



PEDIATRIC WELLNESS CARE

Behavior, Nutrition, Oral Care, & Reproduction

Julie Meadows, DVM

This is the second part of a 2-article series discussing the components of pediatric wellness care. The first article addressed vaccine protocols, parasite management, and zoonotic disease prevention; this article will cover:

- Behavior/training
- Nutrition
- Oral care
- Reproductive concerns.

Pet owners expect to discuss vaccination and parasite prevention at puppy and kitten visits; therefore, when we do this well, we are only meeting expectations, not exceeding them. To increase the value of preventive health care, our discussions should also include behavioral, nutritional, and oral care recommendations, along with enhanced discussion about prepubertal spaying and neutering.¹

PEDIATRIC WELLNESS CARE GOALS

The first article outlined 3 trends that the Bayer Veterinary Care Usage Study identified:^{2,3}

1. Pet owners are confused about where to go for veterinary care
2. Pet owners are not aware of the value of annual wellness examinations
3. Pet owners prefer to see the same veterinarian as much as possible.

As veterinary care team members, it is up to us to respond to these concerns and adapt our pediatric programs, which contribute to creation and maintenance of a lifelong, high-quality human-animal bond. Our pediatric wellness goals are now much broader:

- **Develop a genuine relationship between the practice and pet owner** by partnering with clients when making health care and pet management decisions and improving communication with clients to develop trust, which leads to enhanced adherence to veterinary recommendations.
- **Communicate the value of preventive health care** because the first few months of a pet's life provide the perfect opportunity to introduce the concept of lifelong wellness care.

BEHAVIORAL RECOMMENDATIONS

Early establishment of appropriate foundations for behavior and intervention when training is not proceeding as expected are the keys for desirable outcomes. Following are risk factors for relinquish-



ment of dogs and cats to shelters:^{4,5}

- Pet spends most of the day in a yard or crate
- Pet displays frequent problem behavior
- Pet never receives veterinary care
- Pet housesoils frequently
- Pet is more work than expected.

The following factors are associated with decreased risk of relinquishment:^{4,5}

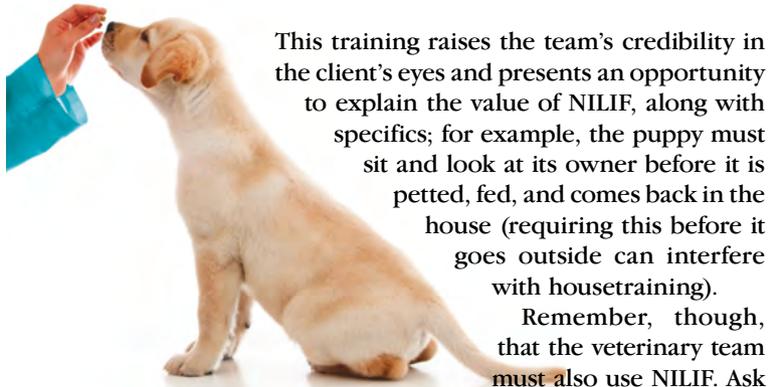
- Pet receives regular veterinary care
- Dogs participate in obedience classes
- Cat owners read books about feline behavior.

Nothing in Life is Free

Nothing in Life is Free (NILIF) is the earliest introduction of reward-based training. It establishes humans as the leaders within the family unit, sets the stage for good manners, and provides a firm foundation upon which to develop a puppy's relationships with other humans and dogs. If behavior problems arise, it is the fundamental tool used to address those issues.⁶

NILIF should be introduced to puppies during the first pediatric visit by a trained team member.

1. The technician can begin NILIF training while the veterinarian is taking a history or explaining vaccination and parasite plans.
2. Teaching a puppy to sit, which is explained in other sources, basically involves using a treat to get a puppy's attention and, once the nose is on the treat, raising the hand so that the nose follows and the hind end sits. The MINUTE the hind end hits the floor, the puppy gets the treat.



