

Normal Puppy and Kitten Development

The brain is an amazing organ, in pets as in people. It goes through stages in development and certain things are best learned at certain times. Think about how easy it is for a child to pick up language skills at a young age but how difficult it is for a grown person to learn a new language. The brains of pets go through developmental stages too.

The first period in puppy or kitten development is the **Neonatal Period**. This period lasts for the first two weeks of life. At this stage, they are completely dependent on the bitch or queen (mother dog or cat). They cannot see or hear so most of their sensory input is from smell and touch. Their brain wave patterns are very slow and flat – not much thinking going on yet!

Dramatic changes occur from 15 to 21 days of age, the **Transition Period**. This stage provides the beginning of sensory, motor, and psychological capacities common in adult behavior. This transition varies from a state of complete dependence upon the bitch to one of relative independence. The eyes and ears become functional, while the motor system matures sufficiently to permit standing, walking and chewing. At the end of the transition period, the rudiments of adult social behavior patterns emerge, i.e. a puppy wags its tail at the sight of people or other animals. The young animal also develops control of urination and defecation and begins to eliminate outside the nest area.

Compared to puppies, kittens develop more rapidly. Their eyes and ears are functional at an earlier age, allowing them to observe the environment and respond at a younger age than the puppy. However, motor skills necessary for the refined movements of tree climbing, prey catching, and running take longer to develop. The period of time that the queen devotes to her kittens is prolonged compared to that of a bitch and her puppies.

The experiences of the young puppy or kitten during the **Socialization Period**, from age four to eight weeks in kittens and four to sixteen weeks in puppies, will have the most dramatic effect on ultimate adult behavior.

Early in the socialization period, behavior is related to care-seeking activities, including a search for food, warmth, and comfort. Young animals may show a fear response to strange objects or people during the first week of the socialization period, and may hide, growl or spit, or run away. They begin chewing and biting one another in playful fighting activities, sometimes growling at one another in mock battle play or when in competition for food or play objects. This competitive behavior plays an important role in the establishment of a social hierarchy or dominance order. The owners of puppies can recognize which puppies will be the dominant and/or aggressive ones and which ones will be timid and/or submissive.

Other social activities are seen at about four weeks of age in the form of early pack or group-coordinated behavior. If one puppy or kitten leaves the home area, the others will usually follow. The puppies begin to explore and investigate their environment. They will first approach objects cautiously and may give a startled response to strange objects. They will gradually become accustomed to their new environment and will venture further from the home area. This process is also seen in eliminative behavior. As the puppy or kitten matures, it gradually goes farther from the cage and eliminates in specific spots or the litter box. When a puppy needs to defecate, he will usually run to an

area, wander around with his nose to the ground, and then circle rapidly. This is the ideal time to housebreak a puppy.

As the socialization process progresses, there is a gradual change in social interactions. In the fourth week, the puppy or kitten interacts primarily with the mother and to a limited extent his littermates. Taking a puppy away from its mother at this time is certain to cause poor socialization. By the fifth week of age, the puppy or kitten has increased social interactions with littermates as evidenced by play behavior, running together and fighting or dominance behavior. This type of behavioral activity is seen from the fifth through the seventh week of life. In a sense, the puppy or kitten must learn to be a dog or cat.

Young animals isolated from their littermates during this interval frequently have difficulty later in life socializing with other animals and may show abnormal sexual behavior as adults. Play activity is an extremely important part of the behavioral development of a puppy or kitten. A pet deprived of play activity tends to be easily upset and does not seem to learn as readily as does the puppy or kitten that has had ample opportunity for social play when it was young.

Coinciding with this time of socialization is an increasing responsiveness towards humans, usually beginning around six weeks of age. This is also the time when the puppy's or kitten's nervous system reaches the structural and functional capacities of the adult. In other words, they are ready to learn and will do so quite readily. Eight weeks of age is an ideal time to place them in their new home so further socialization with humans and subsequent housebreaking and training can occur.

