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AVSAB Position Statement On Puppy Socialization

AMERICAN VETERINARY SOCIETY of Animal Behavior WWW.AVSABonline.org



THE PRIMARY AND MOST IMPORTANT

time for puppy socialization is the first three months of life.^{1,2} During this time puppies should be exposed to as many new people, animals, stimuli and environments as can be

achieved safely and without causing overstimulation manifested as excessive fear, withdrawal or avoidance behavior. For this reason, the American Veterinary Society of Animal Behavior believes that it should be the standard of care for puppies to receive such socialization before they are fully vaccinated.

Because the first

three months are the period when sociability outweighs fear, this is the primary window of opportunity for puppies to adapt to new people, animals, and experiences. Incomplete or improper socialization during this important time can increase the risk of behavioral problems later in life including fear, avoidance, and/or aggression. Behavioral problems are the greatest

For this reason, the American Veterinary Society of Animal Behavior believes that it should be the standard of care for puppies to receive such socialization before they are fully vaccinated. threat to the owner-dog bond. In fact, behavioral problems are the number one cause of relinquishment to shelters.³ Behavioral issues, not infectious diseases, are the number one cause of death for dogs under three years of age.

While puppies' immune systems are still developing during these early months, the combination of maternal immunity, primary vac-

cination, and appropriate care makes the risk of infection relatively small compared to the chance of death from a behavior problem. Veterinarians specializing in behavior recommend that owners take advantage of every safe opportunity to expose young puppies to the great variety of stimuli that they will experience in their lives. Enrolling in puppy classes prior to three months of age can be an excellent means of improving training, strengthening the human-animal bond, and socializing puppies in an environment where risk of illness can be minimized.

In general, puppies can start puppy socialization classes as early as 7-8 weeks of age. Puppies should receive a minimum of one set of vaccines at least 7 days prior to the first class and a first deworming. They should be kept up-to-date on vaccines throughout the class.

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The Process of Socialization:

Puppies should be handled from birth, learning to accept manipulation of all body parts. Every effort should be made to expose them to as many different people, well-socialized animals, situations, places, etc. as possible. Puppies should be encouraged to explore, investigate, and manipulate their environments. Interactive toys and games, a variety of surfaces, tunnels, steps, chutes, and other stimuli can enrich the puppy's environment. Puppies should accompany their breeders/owners on as many car trips as possible. These exposures should continue into adulthood to maintain an outgoing and sociable dog.

Puppy socialization classes can offer a safe and organized means of socializing puppies and more quickly improve their responsiveness to commands.⁴ Each puppy should have up-to-date vaccinations and be disease and parasite free before entering the class. Where possible, classes should be held on surfaces that are easily cleaned and disinfected (e.g. indoor environments). Visits to dog parks or other areas that are not sanitized and/or are highly trafficked by dogs of unknown vaccination or disease status should be avoided.

Classes and at-home training should be based on positive reinforcement with frequent rewards praise, petting, play and/ or treats. Positive and consistent training is associated with fewer behavioral problems and greater obedience than methods that involve punishment and/or encourage human dominance.^{4,5,6} Time must be scheduled for puppies to play alone with their favorite toys (such as stuffed food toys) or take naps in safe places such as crates or puppy pens. This teaches puppies to amuse themselves, and may help to prevent problems of over attachment to the owners. Continuing to offer dogs a wide variety of experiences during their first year of life is also helpful in preventing separation-related behavior.⁷

Proper confinement training using pens or crates helps to ensure that puppies have safe and secure places for rest and confinement. Puppies that are used to being crated will be less stressed if they must be hospitalized or be confined for travel by plane or car. Crates should serve as comfort or play areas.

Early and adequate socialization and programs of positive training can go a long way to preventing behavior problems and improving bonding between humans and dogs. While the first three months is the most important socialization period in a puppy's life, owners of puppies that have passed this milestone are strongly encouraged to continue to socialize their puppies to as many people, pets, and locations as is practical. However, owners of puppies displaying fear should seek veterinary guidance.

The Puppy's Rule of Twelve

Make sure all experiences are safe and positive for the puppy. Each encounter should include treats and lots of praise. Slow down and add distance if your puppy is scared! By the time a puppy is 12 weeks old, it should have:

(If your puppy is over 12 weeks start right away with this socialization guide.)

Experienced 12 different surfaces: wood, woodchips, carpet, tile, cement, linoleum, grass, wet grass, dirt, mud, puddles, deep pea gravel, grates, uneven surfaces, on a table, on a chair, etc.....

