



fab
felineadvisorybureau

Cat friendly practice 2

produced by the Feline Advisory Bureau

sponsored by



Our thanks to our contributors:

Main author:

Andrea Harvey, FAB Lecturer at Bristol University

FAB's feline expert panel members:

Vicky Adams, Sarah Caney, Martha Cannon, Julie Cory, Charlotte Dye, Yaiza Forcada, Darren Foster (Australia), Andrea Harvey, Angie Hibbert, Pru Galloway (New Zealand), Michiel Kraijer (Netherlands), Amy Mackay (USA), Nicki Reed, Suzanne Rudd, Kerry Simpson, Andrew Sparkes, Maud van de Stadt-Gould, Séverine Tasker, Sheila Wills

FAB's feline behaviour expert panel members:

Jon Bowen, Robert Falconer-Taylor, Vicky Halls, Sarah Heath, Kim Horsford, Jenna Kiddie, Daniel Mills, Peter Neville, Francesca Riccomini, Roger Tabor

The practices which took part in our 2006 Cat Friendly Practice Awards Scheme, from whom we learned so much.

Photographs kindly contributed by:

Abbey House Veterinary Hospital, Morley, Leeds
Farthings Veterinary Surgery and Hospital, Horsham, West Sussex
Mill House Veterinary Surgery and Hospital, King's Lynn, Norfolk
North Down Referral Clinic, Godalming, Surrey
Oxford Cat Clinic
Stowe Veterinary Group, Stowmarket, Suffolk
Strathmore Veterinary Clinic, Andover, Hampshire

Sarah Caney
Daniëlle Gunn-Moore
Polly Taylor

Edited by Claire Bessant

ISBN: 978-0-9533942-6-5



Feline Advisory Bureau

Taeselbury, High Street, Tisbury, Wiltshire

SP3 6LD, UK

Tel 0870 742 2278

e-mail information@fabcats.org

www.fabcats.org

The Feline Advisory Bureau is a charity dedicated to promoting the health and welfare of cats through improved feline knowledge, helping us all care better for our cats

Registered charity number 1117342

The Feline Advisory Bureau is a company limited by guarantee, registered in England and Wales
Registration number 6002684



Cat friendly practice 2



*Many thanks to our
sponsors for supporting this
Cat Friendly Practice Scheme.*

*Without them it would not
have been possible.*



WHEN WE COMPILED our first practical guide to running a cat friendly practice last year we pulled together expertise not only from our own feline expert panel, but from cat practitioners and experts across the world. But we realised that this was just the start and that there were lots of issues and ideas that we had not even considered. We know lots of practices have been changing the way they do things and have taken on board many of our suggestions. However, we have also learned from practices and individuals during the year – thank you all for your input; we have incorporated the useful tips in this update. It should be read in conjunction with our first guide ‘[Creating a cat friendly practice](#)’ which is available on the website www.fabcats.org or via the office, contact sue@fabcats.org



Consider the cat coming



When a cat is brought into the veterinary surgery, especially if it is to be hospitalised, it will be exposed to many stressors.

- * *Strange cat basket*
- * *Car journey*
- * *Strange smells, sights and noises of the practice*
- * *New people*
- * *Other animals*
- * *Handling*
- * *Procedures*
- * *Hospitalisation*

Cats are very bonded to their own familiar environment; they seldom leave it by choice so just being in a strange environment results in dramatically increased stress levels. When admitted into a clinic they are likely to be anxious because they are uncertain about the safety of that environment. They will be trying to assess any potential dangers around them; at the same time they obviously have very little control over any of these.

Stress prepares the cat to react appropriately to any unpleasant situation by running away or hiding, and the stress subsides once the danger has been overcome. If, however, there is nowhere to hide or run to, ongoing stress results. This can cause:

- * *Elevation in blood glucose*
- * *Elevation in blood pressure*
- * *Tachycardia and tachypnoea*
- * *Pupil dilation*
- * *Reduced gastrointestinal function*
- * *Anorexia*
- * *Alteration in frequency of grooming*
- * *Increased susceptibility to disease*

In the veterinary surgery where vets and nurses are trying to ascertain the cat's 'normal values' these can make interpretation of results more difficult or even misleading. Hence keeping a cat as stress-free as possible will help to get a truer picture of the problem and help to reduce its susceptibility to infectious disease, improve appetite and aid healing.

into the surgery



If the cat realises that the environment is safe, its anxious state will resolve. If the cat perceives definite danger, its anxiety will progress to fear. Anxiety will be heightened by loud noise, sudden movement, new objects or smells, approach by strange people (or other animals) into the cat's personal space and a lack of control over what is happening.

The way in which a cat is handled in the consulting room or how it is hospitalised can move it from anxiety to fear or from anxiety to relaxation. Avoiding stressors, correct handling, interpretation of body language and suitable housing are all important.

Body language

Anxiety

We can recognise an anxious cat by observing some subtle body language. An anxious cat may sit or lie at the back of its cage. It may also try to hide by sitting in the litter tray. Its eyes may be wide open and pupils dilated or they may be pressed shut faking sleep. There is likely to be a reduction in self-maintenance behaviour (ie, grooming, eating, urinating, defecating). Its body will be flattened, whiskers retracted, ears flattened and tail held tightly near the body. Combination of ear position and height of body can be used to communicate a perceived level of threat. The lower the cat's body is to the ground and the flatter the ears the more intimidated the cat feels. Anxious cats never sleep properly and can become very fatigued as a result.





Fear

A cat is fearful when it has perceived definite danger. This could be an unfamiliar person that cannot be assessed as safe (eg, if they are loud, use firm restraint or stare at the cat), or pain caused by handling techniques or medical problems. A fearful cat will adopt a defensive posture aimed at protecting vulnerable body parts. Flattened ears will move to the back of the head, the whiskers pan out and forward to assess the distance between the cat and the perceived danger, the tail is held tightly around the body. Breathing is rapid and shallow, pupils dilated, eyes wide open and, at the extreme end of fear, there may be shaking, drooling and passing of urine and/or faeces. Most cats that we recognise as aggressive are very fearful. Hissing and growling is a warning to back off. As they become agitated the tail may begin to twitch gently, particularly when being handled and this is a good warning sign that the cat is about to move to the hissing and growling phase - often rapidly followed by biting and scratching! It is important to recognise this and handle the situation appropriately to reduce the cat's fear, not confirm it.

