

Rewards: Learning and Reinforcement

The best way to train your pet is through the proper use of positive reinforcement and rewards while avoiding punishment. The goal of training is to “learn” the proper task and/or behavior. The training sequence is to give a command, to get the desired response, and to use a reward to mark and reinforce the correct response. Generally the most difficult aspect of training is to find techniques that immediately get the desired response after each command (See our handout on basic training for more details).

How does learning take place?

Learning occurs by establishing the relationship between behavior and consequences. There can be different possible outcomes of behavior, and consequences can be positive or negative.

When there is a positive relationship between behavior and consequences, the more your pet performs a certain behavior, the more of the consequence it receives. If there is a negative relationship between behavior and outcome, the more of the behavior the pet does the less of the consequence it receives. When we increase a behavior by removing a stimulus this is known as negative reinforcement. For example, when a dog barks at an intruder (such as a letter carrier) the barking has been reinforced because the stimulus (letter carrier) was removed. Negative reinforcement can also be used for training when a pull on a head halter or a spray of citronella is terminated as soon as the desirable behavior is observed.



What is positive reinforcement?

Positive reinforcement is anything that increases the likelihood that a behavior will be repeated. There is a positive relationship between behavior and consequence. The more the pet does a behavior, the more consequence it receives and what it gets is good. This makes that behavior increase.

What kinds of things will a dog consider positive reinforcement?

They will differ from dog to dog. For some it may be a pat on the head, a play session, a fun toy, a walk, or a food treat. The key is to select the reward that motivates **your** pet. It can be useful to feed your dog, depending on its age, at one or two scheduled meal times. Training sessions

can then be performed just prior to mealtime when the dog is at its hungriest. Most puppies can then be motivated with pieces of food. In the same way, toys, play sessions and affection can be withheld until training time so that the dog is “hungrier” for these rewards and so that the pet learns what behaviors will be followed by rewards. The more predictable the rewards, the more likely for the pet to continue the behavior. On the other hand, if rewards are unpredictable (e.g. affection) the pet will not learn the desired response. Some of the dogs that are hardest to train are those that are difficult to motivate. These dogs may do better with a few special treats that are saved specifically for training sessions (e.g. hot dog slices, small morsels of cheese), or pieces of dog food sprinkled with flavoring such as powdered cheese or garlic. By the way, if there’s no good reason to give your dog a treat, don’t - it fills him or her up, and accomplishes nothing. Consider these tidbits and biscuits not as treats but as “training rewards”. If these rewards are saved exclusively for training they become more motivating and the pet will learn quickly what behavior leads to that reward. Whenever you are giving the dog something of value from food to a walk, first give your dog a command so that each reward can be earned (See our handout on learn to earn).

How do I properly use positive reinforcement?

The proper use of positive reinforcement is more than just giving a treat or a pat on the head. The timing of the reinforcement is very important. Remember, your pet is behaving all the time. So, you need to be sure to reinforce the behavior that you want and not some other. Therefore, closely associate the reinforcement with the behavior you wish to increase. Reinforcement must immediately follow the behavior (within 3-10 seconds). If there is any delay, you run the risk of



the pet engaging in another behavior while you are administering the reinforcement. One example is when you teach a dog to sit. You tell your dog to ‘sit’, and manipulate her into the position. While you are saying ‘good dog’ and giving a food treat, the dog stands up. What has just happened? You have rewarded ‘sit’ and ‘stand up’. Another example is when you are house-training your dog. You send your dog outdoors to eliminate and as soon as the dog is finished, you call the dog back into the house, dry her feet and give it a reward. What happened this time? You just rewarded your dog for coming back into the house and having the feet dried.

Should I reward my pet every time?

The frequency of reinforcement is important. The rate at which behavior is reinforced is called the “schedule”. There are several different schedules of reinforcement.

- A. *Continuous reinforcement.* Every time your pet engages in a behavior it is reinforced with a reward. While this may sound like a good idea, it is actually less than ideal. If you reward a behavior continuously, once you cease rewarding the behavior, it will often stop. But continuous reinforcement is useful when first teaching a new task so that the animal learns the task that leads to a good outcome.
- B. *Ratio or variable rate of reinforcement.* The reinforcement does not come after each performance of the behavior but intermittently. This may mean that instead of a reward every time, the pet gets a reward every third time, then perhaps two in a row, then maybe not until the pet has performed the behavior five more times. What happens if you reward this way? Behavior tends to be stronger and last longer. This type of reinforcement is best instituted once the pet reliably knows the task you wish to teach and helps keep the pet responding at a high rate.