Played with 12 different objects: fuzzy toys, big & small balls, hard toys, funny sounding toys, wooden items, paper or cardboard items, milk jugs, metal items, car keys, etc.....

Experienced 12 different locations: front yard (daily), other people's homes, school yard, lake, pond, river, boat, basement, elevator, car, moving car, garage, laundry room, kennel, veterinarian hospital (just to say hi & visit, lots of cookies, no vaccinations), grooming salon (just to say hi), etc....

Met and played with 12 new people (outside of family): include children, adults (mostly men), elderly adults, people in wheelchairs, walkers, people with canes, crutches, hats, sunglasses, etc....

Exposed to 12 different noises (ALWAYS keep positive and watch puppy's comfort level – we don't want the puppy scared): garage door opening, doorbell, children playing, babies screaming, big trucks, Harley motorcycles, skateboards, washing machine, shopping carts rolling, power boat, clapping, loud singing, pan dropping, horses neighing, vacuums, lawnmowers, birthday party, etc...

Exposed to 12 fast moving objects (don't allow to chase): skateboards, roller-skates, bicycles, motorcycles, cars, people running, cats running, scooters, vacuums, children running, children playing soccer, squirrels, cats, horses running, cows running, etc...

Experienced 12 different challenges: climb on, in, off and around a box, go through a cardboard tunnel, climb up and down steps, climb over obstacles, play hide & seek, go in and out a doorway with a step up or down, exposed to an electric sliding door, umbrella, balloons, walk on a wobbly table (plank of wood with a small rock underneath), jump over a broom, climb over a log, bathtub (and bath) etc....

Handled by owner (& family) 12 times a week: hold under arm (like a football), hold to chest, hold on floor near owner, hold in-between owner's legs, hold head, look in ears, mouth, in-between toes, hold and take temperature (ask veterinarian), hold like a baby, trim toe nails, hold in lap, etc...

Eaten from 12 different shaped containers: wobbly bowl, metal, cardboard box, paper, coffee cup, china, pie plate, plastic, frying pan, Kong, Treatball, Bustercube, spoon fed, paper bag, etc.....

Eaten in 12 different locations: back yard, front yard, crate, kitchen, basement, laundry room, bathroom, friend's house, car, school yard, bathtub, up high (on work bench), under umbrella, etc....

Played with 12 different puppies (or safe adult dogs) as much as possible. Left alone safely, away from family & other animals (5-45 minutes) 12 times a week. Experienced a leash and collar 12 different times in 12 different locations.

Stress triggers for **dogs**

Are you contributing to your dog's anxiety and behavior issues? It's possible if you do any of the following:

1. You punish your dog. Dogs are creatures of opportunity, so avoid opportunities for trouble. If you leave trash or your "stuff" where the dog can get it, it will explore the wonderful-smelling tidbits and assume they're his or hers. If you value your "stuff," keep it picked up and put away.

2. You keep telling your dog "no." When you say "no" and your dog stops the behavior, but then repeats it in a short period of time, the "no" was simply an interrupter. Skeptical? Try saying "pickle" instead of "no," and the same pattern of stopping then repeating the behavior is likely to return. Instead, show your dog what you want it to do.

3. You assume your dog "knows" English. Animals communicate using body language and are very good at figuring us out. Unless you have specifically taught your dog to "drop it," "leave it," "get it," and "come," just to name a few, then your dog may not actually "know" these terms. Therefore, using them will result in stress as your dog attempts to guess the right answer.

4. You say to your dog, **"It's OK."** While this may comfort some pets, generally, owners only say this when something bad is happening or is about to happen. It becomes a cue to be afraid or vigilant. Instead, teach your dog some coping skills for various anxiety-inducing situations.



5. You pull on the leash. You may think your dog is pulling you and that your dog thinks the only way it can go forward it to lug the slow lazy human forward. But pulling on the leash increases everyone's frustration and stress. We owe it to our dogs to teach them—without punishment—that a loose leash is a wonderful thing. (*For more information on Nos.* 4 and 5, check out Decoding Your Dog: The Ultimate Experts Explain Common Dog Behaviors and Reveal How to Prevent or Change Unwanted Ones, from the American College of Veterinary Behaviorists.)

6. You hug or kiss your dog. Do you like when someone holds onto you so you can't move away? How about being hugged and kissed by strangers? Dogs in general do not like to be hugged and kissed—especially by strangers. Restraining a dog so it can't get away puts you on its "not-to-be-trusted" list.