Recognising pain

Subtle changes in piloerection, posture, muscle tone and facial expressions may be the only clue that the patient is in pain. Signs of pain include (although their absence may not mean that the cat is not in pain!):

- * *Loss of appetite*
- * *Swallowing motions without eating or drinking, salivation, teeth grinding*
- * *Crouched (hunched) position*
- * *Mild piloerection*
- * *Inactivity*
- * *Lack of grooming*
- * *Lack of interaction/withdrawal*
- * *Reluctance to use litter tray*
- * *Unresponsive to being touched*
- * *Semi-closed eyes/increased blinking/staring*

Many aspects of feline nursing rely on accurately interpreting changes in behaviour and differentiating what is normal and what is significant.

Correctly identifying signs of pain is essential for an appropriate pain management

programme, and this is an area where nursing care and time spent with the patient can make a world of difference.

Hissing and growling is a warning to back off. As cats become agitated the tail may begin to twitch gently.

This cat is uncomfortable and tense



Interacting with cats

Many cats respond well to human interaction. Making time for staff to play, stroke (gently, especially with the head area) and groom the patient will significantly reduce stress in many hospitalised cats. However, some cats prefer to be left alone, and these individuals need be recognised and left in peace.

The difference between relaxation and aggression using eye contact can be very subtle! A fleeting glance with relaxed facial muscles is acceptable, whereas tense facial muscles with a prolonged stare from other cats or humans can be very intimidating or threatening. Avoid sustained eye contact by looking over the cat's head or at its chest - this can be less intimidating. A relaxed stare with slow blinking will indicate a lack of threat.

Be aware of the sounds that you use when talking to cats, for example a 'Shhh' sounds like a hiss to a cat and should be avoided. Chirruping sounds are used by cats as a friendly greeting, and mimicking these sounds when approaching a cat can help the cat to perceive you as less of a threat. A soft calm voice will be reassuring.

Throughout the rest of this book we will look at ways of decreasing stress for cats in the practice.



Compare this cat with the one on the previous page - it is relaxed and comfortable





The waiting area

Aim: to create a calm and unthreatening environment for the cat to wait in so that it is not stressed or frightened by the time it reaches the consultation room.

Many practices are making efforts to create separate cat waiting areas, which is a great step forward. However careful thought needs to go into the location and size of this area, as well as the route that cats are taken into and out of it. Each individual practice will have a different solution to these problems depending on the size, layout and location of the practice. The key to creating a truly feline friendly waiting area is to consider the needs of cats, what you are trying to achieve with your cat waiting area, and then carefully plan the best way of achieving it. If the layout of the practice does not make creation of a separate area an effective way of achieving these aims, there may be other solutions.

A cat's initial experience on entering the veterinary practice is very important as this is the time that the cat is attempting to assess the safety of this new environment.

Some things to consider

- * Some small practices with a high feline caseload may find that they rarely have cats and dogs in the waiting room at the same time and that it isn't necessary to create a separate area.
- * Some practices have enough space to allow cat owners to take their cats directly into a consulting room without having to sit in the waiting room at all.
- * Other practices have a large car park or courtyard directly outside and find it more practical to ask dog owners to wait outside. Alternatively, clients may prefer to wait in their cars with their cats, and for the receptionist to call them on their mobile phones when the vet is ready to see them.
- * There may be little value in having a feline-only area if cats have to pass through a noisy area to get to it and then back passed all the waiting dogs to get to the consulting rooms. Some practices are able to create a separate doorway into the consulting room so that cats can be taken directly from the cat waiting area into the consulting room without having to risk an encounter with a dog. An area right next to a busy reception, or directly opposite barking dogs, can defeat the whole object of having a cat-only area.
- * In a large practice, a small cat waiting area can force cats to be close to each other at busy times. Direct visual contact with other cats can also be very threatening and stressful for a cat.

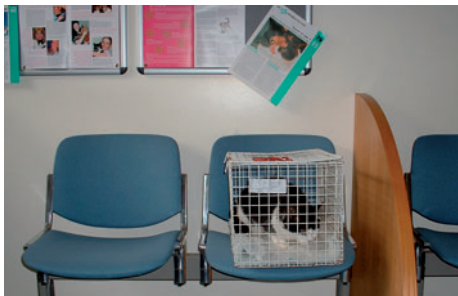




Some practices allow owners to take their cats directly into a consulting room without having to sit in a waiting room

This can be helped by:

- * Erecting small partitions to separate waiting areas.
- * Providing blankets or towels to cover the cat's cage. This can be useful for particularly nervous cats, especially if they are forced to wait near another cat (or dog).
- * Cats feel insecure if they are placed at floor level, so having perches or stools for carriers is very useful. If the cats share the area with dogs, it is important that the perches are not at dog level; they should be higher than dogs, ideally about 1.2 m (4ft) off the ground so that the animals do not come face to face.
- * Avoid locating the reception desk in a narrow area as this is asking for meetings between dogs and cats – a large space in front of the reception desk is important.



- * Provide a raised ledge next to the reception area where clients can place cat baskets.
- * An alternative idea is to have an area of cages or compartments within the waiting area, which carriers can be placed into while owners are waiting to be seen, when they are paying or collecting medication.

Z



The consulting room

Aim: To provide a safe non-threatening area where cats can be examined calmly and effectively.

Things that can help:

- * Use Feliway and Felifriend (Ceva) to impart a general relaxing mood and less threat when handling.
- * Ensure any alarm scents left by preceding patients are removed by cleaning the consult table well and good ventilation.
- * Place the carrier on the floor and let the cat get out and explore the room before being examined - this usually helps to keep cats calm. Ensure that there are no small holes that the cat can get into and make sure that windows or doors are securely closed.
- * It is easier to use a top loading basket as the cat can be more easily lifted out.
- * A very nervous cat can be allowed to hide for the discussion part of the

consultation by placing a blanket over the basket as this will often make it feel more secure.