This training raises the team's credibility in the client's eyes and presents an opportunity to explain the value of NILIF, along with specifics; for example, the puppy must sit and look at its owner before it is petted, fed, and comes back in the house (requiring this before it goes outside can interfere with housetraining).

Remember, though, that the veterinary team must also use NILIF. Ask puppies to sit on the examination room table, before they get off the table, when you greet them in the waiting room, rewarding them when they respond. The reward for all of us, clients and veterinary team alike, is a well-mannered dog that looks to its people for reassurance and guidance in all it does.

Housetraining

Housetraining difficulties can be the most immediate challenge after a client adopts a puppy. The most important concept to communicate to the client is that a dog has absolutely no reason to urinate or defecate outside, on a pad, or in a pan. A dog with a healthy psyche, though, will be evolutionarily hardwired to please a human, and we take advantage of this during housetraining. Crate training is an excellent tool; this and other specifics of house-training have been covered elsewhere (see **Suggested Reading & Videos for Clients**, page 72).

Fearful Behavior

It is essential that anxious puppies and kittens have a positive first experience at the clinic. Immediate use of high-value treats can often help the patient realize that good things can happen during the visit. Effective teams can modify the first visit to focus on building the confidence of the animal, which creates a foundation for future visits.

Other effective tools for addressing anxiety in puppies include:

- Adaptil collars (ceva.us) applied at the first visit and changed on subsequent visits
- Happy visits, in which clients bring puppies to the clinic for quick in-and-out trips; some practices place a bandanna sprayed with Adaptil on the puppy as it enters the clinic for these visits—a very effective client bonding tool
- Puppy socialization classes.

Scratching Management

As the U.S. moves toward eliminating elective declawing, it becomes extremely important to address this innate behavior of cats from the very beginning of the pediatric wellness series. For kittens, this topic and litter box management can be considered as important as NILIF in puppies in preserving the human-animal bond.



Further Behavior Discussion available at tvjournal.com...

- Diagnosis & Management of Feline Urine Marking
- Client Handout: Environmental Enrichment for Pets
- Dog as a Second Language: A Primer for Humans
- Ten Commandments of Cat Management

Litter Box Management

House training cats is much easier than dogs because they will innately choose to eliminate in a litter box. Our task is to keep clients from derailing this natural behavior. Early discussion of litter box types, substrate choices, and location is essential. It is also crucial to help clients understand the potential pitfalls of introducing change to a cat's litter box setup, such as replacing an uncovered box with a covered one to decrease spilled litter.

Follow Through

In a large practice with multiple team members, documentation of behavioral concerns and recommended action plans are as essential as documenting which vaccines and parasitocides were administered. Updating the behavioral history at each pediatric visit, praising progress, and troubleshooting ongoing issues creates a partnership between the practice and client that extends into the next year of the pet's life, keeping the client on track with wellness visits.

NUTRITIONAL RECOMMENDATIONS

Our job, as veterinary professionals, is to provide a uniform voice within the practice as to the science and benefits of feeding practices; then partner with clients as they decide what works best for their pets. Your goal is to explore the client's perspective, provide evidence-based information when possible, and respect your client's decisions, having done your job appropriately.

Selecting a Diet

Practices may have economic or philosophic goals for feeding certain diets, but the minimal goal should be to have a patient consuming an Association for Animal Feed Control Officials (AAFCO) diet labeled for growth. Consider finding out where your client can purchase food and focus on appropriate foods available at that venue.

Discussing types of treats and how much to "treat" is also appropriate, especially in terms of advocating reward-based training. During the training process, using a portion of the dog's daily kibble ration as treats creates good habits.

Large-Breed Puppy Growth Diets

For breeds of dogs predisposed to developmental bone disorders (hip and elbow dysplasia, panosteitis, osteochondritis dissecans), strongly recommend AAFCO diets labeled for large-breed growth, with no supplementation. Clients may advocate for various protein levels based on breeder recommendations or online reading, but using appropriate diets based on their AAFCO label is the safest way to feed these puppies.