7. You stare at your dog. Direct prolonged eye contact with dogs is very confrontational. In canine body language, it suggests you would like to interact—and not necessarily in a good way.

8. You point or shake your finger at your dog.

Typically, when you're doing this, you're also leaning over your dog—and this too makes your dog uncomfortable. How do you know? The "guilty look" isn't because it's actually guilty, but rather it's uncomfortable with the current interaction.

9. You command your pet to "get down" when it's jumping. What word do you use when you want your dog to get into the position where its belly is touching the floor? If it's "down," then when your pet is jumping up, do you expect it to have its belly on the floor when you say "down"—or just on all four paws? Use a different term such as "off," or "four on floor" and teach the dog what the word means. The name of the cue is irrelevant. You could use the word "purple," as long as you show the dog the action that goes along with it. (*See No. 3.*)

 You don't "let sleeping dogs lie." Dogs don't like to be bothered while sleeping any more than we do.

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How Kids SHOULD Interact with Dogs

Use common sense.

Be polite and kind to pets





Learn to recognize when your dog is scared or anxious

Play appropriate games with pets, such as:



TREAT! to to

associate the kids with positive experiences so he'll be more likely to tolerate your child in case she accidentally interacts inappropriately.

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How Kids SHOULD NOT Interact with Dogs

It's common sense. Just imagine how people should interact with each other.



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The Optimal Age for Spay/Neuter: A Critical Analysis of Spay Neuter Literature Philip A. Bushby, DVM

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Introduction

In the past few years the standard practice of sterilizing canine and feline pets has been challenged. Research studies document both benefits and risks associated with ovariohysterectomy and castration creating some level of confusion in the profession. Some in the profession argue for delay in performing these surgeries or abandonment altogether while others argue for early age or pediatric spay/neuter. On one end of the spectrum are concerns over the incidence of certain orthopedic conditions and cancers and on the other end concerns over pet overpopulation and euthanasia of homeless pets in animal shelters. Who is correct? Should dogs and cats be sterilized and is there an optimal age for such surgeries?

The Ugly Truth

Estimates are that between 6 and 8 million animals are admitted to animal shelters in the United States each year. Approximately 50% of those animals are euthanized. Most of the euthanized animals are healthy, most of them friendly, most of them would be perfectly good pets if there were enough homes. But there aren't enough homes and it doesn't end there. Millions more are killed on highways, die of disease, or die of starvation. Every one of these animals is the offspring of owned animals that were not spayed or castrated somewhere in the lineage. Many people view this as an emotional issue, and it is emotional. But it is much more than that. It is a public health issue and a risk to the health of peoples' pets. It's also financial issue. Billions of dollars are spent each year catching, caring for and eventually killing unwanted dogs and cats.

If a new disease were discovered causing the death of 3 to 4 million owned pets a year the veterinary profession would scramble to find the cause, to discover how to treat, how to cure. We know the cause of pet overpopulation and we know the cure. But these animals are not in peoples' homes. For the most part, they are hidden away. The deaths occur in back rooms of animal shelters or on the back roads. Out of the public view. Out of sight out of mind.

The question we must answer is should we spay/neuter. And if so, when? At what age should you do the surgeries? We have seen the recommended age for spay/neuter change over the years. None of the recommendations have been based on a comprehensive analysis of sound research. In fact, until recently there had been very little research on the impact of spay/neuter. The recommendations are based on opinions, on personal biases, or on the results of just a few research studies.

Research supportive of delayed spay neuter or don't spay neuter

Recent research publications have caused some in the profession to question not only pediatric spay/neuter but spay/neuter in general. Four studies out of UC Davis veterinary school have resulted in many people, veterinarians and animal owners, expressing concern about the age of spay/neuter or about even performing spay/neuter at all. These studies are:

- UC Davis: Golden Retriever study¹ (February 2013)
- UC Davis: Comparison of Labrador Retrievers with Golden Retrievers² (2014)
- UC Davis: Neutering of German Shepherd Dogs³ (2015)
- UC Davis: Gonadectomy effects on the risk of immune disorders⁴ (2016)

These articles report on retrospective studies that looked at the incidence of joint problems (CCL rupture, hip dysplasia) various cancers (lymphoma, hemangiosarcoma, osteosarcoma, mast cell tumors) and immune disorders. They reported varying degrees of increase in incidence of certain orthopedic conditions, neoplastic conditions and immune disorders in sterilized dogs.

