response that only needs to be boosted every few years. Other vaccines cannot produce the same level of immunity and require more frequent (often yearly) boosting. This is why your pet may receive a different combination of vaccines from year to year.

Testing antibody levels in the blood is a good way to assess an individual pet's immunity level against a specific infection, although in dogs this is only reliable for parvovirus, distemper and adenovirus. If antibody levels are found to be high when a booster vaccination is scheduled, then your vet may advise you to delay the administration of the booster. Since this will be outside the licensed use of the vaccine, this deviation from vaccine protocol is termed 'off-licence'.

### WHAT DOES 'OFF-LICENCE' VACCINATION MEAN?

A vaccine is said to be being used 'off-licence', when it is being used in a way that differs from the schedule laid down in the manufacturer's licence for that product. It is entirely appropriate for your veterinary team to use a vaccine off-licence where there is a clear clinical reason for this.



There is no evidence that homeopathic vaccines are effective<sup>1</sup>

### ARE THERE ANY ALTERNATIVES TO VACCINATION?

The only alternative to vaccination is to prevent exposure to disease. This means keeping your dog, cat or rabbit isolated from any other pet or animal that could be infected or be a carrier of a disease against which vaccination would normally have been given. Some infections, e.g. parvovirus, can enter the household on inanimate objects such as grooming implements, food materials, clothes, shoes and hands. Other diseases, such as myxomatosis, can be transmitted by biting insects.

### I HAVE RECEIVED CONFLICTING ADVICE ABOUT THE AGE AT WHICH VACCINATION SHOULD BE STARTED AND FINISHED - WHY IS THIS?

There is a desire to complete primary vaccination as early as possible, for puppies in particular, in order to allow them to socialise during the sensitive development period. Poor socialisation can have a significant adverse impact on the behavioural development of dogs, affecting both owners and pet.

Attempting to complete the vaccination course sooner increases the risk of a poor response to vaccination because of high residual levels of MDA. For this reason, some practices may offer a third vaccination when puppies are 16-20 weeks old. A third vaccination should be considered, especially if your puppy is likely to have a lifestyle that involves a lot of contact with other dogs.

### BREEDS WITH POOR RESPONSE TO VACCINATION

Older reports suggest some breeds of dog are more susceptible to parvovirus infection and may respond poorly to vaccination. However, subsequent studies using newer, more effective vaccines do not support these findings<sup>2</sup>.

There are also anecdotal reports suggesting pedigree cats (Siamese and Persian) may respond less favourably to vaccination and have a higher incidence of vaccination-related issues than domestic short haired cats do.

These reports are unsubstantiated and most are from the late 1970s and 1980s.



If vaccination rates drop below a certain level, a disease outbreak could occur with disastrous consequences

### MY CAT/DOG IS ELDERLY NOW - SURELY THEY DON'T STILL NEED VACCINATION?

Whether to vaccinate elderly pets or not has more to do with their activity and likely exposure to disease than their age. For example, if your cat never comes into contact with other cats and you are not going to introduce any new cats or kittens into your household, then the benefits of vaccination may be limited.

It must be borne in mind that the immune system of an elderly animal is less robust, so if they are likely to be exposed to infection then continued vaccination is all the more important.

### VACCINE COMPLACENCY

It is very easy to become complacent about vaccination when diseases like distemper or feline infectious enteritis are now rare in the UK. If vaccination rates drop below a certain level, however, a disease outbreak can occur with disastrous consequences — for example the measles epidemic in Wales that resulted in the death of a child. Owners should recognise that vaccination protects against unpleasant and severe diseases that, even with all our advances in veterinary care, can still be fatal.





# RISKS ASSOCIATED WITH VACCINATION

Vaccination is not a completely risk-free procedure. In the majority of individuals, however, the benefits greatly outweigh the risks. Vaccination reactions are thankfully rare, with adverse events being reported once every 200-250 vaccinations given<sup>3, 4</sup>.

The vast majority of these reactions are mild and short-term, and indicate that the vaccine is effectively stimulating the immune system. Common signs reported are swelling at the injection site, mild fever, malaise and lack of appetite lasting 24-48 hours.

Given that illnesses can occur at any time, they may sometimes develop shortly after vaccination; this does not mean that the vaccine caused the disease. There have been a number of studies investigating whether diseases in which the immune system malfunctions, such as haemolytic anaemia in dogs, may be more common in the months following vaccination (when the immune system is being stimulated), than at other times. To date these studies have not shown a significant link, but a previous history of immune-mediated disease should be taken into account when deciding on a vaccination schedule for an individual pet.

Adverse reactions are reported for 1 IN 200-250 vaccinations given

If you have any concerns about your pet's wellbeing following vaccination, always contact your veterinary practice.



## INJECTION SITE SARCOMAS IN CATS

An injection site sarcoma is a hard lump that develops where your cat has been injected, usually on the scruff of the neck. They are quite commonly reported in the US, but are very rare in the UK. The vaccines most commonly associated with sarcoma development are those protecting against feline leukaemia virus and rabies. Vaccination over a limb or on the tail has been suggested, because surgery to treat an injection site sarcoma, if it occurs here, is simpler and more successful. Vaccination at these sites is technically more challenging and can be unpleasant for the cat, so is not widely practiced in the UK.

