At best, a behavior disorder in a companion animal is a minor inconvenience for the owner. At worst, such problems lead to the surrender or euthanasia of a once-loved pet. Today, however, veterinary pharmacology offers new, safe, and effective therapies for the treatment of anxiety, aggression, and fear in dogs, cats, birds, and exotic pets. Used in addition to behavior modification and changes in the pet’s environment, those medications increase the likelihood of therapeutic success.

Most psychotropic drugs used to treat companion animals have been developed for human use and must be altered in dosage or form before they are administered to veterinary patients. The assistance of a compounding pharmacist is invaluable in making these alterations. Compounded veterinary medications enable accurate dosing; are easily modified in form and composition; and (because they can often be flavored or embedded in a gel or cream for ease of administration) ensure compliance. In this article, animal behaviorist Dr. Barbara S. Simpson describes her approaches to therapy and the use of compounded medications in treating behavior problems in cats, dogs, and birds.

A MULTIFOCAL APPROACH TO TREATMENT
Dr. Barbara S. Simpson, MS, PhD, DVM, and diplomat of American College of Veterinary Behaviorists (ACVB), is a certified applied animal behaviorist and a specialist in treating behavior problems in companion animals. In solo practice at the Veterinary Behavior Clinic in Cary, North Carolina, she also serves as adjunct associate professor in the Department of Clinical Sciences at the North Carolina State University College of Veterinary Medicine in Raleigh, North Carolina. Simpson explained that veterinary behaviorists differ from other animal behaviorists in two ways: they can identify medical or nutritional causes of inappropriate behavior, and they can prescribe medication as part of the treatment program. In her current practice she treats only behavior problems in veterinary patients, about 80% of which are dogs, 15% cats, and 5% horses, pet birds, or laboratory animals.

“Misbehavior is the most common cause of death in dogs in the United States,” Simpson said. “Those that don’t work out because of bad behavior may be abandoned, left outside on a chain, or taken to an animal shelter. Addressing such problems is often a lifesaving measure for the pet and should be considered an important part of veterinary medicine.”

Animals live in a rich social environment, Simpson said, “and the language they use to communicate with each other is fascinating. Most companion animals use the same signals to express themselves to their owners, but the repertoire is limited. Many of the behavior problems that I treat involve a miscommunication in which an owner incorrectly interprets a pet’s behavior. A dog that bites, for example, might seem dominant when it is really afraid.” Simpson has a special interest in cross-species interaction, which includes the language that animals use to communicate with people. “Much of the work that I do involves training people to have empathy for their cat, dog, or bird,” she said. “Shaping behavior to make a pet a more suitable companion requires interpreting its needs and how it sig-
nals frustration. Understanding what our pets are saying fosters our connection with them.” When Simpson addresses a behavior problem in a companion animal, she first rules out medical and nutritional causes. “We then see if we can improve into dogs, and we try positive behavior modification,” she explained. “If those approaches are ineffective, we may add medication to the treatment regimen. Some problems are never classified completely, but they can often be minimized to a level that is manageable for the owner.”

The Benefits of Compounds
Aggression and fear-based reactions are the most common behavior disorders that Simpson treats in dogs. In cats, failure to use the litter box is a frequent complaint from owners. “Anxiety and obsessive-compulsive behavior in cats and dogs have been compared with equivalent disorders in humans,” she said. “That’s a valid comparison because many pharmacologic agents used to treat humans in emotional distress are similarly effective in animals.” Most commercially available psychotropic drugs, however, are manufactured for use in people. To modify those medications for administration to a pet, compounding is a necessity. “The smaller the patient, the more likely I am to prescribe a compounded drug,” said Simpson. “It’s very difficult for patients to split a tablet manufactured for humans into doses tiny enough for small pets. In addition, some patients strongly resist treatment. Cats can be especially difficult to medicate. They easily become suspicious of unfamiliar medications, and in the process of resisting they can become aggressive. The medications that I prescribe are administered at least once daily for weeks to months, so the pet must be a very benign process. Otherwise, clients and patients don’t comply. My goal is to improve the adherence to treatment with a safe medication that is effective and easy to administer.”