Close examination of these papers, however, should cast doubt on the assumption that we should avoid or delay spay neuter. What are the potential issues with these article?

- Lack of control of variables: In the best research, all variables are controlled except the one you are measuring. Retrospective studies can't do that. We don't know the impact of diet, lifestyle, environment, preventive care, genetics or other factors on the results in these studies out of UC Davis.
- Biased research population: At referral institutions cases managed by primary care veterinary clinics are not represented. For example, the private practitioner might manage the dog with

mammary neoplasia, pyometra or testicular cancer, but refer the case of osteosarcoma, hemangiosarcoma or lymphoma. This would totally skew the research results making some conditions appear less frequent and others more frequent. It gets even more confusing. What if animals are sterilized because they have an orthopedic condition as opposed to have an orthopedic condition because they were sterilized. And let's complicate things a little more. There are two primary reasons why people don't sterilize their dogs and cats; they want to breed them or they can't afford the surgery. If someone cannot afford the cost of a spay or castration, what are the odds of them taking their pet to a referral hospital for specialized care. Again, potentially skewing the research results.

- Association does not prove cause and effect: In the past ten years the incidence of diabetes and the number of people practicing yoga have both increased. That does not mean that yoga causes diabetes or that diabetes causes people to want to do yoga.
- Small sample size: The UC Davis studies are actually reporting on very small numbers of cases. Random variation in scientific studies results from the chance distribution of measurements. The smaller the sample size the greater the chance for inaccuracy based simply on random variation.
- Lastly, if all the findings in the UC Davis studies eventually prove to be true, you still cannot extrapolate from one breed to the next and certainly not from one species to another. The UC Davis authors point that out, but many in the public or in the profession seem to ignore that fact.

The value of these studies is that they point to the need for more research, preferably prospective studies in which case criteria and data collection standards are defined in advance and consistently applied. But they do not, at this time, justify wholesale changes in spay/neuter decision making.

There are key factors that should be considered when debating whether or not to sterilize or at what age to sterilize? We must be careful not to base such major decisions on studies with small number of animals. Secondly, in making any decisions about the medical or surgical care of pets we should look at all factors that influence health and longevity not on just a few.

Research supportive of spay neuter

A study at the University of George analyzed the records of over 80,000 patients and demonstrated that sterilization is strongly associated with an increased life expectancy in dogs.⁵ In this study the life expectancy of sterilized dogs, both male and female, was increased in comparison to life expectancy of intact dogs.

- Mean age of death of intact dogs 7.9 years
- Mean age of death of sterilized dogs 9.4 years
- Sterilization was associated with increased life expectance of males by 13.8%
- Sterilization was associated with increased life expectancy in females by 26.3%

While sterilization was associated with a decreased risk of death from some causes, such as infectious disease, it's associated with an increased risk of death from others, such as cancer. In this study sterilized dogs were "dramatically" less likely to die from:

- Infectious disease
- Trauma
- Vascular disease
- Degenerative disease

and sterilized dogs were more likely to die from:

- Neoplasia
- Immune mediated disease
- Within the neoplasia category, occurrence of:
 - Transitional cell carcinoma
 - Osteosarcoma
 - Lymphoma
 - Mast cell tumors
- Was increased in sterilized dogs.

Within the neoplasia category occurrence of mammary cancer was significantly decreased in sterilized dogs.

In interpreting what appears to be conflicting information in the literature keep in mind that recognizing that something may increase the incidence of a condition is of little value without knowing what the incidence is. Significantly increasing the incidence of a tumor that is relatively rare still leaves that tumor relatively rare while significantly decreasing the incidence of a tumor that is common may make that tumor uncommon.

Banfield operates over 1000 veterinary hospitals that share a common computerized medical record system. Each year Banfield releases a "State of Pet Health Report." In 2013 that report was based on analysis of data from 2.2 million dogs and 460,000 cats.⁶ Looking at longevity compared to spay/neuter status they discovered that:

- spayed dogs lived 23% longer than intact dogs
- neutered dogs lived 18% longer than intact dogs
- spayed cats lived 39% longer than intact cats
- neutered cats lived 62% longer than intact cats
- What can we conclude so far?
- · Sterilized dogs and cats live longer
- · Sterilized dogs higher incidence of certain cancers
- · Sterilized dogs lower incidence of mammary tumors
- Sterilized dogs may have higher incidence of some immune diseases.
- Intact dogs are more likely to die of infections and trauma
- In some breeds sterilized dogs appear to have greater incidence of certain orthopedic conditions.