## VACCINOSIS

A concept that is widely circulated online is that 'over-vaccination' will cause disease, sometimes months or years later. This is termed 'vaccinosis'. People who promote the concept of vaccinosis suggest over-vaccination is responsible for a wide range of conditions, from lethargy to lameness to kidney disease. However, there have been no published papers that support this theory and this view is not supported by the vast majority of veterinary professionals.

## VACCINE FAILURE

No vaccine can prevent clinical disease developing in all individuals under all circumstances. There are a variety of reasons why vaccination can appear to have failed, some of which have nothing to do with the vaccine itself.

Type	Issue	Minimising the risk
Vaccine issue	Manufacturing failure	Robust protocols should be in place for testing vaccine batches
	Incorrect storage	Ensure vaccines are stored at the correct temperature and only reconstituted immediately prior to use
	Incorrect vaccine used	Distinct labelling and careful checking before use
Patient factors	Misinjection	Appropriate restraint especially of wriggly puppies or kittens, checking vaccination site after injection to make sure it is dry
	Maternally derived antibodies	Timing of primary course, including third vaccination, and the importance of the first booster injection
	Immune system defect	Full physical examination prior to vaccination and knowledge of patient history
	Patient incubating disease	Full physical examination prior to vaccination, BUT if the patient is in early asymptomatic phase no signs of disease may be present
	'Stress'	Stressors such as recent rehoming can reduce the ability to produce an effective immune response – avoid vaccination at these times
Disease factors	Weight of infection	Very high challenge can overwhelm the immune system – avoid areas where disease levels are likely to be high*
	Challenge soon after vaccination	Full vaccine immunity takes up to three weeks to develop – avoid areas where there is a likelihood of exposure to disease*
	Strain virulence	Veterinary team's knowledge of local disease strains
	Strain variation	Vaccines protect less effectively against certain strains of a disease e.g. feline calicivirus, or against different serovars e.g. leptospirosis

\* disease levels are likely to be high where the density of dogs/cats/rabbits is high e.g. kennels, catteries, rescue facilities, parks and training classes, particularly in areas where levels of vaccination are likely to be low

## SUMMARY

Vaccination has prevented serious diseases and saved the lives of thousands of dogs, cats and rabbits in the UK. However, any veterinary procedure, no matter how commonly it is performed, carries some level of risk. When deciding what is best for your pet it is vital to balance the benefits of vaccination against the risks. For the majority of pets the benefits far outweigh the risks. Your veterinary team can help you understand the benefits and risks, and help you to decide upon the best strategy for your pet as part of an overall preventative healthcare programme.



References: 1. WSAVA Vaccination Guidelines 2015 2. Hoskins JD (1997) Performance of a new generation canine parvovirus vaccine in Rottweiler puppies. *Canine Practice*. 22(4):29-31 3. Moore GE, Guptill LF, Ward MP et al (2005) Adverse events diagnosed within three days of vaccine administration in dogs. *Journal of the American Veterinary Medical Association* 227:1102-1108 4. Moore GE, DeSantis-Kerr AC, Guptill LF et al (2007) Adverse events after vaccine administration in cats: 2,560 cases (2002-2005). *Journal of the American Veterinary Medical Association* 231:94-100 5. Dean RS, Pfeiffer DU & Adams VJ (2013) The incidence of feline injection site sarcomas in the United Kingdom. *BMC Veterinary Research* 9, 17



# ANAESTHESIA

## WHAT DOES IT INVOLVE?

“Every day thousands of pets undergo anaesthesia, with over 99 per cent experiencing no major problems at all”

**Matt Gurney**

BVSc CertVA DipECVAA MRCVS  
RCVS Specialist in Veterinary Anaesthesia  
Anaesthesia and Pain Management  
Specialist, Northwest Surgeons

northwest  
surgeons

Matt graduated from the University of Liverpool in 2003. Following two and a half years in general practice, he returned to academia to undertake a residency in anaesthesia and critical care. In 2007 he gained the Royal College of Veterinary Surgeons Certificate in Veterinary Anaesthesia. Matt joined Northwest Surgeons in 2009, where many patients are able to benefit from his expertise in anaesthesia and pain management.

Matt is a diplomate of the European College of Veterinary Anaesthesia and Analgesia, and was awarded RCVS Specialist status in 2013. Recently he has completed the postgraduate certificate in Veterinary Business Management through the University of Liverpool.



**NOT ALL SPECIES**  
require prolonged starvation  
before undergoing  
anaesthesia

# ANAESTHESIA

Every day  
thousands of pets  
undergo anaesthesia  
**WITH OVER 99%**  
experiencing no major  
problems at all

Anaesthesia was first demonstrated in 1846 in Boston, Massachusetts by William Morton.

The anaesthetic agent was ether, which has long since been discontinued, and the human patient underwent a painless tumour removal.

Since then, anaesthesia has undergone a continuous evolution. Newer drugs, improved safety, a better understanding of the role of pain control and, of paramount importance, a veterinary anaesthesia community that strives for constant improvement has brought it to where it is today.

When your vet tells you that your pet needs to have a general anaesthetic it is only natural to be concerned, but you should not worry unduly. Every day thousands of pets undergo anaesthesia, with over 99 per cent experiencing no major problems at all.

