

Caring for Neonates and Pediatric patients

Most illnesses surrounding early life in puppies and kittens are related to poor mothering, failure to nurse, and failure of the mother to produce adequate milk. However, poor growth and activity can indicate problems with development or function of various internal organs, including, but not limited to, the thyroid, thymus, liver, heart, or brain. These conditions often manifest in the first week of life but may be delayed for several weeks, especially those related to organ function.

A few good sites for information about pediatric puppy and kitten care are listed below:

Puppies: www.aspca.org/pet-care/dog-care/newborn-puppy-care/

www.sheltermedicine.com/node/33/

Kittens: www.aspca.org/pet-care/cat-care/newborn-kitten-care/

www.sheltermedicine.com/node/39/

www.maddiesfund.org/maddies_institute/videos/orphaned_kitten_care_how_to.html

Shortly after birth:

A strong suckle reflex and adequate rooting behavior (ie, ability to move the head in search of milk) should be present shortly after birth. Responsiveness can also be tested by placing the neonate on its back and making sure it can right itself. A strong neonate should be able to do these 3 things.

Weight gain should be evaluated daily using a gram scale. Kittens should gain 7-10 grams/day and puppies 1 gram/lb of anticipated adult weight per day (Eg. If your puppy's adult weight will be 20 lbs, then it should be gaining 20 grams per day; a 50 lb adult as a puppy should gain 50 grams/day, etc.)

Normal values for neonates:

Parameter	Value
Birth weight	Dogs: Varies with breed; most range from 100-650 grams Cats: 90-100 grams
Rectal temperature	Newborn: 96.8°F-98.6°F 1 month: 100°F
Heart rate	180-200 bpm
Respiratory rate	Neonate: 10-18 per minute 1 week: 15-35 per minute
Water requirement	Output: 2.5 mL/100g BW/day
Caloric requirement	Dogs: 20-26 kcal/100g BW/day Cats: 15-25 kcal/100g BW/day
Stomach capacity	4-5 mL/100g BW

BW = body weight; bpm = beats per minute

Neonate Milestones to assess normal development of your puppy or kitten:

Milestone	Age of Occurrence
Pain reflex	At birth
Flexor muscle tone	1-4 days
Umbilical cord loss	2-3 days
Extensor muscle tone	5-8 days
Eyes open	5-14 days
External ear canals open	6-14 days
Capable of crawling	7-14 days
Withdrawal reflex when toe is pinched	7-19 days
Capable of walking, urinating, defecating spontaneously	14-21 days
Ambulation	16 days
Normal vision	21-30 days
Menace reflex	21-30 days
Voluntary voiding	3 weeks
Deciduous incisor/canine teeth erupt	Dogs: 3-6 weeks Cats: 3-4 weeks
Normal hearing	4-6 weeks
Testes descended	4-6 weeks
Deciduous premolars erupt	Dogs: 5-6 weeks Cats: 4-6 weeks
Permanent Canines erupt	Dogs: 16-20 weeks Cats: 16-20 weeks
Permanent Molars erupt	Dogs: 16-24 weeks Cats: 20-24 weeks
Kidney function approximates that of adult	8 weeks
Liver function approximates that of adult	4-5 months

**Some differences exist between dogs and cats or between breeds.

Conclusion

If your puppies or kittens vary significantly from the above parameters, contact your veterinarian for an exam.

In general, when provided with a safe controlled environment, most puppies and kittens, and most mothers that give birth, are pretty self-sustaining and require little additional care. If you have questions at all about the development of the neonates in your care, contact a veterinary hospital.