The Banfield report makes no effort to attempt to theorize why sterilized animals live longer. It simply documents that they do.

Perhaps the most comprehensive reference related to age of spay neuter is a 2007 article by Margaret Root-Kustritz.⁷ In this article the author summarizes the literature up to that date detailing the relationship of sterilization status and disease incidences between sterilized and intact pets.

If we could see into the future for each animal we could determine which animals were going to develop osteosarcoma if they were sterilized and which were going to develop mammary neoplasia or pyometra if they were not. We could then make the best decision for each animal. Lacking that ability, we should make our recommendations based on population dynamics. In the United States, approximately 80% of the female dogs are spayed. The incidence of mammary neoplasia is 4% but that is almost exclusively in intact dogs, virtually 0% in spayed dogs. Making the incidence in intact dogs nearly 20%, 100 times the incidence of osteosarcoma at 0.2%. Some of the articles say that sterilization doubles the risk of osteosarcoma. But again 80% of the dogs in the U.S. are sterilized. So that "doubling" effect is essentially already represented in the 0.2% statistic.

If you total the reported incidence of all the conditions that are considered serious or moderately serious and in which the incidence is increased in sterilized dogs the total is 3.0%. The chances of a sterilized dog getting any one of these conditions is 3.0% versus the chances of an intact female dog getting mammary neoplasia at 20% or pyometra at 24%.

You simply cannot make spay/neuter decisions based on the potential impact of spay/neuter on a just small handful of conditions or diseases. You must take into consideration the potential impact of sterilization on the overall health and longevity of the animal.

In 2017 Dr. Kustritz updated that article to include the relevant research since 2007.8

The key point in her latest article is this. The question about the effect of gonadectomy on health is one of causation: does gonadectomy at certain ages cause or prevent specific health issues? Defining an association is not enough, if it was think of the number of people practicing yoga that would come down with diabetes. At this point, none of the articles that document incidence document causation. The research is not there. To adequately determine causation, you need:

- Randomized clinical trials,
- Unbiased subject selection,
- •Adequate same size,
- Accurate and precise measurement of the factors of interest,
- · Adequate control of confounding factors, and
- · Cautious & critical assessment of results.

When you read the scientific literature, watch for these. Recognize that when any of these are compromised, so too are the results. We need more research; more quality research!

Spay neuter (cats, pediatric cats and dogs)

It seems like most studies have focused on dogs, but what about cats, and what about pediatric spay/neuter? Studies out of Texas AM and Cornell have looked specifically at the medical and behavior effects associated with early age spay/neuter and concluded that there were no serious long term medical or behavioral effects associated with early age sterilization in dogs and cats.^{9,10,11}

Epidemiological studies in 1981 and 2005 document a significantly lower incidence of mammary neoplasia in cats when spayed prior to their first heat cycle.^{12,13} Given that median survival time of cats

with mammary neoplasia is generally less than 1 year and that up to 96% of mammary tumors in cats are malignant the reduction in incidence of mammary neoplasia is very significant. A 1997 study documented fewer anesthesia and surgical complications in cats sterilized under 12 weeks of age when compared to those sterilized at or after 6 months of age.¹⁴ The theory that castrating male cats prior to sexual maturity makes the penis smaller and predisposes to urinary tract obstruction has been proven to be false. In a 1996 study Dr. Margaret Root Kustritz and Shirley and Gary Johnston demonstrated no difference in urethral diameters between cats castrated at 7 weeks, castrated at 7 months or left intact.¹⁵ None of the short-term or long-term studies have shown an increased incidence of urinary obstruction in neutered male cats.

A prospective study of 800 kittens comparing those sterilized between 8 and 12 weeks of age with those sterilized between 6 and 9 months found no evidence that age at the time of sterilization had any effect on the number of, or occurrence of, potentially undesirable behaviors.¹⁶

Feline Fix by Five

In 2016 the Veterinary Task Force on Feline Sterilization was convened to look specifically at spay neuter issues in cats. What they found was that having cats spayed before their first heat cycle:

- Significantly decreases the risk for mammary carcinoma
- · Eliminates reproductive emergencies such as pyometra and dystocia
- Prevents unintended pregnancies that may occur as early as 4 months of age
- Potentially decreases behavioral problems linked with cat relinquishment.

