

# Positive Reinforcement Training. What is it?

*Courtesy of Animal Info Publications*

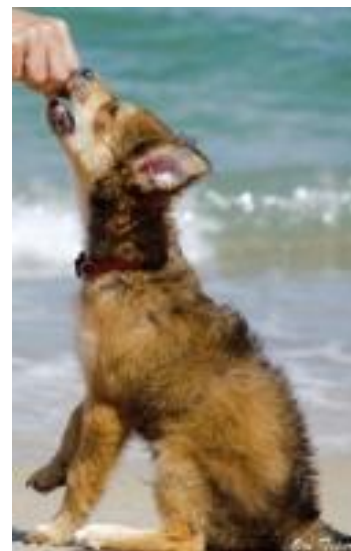
**Author:** Cindy Ludwig, Canine Connection LLC

## Positive Reinforcement Training is Not a New Concept

*Photos Right - Courtesy Ori Teper, Below - Teresa Kofski*

Correction-based training techniques rose in popularity following the two world wars as pet owners adopted the training techniques taught by ex-military dog trainers. However, the idea of positive reinforcement training has been around for over a century. It was Skinner in the middle of the last century and Edward Thorndike, John Watson and others before him who advanced the idea of reinforcing desired behaviors to facilitate learning and behavior change.

Prior to 1982 puppies were not trained until they were 6 months of age, well past their critical periods of socialization and rapid brain development. In 1982 veterinarian, Dr. Ian Dunbar changed the way we train puppies by introducing his Sirius puppy program, an off leash group class for young puppies emphasizing early socialization and positive reinforcement training. A decade later dog trainer, Gary Wilkes and marine mammal trainer, Karen Pryor introduced clicker training to the dog training community when they presented a seminar to a group of dog trainers in San Francisco.



Clicker training was originally pioneered by Keller Breland, Marian Breland Bailey, and Bob Bailey in the early part of the last century based on the work of American psychologist, B.F. Skinner. It was the Brelands who first coined the term, "bridging stimulus," also known as a marker signal or event marker produced by a clicker or other auditory signaling device.

## Operant Conditioning

Positive reinforcement is just one of several ways to influence behavior. It is part of a model of learning called operant conditioning, first described by B.F. Skinner. In operant conditioning animals - and humans interact with their environment to discover what is rewarding and what is not. They repeat behaviors they find rewarding and cease to repeat behaviors that are either punished or not rewarded.

## "The Four Quadrants"

This sounds quite simple until you examine the possibilities for manipulating a dog's responses in a training situation. More than simply punishing or rewarding a behavior, operant conditioning consists of four basic options that can be used as consequences of an animal's responses to mold its behavior. These options are 1) positive reinforcement, 2) positive punishment, 3) negative reinforcement, and 4) negative punishment. To understand these options it is necessary to first understand each of the terms.



"Positive" is a descriptive term which means to add something; "negative" is a descriptive term which means to take something away. "Punishment" is something which serves to reduce the frequency of a behavior, and "reinforcement" is something which serves to increase the frequency of a behavior.

### ***Positive Reinforcement***

It follows that positive reinforcement is adding anything that increases the frequency of a behavior. Food treats, praise, petting, play or going for a walk are all commonly used positive reinforcers, or "rewards."

### ***Positive Punishment***

Positive punishment on the other hand means adding something to decrease the likelihood a behavior will be repeated. Examples include verbal corrections, leash corrections, corrections with electric shock, etc.

### ***Negative Reinforcement***

Negative reinforcement increases the likelihood a behavior will be repeated by taking something away. The forced retrieve, taught by pinching a dog's ear until he takes a dumbbell in his mouth is a perfect example. Shock collars are also used this way. The shock is discontinued once the animal performs the desired behavior. Relief from discomfort is a powerful motivator. Think of a time when you had discomfort and obtained relief either through medication or some other therapeutic intervention. Although effective, negative reinforcement teaches avoidance behavior as the animal learns to avoid the behaviors that elicit the uncomfortable consequences.

### ***Negative Punishment***

Finally, negative punishment means taking something away to decrease the likelihood a behavior will be repeated. Positive reinforcement trainers use negative punishment during training when they withhold a food treat or other reinforcer such as attention in response to an animal offering an undesired behavior. For example, attention is withheld when a dog jumps up on the trainer or barks for attention. Performed consistently, this teaches the dog that jumping or barking are ineffective ways of soliciting attention and these behaviors will extinguish, or disappear.

## **Schools of Thought on Positive Reinforcement Training**

Dog trainers are basically divided into two camps - those who use positive punishment and negative reinforcement and those who do not. Positive reinforcement trainers, also referred to as reward-based trainers fall into the latter category, preferring to achieve behavior change by rewarding desired behaviors and ignoring undesired behaviors. The reasons positive reinforcement trainers do not use positive punishment or negative reinforcement in training is because they can achieve excellent results with positive reinforcement and negative punishment without taking the risks associated with the use of pain or intimidation in training. They also note that while correction may teach an animal what not to do, it does not teach the animal what to do.

Most trainers do not fall neatly into either one of the described categories of trainers. Most trainers lie somewhere on a continuum that runs theoretically from one end of the spectrum to the other, and most, if not all trainers use some form of positive reinforcement in training to some extent.

## Types of Positive Reinforcement Training



Basically, there are two types of positive reinforcement training, 1) *lure-reward training* and 2) *clicker training*. Lure reward training involves using food to lure an animal into position. It may include use of a clicker or other marker signal to mark desired behaviors. Luring with food, though expedient in some situations can result in an animal focusing more on the food than the behavior that earns the reward, so clicker trainers minimize food luring and instead use a target stick to lure an animal into position. Clicker trainers also minimize body movement and only add a cue after an animal has learned a behavior, whereas this is not usually the case with lure-reward training. In clicker training, the click ends the behavior. This may not be the case in other forms of positive reinforcement training.

## Balanced Trainers, Force-free Training and Compulsion

Positive reinforcement trainers do not use any form of correction, although certainly there are many trainers who use positive reinforcement in combination with correction. These trainers are called "balanced" trainers, and while balanced training may at first sound like something good, we know from research that positive reinforcement combined with punishment (a.k.a. correction) actually dilutes the effect of the positive reinforcement and weakens the behavior.

Positive reinforcement trainers can be said to use force-free training; however, trainers who use electric shock also call what they do "force-free" training. So the term, "force" is debatable but to positive reinforcement trainers "force" means any type of coercion, be it physical or psychological.

Any method of training that requires an animal to obey with the potential consequence for disobedience being some form of correction is compulsion or correction-based training. Conversely, training that encourages animals to take an active role in learning, to think and make choices for which the worst consequence is the absence of a reward is called positive reinforcement.

## Positive Reinforcement Training - Conclusion

Over 100 years of experience and research has taught us that positive reinforcement is an effective training strategy and (positive) punishment (a.k.a. correction) is not only unnecessary, but not without adverse effects. Still, our punishment-oriented society is slow to let the habit of correction-based training die and many still cling to the notion that force or the threat of force, whether physical or psychological, is a necessary part of learning. In fact, it is a well known fact that stress inhibits learning. While the use of correction-based training may produce an obedient animal, the initiative and love of learning, as well as the affection this animal has for his trainer, pales in comparison to the animal trained with positive reinforcement.