Simpson has prescribed compounds to treat behavior problems since she opened her specialty practice in 1996. “Using medication in a behavior modification regimen is very helpful for several reasons,” she said. “The appropriate drug in a dosage customized for the pet can safely reduce the effects of anxiety, which can be very powerful in a troubled animal, and we can change the behavior of that animal relatively quickly. Early treatment of a behavior problem also ensures that the owner and the pet do not become locked into negative patterns of interaction and ultimately frustrated. If we can alter the pet’s motivation for the unacceptable behavior, its state of arousal, and its anxiety level fairly rapidly, and also teach the owner a few behavior modification techniques, we have a better chance of success.”

The number of prescriptions that Simpson writes for compounds has increased greatly in the last few years. “The medications that I prescribe most often are antidepressants (anxiety-reducing agents), anti-psychotics (imipramine, fluoxetine, paroxetine) or anxiolytics (sopramine and diazepam) in any of a variety of dosage forms that include liquids, chewable tablets, and transdermal patches,” she said. “When combined with behavior modification, those medications can produce improvement in as many as 70% of cases.”

Determining Treatment Success
Simpson’s guidelines for medication use involve a multifocal treatment approach. “We first establish the lowest and most effective therapeutic dosage,” she said. “Then we look for improvement in the undesirable behavior within 1 month, which is the signal that we’re on the right track. We ask the owner to monitor the pet’s behavior and to note any adverse effects of treatment that might indicate the need to adjust the regimen. The therapeutic dosage of the effective drug is administered for 2 months after the owner is satisfied with the outcome, and that process can take several months. Our next step is to gradually wean the animal off the medication. We do this by determining whether the improvement is sustained if half the effective dosage is given for several weeks. If the answer is yes, we reduce that dosage by half again for an equal length of time. If the unacceptable behavior (which we always try to quantify) recurs, we return to administering the last successful dosage of the drug for a few months. It is important to remember that the goal of therapy is not to eliminate the problem but rather to reduce the objectionable behavior to a level that is acceptable to the owner.” Simpson usually prescribes preparations in an oral dosage form initially to confirm that the medication is effective and well tolerated. Liquids are easy to administer because they can be mixed with moist food rather easily, and they improve dosing accuracy in very small animals. “I can always prescribe a transdermal dosage form instead of a liquid if necessary,” she said. “My compounding pharmacist is an expert in customizing the medication to the pet’s needs and the owner’s preferences.”

Medications by Drug Class That May Cause Behavior Problems in Veterinary Patients as an Adverse Effect of Treatment

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Amphetamines
Anabolic steroids
Angiotensin-converting enzyme inhibitors
Anticholinergic agents
Azacone
Barbiturates
Benzodiazepines
Beta-blockers
Calcium channel blockers
Cephalosporins
Corticosteroids
Dopamine blockers
Estrogens
Fluroquinolones
H1-receptor antagonists (antihistamines)
H2-receptor antagonists
NSAIDs
Neuroleptics
Opioids
Proacone derivatives
SSRIs
Sialylate
Sulfonamides
Tricyclic antidepressants

For generic drug names, adverse effect(s), and comments on this list of medications, please see the following article: Vail J, Davidson G. Compounding for Behavior Problems in Companion Animals. JPCC 2005; 9(3): 185-192.

Reference


For an 8-lb (3.6-kg) cat with nocturnal activity, low dose of 2 mg/kg.

For a 17-lb (7.7-kg) dog with noise-based phobia, situational anxiety, low dose of 0.05 mg/kg.

For a 60-lb (27-kg) dog with dominance aggression, fear-induced aggression, compul- sive behaviors, separation anxiety, fears, phobia, high dose of 1 mg/kg.

For a 22-lb (10-kg) cat who is urine marking (spraying), low dose of 0.5 mg/kg.