In 2017 the AMVA formally endorsed the concept paper developed by the Veterinary Task Force on Feline Sterilization which recommends that cats be sterilized prior to 5 months of age. Endorsements have also come from the American Animal Hospital Association, The Feline Practitioners Association, the Association of Shelter Veterinarians, The Winn Feline Foundation, The Catalyst Council, The International Cat Association, The Cat Fanciers Association and PetSmart Charities. The Feline Fix by Five campaign has been developed in an effort to education the public and the veterinary profession of the benefits of sterilizing cats before 5 months of age.

The Shelter World

Our program at Mississippi State University has been taking students to animal shelters since the early 1990s. We obtained a Mobile Veterinary Clinic in 2007 and a second Mobile Clinic in 2013. Since 2007 we have performed over 70,000 spay/neuter surgeries. Nearly fifty percent of these surgeries are pediatric. We currently serve 25 animal shelters/humane groups across northern Mississippi. In 2007, the shelters we served had a euthanasia rate in both dogs and cats of greater than 60%. In 2016, euthanasia rates had dropped to 20% in dogs and 34% in cats.

Humane Alliance (now called ASPCA Spay Neuter Alliance) is, perhaps, the largest high-volume spay/neuter clinic in the world. Humane Alliance was established in 1994 in Ashville, NC, an area with rapidly growing human population over the past 20 years and statistically that would mean a rapidly growing pet population as well. In the 20+ years since Humane Alliance started performing sterilizations there has been a 75% reduction in intake and a 79% reduction in euthanasia in local animal shelters.

An animal care center in east Tennessee has performed over 55,000 spay/neuter surgeries since 2007. In that time, they have recorded a steady increase in live release rate from their animal shelter, a decrease in dog and cat intake, and a decrease in euthanasia.

Trap neuter return is a growing method of controlling feral cat populations and studies show that areas that have implemented trap neuter return have significantly reduced shelter intake and euthanasia of cats.^{17,18}

So How Do You Decide?

Decisions related to if and when to spay/neuter must be based first on the life situation of the animal: is it in a home or homeless. And secondly on an assessment of all known relationships between reproductive status and health and longevity not just a few. When making decisions related to increase or decrease in incidence of a condition we must consider what the overall incidence is and the impact of the change.

This is what we appear to know.

- In the shelter environment spay/neuter is associated with increased adoption rates, reduced shelter intake and reduced euthanasia.
- There are several conditions that have low incidence in which the incidence may be increased with sterilization. These conditions include:
 - prostate neoplasia
 - transitional cell carcinoma

- osteosarcoma
- diabetes mellitus
- hypothyroidism
- Sterilization decreases or eliminates the risk of several conditions that have high incidence:
 - mammary neoplasia
 - pyometra
 - benign prostatic hypertrophy
 - testicular neoplasia
- Sterilization may be associated with an increased incidence of:
 - cranial cruciate rupture
 - hip dysplasia
 - elbow dysplasia

in some breeds of dogs.

• Sterilization significantly increases life expectancy in dogs and cats.

Recommendations

For shelter animals, spay/neuter is prior to adoption.

<u>For cats</u>, there are few documented adverse effects of spay/neuter in cats and many documented positive effects. Female cats can come into heat by $4\frac{1}{2}$ to 5 months. <u>Spay or castrate before 5 months of age.</u>

For owned dogs the owner must make an informed decision based on species, breed, intended usage and current medical knowledge at hand. For most breeds the protective effect of spay before the first heat cycle on mammary neoplasia far outweighs the potential risks associated with other cancers and orthopedic conditions.

Owned female dogs spay prior to 5 months of age.

For owned large breed male dogs - house pets- orthopedic concerns may outweigh all others - spay/neuter after growth stops 15 - 18 months.

For owned large breed male dogs - free roaming- population concerns may outweigh all others - spay/neuter prior to 5 months of age.

For owned small breed male dogs – no evidence at this time for orthopedic issues – castrate prior to sexual maturity – 5 months.

Conclusions

There is much we still don't know about the impact of spay and neuter. We must, therefore, always remain open to new information as research continues and, if need be, change our minds. In doing this we must, however, always be willing to look critically at new information to determine if conclusions are valid based on the research data.

