

PROTOCOL FOR UNDERSTANDING ODD, CURIOUS, AND ANNOYING FELINE BEHAVIORS

Evolutionary Overview of Cats, Diets, and Social Interactions

We actually have little knowledge of what constitutes normal feline behavior, and there are many myths about cats. For starters, cats are not small dogs and it's important to understand this. The story of dogs is the long history of cooperative work with humans. The story of human-cat relationships is the story of disease control and passive tolerance of cats because of the important feline characteristic of feeding on rodents. The domestic cat was attracted to human settlements because a rodent is a meal for one cat. Had cats had to co-operatively hunt, as did ancestral dogs, as do wolves, and as do some of the larger wild cats, their integration into human society would likely have been slower because, unlike dogs, their social system is not like ours, and they are considered obligate carnivores, meaning that they must eat meat. Some small wild cats like Margay cats eat a lot of fruits, as do many pet cats, but cats are still viewed as mainly meat eaters.

When cats live in our households we need to realize that, if the decision was theirs, cats would *not* choose to live in such a solitary state. It's interesting that humans have no trouble comparing dogs to wolves, and repeatedly refer back to wolf behavior to explain dog behavior, *often with error*, yet we seldom think about ancestral cats and their social systems. To treat our cats most humanely and to best meet their needs, we need to remember that the domestic cats who live with us have, in history, lived very, very differently.

Cats live in matrilineal (mother run and focused) family groups and most of the females in a group are likely to be related to each other. Females may nurse the young of other females, and there is shared care of young among females. Males may help care for the young until they become socially mature (~2 to 4 years of age), and then most males leave their family group and either enter another or become "bachelor" males.

Knowing about the range of normal behaviors that cats exhibit that are different from ours and dogs will help prevent the development of serious behavioral problems and will allow redress of any management-related issues. A discussion of a few of the common problems that can occur with cats follows, and shows how the unique history of the domestic cat affects these concerns.

Eating Plants

Although we tend to think of cats as "obligate carnivores," animals who must eat meat and eat only meat, they will chew on and eat other substances. Most cats will eat plants if they have access. Cats appear to enjoy fresh grass. Whether this is because of a taste preference or because the cats want or need the roughage is unknown. We know that roughage can be important and may help cats who are routinely constipated, and there are some studies that show that adding fiber to a diet can help regulate some feline diabetics who are poorly regulated. For cats with these medical conditions, discuss the addition of measured amounts of fibrous bulking agents (e.g., psyllium) with your veterinarian.

The needs of cats who like and seek out plants to ingest can and need to be met safely. There are now commercially

available "grass gardens" that can be grown indoors for cats. Certain herbs and mints will also grow indoors and are favored by many cats. Some aromatic plants may also act as anti-parasite agents, so their choice may be a healthy one.

Concerns about eating plants focus primarily on toxic issues. **Many houseplants are far more toxic to cats than they are to dogs.** For example, any plant in the lily family can kill a cat. Stargazer lilies, Easter lilies, and amaryllis are commonly grown indoors and are common ingredients in commercial bouquets. Ingestion of these plants is serious and potentially life-threatening for cats, and you should contact your veterinarian immediately if you think that the cat has eaten any of them. Go to www.aspc.org/Pet-care/poison-control/plant-list-cats.aspx for more information. Pesticides, chemicals used in lawn treatments, and fertilizers can also threaten the health of your cat. For this reason, if you have a cat who likes to eat plants, grass, vegetables, or fruit, PLEASE either grow these specifically for the cat, or know the source of your herbage, et cetera, and wash them before allowing the cat to snack on them.

You may want to grow catnip for your cat, thinking that this will make the cat happy. Catnip contains compounds that may act as mood elevators in cats, but the behaviors exhibited by cats are extremely variable. If your cats enjoy catnip, this can be used as a special treat for the cats who react strongly and recover slowly. You should know that the ability to respond to catnip is genetic: the cat either responds or doesn't. For example, cats in Australia don't respond; the "catnip gene" apparently never arrived. So if your cat does not respond to catnip, please do not assume that something is wrong. Not responding to catnip is a variant of normal. Some cats can become quite forceful after eating catnip. This is not a desirable response for some households, but it can be a variant of a normal response to catnip.