- * Adopt a 'less is more' approach to restraint; this will help prevent the cat resorting to aggression. Cats generally respond well to minimal restraint – refer to p14-21 in previous booklet.

- * After removing the cat from the basket, let it settle, stroke it for a while or let it wander around the room.

- * Avoid loud or sudden noises and bright lights.

- * Talk to the cat calmly, slowly and with a relatively quiet tone, moving slowly and

avoiding sudden movements.

- * Be flexible in where you examine the cat - having a window with a window ledge wide enough for the cat to sit on can provide a distraction and make examination much easier. Likewise, sitting on the floor with the cat can make handling easier – particularly for neurological examinations.

- * Perform some of the physical examination with the cat looking away from you. Break long examinations into stages and stop as soon as early signs of distress are seen; allow the cat to have a minute to relax and then continue.

- * Start with the least invasive procedures first. Local anaesthetic cream applied topically, eg, EMLA cream, can be very useful for making blood sampling less traumatic.

- * Avoid stainless steel examining surfaces – they are cold, noisy, reflective and slippery. A rubber mat can help overcome some of these problems.

- * Heated table tops can make sitting on the table less of an ordeal for the cat.





- * Pay attention to owners' warnings that a cat is likely to bite or scratch and don't rely on owners to hold cats safely!
- * Breakable or harmful items are best kept in cupboards – an agitated cat on the loose can cause damage or be injured.



Be flexible in where you examine the cat - having a window with a window ledge wide enough for the cat to sit on can provide a distraction and make examination much easier. Likewise, sitting on the floor with the cat can make handling easier – particularly for neurological examinations.





Hospitalisation

Aim: To keep the cat in a safe, clean, quiet environment conducive to recovery and where it can be handled with minimum stress to cat or staff.

Design of the cat ward

This is an area where visiting practices gave us a great deal of insight into the variety of cat wards and accommodation which are in use. Many practices are beginning to have cat only wards, which are excellent. However, there may be more to consider in the design of a cat only ward than you think! It is not just a case of clearing out a small unused room somewhere in the corner of the practice. Location, size and layout are also vital to the success of having a cat only ward. The principles of a good cat ward:

Cat-only

Being above barking dogs is not conducive to relaxation!

Location

The ward should be in a location that is easily accessible and does not require the cat to be taken through busy noisy areas to get there. However, it needs to be near enough to other areas to ensure that the cats are frequently observed, and not forgotten about.

Layout of cages

The layout of the cages is equally important. There should not be any visual contact between patients – ie, cages should not be placed opposite each other

Size of the ward

The size of the ward is an important consideration, regardless of the number of cages within it. The room needs to be wide enough to get cats in and out of the cages without them having to be held directly in front of another patient. If the ward isn't next to a procedures room, there may need to be space for a table where cats can be examined without having to be directly in front of the other hospitalised patients. There needs to be space for personnel to work and observe the cats without having to be right close up to the cage of a nervous cat.

The ward should contain a mix of cage sizes for long and short stay patients. Cats that are hospitalised for more than 24 hours should have a larger space allowing some degree of free movement. If possible, the ward should be large enough to contain a set of scales suitable for weighing animals up to 10 kg. This enables daily monitoring of in-patients without having to remove them from the ward.



Ensure that the cats are frequently observed, and not forgotten about.

Visibility of cats

It is important that hospitalised patients can be observed quietly and unobtrusively. If the room is very small with opaque walls, it is unlikely that the cats will be monitored closely. One solution to this is to have a glass wall to allow observation of the patients from a distance without having to actually be in the ward.

Cages at good height to clean and reach

Cage level should be at a safe height for personnel (about 90 -100 cm above floor level) so the cat is fully visible and can be retrieved easily from the cage.



Cages which are too high or too deep can prevent good observation, pose a health and safety issue to personnel and make it more difficult and therefore more stressful to the cat when retrieving it from the back of the cage. It can also be very difficult to clean cages properly if the cleaner needs to stand on a chair to reach the top back corner. If you have two rows of cages, the lower level should be raised off the ground by at least 20 cm.

Quiet

The noise of dogs, other cats or banging equipment or metal implements can be very alarming to cats. If there is an aggressive or noisy cat in the hospital, this cat should ideally be kept separate so that the other cats can't hear it. This is also true when performing procedures.

Other cats should not be allowed to see

or hear another cat hissing or yowling if it is becoming distressed, eg, when being restrained for blood sampling.



Temperature and ventilation

The ward needs to be centrally heated to provide an ambient temperature of 18 - 23°C, and in summer months if the ambient temperature rises above this, air conditioning should be provided. Adequate ventilation is also important, either via extractor fans, or safely covered windows.

Cages which are too high or too deep can prevent good observation.



Design of the individual

Materials

Materials in the ward need to be hard wearing and non-porous since cages need to be disinfected on an almost daily basis, especially between patients.

Stainless steel is commonly used, but is quite cold to touch and may even conduct heat away from the cat. Stainless steel is also quite dark and noisy, and some cats can be frightened by reflections in the shiny surfaces. Under floor heating would be fantastic!



White fibreglass cages give better visibility and are quieter and warmer, and those with a glossy finish are just as easy to clean.

Front of the cage

The front of the cage must also be easy to clean, allow good observation and prevent escape or injury. A toughened glass door allows very good visibility of the patient, reduces risk of spread of airborne infection and reduces the chances of the patient putting paws through the bars and opening the door or causing injury to itself.

Rubber stoppers can be used on metal cage doors to reduce sharp metal banging noises when the doors are closed.