Anaesthesia is a reversible loss of consciousness, using drugs that prevent your pet from being aware of what is happening while undergoing a procedure. When these drugs wear off, your pet regains consciousness. Modern anaesthetics produce less of a hangover than older drugs, which means fit and healthy patients should be back on their feet the night after the anaesthetic.

## SEDATION OR ANAESTHESIA?

Your vet will discuss with you which is most appropriate for your pet. Whilst you may assume sedation is safer than anaesthesia, the evidence does not support this. The decision to sedate or anaesthetise is based on the pet's health status and on the procedure to be carried out.



# THE STAGES OF ANAESTHESIA



## PRE-ANAESTHETIC ASSESSMENT 1

## PRE-MEDICATION 2

## INDUCTION OF ANAESTHESIA 3

## MAINTENANCE PHASE 4

## RECOVERY 5

Pre-medication drugs calm the pet, help them relax and get pain relief on board to ensure they remain comfortable



## CASE STUDY

### Honey the rabbit came in to Companion Care Basingstoke to be spayed.

Honey was settled in a quiet ward with hay, water and her usual food. Her pre-medication was injected, followed by drugs to provide pain relief and digestive support. Once she was sleepy, she breathed oxygen mixed with anaesthetic gas through a nasal mask, then a device called a laryngeal mask was passed into her throat to protect her airway and to allow her vet team to keep her anaesthetised while she had the surgery to remove her ovaries and uterus.

Once the surgery was finished, the anaesthetic gas was switched off and Honey breathed oxygen through her laryngeal mask while she woke up. The anaesthetic machine was then disconnected, and the laryngeal mask was removed once Honey could lift her head up. She was kept warm and was monitored closely by the nurse. Honey was offered some of her favourite foods to encourage her to start eating.

Honey stayed in the quiet ward for the afternoon. When her owners came to collect her they were shown how to continue Honey's pain relief and how to monitor her recovery and post-operative checks were arranged. Honey was soon back to her usual, happy self.

Mask induction of anaesthesia



The laryngeal mask being placed



Honey connected to the anaesthetic circuit



Waking up safely from the anaesthetic



Current studies recommend a minimum starvation time of four hours for adult dogs, however it is often more practical for pets to receive their last evening meal, then to go without breakfast on the morning of their procedure. This reduces the risks associated with having a full stomach while under anaesthetic. If your pet is receiving any treatment before the procedure, check with your vet which of their medications to give that morning. Water can clear from the stomach more quickly than food can, so water is usually made available until closer to the procedure time.



## PRE-MEDICATION

Pre-medication is normally administered to all patients shortly before their general anaesthetic.

The patient's health status, the procedure to be conducted and the prior experience of the vet in using those drugs, are all factors that influence which particular medications will be used. Overall, vets tend to use a combination of drugs, which produces a multitude of beneficial effects, while minimising side-effects from any single one.

## INDUCTION OF ANAESTHESIA

Once your pet has received their pre-medication and they are relaxed, a cannula is placed in a limb vein.

The cannula allows the vet to administer the induction agent – which is the drug that makes your pet go to sleep – directly and reliably into the vein.

In dogs and cats, vets have two main options for the induction drug – either propofol or alfaxalone. Propofol is also commonly used in people, whereas alfaxalone is a veterinary-specific drug. Intravenous induction drugs are administered slowly, and always by a vet, who will judge carefully when the required amount has been given.

There are drug combinations that can induce anaesthesia when injected into the muscle rather than into a vein. These are useful for animals that cannot safely be handled such as feral cats, or for other species like rabbits and guinea pigs.

Once the depth of anaesthesia is suitable, the vet needs to place a special tube, called an endotracheal tube, through the mouth and into the trachea. This protects the airway and allows the vet to breathe for the pet if required. The tube provides oxygen and takes away carbon dioxide, and through it the vet can also deliver anaesthetic gas to keep your pet under anaesthesia for as long as necessary. Sometimes the vet may use intravenous drugs, rather than gas, to maintain anaesthesia.

## FOOD, PETS AND ANAESTHESIA



Rabbits cannot vomit. A one to two hour starvation period is sufficient to reduce the presence of food particles in the oral cavity



Like rabbits, rodents cannot vomit and a short food withholding time of one hour should suffice



Ferrets can vomit and require a starvation period of four hours

All of these species should be fed once they have recovered from anaesthesia.

For more specific advice about your own small furry, just ask your vet or vet nurse.



Laryngeal masks are a recently developed alternative to endotracheal tubes. They can offer advantages for some patients, and are often used on rabbits

## THE MAINTENANCE PHASE

Keeping the pet under anaesthesia is known as maintenance. Most commonly vets use a gas, either isoflurane or sevoflurane, which is mixed with oxygen in the anaesthetic machine, and is breathed by the pet.

During the procedure, the vet has overall responsibility for the anaesthetic. The monitoring is usually conducted by a veterinary nurse, who is trained to do this and who communicates information to the vet about the measurements being taken throughout. The constant monitoring allows the team to assess how the patient is coping under anaesthetic, and to decide whether the pet's management needs adjusting at any time. Basic parameters monitored during every anaesthetic include pulse rate, respiratory rate and neurological reflexes. More advanced monitoring includes blood pressure measurement, ECG monitoring of heart rhythm and respiratory gas monitoring.

