Severely distressed animals may need psychopharmacological interventions. Pheromones, nutraceuticals and medications may be beneficial for the reduction of anxiety. **Together, Getting-Pets-to-Vets:** getting pets out of the living room and into the exam room.

Psychotropic agents may aid in improving or resolving problem behaviors, abnormal behaviors, or behaviors that are manifestations of natural feline behavior. This presentation focuses on the use of pheromones, nutraceuticals or medications which exert a psychotropic effect to reduce feline distress and may be applied prior to and during a veterinary visit. Even a routine veterinary visit is not a routine event for a cat. As both a skillful predator and an evasive prey, a cat may naturally avoid stressful encounters by fleeing or defending himself with sharp claws and teeth. The psychotropic agents discussed herein exert their effect by reducing anxiety, fear, arousal, or vigilance; inhibiting aggression; and reducing impulsivity but they are not intended to render a cat helpless or completely unaware of threats. We have a responsibility to our patients to utilize pheromones, nutraceuticals and psychotropic agents to reduce feline distress while providing an environment that also reduces the cat’s distress.

**Pheromones**

Pheromones are the most effective and benign option for reducing feline distress and no cat should be deprived of the protective benefits of pheromones when faced with a stressful situation. Cats communicate with other cats by leaving semiochemical messages called pheromones in the environment, which other cats “read” in much the same way as people obtain information by reading a newspaper or book. What if we could speak “cat”? What if we could write a message in cat language, send it to the cats, and influence their behavior?

Pheromonatherapy is the art of leaving an encoded feline-friendly message in the environment by introducing a synthetic analogue of natural pheromones. These communications should convey peace and comfort; these semiochemicals should enhance the cats’ emotional well-being, not just change their behavior.

Pheromones may be useful preventatively or as a treatment for specific behavior problems. Five feline facial pheromones, designated F1 to F5, have been identified in cats. The F3 fraction is the pheromone deposited by the cat when facial-marking and chin-rubbing on either objects or people. This creates a familiar, comforting scent of “self” in the environment. The synthetic analogue of the F3 fraction is marketed under the trade name Feliway. The F4 fraction of the feline facial pheromone complex is believed to be utilized for allomarking and recognition in feline social greetings. The synthetic analogue of the F4 fraction is marketed under the trade name Felifriend®. A new feline appeasing pheromone marketed under the trade name “Feliway MultiCat” is ideal for reducing intercat aggression between housemate cat but holds promise for other applications influencing mood and social relationships.
Veterinary hospitals, catteries, boarding facilities and shelters for cats may utilize pheromones to enhance the health and welfare of feline visitors. In a placebo-controlled trial, using cats hospitalized for evaluation of lower urinary tract disease, synthetic F3 pheromone was shown to promote grooming behaviors and increased interest in food. Further, the 24-hour food consumption was significantly higher for cats that were offered a cage containing a Feliway-treated carrier for hiding, as compared with those given only Feliway. Another placebo-controlled trial evaluated the effects of F3 analogue alone, or in combination with acepromazine as a premedication before catheterization. F3 analogue was found to have additional calming effects on cats when combined with acepromazine, and to a lesser degree cats that were not given acepromazine. A synthetic analogue feline facial pheromone (FFP) may make cats calmer but does not reduce struggling for intravenous catheterization. The cats in the Feliway and acepromazine treatment group also appeared more relaxed in the cage based on head postures and position within the cage. While at a veterinary hospital, cats may be inundated with odors such as disinfectants, rubbing alcohol, blood, or even air fresheners which cause the cat to be fearful or distressed. The odors and messages from unfamiliar and distressed felines are likely to convey messages of panic and fear to other cats. Cats can be quite distressed by these messages, much as people at an airport would be distressed to read about a plane crash or terrorist-related event—the threats may not be present but the real or perceived fear is conveyed by communications and results in real emotional distress. Feline patients may benefit from the steady messages from diffusers placed throughout the hospital. Pheromones should be applied to towels, bedding or other materials a cat will encounter by spraying about 15 minutes in advance of handling or confinement. Feliway has also been shown to reduce anxiety associated with car travel, both physical signs (e.g., vomiting, urination, defecation) and behavioral signs, when sprayed into the cat carrier in advance of travel.

