Practical advice for cat confinement

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Abstract

The welfare of cats and all other species affected by their behaviour (including animal management officers) can be improved by the effective confinement of cats. Suggestions are made to suit different housing and financial circumstances. Sudden confinement of a cat used to roaming free is expected to have consequences. Frustration and any anxiety-related problems can usually be successfully treated with time, environmental enrichment and, if necessary, medication.

Reasons for confinement

Confined cats live on average three times longer than those that are owned and allowed to roam. Stray (or unowned) cats have even lower survival rates. Their life is short, nasty and brutish. Still, most people don't confine their cats to their properties. There are widespread notions that it is unnecessary, cruel, messy and costly. Tell that to a devoted cat lover and take cover! Confinement improves the welfare of cats, carers, neighbours, wildlife, animal management officers, and the long-suffering workers in shelters who have to regularly euthanase the surplus cats in our society.

Keeping cats in does require a change in attitude, the availability of other daily interactivity, often some litter trays and possibly some structural changes to the property. I am continually impressed by the enthusiasm of those who have implemented these changes. Now they would have it no other way, as their cats are always around for mutual enjoyment. Their cats are better off too. They're not receiving or inflicting wounds or diseases from fighting other cats; not getting abused or poisoned by neighbours; nor are they getting attacked by dogs or hit by cars. They don't urine-spray outside or even inside neighbours' properties, or poop in their vegie patches or kiddies' sand pits; dig up the neighbour's plants; kill neighbouring wildlife; or harass vulnerable pets such as guinea pigs. The neighbours are not going to be annoyed by calling, crying and fighting during the night.

So, how can confinement be achieved? There is a vast array of options to suit different housing and financial circumstances.

Structures

If you live in an apartment it is simple - vigilance around the door may even be unnecessary. Living high above ground level, with a second barrier such as a door at the top or bottom of the stairs, means your cat is extremely unlikely to get far. However, check for possible access from a balcony to a tree or other structure. Your biggest problem, though, might be a body corporate with a heart of stone. Be gentle with them; they may lack the collective pleasurable experiences of cat companionship. Take a leaf out of the feline instructions for educating and seducing humans - schmooze.

Confinement to a house is more challenging, as there are so many points of possible escape. Veterinary practices deal with this problem by maintaining double barriers. It is very embarrassing for a vet to have to phone the owner of a cat that has escaped professional care, not to mention highly distressing for the owner, so at least two of the following barriers are used at all times: doors, windows, flyscreens, transport boxes, hospital cages and exercise harnesses with leads. Private dwellings can also use the double barrier rule.

Increasing numbers of house-owners are providing access to outside enclosures, and some cat-proof the whole courtyard or backyard, as we have done. Others enclose only a section, such as a pergola, or build a separate structure outside the house. Balconies of flats can also be cat-proofed.

If you have a one- or two-metre-wide space running down one side of the house it is quick, easy and relatively cheap to create an outside enclosure. Shade cloth or other netting can be strung between the bargeboard beneath the roof guttering and the top of the fence. Blocking off the ends with fencing, netting or a gate completes the enclosure. The house can be accessed through a window or cat flap in the door of the laundry.

I have seen quite a few decks and pergolas that have been enclosed with netting and look quite nice. A surprising number of clients like to sit out there after work to have a drink and some quiet time with their cat. If needed, human access to the rest of the backyard can be through a gate or sealable flap in the netting.

There are many structures and materials available to defeat the legendary agility and determination of the feline kind. You need to have the cunning of a cat and the practicality of a tradesman to adequately deal with all the permutations and combinations of escape possibilities from backyards. In our war of attrition to keep Jupiter, our young Abyssinian, confined, we have used chicken wire, polycarbonate sheeting to create shelves or other overhangs, bird netting and even the judicious pruning of trees and climbing plants.

Netting made of wire or fibre may be aesthetically acceptable, and is versatile and cheap. This can be used to deal with spaces ranging from the size of this page to a tennis court. While a handy person could soon cobble something up, there are any number of suppliers who will tailor-make and fit their product to your exact needs. You can also expect them to bring to your job the wisdom gained from successfully overcoming the challenges of previous installations.