Unfortunately, many dog breeders and potential dog owners fail to realize the importance of obtaining a pet at this age. Puppies and kittens socialized between six and eight weeks respond to human beings much better as adults than those allowed to socialize before or after that time. Dogs and cats that do not receive any socialization with man until after this time are essentially unapproachable and untrainable. On the other hand, pets weaned and adopted by humans at too young an age don't have normal brain development either, and may end up aggressive or fearful with humans.

In dogs, the next part of the socialization period, from 8 to 10 weeks, is the time the puppy learns to speak "dog." This means he learns "body language" and how to respond to other dogs in a normal way. Without this development, the puppy will be fearful or aggressive towards other dogs and does not show the normal greeting and sniffing that goes into saying "hello" in dog. Dogs also use a complicated set of behaviors to say "I'm dominant," "This is my territory," "I'm submissive," "I'm in heat," "Let's play" and so on. Without this learning process taking place, dogs will be illiterate in their own language.

The final phase of the socialization period of dogs, lasting from about 10 to 12 weeks of age, is when pups learn to speak "human". They learn not to fear the touch and embrace of a human or human speech. If puppies are not raised with human interaction during this period, it is unlikely they will ever trust a human. If they receive lots of handling, including being picked up, having their mouth opened, their feet touched and their ears combed they will tolerate these things all their lives. If they are not handled at all, these pets will be wild and "dog oriented".

In kittens, the socialization period is shorter and they are not as social with other animals as adults. However, they do need lots of human contact to bond best with their

humans. Studies have shown that kittens who receive attention from lots of different people are more friendly and outgoing, even to their own owners, than those that only interacted with a few humans when they were young.

The time from twelve weeks of age until sexual maturity defines the **Juvenile Period** in the dog. Behavioral activities and further socialization of the young dog depend largely on his environment. The young dog left in the kennel or pet store cage develops quite differently from the dog that matures and grows with a human family.

During the juvenile period, the young dog will try to establish its dominance. A young dog left in a kennel with several littermates or other dogs of similar size or age may fight over food, water, or play objects. A dominance hierarchy is established. The young puppy that is placed in a home becomes a part of the social organization of the family and will try to achieve social independence.

The young dog in a household situation will test the members of the family until he finds his place in the home. This is when many behavioral problems arise. The untrained or undisciplined puppy may become aggressive or destructive, so the puppy needs training, rules and limits. This may lead the novice dog owner to abuse or mistreat the puppy, or deposit their new pet at the city pound or dog shelter. It is normal for puppies, like teenagers, to “act out.” Pet owners need to take the time to learn humane and effective training techniques to get through this developmental stage. The human/companion animal bond suffers greatly from misunderstanding and miscommunication during this period.

Early socialization is extremely important in dogs destined for specific jobs. Investigators studied the effects of delayed socialization on the trainability of guide dogs. All puppies received a limited amount of socialization to humans for the first twelve weeks of their lives. Following this time, the puppies were placed in private homes at varied times. Of those puppies that were placed in private homes at twelve weeks of age, 90% became guide dogs. However, when similar puppies were isolated for two weeks following the initial twelve weeks of socialization, only 57% were successfully trained as guide dogs. If puppies were isolated for three or more weeks, only 30% were successfully trained. Therefore, social deprivation after the critical period of socialization may result in the young dog’s becoming asocial. Young animals should also be exposed to car travel, children, and a variety of environments and situations to ensure they are calm and relaxed under many circumstances as adults.

Our recommendations are:

- 1) Puppies and kittens should stay with their litter until they are eight weeks of age.**
- 2) Litters should have human interaction beginning at week three.**
- 3) They should be placed in a human home environment shortly after leaving the litter to prevent “kennelosis”, and they should receive lots of varied stimuli during this time.**
- 4) Hand raised puppies, or puppies removed from their litter before 8 weeks of age, should interact with other puppies in some way (puppy day care or socialization class) so they can better socialize to dogs and people.**