Vomiting may follow ingestion of plants. This can be a normal behavior. If your cat is vomiting excessively or seeking out plants and eating until she vomits, seek your veterinarian's advice immediately.

Spraying and Other Pungent Marking Behaviors

The bad news for humans is that spraying is a normal behavior. The good news is that it is facilitated by hormones and some social conditions, and that we can manipulate both of these.

Spraying urine communicates a huge range of information through both postures and olfactory signals. Information communicated likely includes individual identity, sex, reproductive status, recent meal contents, stress level, et cetera. Humans have a terribly impaired sense of smell compared with cats, so we need to accept that we are not going to appreciate the scent of cat urine in the same way a cat does. Spraying occurs more often if new cats enter the environment, if a female is in heat, if another intact male courts a female, and in stressful situations. To fully understand these patterns you should know that when cats spray they are not only putting information into the environment, but they are provoking the environment, hoping to get information back.

Cats spray over other cats' urine marks; this pattern communicates important information.

Removing the testicles or uterus and ovaries decreases the amount of spraying significantly. The type of spraying that neutering/desexing decreases is that associated with sex or sexually related behaviors. Neutered cats can still spray for the other social reasons listed above. It is in this context that it is important to remember that under "normal" conditions, domestic cats would live in family groups headed by related females.

By working to manage "unnatural" social groupings—those that we construct by adding unrelated cats who are of ages and social composition that would not occur were the cats grouping themselves—we can decrease the spraying. This is best done by gradually introducing a new cat (see the **Protocol for Introducing New Pets**), providing attention and some private time for each cat, providing more litterboxes than there are cats, and using a good odor eliminator. The best odor eliminators contain enzymes that break down the compounds in urine and other substances that make the particles with the scent too heavy to be sniffed up and aerosolized. These two mechanisms alter the information in the urine and should decrease spraying. Recommended odor eliminators include Nature's Miracle (available at pet supply stores), FON (available at pet supply stores), PON (available at pet supply stores), Urine-Off (available online and elsewhere), Get Serious! (www.getseriousproducts.com), Eliminator (available from veterinarians), The Equalizer (available from veterinary supply companies), Anti-Icky Poo/AIP (www.antiickypoo.com), and KOE/AOE (broadly commercially available). The last four have a reputation for being particularly effective. Febreze was first marketed for its potent odor-elimination properties, especially with respect to urine, feces, and other bodily fluids and products. If an odor eliminator is good, the cat pays less attention than he otherwise would to the soiled area. All odor eliminators should first be tested on a small patch of the target fabric to ensure that they will not damage it.

If the spraying is about the change in social groups, it may be transient. If the spraying continues, it may be a nonspecific sign of anxiety, and you should consult your veterinarian. *Most anxiety in cats shows up as behaviors that you may not see as "aggressive" but which for cats represent profound aggression.* This is another scenario where knowing what "normal" is makes a huge difference. If you think you are having an ongoing or worsening problem see the **Protocol for Understanding and Treating Cats with Elimination Disorders and Elimination Behaviors That May Be of Concern.**

Cats also mark their turf using feces and urine that is **not** sprayed. If cats are doing this, they will often continue to mark in a litterbox if one is provided in the area the cats have been using. If moving a litterbox does not help, see your vet.

Scratching Behavior

Cats scratch objects for two main reasons: (a) to remove the layered sheaths that comprise their claws and (b) to leave visual and olfactory marks. Like spraying, the act of scratching is also a behavior that is very obvious and can be seen by any watching cats. *Were cats given their choice, they would never have their claws and the end segment of their toes surgically removed—they would scratch in materials like tree*



A cat spraying against a shrub outside his house. (Photo courtesy of Anne Marie Dossche.)

trunks, lawns, fabric-like surfaces of peeled bark, et cetera. In fact, the scratches left by the behavior then act as a mark to inform other cats who was there and when the tree was last scratched! Cats have glands between their toes that leave a scent that other cats can smell. Removing the claws and a section of their toes doesn't change this, so declawed cats can still "scratch" and leave the scent and, in some cases, a visual residue.