Detailed charts should be kept for hospitalised patients. These should include the cat's daily weight and body condition score, daily temperature, pulse and respiration rates, details of urination, defecation, vomiting or diarrhoea, amount of food fed throughout the day and amount eaten. If the cat is on intravenous fluid therapy the date that the catheter was inserted should be recorded as well as the type and rate of fluids being administered. There should be clear instructions from the veterinary surgeon of how often various parameters need to be monitored in a particular patient, and space on

the clinic records for these to be ticked off once they have been assessed. Additional space is also required to record daily observations of the patient such as whether they are bright and interactive, or hiding at the back of the cage.

cages

It is useful to have a separate medication chart detailing the medication required, correct doses, route of administration and time of administration, with space to tick off when each dose has been given. Cage labels indicating the personality of the cat, eg, 'I bite' or 'I love attention' can help with nursing.

Sizes – combination of depth and width

The size of the cage is also very important. A smaller cage may be acceptable for day-patients, but at the very least there should be adequate space for a litter tray, bedding and food/water bowls. Many day-patients are admitted for minor procedures such as neutering or dental work and, although they may not be in the cage for long, there needs to be adequate space for them to be fully stretched out with their neck extended to allow a safe recovery from anaesthesia – thus a cage the size of a carrier basket is not adequate.



Detailed charts should be kept for hospitalised patients.

Furnishing the cage

* Hospitalised cats feel vulnerable, often showing this by hiding in their litter trays or under bedding. Often small changes can make the hospitalisation cage much more acceptable.

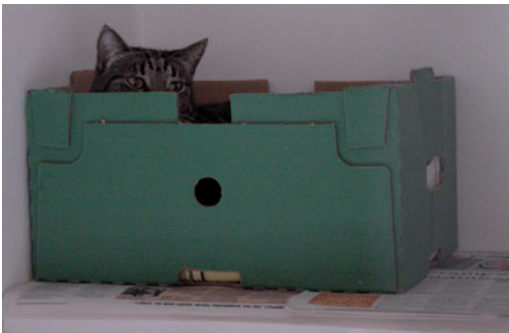
* Provide appropriate hiding places, eg, cardboard boxes, igloo or floppy bag type bedding (see the first Cat Friendly Practice booklet for more on this) which also provide warmth. Using some bedding or clothing from the owner may help to reassure the cat with a familiar smell.

* Cats also enjoy being in a high position and it has been shown that cats prefer to lie on a perch within their cage, so some type of shelf/perch available within the cage can be very useful. This may be in the form of the top of a box, or small stool; some commercially made cages have inbuilt perches.

* Cover the front of the cage with a towel so the cat feels hidden, but remember to check it regularly.

Suggested minimum sizes:

	Height (cm)	Width (cm)	Depth (cm)
Day patient	60	60	75
Overnight patient	60	70/80	75
Longer stay	70	100	75 or more



* For long stay patients provide a raised shelf within the cage, especially useful for separating sleeping areas, food bowls and litter trays.

* Food/water bowls and litter trays should be placed as far apart as possible, which can be achieved by placing the litter tray in one corner and food/water bowls in the diagonally opposite corner. If food and water can also be separated this is ideal.



* If a towel is used for restraining the patient, it is useful for this to be kept within the cage so that it picks up the cat's own scent.

Cleaning and disinfection

The cat ward needs to be cleaned and disinfected daily, and food and water bowls sterilised between patients. Carrier baskets, blankets/towels and bedding should also not be used without washing between patients, and all equipment (including scales, thermometers etc) and tabletops need to be cleaned and disinfected between patients.

Cats cannot metabolise phenols and so any disinfectant containing these (eg, Jeyes fluids, Izal, Stericol, Clearsol, Dettol and Ibcol) should not be used anywhere near cats as even the fumes can be toxic to them.

Isolation facilities

Given how commonly infectious diseases are encountered in cats, a good isolation facility is vital.

* The isolation facility needs to be self-contained to avoid cross-contamination and cross over into the rest of the practice, preferably with a separate entrance. Infectious patients will need intensive nursing, yet be near enough to other facilities to be monitored closely and not forgotten.

* There should be a water supply for washing and disinfection within this room, and any cleaning utensils should remain in the isolation unit.

* A footbath containing suitable disinfectant should be placed outside.

* Appropriate protective clothing should be available, such as aprons/disposable suits, gloves, face-masks and shoe covers.

* Ideally an active ventilation system should be used.

* Strict hygiene protocols should be put in place and adhered to by everyone. The number of staff entering the isolation area should be strictly limited and, ideally, one person should be designated to the nursing care of isolation patients to ensure that they receive enough care.

* If a dedicated isolation facility is not available, a portable cage can be set up in a separate area when required.



This large cage has been created by taking out the wall between two smaller cages. Plastic stops/catches prevent loud metal clashing noises as the door is shut

Fluid therapy

Dehydration can occur very quickly and should be promptly addressed in cats because

- * of their small size
- * water intake can come mainly from food and ill cats may not wish to eat or drink
- * dehydration further exacerbates anorexia and electrolyte disturbances

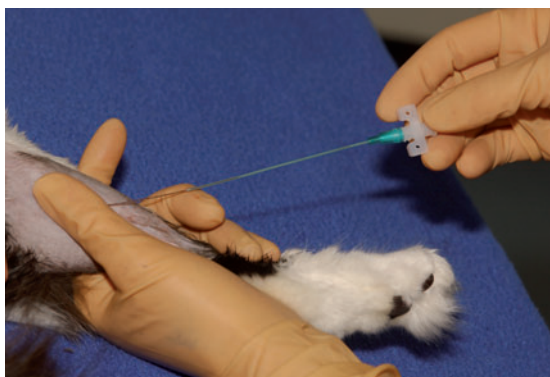
Assessing hydration

Many methods can be used for estimating hydration status including the clinical history (eg, anorexia and/or severe vomiting and diarrhoea, constipation or dry faecal pellets), the clinical examination (loss of skin elasticity, dry mucous membranes, prolonged CRT, sunken eyes), changes in body weight (another important reason for weighing hospitalised patients daily), and laboratory parameters (urine specific gravity, serum urea and creatinine, PCV and total protein). The most common route of fluid administration in the veterinary practice is intravenous administration.