Further Nutrition Discussion available at tvjournal.com...

- Developing a Nutrition Program in Your Practice
- Novel Trends in Small Animal Nutrition: A Practical Guide
- In-Clinic Form: Beyond the Guaranteed Analysis: Comparing Pet Foods
- Treatment of Obesity

Meal versus Ad Libitum Feeding

When clients can manage it, and especially for first-time pet owners with no other animals, it is appropriate to recommend meal feeding, which allows portion control to prevent or manage obesity, allows identification of an animal with an increased or decreased appetite more quickly, and facilitates feeding multiple pets different diets as health needs require. See **Suggested Reading and Videos for Clients** for recommendations on meal feeding

Body Condition Score

The discussion about what and how to feed a puppy or kitten generally takes place at the first visit. How much to feed as a pet grows is an ongoing conversation. Veterinarians should assess body condition score (BCS) at every wellness visit, and team members can participate in this process by explaining BCS to clients (comparing BCS to the body mass index used in human medicine often creates immediate understanding).

ORAL CARE RECOMMENDATIONS

Advanced dentistry knowledge and skills has become a popular educational path for both veterinarians and technicians seeking new challenges within the profession. However, veterinary team members are aware of the many reasons clients decline periodontal treatments. Thus, we need to provide early advocacy for oral hygiene measures.

After more crucial discussions of behavior challenges and prevention of infectious disease have been addressed, introduce the topic of oral care to puppy and kitten owners. Focus on the long-term health benefits and advantages good oral care provides, including:

- Decreased risk for heart disease later in life (dogs)⁷
- Decreased risks for early tooth loss, tooth abscesses, painful gum disease, and repeated anesthesia (dogs and cats)
- Improved breath
- Decreased financial outlay for health care.



Further Dental Compliance Discussion available at tvjournal.com...

- Dental Services: Good Medicine for Patients & Practices
- Periodontal Disease: Improving Client Compliance
- Debunking Common Myths about Periodontal Disease

Our job, and one of our challenges, is to help clients understand that preventive care is less expensive than treatment, which is especially true with oral care.



Toothbrushing

Toothbrushing will always be the gold standard of oral care, and a young age is the time kittens and puppies can learn to accept and even enjoy flavored toothpaste interactions with their owners. It is appropriate to tell clients that their pets' current teeth are deciduous, and the goal is acclimating the pets to the process rather than effectively cleaning the tooth surface.

Multiple instructional videos are available on YouTube (see **Suggested Reading & Videos for Clients**)—find your preferred method and create a handout with your recommendations and the link to the video, which, along with a toothpaste sample, can be placed in your puppy/kitten folders or bags given to clients.

Dental Products

The Veterinary Oral Health Council (vohc.org) was created to endorse oral care products that truly make a difference in a pet's oral health. If early experience suggests a patient is unlikely to allow toothbrushing, refer clients to this website for other oral care options. Caution clients, though, that most dental health diets are not formulated for growth.

REPRODUCTIVE RECOMMENDATIONS

Gonadectomy as early as 4 to 6 months of age has been recommended for decades, both to address animal overpopulation issues and for long-term health benefits. As we move into relationship-centered care, however, our clients need us to confirm the advantages of this recommendation. Following is a summary of the latest information regarding the pros and cons of prepubertal gonadectomy.

Female Dogs

The following statistics drive recommendations for early spaying of dogs.⁸

- Spaying *after the first estrus* is associated with an 8% greater chance for developing mammary neoplasia, with approximately 50% of these neoplasms being malignant.
- Spaying *after the second estrus* is associated with a 25% greater incidence of mammary tumors.