For complicated cases or for very sick pets, a specialist veterinary anaesthetist may be involved. Specialist veterinary anaesthetists are vets who are qualified to the equivalent level of a human consultant anaesthetist, and provide the level of care you would receive if you were anaesthetised.

For some types of surgery, the vet may also perform a nerve block. This involves injecting a special local anaesthetic medication into or close to the surgical site, to ensure that the pet will be as pain free as possible both during and after the surgery.

Once the procedure is finished, the team will stop administering the anaesthetic gas and move the pet to a dedicated recovery area.

## RECOVERY FROM ANAESTHESIA

Recovery from anaesthesia is the most critical stage. Studies have shown that this is the stage where a pet is most at risk<sup>3</sup>. It is vital that the pet is monitored and supported constantly until they are totally recovered from the anaesthetic.

As a pet comes round from the anaesthetic, a recovery nurse will ensure it is kept warm and is assessed for any discomfort. If a nerve block has been used, the team need to be ready to give further pain relief when it wears off so that the pet remains comfortable.

Most pets recover quickly enough to be able to go home the same day. Others may need to stay in the clinic overnight so they can be kept comfortable and closely monitored.





## CASE STUDY

**Barney the beagle was playing frisbee when he landed badly and ruptured the cruciate ligament in his knee.**

Prior to the incident, Barney had no health concerns and was graded risk category one. He was admitted to Northwest Surgeons for surgery and was taken to relax in the ward where he was offered access to water. A pre-medication was injected into a muscle, and 15 minutes later an intravenous cannula was placed in one of his front legs by the nurse allocated to monitor his anaesthetic.

At this stage the team conducted their first safety check. They ensured that they had the correct patient, all of the team were aware of what procedure was being performed and that all of the necessary equipment was to hand. Once the checklist was complete, the team started induction of anaesthesia.

The process of drug administration and tracheal intubation took about a minute.

Once Barney was safely anaesthetised, his endotracheal tube was connected to the anaesthetic machine. His injured leg was clipped and cleaned ready for surgery, and his anaesthetist performed a nerve block to keep him as comfortable as possible.

Once the surgery was complete, the team stopped administering the anaesthetic gas and moved Barney into a recovery area.

As Barney was coming round from his anaesthetic, his recovery nurse ensured he was kept warm and that he was assessed for any discomfort. Barney stayed in the hospital overnight so that his team could continue to monitor and control any pain, and ensure he was comfortable. That night, he ate well and by the next morning was bright and ready to go home.

## CASE STUDY

**Poppy the three-year-old cat spent the day at the Vets4Pets Sheldon surgery recently, in order to have her spay operation.**

Once she was relaxed in her bed in the cat ward, Poppy had her pre-medication injection, a combination of drugs to relax her and give her pain relief ready for her surgery.

Half an hour later, Poppy's cannula was placed in a vein in one of her front legs, and the vet then began to administer her anaesthetic induction drug through this until Poppy was asleep.

Local anaesthetic was sprayed into the back of Poppy's throat so that her endotracheal tube could be placed. Once this was connected to the anaesthetic machine and Poppy was breathing nicely, she was given an injection of an additional kind of pain relief that would last for 24 hours.

Poppy received oxygen and anaesthetic gas to keep her asleep while her operation was completed, and then she breathed oxygen for another five minutes while she was woken up.

Poppy went home later that afternoon, with five days' supply of oral pain relief and she made an excellent recovery.



Poppy connected to the anaesthetic circuit



Propofol being administered through Poppy's intravenous cannula



The ET tube being placed with a laryngoscope



Waking up under close supervision in her Cat Condo

# COMMON QUESTIONS

## SHOULD MY PET HAVE PRE-ANAESTHETIC BLOOD TESTS?

There are two research studies investigating this question in dogs<sup>1,2</sup>. The first study concluded that a thorough history-taking and full clinical examination are sufficient and that a blood sample only needs to be taken if there is clinical suspicion of underlying disease.

The second study in dogs with an average age of ten years found that when blood tests are carried out, a new diagnosis is made in 30 per cent of cases. There are no such studies in cats, so vets follow a similar line of recommendation as they do for dogs.

If your pet is sick, pre-anaesthetic blood tests are a vital part of the diagnostic process and will allow your vet to evaluate what treatment is needed before, during and after anaesthesia.



## WHAT ABOUT PAIN RELIEF?

Pain relief is an essential component of anaesthesia. Under anaesthetic, the patient's response to pain from surgery is blunted – however the pain signal is still being received by the brain. This is why the vet needs to ensure that painkillers (analgesics) are used, to prevent this from happening.

The pre-medication includes the first painkiller your pet will receive. In people, morphine is often used for this purpose. For dogs and cats, vets use licensed veterinary medicines and the options available are methadone and buprenorphine. Both drugs produce excellent pain relief and last several hours. Where possible, vets use combinations of these drugs, and this usually means that they add in a non-steroidal anti-inflammatory drug (NSAID). The advantages of using multiple drugs are superior pain relief and a reduction in side-effects. The third approach to providing pain relief is local anaesthesia. Local anaesthetics are excellent, because they block the transmission of pain completely (which you will know if you've ever had a nerve block).