Ensure that the cats are frequently observed, and not forgotten about.

Intravenous fluid therapy

* Accurate fluid therapy is a very important aspect of management of a number of conditions. It can be very difficult to monitor response to fluid therapy if it is unknown whether the correct volume of fluids has been administered at the correct rate.



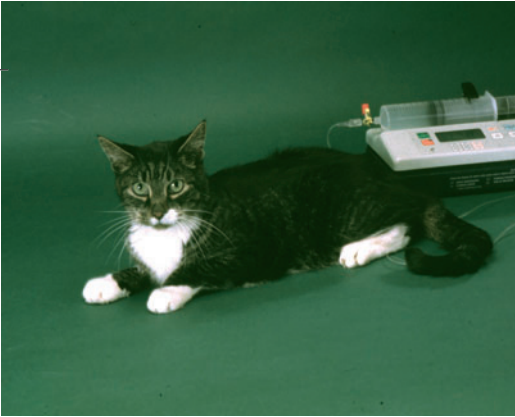
- * Long stay, long intravenous catheters (Leader Catheter Vygon 20G) placed in the saphenous vein can be very useful for maintaining an intravenous line when required for more than a few days.
- * It can be very useful to add medications to fluids to administer them as a constant rate infusion (eg, potassium chloride, potassium phosphate, metoclopramide, dextrose) and in these cases it is even more vital that the correct rate and

volume is administered as well as the fluids being thoroughly mixed before starting the infusion.

* It is easy to cause volume overload in cats with over-zealous fluid therapy, particularly in cats with pre-existing systemic inflammatory disease, acute renal failure or cardiorespiratory disorders.

* Although the use of paediatric giving sets can be acceptable in some instances, if the nursing staff are busy, the drip could stop running without





anyone being aware until the patient is checked. This can result in a delay in the administration of treatments or fluids. Even if the rate has been set on the burette, it can sometimes slow down or speed up, depending on the patient's leg position.

* Where an accurate supply of fluid is required, infusion pumps or syringe drivers provide the most ideal and safe solution. These automated pumps can be programmed to deliver a set volume over a given time. They are also fitted with an alarm that sounds if the fluid has run out or if the drip has become occluded. These pumps are expensive (approx £900 each), however given that intravenous fluids is one of the most common treatments administered to a

hospitalised and anaesthetised patient, they are well worth the money.

* Infusion pumps or syringe drivers can also be used to administer other treatments that may be more effectively given as a constant rate infusion, such as insulin in a diabetic ketoacidotic, phenobarbitone or propofol in a seizing patient, mannitol in a patient with raised intracranial pressure, or treatments that need to be administered very slowly intravenously (eg, metronidazole).



Subcutaneous fluid therapy

Subcutaneous fluid (SQ) therapy is also sometimes used, for example as chronic maintenance therapy in cats with chronic renal insufficiency. In addition to administering fluids in the clinic, a willing and able owner may be able to administer SQ fluids at home. FAB has an information sheet for clients with step-by-step pictures to help them give their cat fluids (see www.fabcats.org).

Home administration of SQ fluids by owners

* SQ fluids may be given as often as is needed, but for most cats that require fluid supplementation, SQ fluids are most often provided between once a week and once a day (with 2 - 3 times weekly being most common).

* Generally around 10-20ml/kg of fluid can be given at a single SQ injection site (approximately 60-100ml in total for most 'average' sized cats).

* There are a variety of methods that can be used for SQ fluid administration, but the way that is best tolerated is usually by using a 'drip bag' and giving set attached to a needle.

* The drip bag is suspended above the level of the cat so that the fluid can run subcutaneously under the influence of gravity. It usually takes several minutes to administer the fluid, and it is often helpful for owners to cuddle, stroke or pet the cat during this period, and many people find it helpful to feed the cat at the same time, providing them with a distraction.

* The vast majority of cats tolerate being given SQ fluids tremendously well.



Complications associated with SQ administration of fluids are very uncommon.





Nutrition

Hospitalised and sick cats are likely to be anorexic because of pain, stress, nausea or dehydration. Failure to meet nutritional requirements will result in:

- * *Reduced immune system function*
- * *Increased risk of sepsis*
- * *Reduced tissue repair*
- * *Delayed healing*
- * *Muscle weakness*
- * *Altered drug metabolism*

Cats are also susceptible to development of hepatic lipidosis following even short periods of anorexia.

Hospitalised patients may be in a hypermetabolic state which, when combined with starvation, quickly leads to protein depletion and protein energy malnutrition which can be a major contributing factor in multiple organ failure.

Encouraging cats to eat

- * Check the cat is receiving adequate pain control
- * Check that the cat is properly hydrated (see page 17 for more information on fluid therapy) and electrolyte balance is correct.
- * Reduce environmental stressors (eg, noise, odours etc).
- * Ensure food is placed away from the litter tray and if possible away from water too.
- * Offer the food the cat is used to (collect this information on the owner admittance form) or something known to be a favourite treat.
- * Use small amounts of food initially.
- * Warm food to body temperature.
- * Increase palatability by adding flavours or increasing fat/protein content.
- * Use food with strong odours.
- * Change the consistency eg, by mashing up food.
- * Tempt cats by smearing a small amount of food on the paws or face. This can stimulate a licking response to start the cat off.
- * Remove uneaten food after an hour (except in the case of 'secret eaters' – cats that only eat during the night or at times when the ward is completely silent).
- * Give a choice of two foods – more is overwhelming – or try with a different food later.



- * Tempt to eat by hand feeding.
- * Offer some dry food too as some cats have a preference for it.
- * Use wide shallow bowls which mean that the cat's whiskers don't touch the sides.
- * Stroke gently and see if this helps or hinders.
- * Drape a towel over the cage or feed in a cardboard box in the cage where the cat may feel more secure.
- * Food aversion is a particularly important potential complication of anorexia in hospitalised cats. Offering food or force-feeding when a cat is feeling nauseous can result in persistent refusal to eat that food. It is easy to induce food aversions at this time because the cat may associate certain foods with the discomfort that it is feeling. Give the cat a 'rest' from food in the cage, especially if it may be nauseous
- * Be careful with syringe-feeding as it is likely to induce or exacerbate food aversion. It is unlikely to be able to provide the cat's calorific requirements and carries a high risk of inducing aspiration.
- * Avoid baby food preparations as they do not meet essential nutrient requirements and some contain onion powder which causes oxidative damage to feline red blood cells resulting in Heinz body-associated haemolytic anaemia if used long term.
- * Appetite stimulants such as cyproheptadine and mirtazapine can be helpful.