Further, understanding the derivation and the natural applications of pheromones help elucidate the appropriate applications and possible misapplications. If a cat is extremely terrified and simultaneously detects a semiochemical message conveying comfort and tranquility, one can imagine this may be more confusing or disconcerting to the feline psyche. Pheromone products are best applied to influence a behavioral response as they are not intended to completely control a specific response.

**Practical Considerations: How to Apply**

**Feliway Spray**
- In carrier before travel – either before leaving home and/or before leaving clinic
- On bedding or objects to accompany cat to the hospital
- Applied to cage, bedding or paper towel

**Feliway or Feliway Multicat Diffuser in Home**
- At least a week before a scheduled veterinary visit
- Upon discharge from an unplanned or particularly stressful visit

**Feliway Diffuser in Veterinary Hospital**
- Provides on going stress reduction to all feline patients
Severely distressed animals may need psychopharmacological interventions for a “routine” veterinary visits. The days of just giving these fearful patients a little or a lot of acepromazine have passed. Acepromazine has been the most commonly prescribed drug for this problem. Acepromazine may immobilize pets while enhancing their memory and associations of the sights, smells and traumatic events associated with the veterinary visit. Benzodiazepines (e.g. diazepam, alprazolam or lorazepam) may be beneficial for the reduction of anxiety but not result in immobility except at much higher doses. Amnesia may occur so learning may be inhibited: and indeed some days at the vet are better forgotten.

While a medication might be the best option for the most severely anxious patients many pet owners are often reluctant to give their pet any psychotropic drug, never mind even being able to administer a pill to a cat. Palatable supplements such as Zylkene®, Anxitane®, Composure® or Solliquin® provide anxiolytic effects without the need to force medicate a cat.

**Benzodiazepines** work by facilitating the action of the inhibitory neurotransmitter GABA, thus increasing neural inhibition by their agonistic effect on GABA receptors. Benzodiazepines potentiate GABA, an inhibitory neurotransmitter. The exact mechanism of action is unknown, but postulated mechanisms include antagonism of serotonin, increased release of and/or facilitation of GABA activity, and diminished release or turnover of acetylcholine in the CNS. There are many common examples: Alprazolam, oxazepam, lorazepam, clonazepam, clorazepate, and diazepam. Benzodiazepines (BZ) are suitable for the alleviation of short term distress and appropriate to be given prior to situations or events (travel, grooming, and veterinary visits) which are likely to result in anxiety. This preventative approach means a lower dose may be more effective. The immediate onset of action is the greatest advantage for medications in this category and the short term effect, generally a few hours also makes their choice as a preventative logical. BZ provide a range of effects: Anxiolytic, sedative, skeletal muscle relaxant, and anticonvulsant. Benzodiazepines may have an amnesic effect on learning and memory. Precautions: May disinhibit aggression or alleviate anxiety such that a cat that is terrified becomes able to respond rather than remain frozen. May enhance appetite. Use in caution with cats with hepatic dysfunction. Diazepam has been reported to cause rare cases of fatal hepatic necrosis. If a cat becomes listless or anorexic after beginning diazepam, reassess, particularly for liver disease. Because clonazepam, oxazepam, and lorazepam have no active intermediate metabolites, they may be safer for cats in general and especially for cats with compromised hepatic function. Useful primarily for the short term or for situational events. Benzodiazepines reach peak effect shortly after each dose and are therefore useful on an as-needed basis for specific situations. The therapeutic window is often hours in duration but may vary between individuals and between drugs in this class. Owners should observe for the time of onset and the duration of effects and/or benefits for their pet.