Scratching on furniture can be done for either of the reasons cats commonly scratch, but it occurs because the fabric resembles the natural surfaces that the cat would otherwise seek out. If you provide all cats with appropriate scratching surfaces when they enter the household and encourage the cats to use them, rewarding them when they do so, scratching that is inappropriate will not occur unless there are other behavioral concerns in the household.

- You can buy commercial scratching posts that are covered in carpet or hemp, and some kitty condos have a scratching post built into them.
- You can make one of these yourself with wood and fabric scraps and rope.
- You can add a scratching panel that is made of sandpaper so the cat can file his own nails.
- You can bring in logs.

You may still need to clip the ends of cat's nails, but if you start to do this when the cat is a kitten, the cat will not fear you and will learn that nail trimming is also a time to get treats, massages, et cetera. Have your vet demonstrate how to cut your cat's nails, and buy good clippers and keep them sharp. The extent to which you can meet the cat's needs for scratching is limited only by your imagination.

The conventional wisdom regarding declawing (onychectomy) is changing. In Canada, Australia, and most European nations, declawing is not considered a valid or legal veterinary procedure unless injury is involved (i.e., the procedure is done only when medically warranted). Most declawings in the United States are elective, meaning that there is not a medical reason for the procedure. Attitudes are changing in the United States and more veterinarians, welfare groups, and veterinary groups now feel that declawing should be a last resort, not a first choice.

When cats are declawed—and the method used may include anything from scalpels to lasers—the end bone in the



Scratching behavior is important for removal of old sheaths on claws and because it leaves visual and olfactory marks. The cat in the *top photo* is using a "homemade" scratching post crafted from tree branches. The cat in the *bottom photo* is using a real tree in the yard. (Photos courtesy of Anne Marie Dossche.)

finger/toe is removed. If this bone is not removed, the nails continue to grow. In order to scratch, cats have to extend their claws. As part of the basic posture of cat toes, nails are retracted. This is why you can always tell whether a cat or a dog walked across the snow in your yard: if there are only pad marks and no nail indentations in front of them, the animal passing through was a cat; if there are nail marks in front of the pads, the animal was a dog.

Because this ability to retract claws uses tendons, newer methods for controlling destructive scratching include tenectomy, which is the severing of the tendon. In this case, claws continue to grow and must be routinely trimmed, but the cat

cannot extend the claws to scratch on furniture or other living things.

Pain can be involved with both of these procedures, but according to published reports, tenectomy appears to have faster recovery and fewer long-term side effects. Long-term pain and discomfort is, in general, the exception, but no good **behavioral** studies have been done that compared cats' personal behaviors, activity, and interactions before and after declawing. Done correctly, these studies are likely to be extremely informative.

Finally, when considering declawing ask yourself if you are subjecting your cat to a procedure where blood loss and pain can be considerable just because you find it more convenient than trimming nails. We are moving into a new age of improved animal welfare and humane care. When we give more serious and generous thought to meeting the needs of those animals dependent on us, we benefit, too.

Hunting and Caching

Indoor-outdoor cats or outdoor cats may hunt. Cats have to learn to hunt and they are generally taught to do so by their mother. If you want your cat to have fewer hunting skills, obtain a kitten from a mother who has never hunted. That said, starved cats can learn to hunt. Even well-fed cats will hunt if they are "hunters." They may or may not eat their prey, even if they are well-fed.

Hunting is an intellectual endeavor. Consequently, the more we stimulate our cats and provide them with lives rich with opportunities to problem solve, the less likely they are to hunt. Teach your cats all the tasks, tricks, and signals that are taught to dogs! Cats can learn to jump through hoops and over fences that are used in agility! Watch the videos on YouTube. Imagine—intellectual stimulation and exercise all rolled into one feline activity!

Cats eat one small meal multiple times per day, so rodents are the feline version of a boxed or "takeout" meal. The mental stimulation involved in this activity is not trivial. When we "meal feed" cats, they not only don't get to hunt, they get all their calories in one setting. After they empty their dish, they have 23 hours and 55 minutes of their day to fill.

Cats fed dry food can be encouraged to mimic hunting behaviors by having all their food placed in treat balls: as the cats bat these, one or two pieces of kibble come out. Filling these with a tiny amount of food 3 to 5 times a day can mimic the native hunting behavior.