Summary of Key Points

- Cannot make spay/neuter decisions based on the impact of spay/neuter on a small handful of diseases. Must take into consideration the impact on the overall health and longevity of the animal.
- To determine cause and affect
 - Randomized clinical trials
 - Unbiased subject selection
 - Adequate same size
 - Accurate and precise measurement of the factors of interest
 - Adequate control of confounding factors
 - Cautious & critical assessment of results
- When making decisions related to increase or decrease in incidence of a condition. Must consider what the overall incidence is and what is the change

Summary of recommendations

Species	Spay or Castrate
Dog or cat in shelter	Prior to adoption (as young as 6 weeks of age)
Cat (male or female)	Prior to 5 months of age
Dog (small breed, male or female)	Prior to 5 months of age
Dog (large breed female)	Prior to 5 months of age
Dog (large breed male – free roaming)	Prior to 5 months of age
Dog (large breed male – house pet)	After growth plates close – 15 – 18 months

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These recommendations are based on the 2019 AAHA Canine Life Stage Guidelines. For more information, visit **aaha.org/caninelifestage**.

Pets, Parasites and People



Companion Animal Parasite Council www.petsandparasites.org

Dogs and cats are not just pets. They are treated like members of the family. And like any member of your family, it's important to keep your companion animal healthy and free of parasites.

It is fairly common for a dog or cat to become infected with an internal or external parasite at some point in its lifetime. Parasites can affect your pet in a variety of ways, ranging from simple irritation to causing life-threatening conditions if left untreated. Some parasites can even infect and transmit diseases to you and your family.

Your veterinarian can help prevent, accurately diagnose and safely treat parasites and other health problems that not only affect your dog or cat, but also the safety of you and your family.

For more information on how parasites affect your dog or cat, the health risks to people and prevention tips, please visit us at www.petsandparasites.org.

What is a zoonotic disease?

Zoonoses, or zoonotic diseases, are those diseases that can be transmitted directly or indirectly from animals to humans. For example, some worms can be transmitted in the environment.

What is a vector-borne disease?

Vector-borne diseases are those transmitted by fleas or ticks among other parasites that infest dogs and cats. They can affect pets and people. Ticks can transmit a large number of "vector-borne" diseases in North America including ehrlichiosis, Lyme disease, relapsing fever, Rocky Mountain spotted fever and tularemia.

Parasites that may affect your pet

• Coccidia	• Giardia	 Mange Mites 	• Ticks
• Ear Mites	• Heartworms	Roundworms	• Toxoplasmosis
• Fleas	• Hookworms	• Tapeworms	• Whipworms

Common questions about pets and parasites

Do fleas and ticks on my pet present a health risk to my family?

Yes. Fleas and ticks can carry and either directly or indirectly transmit several potential illnesses of humans. For example, rickettsiosis (infection with Rickettsia) can be transmitted directly by ticks. Bartonellosis (infection with Bartonella) is transmitted between cats by fleas and then may spread to people. Also, fleas serve as an intermediate host for tapeworms, which can infect both your pet and humans.

What kind of internal parasites or worms can infect my cat or dog?

There are a number of intestinal worms that can infect dogs and cats, and they vary according to the species. In general, these include roundworms, hookworms, whipworms and tapeworms, and they are very prolific. In fact, one worm can produce more than 100,000 eggs per day, which are then passed in the pet's feces and spread throughout the area the pet roams. Once in the environment, some of these eggs can remain infective and present a health risk for your pet and humans for years.

Are heartworms a parasite I should be concerned about for my pet?

Yes. Heartworms can be a very serious problem for both dogs and cats, especially those in mosquito-infested areas, as mosquitoes are a vector and intermediate host for the pest. Heartworms can kill or seriously debilitate pets that are infected with them. That's because heartworms live in the bloodstream, lungs and heart of infected pets. Your veterinarian can do a blood test to determine if your pet has heartworm disease. A year-round preventive program is most effective to keep pets free of heartworms.

If my dog or cat has intestinal worms, how can these parasites infect humans?

Roundworms are the most common intestinal parasite of pets and the most likely to be transmitted to humans.

Humans can accidentally ingest infective worm eggs that have been passed through the pet's feces and left in the environment. The eggs can then hatch in the human's intestinal tract, and the immature worms can travel to various tissues in the body, including the eyes and brain, potentially causing serious infections.

For more frequently asked questions and answers, please visit us at www.petsandparasites.org or consult with your veterinarian.

Reducing risks for your family

You can reduce the risk of parasitic infection to your family by eliminating parasites from pets; restricting access to contaminated areas, such as sandboxes, pet "walk areas," and other high-traffic areas; and practicing good personal hygiene.

Disposing of pet feces on a regular basis can help remove potentially infective worm eggs before they become distributed in the environment and are picked up or ingested by pets or humans.