Gabapentin is structurally similar to GABA, but no known direct actions on GABA or its receptors. Gabapentin is a structural analog of GABA, but it does not alter GABA binding, reuptake, or degradation. It does bind to the α2δ1 subunit of presynaptic voltage-gated calcium channels and inhibits calcium influx by way of these channels. Gabapentin inhibits release of excitatory neurotransmitters (substance P, glutamate, norepinephrine) from primary afferent
nerve fibers. Gabapentin is widely available as a generic or as branded product for people (Neurontin; Pfizer, New York) or the more expensive, similar product pregabalin (Lyrica; Pfizer). Commonly prescribed for: Hypersensitivity, neuropathic pain, or adjunctive use for anxiety and aggression. Produces an effects which may be notable within days or weeks. Gabapentin is well tolerated, mild adverse effects but though limited information is available on its use in cats, its use to reduce anxiety and distress associated with veterinary visits is promising.

Dosing strategies vary but anecdotal reports suggest a dose of 100mg Gabapentin 90 minutes before a veterinary visit may be profoundly beneficial, especially for cats with a history of explosive reactivity on prior veterinary visits. Particularly during examination or restraint. Peak plasma levels are reported to be about 1.5 to 3 hours with an elimination half-life of about 3 hours. Sedation is the most common side effect, and this may be transient. Ataxia also possible. Common adverse events include mild sedation or ataxia. Avoid the use of human oral solution (300 mg/mL xylitol), which may create adverse effects related to xylitol, including hypoglycemia, hepatotoxicity, and a false-positive urinary protein dipstick test result. Generally, there is limited information on and variability in suggestions with respect to dosing for gabapentin in cats, but this medication is considered safe and may offers promise as we learn more about its effects in cats.

Maropitant suppresses both peripheral and centrally mediated emesis as an antagonist of the neurokinin-1 (NK1) receptor, which acts in the CNS by inhibiting substance P, the key neurotransmitter involved in vomiting. Maropitant (Cerenia; Zoetis) is available and labeled for acute vomiting and the prevention of vomiting in cats. Maropitant is well tolerated in cats, but limited information is available. The primary use and label recommendation for maropitant is the prevention of acute vomiting and the prevention of vomiting due to motion sickness. In fact, some cats that are anxious during car rides may have concurrent motion sickness. Therefore, for a cat that experiences hypersalivation, drooling, or vomiting, this drug is a logical adjunct to treatment for travel-related anxiety. Orally administered off-label combinations with benzodiazepines might be effective prior to veterinary visits, grooming, or other potentially fear-evoking events. Cerenia Injectable Solution is now approved in US and UK for treatment of vomiting in cats ages 16 weeks and older, but use of tablets or for other indications is still considered off-label use. Maropitant acts in the CNS by inhibiting substance P, the key neurotransmitter involved in vomiting but, along with NK1, is also involved in the body’s response to stress. The possible effects of maropitant on feline distress and anxiety have not yet been explored

Trazodone may be useful to alleviate anxiety before handling or procedures such as veterinary visits, nail trim or grooming. Trazodone should decrease anxiety but not result in profound sedation or immobility. Trazodone has been gaining wider use for dogs but is still a novel and promising application for reduction of feline distress. The optimal dose will vary from patient to patient and is determined by trial. As with all situational medications, adjuncts such as low stress handling, pheromones and, possibly pressure wraps (eg, a ThunderShirt or Anxiety Wrap) may reduce the necessary and effective dose. The beneficial effects may be overcome by fear and panic so it is essential to incorporate low-stress handling simultaneously. In a double blind placebo controlled crossover study on 10 client owned cats trazodone improved tractability and ease of examination (p=0.031). A dosing strategy of 50mg trazodone given 1 hour before a
veterinary visit may be beneficial for reduction of feline anxiety. For cats with a history of extreme anxiety or reactivity an additional dose could be given the night before. Cats may experience a sedative or hypnotic effect. The possible effects of trazodone on feline distress and anxiety have not yet been fully explored.

