

Desensitization and Counterconditioning: The Details of Success

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Desensitization and counterconditioning are two of the behavior modification techniques most commonly used in the treatment of behavior problems in dogs, cats, and other animals. Desensitization gradually accustoms an animal to a stimulus to which it initially has an undesirable response. In most cases, the undesired response is anxiety or fear and the animal's consequent behaviors. Counterconditioning is the process by which a response that is physiologically and behaviorally incompatible with the undesired response is induced. While the two techniques are different, they are usually used together to optimize the speed and degree of resolution of a behavior problem. To be successful, both techniques must be tailored to the individual patient, taking into account the nature and intensity of the stimulus, the preferences of the pet, and the duration of the behavior modification sessions. Attention to detail can be the difference between success and failure.

IDENTIFY THE CORRECT STIMULUS

For desensitization and counterconditioning to be effective, the stimulus used to reproduce the conditions in which the animal experiences fear must be one to which the animal responds with the undesired behavior. For some animals, the stimulus is quite specific. To use the example of noise phobia, it is important to confirm, before beginning treatment, that the pet exhibits a fear response to the sound that will be used as the stimulus. This is particularly important if a commercial recording is to be used. Some pets exhibit intense fear to one particular recording and are not at all bothered by another recording. Presumably, this is because the recording that elicits fear most closely mimics the actual situation in which they developed the fear. The *Sounds Scary* CD set developed by veterinarians Sarah Heath and Jon Bowen is available in several countries and can be useful for many pets. Going to Internet resources (e.g., Amazon.com) and searching for the relevant sounds in the music section also typically reveals several possibilities.

Occasionally, a client will try several commercially available recordings to no avail. I most often encounter this situation with people who live in the mountainous regions of north Georgia and western North Carolina, where the sounds of thunder echo off the rolling landscape in a particular way. People with pets that react adversely only to very specific local thunderstorms may need to make their own recording of the sounds.

For other animals, the opposite may be true: the stimulus may be very generic. For example, a dog or cat may be afraid of all people. In this difficult situation, the challenge is to design the least threatening treatment protocol possible. In these cases, it

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About This Column

Behavior problems are a significant cause of death (euthanasia) in companion animals. While most veterinary practices are necessarily geared toward the medical aspect of care, there are many opportunities to bring behavior awareness into the clinic for the benefit of the pet, the owner, and ourselves. This column acknowledges the importance of behavior as part of veterinary medicine and speaks practically about using it effectively in daily practice.

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may be best to allow the animal to choose the intensity of the stimulus to which it is subjected.

CHOOSE THE STIMULUS INTENSITY

Desensitization: Slow and Steady

To begin the desensitization process, the animal is exposed to a stimulus to which it has an undesirable response, but at such a low level that the undesired response does not occur. As desensitization progresses, the intensity of the stimulus is gradually increased, taking care not to exceed the threshold that triggers the undesirable behavior. For example, if a dog is afraid of one particular person, desensitization to that person's presence can begin with the person standing, sitting, or walking at a distance that does not frighten the dog while someone who the dog does not fear holds its leash. Over multiple sessions, the distance between the dog and the person it is afraid of is gradually decreased, under controlled conditions. If the intensity of the stimulus—in this case, the proximity of the person the dog is afraid of—becomes great enough to cause the beginning of a fear reaction, it

not an option. If the pet likes treats, “treat trails” can be laid down from a place close to the animal to a place where a person eventually sits down and engages in a quiet activity, such as reading. It is important for the person to not stare at the animal and to check the status of its progress only with quick glances. The person should remain as still as possible and not talk. In this scenario, the animal chooses how close it is willing to get to the human in order to attain the food treat, and the intensity of the desensitization process is never pushed beyond the animal's threshold of fear unless the person makes a sudden movement or noise that startles the animal. While this process can be frustrating at first, persistence typically results in steady progress. If the animal is not interested in treats, another type of approach may be necessary.

Flooding: All or Nothing

Desensitization is generally preferred to flooding, in which the pet is forced to experience a fear-inducing stimulus until its fear response extinguishes, if the fear

Pets may be afraid of specific, discrete stimuli or broad categories of stimuli.

should be briefly maintained to see if the pet's fear will decline. If the dog remains afraid, the person should back up to a distance at which it becomes calm.

To desensitize a patient, it is essential that the handler be able to control the stimulus. Sometimes this is easy; at other times, it is so difficult as to be, for practical purposes, impossible. Some storm-phobic pets appear to respond to barometric pressure. In contrast to the ease with which a person can walk toward or away from a fearful pet, it is impossible to control barometric pressure, short of placing the pet in a barometric pressure chamber such as those used by deep sea divers—a cost-prohibitive and, given the probable reaction to being placed in such a novel environment, likely counterproductive approach. Fortunately, most storm-phobic pets show improvement if they are desensitized and counterconditioned to aspects of storms that can be controlled, such as sound and light. However, because some stimuli cannot be controlled, medication is usually an important component of treatment.

Sometimes, the pet may need to control the stimulus. In the example of a pet that fears all people, handling and counterconditioning by a person it does not fear is

was learned via classical conditioning, or until it habituates, if the fear was an innate and natural response. Once a flooding session is initiated, it must be continued for as long as it takes for the pet to become calm. Otherwise, the problem may be exacerbated. This may require hours, and the logistics of constantly exposing an animal to a fear-inducing stimulus for such a long period of time can be highly problematic.