Spayed dogs have a 4% to 20% increased chance for developing urinary incontinence, but there is no evidence that surgery before or after puberty affects this number.⁸ Because incontinence is easily controlled with medication, and malignant mammary neoplasia can be fatal, the risk/benefit equation supports prepubertal ovariohysterectomy. Pyometras are additional long-term concerns that can be minimized by ovariohysterectomy.

Male Dogs

The benefits of prepubertal canine castration are mostly behavioral, including:

- Decreased potential to roam from home
- Elimination of potential for intact intermale aggression
- Anecdotally, dogs neutered early are less likely to engage in marking behaviors
- Some obedience programs require castration before enrollment.

New evidence associates castration with a 2× to 4× increased risk for prostate cancer, but this risk is not affected by time of castration.⁸ Most clients understand that the slight increase in risk is outweighed by the overwhelming benefits of castration. Inflammatory prostatic diseases are largely eliminated by early castration; risk of testicular tumors is obviously eliminated by castration but, in intact dogs, testicular tumors develop later in life and can be discussed at adult wellness visits.

In golden retrievers, our discussion may need to change. A single study has documented that the risks of developing lymphosarcoma, hemangiosarcoma, and cranial cruciate disease may be significantly higher in males of this breed castrated prepubertally.⁹ The same association with neoplasia is not seen in females, although prepubertal ovariohysterectomy is associated with an increase in cruciate disease in this gender as well. Currently, there is no evidence to support extrapolation of this data to all breeds. Read more about this new study in **Journal Club** (page 79).

Some clients may be invested in the appearance of their male dogs. The broad skull of some breeds, such as Rottweilers and Labradors, is a secondary sex characteristic that is thought to require testosterone to develop. In these cases, delaying castration is unlikely to have a negative impact. Evidence shows that growth plates of long bones close later in dogs spayed or castrated early; therefore, large breed dogs will be slightly taller than those castrated later.⁸

Female Cats

- Intact female cats have a 7× greater risk for mammary neoplasia, and 90% of those tumors are malignant.⁸
- Apart from the obvious risk of pregnancy while the cat is still immature, intact female cats allowed outdoors also have increased risk for feline leukemia and feline immunodeficiency virus.⁸

Male Cats

It is difficult to not advocate for castration of male cats as early as possible due to:

- Significant risk for urine marking and associated risk for relinquishment
- Potent odor of urine
- High potential for infectious disease transmission related to fighting and mating.

The evidence no longer supports an association between prepubertal feline castration and increased incidence of feline lower urinary tract disease.⁸ There is evidence to support an increased incidence of femoral head fractures in prepubertally castrated cats, but these fractures are associated with obesity.⁸

Suggested Reading & Videos for Clients

Housetraining

- aspca.org/pet-care/virtual-pet-behaviorist/dog-behavior/house-training-your-puppy
- Miller C. Housetraining Success Formula: 6 Simple Steps to Housetraining Your Puppy or Dog. Amazon Digital Services (amazon.com), 2012.
- Anderson T. Quick & Easy Crate Training. Neptune, NJ: TFH Publications, 2005.

Meal Feeding

- <http://dogtime.com/feeding-puppies.html>
- petmd.com/dog/puppycenter/nutrition/evr_dg_feeding_schedule_for_puppies#.Umjg7RBkiUk

Dental Care

Videos that describe how to teach a dog to accept toothbrushing:

- youtube.com/watch?v=wB3GIAgrTPE
- youtube.com/watch?v=PsNILLSBWLJU

Health Concerns

The veterinary literature cites many studies associating spay/castration with obesity; orthopedic diseases, both neoplastic and degenerative; and vulvar fold dermatitis.⁴

After gonadectomy, metabolism slows, yet ongoing nutritional needs require continued feeding of growth diets. In order to prevent the development of obesity in the first year of life, a specific discussion about the potential for significant weight gain after gonadectomy and adjustment of portions to maintain an appropriate BCS is recommended.