Start training new commands or tasks with continuous reinforcement but switch to intermittent, variable rates as soon as your pet is responding consistently.

What if my rewards are not working?

First, you may not be reinforcing the correct task. Remember the example of 'sit' and 'stand up'. Be sure that the timing of your reinforcement is immediately after the behavior you wish to increase. Second, you may be phasing out your reinforcement before your pet has adequately learned the new behavior. Go back to basics and be sure your pet understands what to do. Therefore, until your dog consistently responds to the command, it can be valuable to leave a leash attached so that you can immediately show your pet what it is "supposed" to do. It is also possible that you may be repeating commands several times, or in different ways and thus confusing your pet. Ask for our handouts on training for specific tasks for additional help.

What type of rewards should I use?

Rewards do not always have to be food. For many pets, owner attention can be a reward as can a walk in the park or a game of fetch. In fact, any time your pet is in the mood for some social interaction, and any time you are giving a toy, food or treat, you have the perfect opportunity to first train your pet to a command. If you do not keep track of when and where you give rewards you may actually be reinforcing undesirable behavior (see below). What is important is that it be appropriate and motivating for your pet. Remember, you need not give a "special" reward such as food each time your pet performs a task, but always acknowledge good behavior if only with praise or affection.

Is there a wrong way to reward my dog?

Yes. We may reinforce behaviors that we do not want. Remember that positive reinforcement makes behavior increase. So, there may be times when you may be inadvertently giving reinforcement when the pet is exhibiting a behavior that is undesirable. Giving any form of attention to a barking dog, a dog that is jumping up, or a dog scratching at the back door only serves to reward the behavior. Sometimes people even give a bit of food, pat the dog, or play with it in an attempt to calm it down. What they are really doing however is reinforcing the problem behavior. Similarly you may think that you are punishing your dog when you are indeed reinforcing behaviors. Examples include scolding your dog with an insufficiently harsh tone of voice, or gently pushing the dog away when it is play-biting. What is worse is that when these behaviors are rewarded occasionally or intermittently, the behavior becomes stronger and lasts longer (see above). A reward should never be given unless it is earned.

What are other ways in which rewards can be used?

There are other situations where rewards can be most helpful. For example, it may help a puppy or even an adult dog to learn to accept new people if that greeting is always coupled with a food treat. This will help the pet learn that new people bring something good. In other cases, rewards can be used to encourage desirable behavior. Food enhanced toys may encourage a dog to chew on them instead of the household possessions. Removal of a reward as soon as the dog exhibits undesirable behavior is another training tool known as negative punishment (e.g. stopping play when the dog bites too hard). In this example, the reward is used as a punishment since play biting should be reduced or cease since it leads to the reward being removed.



What type of rewards would I use for my cat?

Cats respond to training like dogs, however, they seem to need reinforcement at a higher rate than dogs to maintain performance. Food is often the best reinforcement for cats, but many will enjoy play sessions with favorite toys as well. Like dogs, finding small tidbits of human food, or special cat treats with high appeal, may be more motivating than regular food. Train your cat with these treats before mealtime, not after, and feed your cat on a meal schedule not free choice so that it is hungry at training times. Remember to think of toys and snacks as rewards, not as treats. It can be an extremely useful and fun exercise to train your cat to a few simple commands (come, sit, meal time). All it takes is to encourage the behavior (e.g. with a toy or food lure), reward the behavior, and once the cat will respond reliably, add a command. A leash and harness can also help to prompt the cat to get the desired response. These commands can come in very useful when you need to communicate with your cat.

What is clicker training and how does it work?

A clicker or an audible tone (found on some remote collars) can be paired with a food reward by consistently sounding it just prior to giving the food until it becomes a conditioned stimulus for food. The value of a clicker is that it can then be used as a reward to immediately mark correct responses in a convenient and precise manner, with the food being given shortly afterwards. By consistently pairing food with the clicker their value can be maintained throughout training. Highest-level rewards, including the clicker, can be used for initial training of new responses, and for counter-conditioning. Once the clicker is predictive of a reward, the clicker can be used as a bridging stimulus. This means that the clicker can be used to immediately as a positive marker of the correct response, and the food reward can be slightly delayed until it is available. For example if a dog were to eliminate outdoors or a cat eliminate in its litter and you were supervising so that you could immediately click, then even if you had to come indoors or go to the refrigerator to retrieve the treat, the pet would still associate the treat with the behavior. Clickers are an excellent way to gradually shape more elaborate or more accurate responses since it is possible to reinforce one small increment of behavior and then with each subsequent session, reinforce responses that are gradually closer to the final goal. In addition to clickers, favored food rewards can be paired with praise, stroking or petting.