Enteral feeding

Enteral assisted feeding should be considered in any patient that:

- * Has not been consuming resting energy requirements for three or more days
- * Has lost 10 per cent or more of bodyweight
- * Has increased nutrient demands (eg, trauma, surgery, illness) that are not being met by voluntary food intake

See pages 20 and 21 for step-by-step placement of naso-oesophageal and oesophagostomy/gastrostomy tubes.





Placing naso-oesophageal tubes

Naso-oesophageal tube feeding is very useful and appropriate in many cases for short-term nutrition.



1 Equipment. Local anaesthetic (eg proxymetacaine) should be squirted into the nostril



2 The tubes should be measured from the nostril to the 9th rib'



3 Lubricate the tube



4 Gently inset tube into the nostril directing ventrally and medially



5. Suction with an empty syringe - if the tube is correctly in the oesophagus, there should be a vacuum with resistance against suction. If the tube is in the trachea, air will be aspirated back, and if this occurs the tube should be removed and start again. If there is resistance against suction, finally check by flushing the tube with 4-5ml sterile water. If there is any coughing, remove and start again.



6. Secure the tube in place with small pieces of tape either superglued to the hair (take care not to get superglue on the skin), or sutured to the skin.

Fortol (Arnolds) and Waltham/Royal Canin Convalescence Support are the most suitable available diets for naso-oesophageal tube feeding because they are liquid enough to administer easily down the narrow bore. Fortol contains 1 kcal per ml of food.

Placing oesophagostomy or gastrostomy tubes



The metal introducer is passed into the anaesthetised cat's mouth

Thicker consistency diets can be administered down oesophagostomy and gastrostomy tubes if they are liquidised first, eg, Hill's a/d or specific prescription diets, eg, Hill's l/d for hepatic lipidosis or k/d for renal disease.



The needle is withdrawn leaving the peel-away sheath in situ



The end of the introducer lies in the oesophagus, below the larynx



The oesophagostomy tube is fed through the peel-away sheath. The tip should lie at the level of the 9th rib



The 'peel-away sheath' (Arnolds) fits over the needle. Both are passed through the soft tissues of the neck until the needle lies within the introducer



The peel-away sheath and introducer are removed and the tube sutured in place





Analgesia

When a cat comes into the surgery it is often already in pain through for example trauma, or it will subsequently be operated on, in which case pain control must be considered. In effect it is a case of thinking 'does this cat hurt?' or 'will this cat hurt?'. The information below is part of a forthcoming practice poster from FAB and Alstoe Animal Health on which dose rates etc can be found.

Simple but true:

- * ANY surgery will hurt – if it hurts you, it will hurt the cat
- * Some diagnostic procedures will hurt
- * An injured cat already hurts
- * Prevention is better than cure
- * Pre-medicate with analgesics
- * Stop pain before it starts and prevent 'wind up'
- * Quiet and still does NOT mean pain free!

For trauma

- * Give analgesics as soon as possible – NSAIDs (unless contraindicated in renal disease for example) and/or opioids
- * Assess for effect frequently in first hour
- * Give more/something else if not sufficient!
- * If the cat needs surgery – treat as for elective surgery (see below) but expect more analgesic to be required – especially post operatively

For elective surgery

- * Use an analgesic in the premedication
- * Check for pain as soon as the cat recovers consciousness
- * Check for pain hourly post surgery
- * Know when the analgesic's effect is likely to wear off and give more just before

Default analgesic protocol for surgery

Premedication	Opioid and/or NSAID
Induction & maintenance of anaesthesia	Injectable and volatile anaesthetic or triple combination
Post operative	Repeat opioid when needed or just before expected limit of effect

If default is not enough

Ketamine	Pre op or by infusion
Bupivacaine	Pre emptive local nerve block
Lidocaine	By iv infusion
Fentanyl patch	NB takes hours to work – give im morphine, methadone or pethidine at time of patch placement and repeat as necessary while patch takes effect



Myths and facts about analgesics

Myth 'Pain stops the animal using the injured part and causing more damage'

Fact Pain reduces eating; inadequate energy intake impairs tissue healing and impairs function of the immune system. An injured cat in pain will not heal as well as a happy cat.

Opioids

Myth 'Morphine makes cats go mad'

Fact It only causes mania in cats when very high doses are given. 0.2 - 0.3 mg/kg will not cause mania in cats that need analgesic treatment

Myth 'Opioids cause respiratory depression and are not safe in injured or anaesthetised cats'

Facts This is only a problem in primates – not significant in cats. Respiration should be monitored during anaesthesia whether opioids are used or not. Opioid analgesia improves respiration after chest injury.

Myth 'Opioids cause unwanted gastrointestinal side effects'

Facts Morphine will make a healthy cat vomit, but not one that needs analgesia. Opioids may affect gut motility, and morphine should not be used for pancreatitis – any of the other opioids are suitable.

Myth 'Buprenorphine has a bell shaped response curve, so it doesn't work if you repeat the dose or use higher doses'

Facts This has only been shown with very high doses in rats. There is NO evidence that this situation is ever reached in cats with doses up to at least 0.03 mg/kg

Myth 'Morphine is the best analgesic'

Facts Some morphine metabolites contribute to its analgesic effect but cats do not metabolise morphine very well and may not get as much benefit as other species

NSAIDs

Myth 'NSAIDs are toxic and cannot be used in cats'

Facts Feline metabolic pathways that eliminate NSAIDs are defective. If NSAIDs are given at the recommended dosing rates and intervals they are just as good in cats as in any other species.