MICROCHIP RECOMMENDATIONS

Because of the size of needles used for microchipping, patient and client comfort are best achieved by advocating microchipping the pet at the time it is spayed or castrated. When we “link” these 2 procedures as a standard recommendation, we experience greater adherence to this recommendation and ensure the pet has the best chance of being reunited with its owners if separated from them.

For the microchip identification and reunification process to be successful, client information must be current in a database. Team members should actively advocate for registration in a national database once a chip is placed. Some chip providers charge for this service, and it is important to brief clients about this to prevent frustration over unexpected charges.

IN SUMMARY

The “to do” list for the pediatric wellness list seems exhaustive and potentially impossible in the fray of a busy general practice. These 2 articles have made the case why each component is important to address during the first 4 months of a pet’s life. The **Pediatric Wellness Care Checklist** outlines what components should be addressed during the pediatric wellness series of visits.

IN-CLINIC FORM

PEDIATRIC WELLNESS CARE CHECKLIST

Julie Meadows, DVM

FIRST VISIT (6 to 8 weeks old)

Behavior

- Discuss housetraining concerns in puppies and scratching behaviors in kittens
- Recommend puppy socialization/kitten education classes
- Introduce Nothing In Life is Free (NILIF) training for puppies

Nutrition

- Discuss and determine appropriate diet
- Discuss ad libitum versus meal feeding

Parasite Prevention

- Deworm for hookworms and roundworms
- Begin heartworm prophylaxis, if possible
- Determine need for ectoparasite management
- Fecal flotation by centrifugation
- Discuss potential for zoonotic disease

Vaccination

- Establish age in weeks
- Plan core vaccination program

SECOND VISIT (9 to 11 weeks old)

Behavior

- Reinforce implementation of NILIF
- Re-emphasize puppy socialization/kitten classes
- Screen for rough play concerns

Nutrition

- Discuss body condition score (BCS) assessment

Oral Care

- Introduce tooth brushing

Parasite Prevention

- Repeat deworming
- Begin heartworm prophylaxis
- Assess need for ectoparasite control
- Repeat recommendation for fecal flotation, if not yet done

Vaccination

- Continue core vaccination plan

THIRD VISIT (12 to 15 weeks old)

Behavior

- Screen for ongoing concerns and problem solve as necessary

Nutrition

- Screen for concerns and verify appropriate BCS

Oral Care

- Re-emphasize long-term benefits of regular oral care

Parasite Prevention

- Repeat recommendations outlined for second visit

Reproduction

- Discuss prepubertal gonadectomy
 - Discuss/recommend microchipping
- Gonadectomy may coincide with last pediatric wellness visit*

Vaccination

- Discuss need for noncore vaccinations

FINAL VISIT (16 to 18 weeks old)

Behavior

- Recommend enrollment in basic obedience classes

Parasite Prevention

- Recommend product(s) to use for first year of life, adjusting as necessary to accommodate weight changes

Reproduction

- Reiterate recommendations

and schedule gonadectomy and microchipping

- If gonadectomy is delayed or waived, stress microchipping at this visit

Vaccination

- Finish pediatric vaccination protocol or plan for additional visits if separating vaccines based on size of puppies

The veterinary technician is an integral player in the development of protocols and then communication of this information to clients, which makes this level of preventive care a standard for the practice. ■

AAFCO = Association for Animal Feed Control Officials; BCS = body condition score; NILIF = nothing in life is free

References

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Julie Meadows, DVM, is Chief of Community Medicine at University of California–Davis School of Veterinary Medicine, where she lectures on client adherence, orphan kitten management, and animal handling and physical examination. Her professional speaking focuses on the concepts of relationship-centered care and family practice. She received her DVM from UC Davis and practiced small animal general medicine for 20 years, owning a practice for 10 of those years, prior to her current position.

and schedule gonadectomy and microchipping

- If gonadectomy is delayed or waived, stress microchipping at this visit

Visit tvpjournal.com to download an expanded **Pediatric Wellness Care Checklist** for use in your clinic.