Purpose-built enclosures can be designed to go in gardens, courtyards, on the sides of buildings and on roofs. They are usually made out of netting. Some come in modular form. This allows them to be reconfigured, added to and transported to other residences. Access to an enclosure some distance from the house can be conveniently provided via a tubular walkway. Cats will even use them to go up and over roofs to get to attractive areas.

Access to an enclosure outside the house enriches a cat's daily life. It extends the space and options available for interacting with or modifying the environment. For instance, he or she might choose to lie in the sun or shade; watch birds; climb and scratch tree trunks; safely monitor cats and other animals from a protected position; get away from other cats in the household; and use an area for pooping and peeing that is acceptable to you.

Once you have the physical set-up complete, it's then a matter of keeping puss entertained, and addressing any behavioural issues that might arise from his or her confinement.

Behavioural consequences

When we restrict the movement of cats we reduce their opportunities for the environmental interaction they would have as wild-living or roaming animals.

This inability to encounter and overcome the usual challenges can lead to frustration. However, suddenly confining adult cats can be done. Some adapt quickly and easily, others need time and help to cope. It is certainly easier to start with kittens that haven't been allowed out. Moving house provides an opportunity to start keeping a cat permanently confined, as it is usually somewhat subdued for the first few days.

The most common behaviours after sudden confinement are pacing and vocalising in frustration, particularly around the usual exit point. This can be very wearying and upsetting for the human occupants. In time this behaviour will reduce in frequency, as long as confinement is 100 per cent effective the occasional escape will actually maintain and possibly intensify the behaviour of frustration.

However, adaptation to being kept in can be sped up with environmental enrichment and other calming management or medication. Further information about how to carry out these interventions is described in the next three sections (Environmental Enrichment, Problems, and Anxiety-Reduction).

Environmental enrichment

Enriching the daily life of our cats is limited only by our ingenuity and the time available. The intention is so replace the interactions that a free-roaming or wild-living cat would encounter on a daily basis. Think of it as providing numerous varied and varying challenges that the cat can and will wish to overcome each day. In other words it is a series of changing activities for which the cat is motivated and reasonably capable of carrying out. This puts complexity, unpredictability and choice into its daily life. These are the cure for boredom that is considered to be a state of frustration resulting from an inability for the cat to make changes in its environment.

There are many ways that environmental enrichment can be carried out. Different activities suit different cats, their carers and types of confinement. The following are some suggestions:

• Feeding

All cats must eat and so why not make it a challenge? It is in the wild. It will be better for them in confinement if they have to search, work harder, and take longer to obtain their food.

Scattering or hiding dried food far and wide can do this. Dried food made sticky with moist food can be packed into a hollow rubber cone. Licking the food out of the cone can take an age. On a hot day a cat is likely to appreciate the cone being frozen. In fact, small pieces of ice are great objects in any weather for cats to chase and capture on a slippery floor. Food Popsicles can be hung from door frames; meat can be given as one large cube instead of being minced; it can be given on a bone too large to fit in the mouth; corn can be given on a large cob (again too large to fit in the mouth); and the changes can be rung in the daily protein source e.g. beef, lamb, fish, chicken, kangaroo, liver and heart for starters.

There is great potential for ringing the changes in feeding cats. If they are brought up with this variability it will enrich their lives. However there are some anxiety-prone cats that become emotionally disturbed, withdraw and won't eat when attempts are made to change their routine. Other cats can be fed different foods, in different places, at different times with different delivery systems. As with all things cats, it is useful to consider them as individuals, with an impressive array of idiosyncrasies.

Incidentally, studies of the cat brain show they are producing more of the "feel good" brain chemical, serotonin, when they are orally active. So get them sucking, licking, chewing and gnawing. It is likely to reduce anxiety and other problems of self-control.