However, NSAIDs must be used with care in cats and should not be used in dehydrated or shocked cats, or in cats with renal or gastrointestinal disease. NSAIDs should not be given with corticosteroids, diuretics and ACE inhibitors.

Multimodal analgesia

Using more than one drug type at a time, eg, opioid, NSAID and local anaesthetic together

- * Better effect as it produces analgesia by different routes
- * Less toxicity as excreted by different routes

Avoiding repeated injections

Buprenorphine	Transmucosal (mouth)
Fentanyl	Patch
Meloxicam	Canine oral drops
Epidural	Morphine, medetomidine, ketamine, bupivacaine
IV infusions	Ketamine, lidocaine

NB Not all of these products have market authorisation for cats but all recommended treatments have proved useful in cats





Consider appropriate antibiotic i

- * Before administering antibiotics always consider whether they are actually indicated. In many cases where antibiotics are administered, bacterial infection may not actually be present, eg, idiopathic cystitis.
- * With cats, our antibiotic choice may be largely based on ease of administration, which clearly is a very important aspect to ensure compliance.
- * Newer drugs may significantly improve the ability to successfully administer long courses of antibiotics with no compliance problems eg, Convenia (3rd generation cephalosporin; Pfizer)
- * However, it is also important to remember the other vital aspects that should affect our choice of antibiotic
- * Always try and choose an appropriate antibiotic based on bacterial culture and sensitivity results
- * Choice of an empirical antibiotic should be based on the most likely bacteria involved and their most likely sensitivity
- * Use narrow spectrum antibiotics where possible as a first line
- * Reserve antibiotics such as fluoroquinolones and 3rd generation cephalosporins for resistant organisms
- * Consider the duration of antibiotic treatment required
- * Consider the disease to be treated and the distribution of the antibiotic, eg, doxycycline is not well excreted in urine so would not be a first line drug for bacterial UTI.

Potential side effects associated with some commonly used medications

Diazepam Sometimes used as an appetite stimulant, anti-epileptic and muscle relaxant. Oral diazepam has been associated with idiosyncratic fatal hepatotoxicity in cats so it is not recommended as a long term treatment.

Doxycycline May be associated with oesophagitis and oesophageal stricture formation if tablets are incompletely swallowed. Always ensure that clients are aware of this and that tablet administration is followed by 3 to 5 ml water, or that the cat eats immediately after. A cat licking a small amount of butter which has been smeared on its nose has also been reported to ensure that the cat swallows effectively to move the tablet into the stomach.

Clindamycin Also recently been associated with oesophageal injury. Follow the same advice as for doxycycline, or empty powder from capsules and mix with food.

Enrofloxacin Associated with retinal degeneration. Caution should be used when considering using this drug and alternative suitable treatments should be considered.

Potassium bromide Potassium bromide has been associated with the development of severe bronchial disease in cats, and therefore its use should be avoided where possible.

otic use



Drug considerations

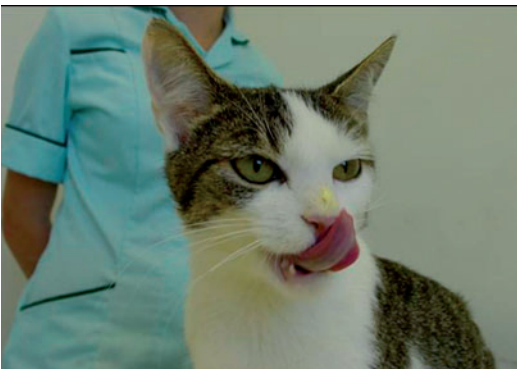
Consider drugs that are vital to have in an emergency:

- * *Bronchodilators eg, injectable terbutaline, inhalational salbutamol*
- * *Diuretics eg, furosemide*
- * *Soluble insulin for diabetic patients presenting in a ketoacidotic crisis*
- * *Anti-epileptics, eg, injectable phenobarbitone and diazepam for patients presenting in status epilepticus*
- * *Drugs to manage cardiorespiratory arrest eg, adrenaline, atropine*

Some newer drugs that are not licensed in cats, but may be useful:

Mirtazapine (Zispin (Remeron); Organon) An appetite stimulant and anti-emetic, so very useful for inappetent nauseous cats. Only needs to be given every three days! Dose: 1/4 of a 15 mg tablet per cat once every 72 hours.

Levetiracetam (Keppra; UCB Pharma) This is an anti-epileptic drug which can be useful to use in combination with phenobarbitone when seizure control is inadequate on phenobarbitone alone. It can also be useful as a sole anti-epileptic agent in cats with partial seizures.



Giving water (above) or letting the cat lick butter off its nose will help to move tablets into the stomach.



Anaesthesia



General anaesthesia is performed on a daily basis in most practices, and it is the veterinary surgeon's responsibility to ensure that the risks of anaesthesia are kept to a minimum by using appropriate anaesthetic and analgesic agents (see page 22 important drug considerations), warming and monitoring equipment, careful monitoring and recording to ensure that problems are identified early on, and acting quickly when a problem arises. Inflation of cuffs on endotracheal tubes should be undertaken with care as this has been associated with tracheal rupture. An uncuffed tube is preferable, unless procedures with a high risk of aspiration, such as dentistry, are being performed.