If you feed wet food you can create food puzzles: Small amounts of food can be put into holes in peg boards or small Kongs and other food toys; a cafeteria tray can be outfitted with small flower pots covering food, or rocks and large pebbles that hide food. Again, only your imagination limits how your cat's needs are met.

You may be distressed and confused if your cat brings you not-quite-dead-yet prey or prey that has been decapitated. In a free-ranging situation, cats will return injured prey to the group to share with the more dependent cats and to teach hunting, and they will cache dead prey. Start seeing yourself through your cat's eyes; your cat is only trying to help and provide for his extended family.

One last concern about hunting needs to be discussed: the issue of wildlife. In many parts of the world, cats have been responsible for the extinction of native species. Many island

species are particularly victimized and large extermination programs are necessary to control the cat population if we are to have any wildlife left in these areas. As sad as it is to discuss this topic, we need to realize that feline overpopulation is the result of irresponsible human behavior, unnatural provisioning, and, on islands, a result of humans abandoning cats. More countries, provinces, states, and townships are legislating the extent to which cats are allowed to roam. Sharing the world is a lesson with which we humans seem to struggle.

Rubbing

Cats rub people, cats, other animals, walls, and inanimate objects. Rubbing is a normal behavior that has tactile, social, and olfactory components. Cats rub when they are exhibiting “affiliative” behavior—these are behaviors associated with being close, with being in relaxed and friendly social circumstances.

Because cats have large numbers of glands that secrete a waxy and—to cats—odoriferous substance, they actually leave deposits wherever they rub. We think that these compounds differ depending on the region of the body, which may explain why certain patterns of rubbing seem to occur more frequently in some environments than others.

When cats rub against humans they may rub with only their tail and their hind end, or they may “bunt.” Bunting is the behavior where the cat pushes his head up into someone and rubs the area just in front of the ears across the individual being rubbed.

Cats will also rub the sides of their cheeks, the area in front of the ears, and their chin on corners of walls or furniture. You can learn if your cat has been doing this by looking at hallways, entrances, et cetera, at cat height—you’ll see the slightly waxy deposit. This behavior has created a market for “corner combs,” devices that can be attached to edges of walls and where cats can rub and groom their facial hair at the same time.



A cat rubbing her cheeks and whiskers across a metal screen, which leaves behind some waxy secretions and odor.

Cats will also move back and forth along edges while pressing the base of their tail and their rump against them. These are normal behaviors. When patterns of these marking behaviors begin to change, the change may indicate difficulties in the feline social environment. *Again, you cannot*

recognize when something changes without knowing what normal is. Please watch your cats to learn what they do so that when something changes, you’ll notice it.

Nocturnal Activity

Cats are solitary predators of animals who are awake at night (e.g., mice, voles, et cetera). Hence, cats are much more nocturnal than we or dogs are. Cats do not have to swing from chandeliers at 2 AM, but if they are young, are left alone all the time, get little attention, and have learned that you will give them attention if they bother you enough, they can learn to swing from chandeliers. *Meet your cat’s needs.*

If you have an only cat who is running around like crazy at night, try playing games with the cat before you go to bed. If this doesn’t work, consider another cat with the same playful temperament. A dog can also help exercise a cat if you don’t want two cats.

If you wish for your cats to match your sleeping pattern, you need to be reasonable. This is another reason why leash walks can be so good for cats—they can actually accompany you much of the time and will be on a more similar schedule.

Remember that cats generally sleep for a few hours after they eat. Feed them so that this 3- to 4-hour hiatus starts at a time that helps encourage a realistic sleeping schedule for both of you.

For any change to occur, you **must** be meeting your cat’s intellectual and exercise needs. Unless you wish the cat to get you up to play or eat, do not encourage these behaviors as a way of shutting the cat up. All you have done is shown the cat what will get him attention or food. Instead, get earplugs, ignore the commotion (unless it’s a danger to the cat) and wake up the next morning prepared to meet the cat’s needs and change the way you have been interacting.

If your older cat begins to show a change in her nocturnal behavior, such as a change in sleep cycle or nocturnal vocalization, please have your veterinarian assess the cat immediately. Nocturnal vocalization and changes in activity are two of the most common signs of age-related cognitive decline/dysfunction in cats. Medications, diet, and exercise can help.