There is another advantage to requiring more chewing or gnawing. It is likely to improve or maintain dental hygiene. One of the reasons cats can be reluctant to or won't chew is that they have dental disease that makes it sore to do so. Carers are urged to have their cats' teeth checked annually by their veterinarian.

Chasing

We all know the tendency for young healthy cats to chase small rapidly moving objects. This predatory behaviour towards acceptable objects should be encouraged throughout life to provide stimulation and maintain mobility. The ankles of owners and timid cats are not usually considered to be acceptable by the recipients. However, furry, flappy or feathery things attacked to a line on the end of a pole and line are suitable.

The bright spot from a handheld laser pointer gets many cats into predatory mode. It is a very convenient tool for getting them to chase up and down different arms of the house whilst the operator stands at a central place. Normal sensible use in this way of the low power laser pointers commercially available from electronic shops in Australia apparently poses no detectable risk of damage to the back of the cat's eye. Even if the laser beam momentarily crossed the cat's eye, the power of the laser is insufficient to cause detectable damage to the retina. Clearly the pointers should be used by or under the immediate and direct supervision of a responsible adult.

Climbing

Given the opportunity a reasonably agile cat will jump or climb up and down structures so using height as the third dimension of its environment. They often rest in high vantage points that provide them with a safer position from which they can monitor more of their environment.

A convenient way of cats getting access to high points is up a tall scratching post that they will climb as though it were a tree. If the cat cannot climb in this way, then a series of shelves could be embedded in a tall post. These are the indoor equivalent of trees.

If there are open beams in the ceiling, such as with a cathedral ceiling, or other high points, narrow shelving can be placed between them to provide walkways.

Get-away areas

It is a good idea to provide access to such areas ("cubbies") for cats, particularly for those that are anxious and where there is more than one cat in the house. This can be easily done by closing the lid of a cardboard box of suitable size (about 35x30x25cm for an average sized cat). Fold in any leaves, lightproof it with adhesive tape, and cut a slot in the middle of one end just big enough for the cat to get in and out. Put in an unwashed garment, such as an old sweater of its favourite person, and place in the highest accessible place in the house. As they are so cheap and quick to make, you can experiment with several of these "cubbies" in different places. High level walkways, very tall scratching posts or indoor "trees" can provide access.

Scratching post

Cats naturally scratch surfaces through which they can drag their claws. This is more likely done as a stretch soon after they get up from a rest. They tend to reach up a vertical surface with their forefeet and drag their claws several times through the surface. It may be done at other times and on horizontal surfaces.

Cats can be trained by positive reinforcement to use a scratching post that is more attractive than the surfaces regarded as undesirable by the carer. Cut pile carpet is usually attractive, particularly if the material can be torn out. A loosely woven material or soft wood composition board are also often scratched.

The scratchable surface could be firmly attached to a post about 1m high to encourage usage by providing a suitable surface at full stretch. It should be securely held in position to provide resistance for the pulling and drawing through action of the claws on the surface. For a post a heavy base can provide this stability.

Use by kittens especially can be encouraged by gently placing their forefeet up the post and drawing their claws through and down the surface. By rewarding the scratching with highly attractive food and stroking they are more likely to quickly learn to exclusively use such posts.

Posts are best placed close to the place or places the cats most frequently rest.

· Physical contact with a person

Many, but by no means all, cats show a strong preference for periods of physical contact with one or more people. There is great variability in this. At different times of the day or night for varying lengths of time some cats will chose to lie on or alongside their carer's head, shoulders, chest, lap, legs or feet. Many like to be carried around the house draped over human shoulders. Others prefer just to be in their carer's company but not to be touched. It is a good idea to train cats to tolerate brushing or combing, as well as other handling. Many cats really enjoy this tactile stimulation but, as with stroking, only tolerate so much before digging their claws into the person.

Toys

The best toys are interactive. That is that they require another, different, and preferably randomly variable response from the cat. That is the challenge for the toy maker. For this reason many toys need a human to provide a response, and without it the cat soon stops playing. Any number of well-meaning cat owners have expressed disappointment at the rapid loss of interest in expensive toys.