Anaesthetic equipment

Anaesthetic equipment should include:

Cat sized laryngoscope

Intubeze (Arnolds; not just plain xylocaine spray). Always disinfect the spray nozzle between patients

An endotracheal tube stiffener (a dog urinary catheter can be used in an emergency)

Plain and cuffed silicone endotracheal tubes (red rubber tubes can be more traumatic to the cat's delicate larynx)

T piece breathing circuit and/or **Mini lack** (Burtons) breathing circuit

Warming equipment, eg, bubble wrap, microwaveable wheat bags, Snugglesafes™, heatpads, Bair Huggers™

Monitoring

Anaesthesia monitoring should include:

- * Close monitoring of vital parameters
- * Respiratory rate
- * Heart rate – measured with stethoscope, oesophageal stethoscope and/or ECG (stick on paediatric ECG pads and an ECG that will read up to 250 bpm are useful)
- * Peripheral pulse quality and rate
- * Temperature – rapid reading flexible digital thermometers are useful, eg, Flexi-firm from Vetdirect
- * Pulse oximetry (with a suitable sized probe for cats)
- * Blood pressure – there are a variety of Doppler blood pressure machines suitable for blood pressure measurement in conscious cats, eg, Parks 811-BTS model with an infant flat probe (www.burtons.uk.com); Thames Medical CATDoppler (www.thamesmedical.com) and Huntleigh Vettex Doppler machine (www.arnolds.co.uk). A new high definition oscillometric machine (Memo-diagnostic, VetDirect) may also be useful for monitoring blood pressure, particularly under anaesthesia, although this machine has not been widely trialled in conscious cats.
- * Ideally, low flow capnography (using microstream technology) is also useful



Compliance and cats

Investigating patients fully, reaching a diagnosis and having appropriate medication available is one thing, but what if clients cannot administer that medication? Medical research has shown that only 50 per cent of people on chronic medication are compliant, so are people really going to be any better than this when it comes to medicating their cat?

A survey undertaken by Pfizer Animal Health showed that 69 per cent of cat owners in the UK have difficulty giving pills to their pets and more than 70 per cent of vets believe that poor compliance by pet owners is the number one cause of antibiotic failure in cats and dogs. If this is the combined figure for cats and dogs, it is likely that it is higher for cats alone. In the survey long-term problems and animals with mouth/neck problems, loss of appetite and vomiting were more likely to be associated with poor compliance. It showed that almost 1 in 5 cat owners abandon giving the treatment altogether at times. In addition, clients are willing to pay more for easier treatments, and 94 per cent said that they preferred their pet to have an injection than to give tablets.



69 per cent
of UK cat owners
have difficulty
giving pills
to their pets

Can practitioners predict those clients who are going to be less likely to be compliant and try and think of additional strategies for them? Unfortunately this doesn't seem to be the case. A study at the RVC showed that the ability of a veterinarian to predict whether a client was going to be compliant or not was no better than chance. Furthermore, owners usually fail to volunteer the information that they have been unable to medicate their pet, and are very reluctant to admit their inability to administer medication when asked. Therefore, every client needs to be treated as a potential non-complier!

If a treatment doesn't work properly, the veterinary surgeons are the ones who get the blame. Poor compliance reduces patient welfare, and is also bad for business. Poor outcomes result in dissatisfied customers, and clients may not return next time their pet is ill.

Making a huge effort with regard to compliance will certainly take a lot more time, but the benefits will be worth it. Improving compliance will result in higher cure rates, fewer relapses, and reducing risk of bacterial resistance that may occur with administration of incomplete antibiotic courses. Good compliance will improve the overall health and welfare of the pets, increase customer satisfaction and increase financial gain.


Top tips for improving compliance

* Consider the owner's ability and motivation to give a particular form of medication, eg, there is little value in prescribing a treatment that needs to be given three times daily if the owner is out all day. Similarly, there is little value dispensing a liquid medication if the owner has never been able to administer



liquids but can manage tablets. Asking about previous experiences with the pet and whether they have had difficulty giving certain types of treatment may well influence the treatment decision.

- * Discuss alternative medications and tell the client to call you if they are having difficulty administering the medication.
- * Spend time showing owners how to most effectively administer medication. Use the **FAB Cat Friendly Practice** client leaflet 'Giving medicine to your cat' which outlines how to give tablets or administer spot ons, ear or eye drops.
- * Provide clear written instructions for the client to take away. Include written information about the purpose of the drug, the importance of it, and problems that may arise if medication is not given – one study showed that the highest compliers were those given extra information about the medication.
- * Where possible, keep the numbers of medications to a minimum. If multiple medications are required, ensure that the clients know which are the most important ones so that if they do have to miss one out occasionally, they can miss out a less important treatment rather than the vital one.
- * Prescribe easy to use more palatable products, eg, FAB labelled **Easy to Give** products.
- * Suggest trying products such as 'Easytabs' (Bayer) – a meaty device in which the pill can be hidden.
- * Some clients find pill poppers useful.
- * Breaking tablets up into the appropriate size for the clients.
- * Provide empty gelatin capsules if multiple medications are required – insert all the required medications into the capsules for the client so that it is easier for them to administer. (NB it may not be appropriate to mix all drugs in an empty capsule – if in doubt consult the manufacturer of the products).
- * Some owners find crushing tablets into a fine powder, mixing with butter, smearing on the cats' paws works well.
- * Make sure the clients are aware that you sell pill crushers and pill cutters to make things easier.
- * Ensure that owners are aware of different ways of administering the medication, eg, clindamycin capsules may be administered whole (NB risks of oesophageal injury) followed by administration of food or water, or be opened up and the powder sprinkled in food.
- * Try to avoid medications that are very bitter tasting, eg, metronidazole syrup, or at least warn the owners that the cat may foam at the mouth, and ensure that they are willing to try administering them.
- * Use your nurses more to spend more time with owners making sure they understand how to medicate their pet and the importance of it. They can keep coming back to see the nurse as often as necessary, or phone/email the nurse for support when required.
- * Suggest to clients that they syringe a small amount of water into the cat's mouth or put a small knob of butter on its nose (or offer it on a finger) so that the cat swallows and the pill moves successfully down to the stomach. This prevents damage to the oesophagus which can occur if some tablets sit there for prolonged periods.
- * Telephone the client after a couple of days to see how they are coping with giving the medication.



Giving water to make sure pill is swallowed helps



fab

feline**advisory**bureau

Feline Advisory Bureau

Taeselbury, High Street, Tisbury, Wiltshire SP3 6LD, UK

Tel 0870 742 2278

e-mail information@fabcats.org

www.fabcats.org

The Feline Advisory Bureau
is a charity dedicated to promoting the health and welfare of cats
through improved feline knowledge, helping us all care better for our cats

Registered charity number 1117342