Ingestion of Non-food Items That Are NOT Plants

Ingestion of non-food items like fabric or rocks is called pica. Many cats try to lick or eat non-food objects, but do not do so religiously. If cats begin to seek out and focus on chewing, sucking, or ingesting non-food items, they have a true behavioral disorder and you need to seek help.

In addition to the concern about a potential intestinal obstruction please understand that this form of ingestion is a variant of obsessive-compulsive disorder (OCD) and will worsen without treatment. OCD runs in both family and breed lines. Sucking, licking, and ingesting non-food items are all separate forms of OCD. Any item can be involved, but many cats suck or chew wool. In fact, when Siamese and other Oriental breed cats have behavioral conditions, they often have an OCD involving chewing and ingestion of wool. Some cats generalize to other fabrics, and some cats are only attracted by one type of fabric.

If your cat occasionally licks clean plastic (it would make sense to lick plastic containers that previously had food in

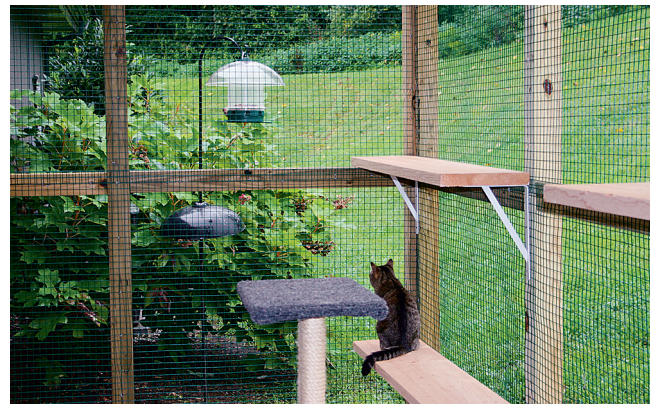
them), sucks on a pillow or a toy, or chews on a pen, it's not a big deal. Make sure that the cat cannot injure herself, especially if the cat's preference for an afternoon snack involves electrical cords, by sequestering appealing objects or sequestering the cat when unsupervised. Ensure that the objects sucked and chewed are not toxic. If you notice you cannot distract the cat when "caught in the act," have your cat evaluated. Tasting and sampling can be normal, obsession is not.

Roaming and Cat Enclosures

Roaming cats who defecate in neighbors' gardens are nuisances. The aesthetic aspect is one problem, the public health one is more severe. Illness is a concern in areas where humans garden in soil in which cats have defecated, or where children play in sand boxes also used by cats. The soil or sand may harbor fecal parasites that can make humans ill. In young children, one of the most common cat-caused illnesses is caused by the larval stage of a fecal worm and the child can become blind. This is **not** a trivial concern in many, many urban regions, and as such, it is a public health issue that requires people who have feline partners to take responsibility for the actions of their cats (www.petsandparasites.org/cat-owners; www.cdc.gov/parasites/toxoplasmosis/gen_info/pregnant.html).

- Neutering cats renders them more likely to stay close to home and less likely to roam.
- Having an entertaining and stimulating environment at home will keep cats closer to home.
- Providing cats with physical exercise and mental stimulation will keep the cats closer to home.
- Finally, keeping cats indoors can keep them safe and they will live longer than do outdoor cats.

However, if you want your cats to have some outdoor exercise but are concerned about these other issues, there is a way to simultaneously meet all needs: cat enclosures. Custom-made enclosures are more commonly seen in Europe than in the United States, and they can be wonderful. These enclosures are made from various kinds of fencing and mesh, can be built into a window or a cat door, and can even be designed to include most of a tree so that the cats can see the birds, but not snack on them (www.catsondeck.com; <http://catnet.stanford.edu>; <http://habitathaven.com>).



Cat pens made from enclosing a concrete slab porch. This is a safe way for cats to be outdoors and experience mental stimulation.

There are also some fencing additions that can restrict your cats to their own backyard safely and humanly (www.kittyfence.com; www.catfence.com; www.purrfectfence.com).

These are two ways to bring the rich stimulation of the outside world to the stay at home cat, and make everyone happy while meeting the cat's needs.