New self-play (i.e. there is no other person, cat or other animal involved) toys are played with until the novelty wears off and then are only used again after some time. Presumably there needs to be a sufficient degree of unfamiliarity to create the required challenge to stimulate play. As with children, toys are more attractive when they have been out of sight for days or weeks. Deliberately making them inaccessible for such periods is a good idea. Carers can cycle through a collection that is mostly inaccessible to the cat, but making one or two available per day before putting them away again.

Training

Many cats learn to do tricks quite accidentally, such as retrieve items for the reward of them being thrown again for them. Despite their reputation for being self-willed, independent and untrainable, cats are amenable to the use of the same principles of learning as are dogs, horses and people. In fact, they are so good at it that they often train their carers to get up at weekends to feed them at the same time as weekdays! Cats can be trained by encouraging desirable behaviour with a rewarding experience, such as a titbit, immediately after doing an action desirable to the carer, such as scratching a structure acceptable to the carer. Clicker training can be readily utilised. The key to all training is in the timing of the reward.

· Walking on harness

There are a number of dedicated carers who take their cat outside confinement on a lead attached to a harness around the cat's forequarters. The differing sights, sounds and smells add to daily variation in stimulation.

As usual the younger cat is easier to train. First of all it needs to learn to tolerate the wearing of the harness. As a process this can be broken down into small steps ("chunking"). Each step would ideally be made pleasurable with some small reward, such as head rub. At no stage should the process produce agitation, struggling or escape. That would be an undesirable association with the harness. Once wearing it comfortably, the cat can be allowed to slowly investigate a novel and non-threatening area. It can be trained to walk on a lead by reinforcing the walking forward with tiny pieces of favourite food. This may take a bit of time with a timid cat. Some cats that haven't been outside for years or have had a traumatic experience out there, just don't want to go. Let the cat vote with its feet and investigate or not at its own pace. With time many cats learn to follow their owners and walk alongside them.

· Novel bags and boxes

The legendary inquisitiveness of the feline kind is enshrined in the adage "Curiosity killed the cat". A cardboard box from the supermarket, or paper bag from the bottle store, is usually vigorously investigated and played with. As with children, care should be taken with plastic bags. Many cats like to claw, scratch and shred these materials. This is preferable to doing likewise to the lounge suite.

Dedicated owners have been known to collect a series of new boxes on a Friday; over the weekend make them into a structure in the style of a multi-storey car park; and leave it for destruction by the cats during the week. As I previously said, we are only limited by our imagination.

Entertainment box

Taking advantage of their well-known tendency to investigate things with their paws, we can put small objects inside a box in which there are holes through which the cat can put its paws but through which it would be very difficult to remove the objects. Such entertainment devices are commercially available.

View of a busy scene

Healthy well-adapted cats prefer to monitor their surroundings. It makes good biological sense. They will often be found sitting or lying in a strategically important place that provides the most interesting, important or effective view outside their confinement. From an environmental enrichment point of view this provides complexity, unpredictability and choice, even though they may not be able to be an agent of change on the environment they see. This may cause a problem when an unfamiliar or known aggressive free-roaming cat comes into the immediate vicinity, causing the confined cat to be anxious. This can trigger urine-spraying by the resident cat on adjacent structures, or redirected aggression to an accessible cat or human. Occasionally therefore the recommendation is to block off that view. As with all these suggestions, they are only general in nature, and their relevance needs to be considered in context for each cat, environment and carer

· Cat Nip, Cat Mint and Cat Grasses

These plants can be successfully grown indoors in pots from seeds or small plants that are commercially available. Many, but by no means all, cats will visit a Cat Nip plant each day to sniff, rub, grasp, roll alongside and kick at it. This seems to be play and is shown by both sexes of reproductive age whether or not they have been desexed. Cat Mint and cat grasses are attractive to many cats and are more likely to be chewed than some of other indoor plants.

This gives the cats fresh vegetation to eat, which they would otherwise do outdoors. Cat Nip and Cat Mint are recognised plant species. The so-called cat grasses can be grown from budgie seed.