In recent years there has been a huge leap forward in the recognition and management of pain. UK vets are fortunate to have access to a range of excellent pain-relieving drugs for our patients.

## ARE THERE ANY RISKS?

Every procedure performed in veterinary medicine and surgery carries risk. Vets do everything to minimise this and to make the anaesthetic as safe as possible for the pet.

## HOW DOES MY PET'S HEALTH STATUS AFFECT ANAESTHETIC RISK?

Health status is one of the main predictors of complications under anaesthesia. Current figures for healthy pets show that one in 2,000 dogs, one in 1,000 cats and one in 130 rabbits will die under anaesthesia<sup>3</sup>. These rates increase dramatically if the pet is ill, so careful assessment of health status is crucial. Anaesthesia of rabbits can be particularly risky. One reason for this is that rabbits, as prey animals, are designed to hide how sick they really are. Many rabbits have undetectable lung infections which can cause problems whilst they are under anaesthesia.

## ARE SOME DRUGS SAFER THAN OTHERS?

If any drug were proven to be unsafe it would be removed from the market. There is a perception that particular drugs should not be used in certain breeds. However, current evidence tells us that it is difficult to make breed-specific recommendations.

Familiarity with the drugs used, and with the techniques required for anaesthesia, are of paramount importance. This is only acquired through experience.

## WILL MY PET HAVE TO STAY OVERNIGHT?

Most minor procedures conducted in veterinary practices mean that the pet can be admitted on the morning of the procedure and go home that same day. If your pet is unwell or is undergoing major surgery, then it is likely they will be hospitalised until your vet is confident that they have recovered fully enough to go home.

## WHAT CAN THEY EAT AFTER ANAESTHESIA?

In people, post-operative nausea and vomiting are some of the most common side-effects of anaesthetic drugs. Dogs and cats tend not to be affected this way, and can be fed their usual diet once recovered from the anaesthetic. Be careful, however, not to overfeed them.

## WILL MY PET BE IN PAIN AFTER SURGERY?

If your pet has had a surgical procedure he or she will have received pain relief before and during the surgery. In cases where pain is expected to be moderate to severe, the pet will be hospitalised overnight to monitor and control their pain using injectable painkillers. Pain is monitored using pain scoring systems in both dogs and cats. It is unlikely that your vet will send your pet home if they are still in pain. If you feel your pet is uncomfortable at home, then you should contact your vet immediately.

## WHAT SHOULD I WATCH OUT FOR ONCE MY PET COMES HOME?

Your pet should be fully recovered from their anaesthetic when you collect them from your vet. Once you get them home they may appear very tired, which is normal. You should offer small amounts of their usual food and access to fresh water, and allow plenty of opportunity for toilet breaks. Give your pet any medications as prescribed, and if your pet has a wound ensure he or she cannot interfere with it.

Vet nurses play a huge role in anaesthesia and are involved at every stage. If you need reassurance or advice at any point, just ask.



## TIREDNESS

is completely normal in pets when you get them home after having an anaesthetic

If any one drug were proven to be unsafe it would be removed from the market



# MICROCHIPPING UPDATE

**Dr Catriona Curtis**

**BVM&S MRCVS**

Bayer Animal Health

**1 MILLION**  
dogs in the UK still need  
to be microchipped  
and registered



Microchipping was first introduced into the UK in 1989. It was already a legal requirement for dogs to wear collars with tags containing their owner's name, address and postcode, but microchipping offered a safer, more effective and permanent way of reuniting lost or stolen dogs with their owners. A dog's collar can be easily lost or removed, but this is not the case with a microchip.

The Microchipping of Dogs (England) Regulations 2015 specified that from April 2016 it would become mandatory for all dogs over eight weeks old in England, Scotland and Wales to be microchipped and registered on an approved database. It had already been a legal requirement in Northern Ireland since 2012, and the rest of the UK has now followed suit. Great Britain and Northern Ireland aren't alone in having this legislation. It has been a legal requirement in more than 15 countries worldwide for a number of years and, in addition to this, in many states in the USA and Australia. The estimate is that compliance in these countries ranges between 80 and 90 per cent.

Many groups, including The Microchipping Alliance (of which the British Veterinary Association is a member) had been campaigning for compulsory microchipping for a number of years, so the passing of this legislation is a huge success for them.

The estimated annual cost saving to local authorities and charities in the UK, resulting from the new legislation leading to improved reunification is around £33 million – an astonishing figure.



# HOW MANY UK DOGS ARE CURRENTLY MICROCHIPPED?

At around the time the legislation was introduced, it was estimated that compliance in England and Wales was in the region of 86 per cent<sup>1</sup>. There are approximately 8.5 million dogs in the UK<sup>1</sup>, which means that around 1.2 million dogs didn't have a microchip when the legislation came into force.

Even though some of these dogs will now have been microchipped, it is thought that there may still be around one million dogs in the UK that need to be microchipped and registered.