**Acepromazine** is a neuroleptic drug that blocks dopamine receptors in the brain, causing a nonspecific depression of the CNS, decreased motor function at the basal ganglia, and elevation in prolactin levels with concurrent reduced awareness of external stimuli. Acepromazine is most commonly prescribed for tranquilization due to its rapid onset of sedation or immobilization but it provides poor anxiolytic effect. Acepromazine is not recommended as a sole agent for anxiety or behavioral applications. Monitor for noise sensitivity and rare cases of increased aggression (most likely a paradoxical effect).

The lack of antianxiolytic effect and a profound immobilization effect make this a poor choice for alleviation of anxiety and improvement of cat welfare.

In addition, they are anticholinergic and should not be used in patients with seizures, liver disease, or heart problems. Other side effects include hypotension (due to α-adrenergic blockade), decreased seizure threshold, bradycardia, ataxia, and extrapyramidal signs such as muscle tremors, muscle spasms, muscle discomfort, and motor restlessness. Traditional application for phenothiazines such as acepromazine do not provide reduction of fear, even if given in sufficient doses to reduce locomotor activity.9

**MEDICATIONS USEFUL FOR ALLEVIATION OF SHORT TERM ANXIETY OR DISTRESS IN THE CAT**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>0.125 -0.25 mg/cat sid – tid</td>
</tr>
<tr>
<td>Diazepam</td>
<td>0.2-0.5 mg /kg bid to tid</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>0.2 - 0.5 mg/kg sid to bid</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>0.02-0.2 mg/kg sid-bid</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>0.025-0.05 mg/kg sid-bid</td>
</tr>
<tr>
<td>Trazodone</td>
<td>50mg per cat</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>5-10 mg/kg sid–tid OR 100mg per cat 90 minutes before appointment</td>
</tr>
</tbody>
</table>

*The reader should consult a formulary for full details on all medications.*

**Anxiolytics: nutraceuticals or pharmaceuticals?**

In many clinical behavior cases, anxiolytics play a pivotal role in the treatment, amelioration or management of the relief of clinical signs associated with fear, stress and anxiety in dogs and cats. Anxiolytics are used in conjunction with protective strategies of avoidance and management of the environment to reduce exposure to the perceived threat while behavioral modification strategies are implemented. Anxiolytics are particularly useful when the occurrence of the primary stimulus cannot be completely controlled (e.g., noises, storms, car rides, grooming, walks or veterinary visits). Anxiolytics including pharmaceuticals, pheromones, or nutraceutical supplements may reduce fear, stress, anxiety and their resultant behaviors. Nutraceutical supplements provide a comfortable early intervention option. The goal is not
sedation or tranquilization. The goal of an optimal anxiolytic effect is to reduce the anxiety sufficiently to allow natural habituation or create an environment whereby the pet may learn to be less afraid in the face of the fear evoking stimuli. This optimizes daily experiences and allows the owner to direct the learning experience. By reducing the pet’s overall fear, anxiety and distress, anxiolytics “open the door” to allow for successful learning during implementation of a behavior modification program.

**Veterinary herbals, supplements and nutraceuticals**

**Alpha-casozepine** (α-S1 tryptic casein) is a tryptic hydrolysate of α-S1 casein, a protein found in cow’s milk. It is similar in structure to gamma amino butyric acid (GABA) which likely explains its affinity for GABA-A receptors producing an effect similar to many benzodiazepines. Alpha-casozepine is used to treat fear, anxiety, stress, and related behavior problems. There are no known or reported side effects or contraindications. In one study in dogs, it was determined to be equally effective as selegiline in reducing anxiety in dogs based on owner assessment and EDAD (Emotional disorders and evaluations in dogs) score. Selegiline is approved for emotional disorders in many countries in Europe and, in this study, alpha-casozepine was considered equally efficient and successful in reducing the EDAD score and correlated to owner assessments. In a placebo controlled study in cats, it significantly improved fear of strangers, contact with familiares, general fear, fear related aggression and autonomic signs. Zylkene® is a capsule but the powder is readily consumed when sprinkled over food and especially blends well with milk products.