Another disadvantage to flooding is that the intensity of arousal and fear that can be induced by this technique can result in the animal harming itself, people around it, or the environment. The owner may also experience significant stress, and even if the pet and owner are not physically harmed during a flooding treatment, the stress they both feel can be highly disruptive to the human–animal bond. The stress this treatment technique causes the animal also brings up questions of its appropriateness in terms of animal welfare. In contrast, desensitization and counterconditioning are not stressful, can be conducted in a series of short sessions whenever the owner has even a few minutes to work on the treatment, and often strengthens the human–animal bond.

FIND THE BEST COUNTERCONDITIONER

In counterconditioning, the animal is taught to associate a stimulus that previously induced fear with a pleasant experience so that the undesired response is replaced by a desired one. This pleasant experience is evoked through the use of a counterconditioner, which is an item or activity that is highly appealing to the pet. The ideal counterconditioner varies with each animal. Also, while some pets learn best with consistent use of the same counterconditioner, others learn faster and better if several counterconditioners that work well for them are rotated.

Food

One of the most common counterconditioners is highly palatable food. “Highly palatable” depends on the individual patient. As a general rule, kibble and dog biscuits are not very motivating for dogs, but for some, they work well. Talking to the owner may reveal novel—and sometimes odd—food preferences for his or her particular pet. I have

offer the canned food, either on his or her fingers or on a spoon. Alternatively, a can of the food can be cut into slices and baked to produce “cookies” that are then broken up into semimoist treats. Finally, ingredients of commercial diets that the animal tolerates can be supplied by other mechanisms. For example, if a pet can eat a commercially prepared allergy diet of fish and potatoes, then the owner can prepare treats made of these foods. However, the owner must be instructed to prepare them without adding other ingredients to which the pet might be sensitive. Potatoes can be sliced into strips or disks and baked without the use of oil to produce potato treats. Fish can also be cooked by techniques that do not involve the use of added ingredients. Tilapia, an inexpensive whitefish, can be baked or microwaved to produce a flaky, fresh fish treat. Similar techniques can be applied to other special diets.

Some pets are not very interested in food and do not respond well to this type of counterconditioner. If, on initial interview, the owner believes this to be the case, it

Talking to the client may help identify the most effective—and sometimes unusual—counterconditioner.

used cheese, small pieces of hot dog, various commercially marketed treats, broccoli florets, cauliflower florets, carrot slivers, and a variety of other foods with my patients. As long as the food is not harmful, it can be used as a counterconditioner if the pet appears to find it very appealing. The food does not need to be given in large volume. In fact, to conduct a prolonged counterconditioning session, small treats are necessary. A hot dog can easily provide about 50 small treats for use in a single session.

If the pet is obese, it may be necessary to give it a significant part of its daily caloric intake, or even its entire caloric intake, during counterconditioning sessions. In these cases, meal feeding must be adjusted or discontinued accordingly, and care must be taken to ensure that the diet remains balanced. If tiny bits of tuna are the best counterconditioner for a cat, or broccoli florets are the best counterconditioner for a dog, these foods must be used as a supplement to a diet that is balanced and appropriate for the species.

Pets with allergies present a special problem that can be addressed with a bit of creativity. If the diet the pet tolerates is available in a canned version, the owner can

is important to ask exactly what kind of treats he or she has tried. It is not uncommon for the owner to have tried only one or two brands of commercially available treats and have concluded from the pet’s response that it does not like any treat. If this is the case, the owner should be instructed to experiment with a variety of treats, including certain “human” foods that are not marketed specifically for pets but that are safe and appropriate for their pet’s diet.

Sometimes, even after extensive attempts by owners to find a food treat that their pet really likes, it is clear that the pet simply does not have much interest in food. If the pet is underweight, medical possibilities for this disinterest should be pursued. However, if the pet is a normal weight and simply eats just enough food to maintain its weight, other possibilities for counterconditioning should be pursued.

Interaction

Some pets respond best to particular toys or games. If this is the case, the owner should use play as the counterconditioner. As with pets on restricted diets, creativity is some-

(continues on page 594)

Understanding Behavior *(continued from page 592)*

times necessary. For dogs that need to be desensitized and counterconditioned to the sounds of thunderstorms but are only interested in playing Frisbee or other games that involve running and chasing various toys, it may be necessary for the owner to take a portable device outside and play a recording of a storm while playing with the pet. In another example, if a cat that is afraid of one or more people has taken to hiding under the furniture but enjoys chasing after toys tied to the end of strings, the usual string can be replaced with a long string. The person the cat fears should position the toy near where the cat is hiding, then walk away for the full length of the string before beginning to jiggle the toy. Over repeated sessions, the string is gradually shortened. If the person is far enough away that the cat is not afraid, it will eventually come out of hiding and start playing with the toy. Some pets are not interested in either food or toys but respond very well to petting, cuddling, and massage.

DURATION

When undertaking any program of desensitization and counterconditioning, patience is essential. The ideal length of a session depends on the pet, the owner, the exact fear, and the logistics of the desensitization and counterconditioning protocol. If the owner is unsure of the ideal length, frequent short sessions are better than a single long session. Long sessions have the potential pitfalls of the owner and any helpers becoming bored or frustrated and the pet becoming satiated, if food is used, or uninterested in the game, if play is used. Even for gentle massage and petting, pets have a threshold beyond which the pleasant experience turns into an unpleasant experience. For pets with moderate to severe behavior problems, supplementation of the behavior modification protocol with medication is likely to make the process go faster.

CONCLUSION

All of the factors mentioned in this article play roles in determining the success of a desensitization and counterconditioning program, but one important consideration remains: the commitment of the owner and anyone else who may be needed to conduct the sessions. When fear reactions involve people, both the handler and the person serving as the stimulus must be willing to take the time to work with the pet. When designing a desensitization and counterconditioning protocol, it is important to talk to the owner and ascertain his or her ability and willingness to follow recommendations.