Research commissioned by the Dogs Trust this year has demonstrated that the beneficial effects of mandatory microchipping are already visible. It revealed a 21 per cent decrease in strays handled by local authorities between 2015 and 2016. Around 45 per cent of these dogs were, however, unclaimed. Some of the dogs found do have microchips, but their owners' contact information is outdated. Sadly, an estimated 12 stray dogs a day could be put to sleep because their owners cannot be traced – that's over 4,000 lives a year that could have been saved if owners had kept their pets' microchip information up to date.

There is no doubt that the new legislation will improve dog welfare and increase the likelihood of lost and stray dogs being reunited with their owners, but the benefits go way beyond this. It has been welcomed across the veterinary profession and all organisations involved with animal welfare, but we still have a way to go.



21%

decrease in strays handled by local authorities since microchipping was enforced

## OTHER BENEFITS OF COMPULSORY MICROCHIPPING

- It promotes responsible dog ownership, which should in turn improve animal welfare
- Owners who have committed animal cruelty may be easier to identify and brought to justice
- All puppies will be traceable to their breeder
- Vets will be able to identify stray dogs more quickly, in order to seek consent for urgent treatment

## CASE STUDY

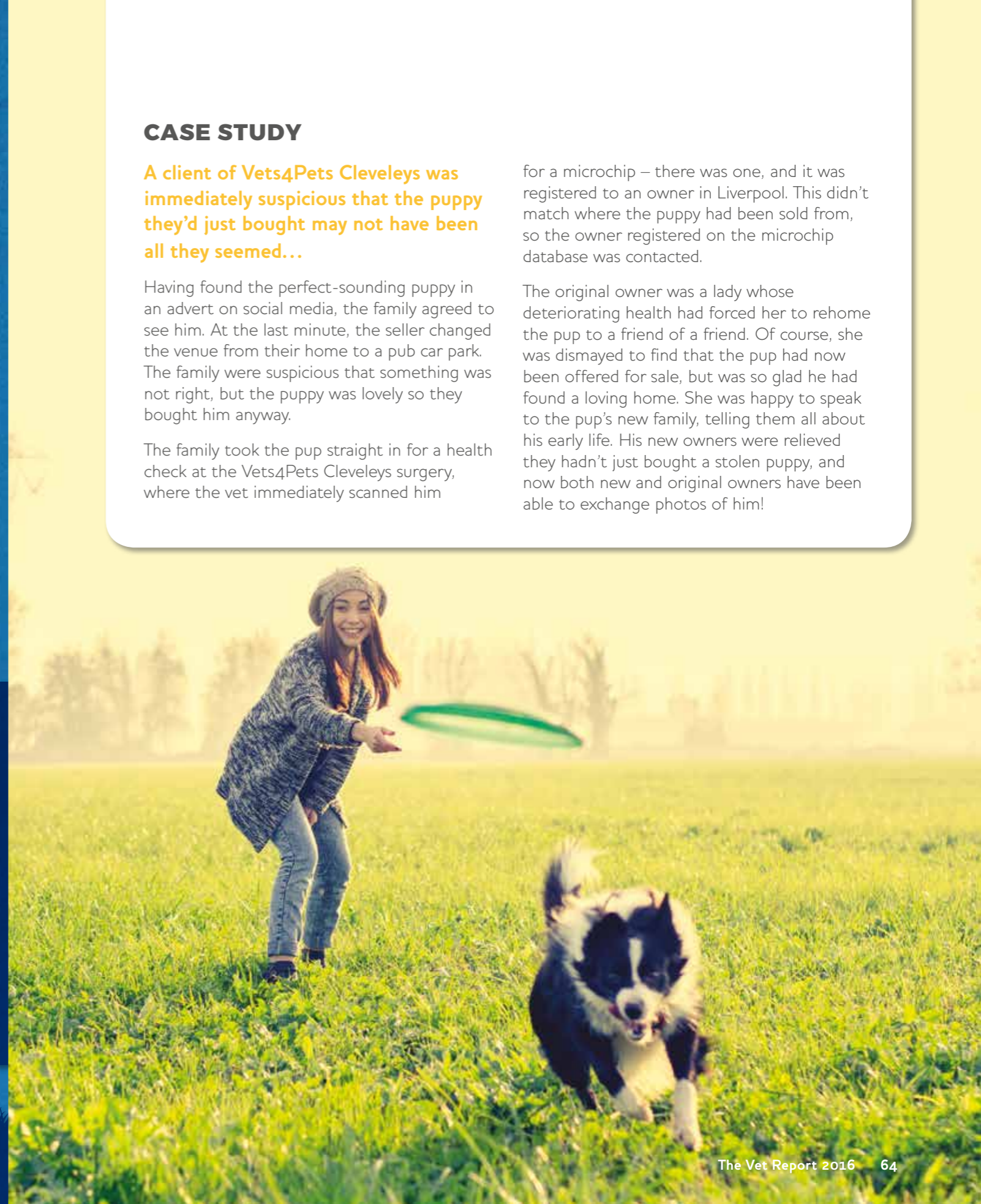
**A client of Vets4Pets Cleveleys was immediately suspicious that the puppy they'd just bought may not have been all they seemed...**

Having found the perfect-sounding puppy in an advert on social media, the family agreed to see him. At the last minute, the seller changed the venue from their home to a pub car park. The family were suspicious that something was not right, but the puppy was lovely so they bought him anyway.