**Alpha-lactalbumin** is a unique protein component of milk which is obtained by purified extract from milk whey protein. Whey is the “watery” by product of cheese production that separates from the curds when making cheese. Concentrated whey milk protein provides many proteins and benefits but the most notable of the ingredients in the extract is alpha-lactalbumin. Concentrated whey protein contains 10 essential amino acids including the essential amino acid, L-tryptophan, a precursor of the neurotransmitter serotonin, and cysteine which is an important antioxidant. Cysteine may increase endogenous production of glutathione, the master antioxidant. Brain serotonin levels increase under stress since the neurotransmitter is important in regulating emotional states and moods. Chronic stress and anxiety may lead to a depletion of available concentrations of serotonin and tryptophan, causing serotonin levels to fall below functional needs. Alpha-lactalbumin contains a high tryptophan content (approx. 4%) compared to other food protein sources, and studies suggest that dietary supplementation of alpha-lactalbumin improves cognitive performance in stress-vulnerable subjects via increased brain tryptophan and serotonin activities.

**L-theanine** is a structural analogue of the amino acid glutamate, the most important excitatory neurotransmitter of the nervous system. Theanine, found naturally in black, green and white tea, is thought to exert neuro-protective effects by binding and blocking glutamate receptors, thus reducing excitatory impulses and lowering the stimulatory effects of glutamate. Animal studies also suggest that theanine increases the levels of stabilizing neurotransmitters such as serotonin, dopamine, and γ-aminobutyric acid (GABA) in the brain. Theanine also directly stimulates the production of alpha brain waves, which create a state of deep relaxation, daytime wakefulness, and mental alertness which supports a once a day, morning dosing regimen.
Theanine is uniquely palatable. The effects of theanine have been evaluated in dogs and cats and indicate that theanine may reduce signs of anxiety in cases of fear of humans, noise phobias, travel anxiety, and urine marking. L-theanine is a common ingredient found in many veterinary formulations such as Anxitane® and Composure®. Solliquin™ is a new supplement which contains combination of L-theanine, magnolia officinalis, phellodendron amurense and alpha-lactalbumin.

*Magnolia officinalis* extracts have long been utilized in polyherbal combinations in traditional Chinese and Japanese herbal medicine. Magnolia extracts, most specifically the constituent’s honokiol and magnolol, enhance the activity of both synaptic and extra-synaptic GABA receptors in the brain. GABA is the brain’s chief inhibitory neurotransmitter which modulates the activity of overexcited neurons stimulated by fear and anxiety. The action of these compounds is thought to be selective binding to specific GABA-benzodiazepine receptors which may explain why the effects of honokiol and magnolol are similar to diazepam, without the sedative effects. Harmonease™ is labeled for dogs but considered safe for cats.

*Nepeta cataria* (catnip or catmint). Catnip exerts its influence on the CNS through the olfactory bulb, but not the vomeronasal organ. The active ingredient in catnip, Nepeta cataria, is the essential oil nepetalactone, which is a terpene composed of two isoprene units with a total of 10 carbons. Catnip or catmint produces an apparent euphoric or hallucinogenic reaction in about 50% to 75% of cats, and responsiveness is reported to be an autosomal dominant trait which may be noted beginning at about 8 weeks of age. Affected cats may exhibit a range of behaviors, including sniffing, licking, and chewing the plant, head shaking, chin and cheek rubbing, head rolling, and body rubbing. This reaction lasts for 5 to 15 minutes and then may be initiated again for another hour or more. Catnip is available as a leaf, but liquid and aerosol forms are also available. Volatile oils appear to exert a cholinergic effect, which may account for some of their psychoactive properties. Catnip may be useful for enrichment, reinforcement-based training, response substitution, and counterconditioning. Generally considered safe and non-addictive, there is one case of catnip intoxication which has been reported.

