

Normal Values for the Newborn Puppy

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Normal puppies delivered without problems are plump and firm. They have good muscle and skin tone and feel firm and tense. The membranes of the mouth and skin of the abdomen are pink. Their legs and back are straight. A normal litter that is well nourished is warm, quiet, appears contented, and will sleep most of the time. The puppies will nurse for about 20 minutes before falling asleep. Activated sleep (twitching while asleep) is prominent during the first few days of life and serves as a normal method of exercise for muscle development.

The abnormal puppy is thin and limp due to poor muscle control. Its skin is often wrinkled, flaccid and feels cold. The abdominal skin and membrane of the mouth may appear reddish purple. It tends to cry a lot and easily loses contact with the dam, thus becoming an ineffectual nurser. If the puppy cries a lot and is observed squirming and crawling more than normal problems usually exist.

A puppy is born with little or no spontaneous movement but the initial licking by the bitch starts respiration and signals the start of muscle tone development. Sensory and behavioral development may be divided into several phases. For discussion purposes, the various changes will be discussed as neonatal period, transitional period, socialization period, and juvenile period.

Neonatal Period

The span of this period is basically from birth up to 18 days of age. It is mostly a period of nursing and sleep. During this time the puppy is blind and has poor hearing. It is capable of a slow crawl and will move with a side-to-side head swing if it becomes lost from the bitch, continuing until it becomes re-oriented or exhausted. There is some reaction to odors, pain, and touch by the fourth day. A light flash to the eye will evoke a slow blink of the closed eyelids. Pain is expressed vocally during the first four days. The eyes open from 11 to 15 days and pain response then becomes less vocal and more withdrawn. During the neonatal period the puppy is dependent on the dam to stimulate urination and defecation. A rooting reflex is also present when the puppy comes in contact with the dam. The umbilical cord drops off in two to three days after birth and the puppy will right itself when placed on its back. The gag reflex is not present until about 10 days of age.

It is advisable to weigh the puppy at birth and daily until at least three to four weeks of age. A healthy puppy from a healthy bitch will double its body weight in 9 to 10 days.



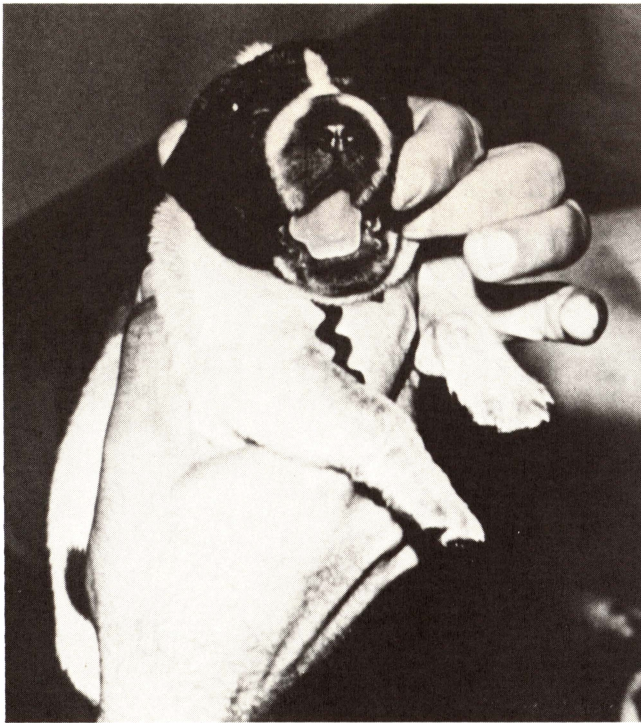
A normal, well-nourished litter is warm, quiet and appears contented.

Transitional Period

The transitional period begins when the eyes open and ends at around three weeks of age. The ears open about two days after the eyes open, or from 13 to 17 days of age. Puppies begin to walk around 18 days of age and will begin then to urinate and defecate without assistance. The first teeth generally appear at this time.

Socialization Period

The socialization period occurs from the third week through the 12th week of age. Positive orientation to sight and sound occurs around the fourth week. Puppies begin to follow a moving object, with a definite visual and auditory recognition. The skill necessary for walking, and jaw movement is learned during this time. It is also the "cute" period as tail wagging, play fighting, facial expressions, object carrying, and tug-of-war games develop. Peak approach behavior is exhibited between the fifth and seventh week of age and is the best time to introduce the puppy to all animals it may later associate with. For example, if it is to associate with adults, children, horses, cats, or dogs as an adult dog, it should be exposed to them now when a close bond may be formed. At eight weeks the puppy is capable of learning by training. However, there is a strong possibility that its personality



The membranes of the mouth and the skin of the abdomen of a normal puppy is pink. At about 10 days of age the gag reflex is developed.



A normal puppy is plump and firm with good muscle and skin tone.

could be damaged by a traumatic experience between eight and nine weeks of age. It is therefore advisable not to schedule vaccinations during this period to reduce the dog's dislike for veterinarian or veterinary hospital. By 12 weeks of age the puppy will reach a peak avoidance behavior. It is nearly impossible to socialize a puppy after this time, resulting in a wild animal.

Juvenile Period

This is basically the time beginning with weaning, overlapping into the socialization period and continuing to sexual maturity. Early into this period the animal must be restrained to prevent it from running away. It will become independent by six months of age and coprophagy, or stool eating, may be observed.

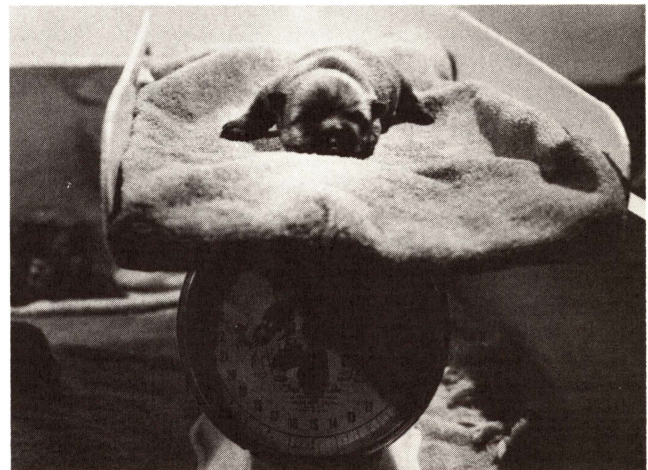
General Physiological Data

The average energy required for growth is around 70 to 80 K-cal/lb. body weight. Water intake averages two to three ounces (60-90 ml.) per pound of body weight compared to two-thirds to one ounce (20-26 ml.) per pound in the adult dog.

The body temperature at birth will average between 92 and 97 F and usually will not reach adult temperature range of 101 F until about four weeks of age. Respiratory rate for the first five to six weeks of life will range from 16 to 32/minute and the heart rate will average around 200 to 220/minute.

General Information

Dew claw removal and tail docking should be done during the low pain threshold period from three to five days of age.



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Pan feeding is possible by 18 days of age and puppies should be eating well by 21 days of age.

The dental formula for deciduous teeth is three incisors, upper and lower; one canine, upper and lower; and three premolar, upper and lower, $2(\overline{I3C1P3})$. The permanent teeth

formula is three incisors, upper and lower; 1 canine, upper and lower; four premolar, upper and lower; and 2 molar upper and 3 molar, lower, $2(\overline{I3C1P4M2})$. The permanent teeth start

erupting at around four to six months of age. Dentition should be complete after eight months of age.



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