The family took the pup straight in for a health check at the Vets4Pets Cleveleys surgery, where the vet immediately scanned him

for a microchip – there was one, and it was registered to an owner in Liverpool. This didn't match where the puppy had been sold from, so the owner registered on the microchip database was contacted.

The original owner was a lady whose deteriorating health had forced her to rehome the pup to a friend of a friend. Of course, she was dismayed to find that the pup had now been offered for sale, but was so glad he had found a loving home. She was happy to speak to the pup's new family, telling them all about his early life. His new owners were relieved they hadn't just bought a stolen puppy, and now both new and original owners have been able to exchange photos of him!



References: 1. <https://www.gov.uk/government/news/compulsory-dog-microchipping-comes-into-effect>

# COMMON QUESTIONS

## BY WHAT AGE DO I NEED TO GET MY DOG MICROCHIPPED IN ORDER TO COMPLY WITH THE LAW?

Dogs must be microchipped while still with their breeder, and by eight weeks of age. Vets generally advise that this is carried out between six and eight weeks.

## WHAT HAPPENS WHEN MY DOG IS MICROCHIPPED?

The microchip itself is about the shape and size of a grain of rice. Implantation is relatively painless. A special implanting device is used to insert the microchip under the skin on the scruff of the neck. The procedure needs to be done by a vet or by an approved implanter, and looks quite similar to an injection.

## HOW DOES THE MICROCHIP WORK?

The microchip holds a unique number which is revealed when it is checked using a microchip scanner. This 15-digit number is stored on a secure database, along with the pet's details and the owner's contact information. When a lost pet is scanned, the number from its microchip can be used to trace its owner and it can then be reunited with its family.

## ARE THERE ANY EXEMPTIONS FROM THE NEW LEGISLATION?

If a vet or approved implanter feels that microchipping could be dangerous for the dog on health grounds, for example because it is unwell, or still very small at eight weeks, an exemption certificate can be completed and signed by the vet. This details the reason for the exemption, and the date when it expires. The dog needs to be microchipped by that date unless the vet issues another exemption certificate.

The other exemption is when a dog has been certified as a working dog by the vet and has had its tail docked in accordance with the Animal Welfare Act 2006. In this case the dog must be microchipped by a vet or veterinary nurse, and the owner's details recorded on a database by the time the dog is three months old.

## HOW DO I KEEP MY REGISTRATION DETAILS UP TO DATE?

Having up-to-date contact details is a critical part of the legislation. If for example you move house or change your phone number you should contact the database on which your dog's microchip is registered and update your details accordingly. Failure to do so is a breach of the legislation and could result in a fine. If you aren't sure which database holds your details, you can check the table below to see which microchip numbers correspond with which database. If you don't know your dog's microchip number, your veterinary team can scan your dog's chip and tell you the number.

Chip Number Prefix	Database	Phone Number	Website
966, 968, 985, 9861	Anibase	01904 487 600	www.anibase.com
900075, 900032002	Pet Identity UK	0800 975 1960	www.petidentityuk.info
978, 982, 9600	Pet Protect	0800 077 8558	www.petprotect.com
981, 956, 968, 952, 967, 958, 900032, 9001, 934, 941, 968, 961, 978, 90008	PetLog	0844 4633 999	www.petlog.org.uk
9772	Pettrac	0800 652 9977	www.pettrac.co.uk
900118, 90003200, 99100 or 900250000, 90007900	SmartTrace	0844 542 0999	www.smarttrace.org.uk

## WHAT COULD HAPPEN IF I DON'T GET MY DOG MICROCHIPPED?

The legislation states that there is a 21-day 'grace' period from when it is first identified a dog hasn't been microchipped. You would be served with a notice telling you to have the dog chipped. If the dog had still not been microchipped within 21 days there could be a fine of up to £500.

## I'VE GOT A NEW PUPPY WHOSE CHIP IS REGISTERED TO THE BREEDER. HOW DO I CHANGE THE REGISTRATION DETAILS SO THEY'RE REGISTERED TO ME?

The breeder will always be registered as the 'first keeper', which means there is traceability back to them. They should provide you with a microchipping pack, or with written instructions on how to transfer 'primary keepership' to yourself. The breeder may transfer the information for you, but make sure they get your details correct. Some databases charge to update details, however it is a legal requirement so it must be done.

## DOES COMPULSORY MICROCHIPPING PROVE OWNERSHIP?

No. It only means that you are the primary keeper of the dog. Legal proof of ownership is not defined anywhere in the legislation and, in cases where this is disputed, it is up to a court to decide who is the legal owner.



You could be fined  
**UP TO £500**  
if your dog isn't  
microchipped



**44,000**  
 cats were rehomed  
 by Cats Protection  
 in 2015

## THE IMPORTANCE OF MICROCHIPPING CATS

Although mandatory microchipping of cats was not included in the recent UK legislation, there are some very good reasons to microchip your cat.

There are an estimated 11.1 million cats in the UK<sup>1</sup>. Research published by PDSA showed that approximately 38 per cent of UK cats are still not currently microchipped<sup>1</sup>. In other words, over 4.2 million cats are unidentifiable. In 2015 Cats Protection rehomed 44,000 cats, and reunited 3,000 of those with their original owners<sup>2</sup>. If more cats were microchipped, greater numbers could be reunited with their owners and fewer would need to be found new homes.