*Phellodendron amurense* is a species of tree commonly called the Amur or Chinese Cork tree, and the major source of huáng bái, one of the fundamental herbs of Chinese medicine. *Phellodendron* extracts are rich in berberine, which has demonstrated similar anxiolytic effects as diazepam and buspirone in experimental anxiety models in mice, though the exact mechanism is still unknown. Though the name sounds similar, *Phellodendron amurense* is not the same as the toxic ornamental houseplant *Philodendron*. The combination of *Magnolia* plus *Phellodendron* extracts appears to be synergistic, with the combination controlling stress and anxiety more effectively than either compound used alone. In a laboratory model, the combination of *Magnolia* and *Phellodendron* (Harmonease™) reduced anxiety in beagles in a placebo-controlled clinical trial of noise-induced anxiety.15

**NUTRACEUTICALS USEFUL FOR ALLEVIATION OF SHORT TERM ANXIETY OR DISTRESS IN THE CAT**

<table>
<thead>
<tr>
<th>Active ingredient</th>
<th>Veterinary products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha-casozepine</td>
<td>Zylkène®(Vetoquinol, France)</td>
</tr>
<tr>
<td>Alpha-lactalbumin</td>
<td>Solliquin™(Nutramax Lancaster, SC)</td>
</tr>
<tr>
<td>L-theanine or sun theanine®</td>
<td>Anxitane® (Virbac, France), Solliquin™, Composure™ PRO (VetriScience®, Vermont) GNC® Pets Ultra Mega Calming, (GNC, Pittsburgh, PA)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Nepeta cataria, Catnip</td>
<td>None</td>
</tr>
<tr>
<td>Magnolia officinalis</td>
<td>Solliquin™ (Nutramax Lancaster, SC), Harmonease® (Veterinary Products Laboratories, Arizona)*</td>
</tr>
<tr>
<td>Phellodendron amurense</td>
<td>Solliquin™ (Nutramax Lancaster, SC), Harmonease® (Veterinary Products Laboratories, Arizona)*</td>
</tr>
</tbody>
</table>

Harmonease® is labeled for dogs but considered safe for cats.

**ADMINISTRATION OF PILLS**

Some owners may become adept at administering medications directly if properly trained and instructed. Placing the food inside human food or pilling treats (Greenies Pill Pockets (The Nutro Company, Franklin Tennessee) may allow some cats to be easily medicated. Crushing the tablet or opening the capsule and placing it inside a tasty human food such as yogurt, cheese, a fish pate, poultry, or anchovy paste may also be successful. Though cats do not taste sweet foods as people do, some cats may accept pills buried in whipped cream. Provided the medication is not in a coated or time release form that should not be crushed, this may be preferable to compounding because the medication can remain in its original form until use. Kittens may actually be trained to accept the handling and manipulation of “pilling” by administering food kibble instead of pills. For more information on administering pills to cats, see the handout INSTRUCTIONS FOR ADMINISTERING MEDICATION TO CATS: HOW TO PILL YOUR CAT WITH KINDNESS.

**CONSEQUENCES OF VETERINARY RELATED DISTRESS**

Easing feline distress associated with veterinary visits by the strategic use of pheromones, nutraceuticals and medications is key to improving the emotional wellbeing of cats immediately but also, by ensuring their wellbeing and attendance at future veterinary visits, improves the cats overall health.

The Getting-Pets-To-Vets mission is to provide education, research and increase awareness regarding pet distress associated with getting from the home to the clinic and empower trainers, certified dog and cat behavior consultants and the Veterinary Health Care Team (receptionist, technicians and DVM’s), as well as pet owners, to identify and alleviate this distress and improve the welfare of pets and their people. Theresa DePorter and Steve Dale have partnered with Ceva Animal Health Together, so we may bring the fearful pet from the couch to the exam table while enhancing the lives of pets: Together, Beyond Animal Health.