Problems

Urine-spraying, pooping and peeing in places unacceptable to people, aggression to feline and human members of the household, and scratching of furniture can all occur in confinement. They also occur with cats that roam. There are numerous possible causes, and different options for treatment according to the causes. Each cat is an individual living in a unique physical and social world. However, problem behaviours can usually be controlled and managed to an acceptable degree. In practice, that is a more realistic expectation than cure

The most effective and humane way of treating problem behaviour is by eliminating or at least reducing the cause or causes. Their identity may be self-evident or require the help of an appropriately qualified person. The following comments are of a general nature only. Professional assistance should be sought for the behaviour of an individual cat.

· Agitation immediately after confinement

The pacing and vocalisation during frustrated attempts to escape are likely to significantly reduce over the first month of confinement. The speed of adaptation is reasonably expected to be faster with environmental enrichment. However, the agitation and escape attempts will be made worse by the occasional escape. There should at all times be a double barrier at exit points.

Scratching of surfaces unacceptable to people

Unfortunately some households contain surfaces that cats prefer to scratch rather than the scratching post. This may reflect the high degree of attractiveness of the surfaces the carer would prefer not to have scratched or it may reflect the relatively unattractive surface of the so-called scratching post.

Suggestions for the nature, positioning and training to use scratching posts were given above (Environmental Enrichment > Scratching Post).

Shouting at or spraying a cat with water is only likely to reduce the scratching in the presence of the person giving that noxious treatment. Scratching is still likely to occur when that person is absent.

The area that is being scratched can be temporarily covered with material that is unattractive for scratching, such as thick plastic, wood, steel. An attractive scratching post is then placed where the cat would have previously stood to scratch the unacceptable surface. Any scratching of the acceptable surface is then rewarded as described earlier. When this surface is being consistently used, it can be moved about 30cm per day to an area that is acceptable to the carer. Once it is being used in that position then the protection over the undesirable surface can be reduced day by day.

The effects of scratching may be reduced by regular trimming of the claws or by gluing rounded plastic tips over the claws.

Urine-Spraying

This is usually the depositing of a small volume on a vertical surface by a standing cat. Anxiety appears to be the most common amongst the many possible causes. However, sometimes it is a sign of cystitis. The best way to start is to have a veterinarian examine the bladder and urine. After ruling out inflammation of the bladder, the veterinarian may recommend thorough elimination of the odour, anxiety-reducing techniques (see later section Anxiety-Reduction), or referral to a veterinary behaviourist.

I favour the use of baking soda solution on surfaces upon which it is safe to do so. For others I prefer a water-based culture of safe bacteria (e.g. "Bac to Nature" or "Animal Odour Eliminator") to naturally break down the urine or faeces as would be done in the soil.

· Defaecating and/or urinating in places unacceptable to

Again there are a variety of possible causes. Avoidance of the litter tray is a common one, with dirty litter being the most frequent. As a general guide there should be one more tray than the number of cats in the household. Soiled litter should be removed as soon as it is seen. All the litter should be replaced with fresh material every 24 hours, and the bottom of the tray thoroughly cleaned with a solution of baking soda to remove odour. With this regime there is usually no need to have more than about 1cm depth of litter.

After defaecating or urinating out of the tray for whatever reason, cats will often become conditioned to use that area. After thorough odour elimination and then covering the area and surrounds with plastic sheeting, a litter tray can be placed over the area. Once the cat is using the tray it can be moved about 30cm per day to the area desired by the carer. Several litter trays may need to be coalesced from a number of previously soiled sites.

Aggression to people

Because of the likelihood of injury to people, especially children, this should be taken seriously. The first thing to do is have a clinical evaluation for aggression carried out by a veterinarian. Various physical conditions make cats more likely to be aggressive. The veterinarian may offer treatment, euthanasia, or referral to a veterinary behaviourist.

· Aggression to cats

Aggression between cats also has many possible causes. The severity and tolerance by the carer varies enormously. Sometimes it is just the occasional normal spat between members of a species in which only the females naturally live together, and then only temporarily for joint rearing of kittens. In other cases one cat may injure another as it attempts to displace it from the area. It is recommended that the first step be a discussion with a veterinarian to identify the best course of action.