Cats are usually microchipped as kittens, at the time of their primary vaccination course. Most kittens aren't upset by the procedure, but some owners prefer the chip to be placed while the kitten is under anaesthesia at the time of neutering. In either case, the microchip should be in place before the kitten starts to be allowed outside. Even cats who are going to live permanently indoors should be microchipped in case they climb out of a window or go through an open door.

Some cats wear collars with identity tags on. If collars are used they must be of the type with a quick-release fastener so that if the cat should get caught on something, or get a leg through the collar, it will pop open. Microchips are a permanent, less risky way of identifying a cat.

In order to patrol their territory and to hunt, cats often spend much of their time away from direct supervision. Some cats even go off adventuring for days at a time and can be mistaken for strays by well-meaning members of the public. If a microchipped cat is picked up as a possible stray and is taken into a veterinary clinic or a rehoming centre, the owner can be contacted and the cat returned home.

More than  
**4.2 MILLION**  
 UK cats are not  
 microchipped

Similarly, people pick up elderly cats, suspecting they may be neglected or strays, and take them in to be scanned. For cats who have become a bit confused and wandered off, or for cats on medication, their owner can be contacted immediately if they are found, before they come to any harm.

When families move house, their cat may try to find their way back to their old home. They can be missing for a long time while they travel – in some cases – many miles. If this happens, it can be helpful to put up posters in the vicinity of the old home, so that should the cat turn up there the owners may be contacted, provided they have kept their details up to date with the microchip database.

It's a sad fact that cats may get hurt or killed on the roads. If they are wearing a microchip, it can be scanned and their owner can be informed. If the worst has happened, the owner will at least be aware and not be forever wondering where their missing cat could be. If the cat has been injured, the owner has the choice then of how to proceed with treatment of any injuries the cat has sustained.

Not only do microchips benefit cats outside their own home, but they can be used to activate a type of cat flap that may be programmed only to open when it detects specific microchip numbers. This prevents other cats from entering the property and upsetting the resident cats.

It remains to be seen whether it will ever become law that cats must be microchipped. For now, it is clearly part of being a responsible pet owner to make sure that cats are permanently identifiable, and the best way to do this is by microchipping them.



References: 1. PDSA Animal Wellbeing (PAW) Report 2015 2. [http://www.cats.org.uk/uploads/documents/Cats\\_Protection\\_Annual\\_Review\\_2015\\_web\\_vr3.pdf](http://www.cats.org.uk/uploads/documents/Cats_Protection_Annual_Review_2015_web_vr3.pdf)

# ALABAMA ROT UPDATE

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**Alabama Rot continues to be in the news. In the past two issues, The Vet Report has followed developments as more cases have been confirmed, and has sought to encourage owner participation in order to further knowledge about the disease.**

Idiopathic cutaneous and renal glomerular vasculopathy (CRGV) – better known as Alabama Rot – was first recognised in Greyhounds in the USA during the 1980s. In 2012, a disease resembling Alabama Rot started to be seen in the UK, with the New Forest in southern England emerging as an initial ‘hotspot’. The disease is now geographically widespread, and there have been confirmed cases in 25 counties in England, Wales and, more recently, Scotland.

Alabama Rot damages blood vessels in the kidneys and skin. The first signs an owner might notice if their dog has become affected are areas of swollen, red or ulcerated skin. These usually appear quite suddenly on the extremities. Within two to seven days, signs of kidney

failure are apparent and the dog becomes lethargic, inappetent, and may vomit. Sadly, even with immediate, specialist veterinary support, many dogs do not survive.

At the time of writing, the number of confirmed Alabama Rot cases in the UK is 78<sup>1</sup>. Although we don't yet fully understand the disease, research is ongoing, and it appears that there is a seasonal pattern, with more cases occurring between October and May.

Alabama Rot can have severe consequences, but it is still relatively uncommon and some of the clinical signs may occur in other, more frequently seen conditions. If you are concerned about your own dog, seek urgent veterinary attention in order to rule it out.

## GEOGRAPHICAL SPREAD OF ALABAMA ROT<sup>1</sup>

### ● Confirmed cases

- 18 Hampshire
- 9 Greater Manchester
- 7 Dorset
- 6 Surrey
- 3 Cheshire
- 3 Monmouthshire
- 3 Wiltshire
- 2 County Durham
- 2 East Sussex
- 2 Kent
- 2 Lancashire
- 2 Nottinghamshire
- 2 Somerset
- 2 West Yorkshire
- 2 Worcestershire
- 1 Berkshire
- 1 Cornwall
- 1 Dumfries & Galloway
- 1 Northamptonshire
- 1 North Yorkshire
- 1 Shropshire

### ● New counties affected

- 3 London
- 2 West Sussex
- 1 Staffordshire
- 1 Wrexham



For more information visit: [vets4pets.com/stop-alabama-rot](http://vets4pets.com/stop-alabama-rot)

<sup>1</sup>. Data supplied by Anderson Moores Veterinary Specialists



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[www.vetreport.co.uk](http://www.vetreport.co.uk)

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