Theresa DePorter and Steve Dale
RESOURCES


- **The Cat Friendly Practice (CFP) program** contains the tools for practices to integrate a feline perspective and embrace the standards needed to elevate care for cats. Available from: [http://catfriendlypractice.catvets.com/](http://catfriendlypractice.catvets.com/)

- The CATalyst Council program provides resources and tips for owners taking their cat to the veterinarian. Available from: [www.catalystcouncil.org/resources/video](http://www.catalystcouncil.org/resources/video)

- **International Cat Care**—a charity dedicated to improving the lives of all cats. Available from: [http://www.icatcare.org/](http://www.icatcare.org/)

REFERENCES

INSTRUCTIONS FOR ADMINISTERING MEDICATION TO CATS: HOW TO PILL YOUR CAT WITH KINDNESS

Iris Cloyd and Theresa DePorter – Behavioral Medicine Oakland Veterinary Referral Services

Pills can be tucked inside tasty soft treats or foods. But to avoid startling your cat with a new routine and a “hidden agenda,” it’s a good idea to try the following exercises before there is any need to medicate your cat at all. It doesn’t take long at all -- just a few minutes a day!

First, get your cat accustomed to accepting small soft treats at a specific time and place. Make a ritual of it. Cats differ in their preferences, so choose a food or treat that is delectable for your cat but has pill-hiding potential for you. Options include: Pill Pockets™, canned pate-style cat foods, cream cheese, meat-flavored baby-foods, squeeze cheese, whipped cream, and yogurt. Consult your veterinarian if your cat has dietary restrictions. Canned foods can be warmed to enhance aromas. Many cats are suspicious of novel foods but may accept these foods after repeated invitations.

Most cats are amenable to having designated treat times -- you may find that your cat has already trained you! Have at least two sessions a day, morning and evening if possible, each of several minutes’ duration. Just be sure to give your cat quality attention and praise at this time. Stroke or engage your cat in some way if your cat enjoys these interactions.

Initially, you will give the treats without anything hidden inside. Use tiny amounts so that you can offer 4 to 6 treats per session. And try different methods: some cats will accept a treat from your hand; others prefer that you place it on a dish. But it is suggested that you also try placing the treat on a pill gun, so your cat will become familiar with it in case you ever need to use it. (A pill gun is a product designed to administer a pill directly into a pet’s mouth, with the pill gun holding the pill in place of your fingers.) At this stage, simply use the pill gun as you would a spoon -- just a means of extending a treat out toward the cat. But let your cat come to it; don’t force it on your cat. If the treat is tasty enough, some cats will grab the pill gun with their teeth!

After several sessions of your cat readily accepting treats when offered and, in fact, running to you at the designated times, try slipping one kibble of cat food into some of the treats. Use only enough of the treat to cover the kibble, to discourage the cat from eating around it. Most cats will detect the hard core inside, but after examining it, will not be concerned. Continue this method until your cat readily eats the kibble-filled treats without scrutinizing them.

If your cat is one who grabs the pill gun with her teeth, slip the treat-cloaked kibble into the end of the pill gun and gently push the plunger (to pop the pill into her mouth) as she chews at the pill gun. If your cat has a more leisurely licking style (and therefore might lick off the treat and leave the kibble behind), load the treat-cloaked kibble into the pill gun and add a more tasty treat on top. Then when your cat begins to lick the treat off the end of the pill gun, gently nudge the pill gun closer, and give the plunger a boost to pop the hidden kibble into her mouth. Don’t forget the praise and positive attention!
These exercises are as much for you as they are for the cat. If your cat spits out the kibble, just be patient and work on improving your technique at the next session. The practice sessions should be stress-free for both of you. When your cat eagerly consumes a kibble hidden inside a treat, you can have confidence knowing that you can substitute a pill into the treat whenever needed.

When it’s time for the real thing: first offer a treat without a pill, followed by the treat-cloaked pill.

If despite all your efforts, your cat refuses to accept pills, ask your veterinarian for other options. For medically urgent conditions, it may be helpful to try flavored liquid medications or transdermal formulations available from compounding pharmacies. But note that some drugs (for example, many anti-anxiety drugs used in behavioral therapy) are unstable and of uncertain efficacy when compounded. In these instances, try crushing the pills and mixing them with water from canned tuna or clams -- many cats find these pungent “juices” appealing. Again, seek guidance from your veterinarian if needed. Ultimately, the goal is to have kind, gentle medication strategies which will be amenable to your cat long term and allow for optimum health and well-being.