Anxiety-reduction

Some or all of the following may be sufficient to reduce anxietyrelated behaviour:

· Avoidance of circumstances

An example of this would be the blanking off of the view by a resident cat that is urine-spraying on seeing an alien cat outside the house

· Anxiety-reducing management

One of the more successful ways this might be achieved is by perfusing the whole or part of the house with an analogue of the feline facial pheromone ("Feliway"). It is the manufactured version of the product cats naturally produce in their skin glands and then rub on familiar objects in their environment. Aromatisation of the commercially available product is by plugging a special heating device into the mains power supply. The heating device and reservoir are available through veterinarians. The product is also available as hand pump spray.

The use of get-away areas, such as "cubbies", strategically placed around the house is likely to reduce anxiety by providing safe areas for relaxation.

For the highly anxious cat it would be preferable to maintain a fixed routine to reduce unpredictability. This is in distinction to the value of unpredictability in enriching the environment for non-anxious cat. Management need to be appropriate for the individual.

Medication

Various medications are available on prescription from veterinarians for reducing anxiety in cats.

Desensitisation

By controlled exposure to an anxiety-provoking stimulus, such as loud noises, a cat may be desensitised. This requires precision, patience and a knowledge of the principles of successive approximation and/or counter-conditioning. Further information could be obtained from veterinarians or veterinary behaviourists.

• Environmental enrichment

Adequately enriching the daily life of a confined cat is believed to make cats less reactive in general and so be less likely to react to stimuli that might otherwise trigger anxiety. Vigorous exercise, such as in chasing, and oral activities are likely to increase serotonin activity in the brain. This could help the cat control its tendency to be anxious.

Conclusion

Devoted cat lovers take all these challenges in their stride. They know the benefits far outweigh the effort involved in keeping cats inside. Once they know their cat is securely confined, they can relax. They can enjoy the companionship, secure in the knowledge that they are benefiting not only their own cat, but also every animal and every person in the neighbourhood. Whilst many cats still wish to leave the property, if they become a "free spirit" and are allowed to roam at will they are unlikely to "make old bones". People who really care about their cats don't give them the choice. When we weigh up the welfare of all parties involved, it is better that cats be confined.

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Further information

- Holmes, R.J. (2001). Environmental Enrichment. Post Graduate Committee in Veterinary Science, University of Sydney, Proceedings 340: 387-400.
- James, A.E. (1997). The laboratory cat. Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) News 8(1) Insert 1995 Mar:1-8.
- Loveridge, G.G. (1997) Comfortable environmentally enriched housing for domestic cats. In V. Reinhardt (Ed.), Comfortable Quarters for Laboratory Animals, 8th edition (pp. 55-62). Animal Welfare Institute, Washington DC.
- McCune, S. (1997) Enriching the environment of the laboratory cat: A review. In Proceedings of the Second International Conference on Environmental Enrichment, held in Copenhagen on Aug 21-25, 1995 (pp.103-117). Copenhagen Zoo.
- McCune, S. (1995) Enriching the environment of the laboratory cat. In C.P. Smith and V. Taylor Eds.) Environmental Enrichment Information Resources for Laboratory Animals: 1965 1995: Birds, Cats, Dogs, Farm Animals, Ferrets, Rabbits, and Rodents

- www.nal.usda.gov/awic/pubs/enrich/labcat.htm (dated 11 August 1998, accessed 24 July 2006).
- Rochlitz, I. (2005). Housing and Welfare. In I. Rochlitz (Ed.), *The Welfare of Cats* (pp. 177-203). Dordrecht: Springer.
- Wemelsfelder, F. & Birke, L. (1997). Environmental challenge. In M.C. Appleby & B.O. Hughes (Eds.), *Animal Welfare* (pp 35-47). Wallingford: CAB International.
- www.vetmed.ucdavis.edu/Animal_Alternatives/ enrich.htm#cats

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