Year-round prevention

Parasites can infect your pet any time of year. External parasites, such as fleas and ticks, may be less prevalent outside during certain times of the year; however, they often survive in the house during the winter months, creating an uninterrupted life cycle. Other internal parasites, such as worms, may affect your pet all year long. That's why it's important to consult with your veterinarian to implement a year-round parasite control program.

What can I do?

Responsible pet parasite control can reduce the risks associated with transmission of parasitic diseases from pets to people. By following a few simple guidelines, pet owners can better protect their pets and their family.

- Practice good personal hygiene.
- Use a preventative flea and/or tick treatment year-round.
- Only feed pets cooked or prepared food (not raw meat).
- Minimize exposure to high-traffic pet areas.
- Clean up pet feces regularly.
- Visit your veterinarian for annual testing and physical examination.
- Administer worming medications as recommended by your veterinarian.
- Ask your veterinarian about parasite infection risks and effective year-round preventative control measures administered monthly.

For more important information about parasite control guidelines, ask your veterinarian or visit us at www.petsandparasites.org.

The Companion Animal Parasite Council

The Companion Animal Parasite Council (CAPC) is an independent council of veterinarians and other animal healthcare professionals established to create guidelines for the optimal control of internal and external parasites that threaten the health of pets and people. It brings together broad expertise in parasitology, internal medicine, public health, veterinary law, private practice and association leadership.

Initially convened in 2002, CAPC was formed with the express purpose of changing the way veterinary professionals and pet owners approach parasite management. The CAPC advocates best practices for protecting pets from parasitic infections and reducing the risk of zoonotic parasite transmission.

For more information about how parasites may affect your pet, please visit us at www.petsandparasites.org.

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Why do we recommend two negative fecal tests for your new puppy or kitten?

Our recommendations are based on information provided by the Centers for Disease Control (CDC) and the Companion Animal Parasite Council (CAPC). A fecal flotation is a test that looks for microscopic eggs released into the intestinal tract of your puppy/kitten by an adult worm. A fecal floatation is also testing for the presence of giardia or coccidia, which are single celled protozoal organisms that can infect dogs, cats, and other species. Pets infected with any of these organisms may not have any outward signs of disease and you may not see any evidence of worms in their feces.

It is not uncommon that a dog or cat from a reputable, caring breeder or shelter may have intestinal parasites. This is because of the life cycle of the parasite itself. When a worm infects a pet, it may not enter through the mouth or GI tract. Some can burrow through the skin on the paws or abdomen. These worms pass through muscle tissue where they can become dormant for months or years. Conditions such as pregnancy in cats or dogs can allow the parasite to become active and then the parasites can spread to the offspring through the placenta or even milk. These parasites take time to move through the tissues, become adults, and start laying eggs. Even if one fecal test is negative, it doesn't mean a pet is free from intestinal parasites. It may mean that adult worms may not be currently laying eggs. This is why we recommend two negative fecal tests in addition to routine deworming medications.

Why not just give frequent deworming medications and skip the fecal tests?

Some parasites such as giardia and coccidia require very specific medications that we would not routinely administer to every pet. Other parasites require a specific interval of medication administration to ensure it's being given at the appropriate parasite life stage. Finally, because parasites like hookworms can also infect humans and can cause infection by burrowing through bare skin, it's important to know what kind of precautions must be taken to protect human family members.

Why not just skip the deworming medications and perform only fecals?

Some parasites such as tapeworms don't release their eggs inside their host. Instead, a small segment (called a proglottid) crawls out of the digestive tract to release eggs outside the host. Unfortunately, this makes tapeworms challenging to diagnose unless they're actually seen. Even indoor-only pets can get tapeworms by ingesting a single flea or ectoparasite. Deworming medications are very safe and no fecal test has 100% accuracy.

This combination of routine deworming and fecal testing is the best practice to help ensure your new pet is free of intestinal parasites. Please don't hesitate to contact us with questions or concerns about intestinal parasites in your new pet.

Simparica **TRIO**, (sarolaner, moxidectin, and pyrantel chewable tablets)

Protect him with all your heart

The FIRST chewable for:



HEARTWORM DISEASE

TICKS & FLEAS

ROUNDWORMS & HOOKWORMS

SimparicaTrio.com

ZOETIS PETCARE

Simparica **TRIO**, (sarolaner, moxidectin, and pyrantel chewable tablets)

Now, you don't need 2 or 3 products for the monthly protection your dog needs

It's here!

Simparica Trio makes protecting dogs simple and convenient

JUST ONE GETS IT DONE!

Ask your veterinarian about Simparica Trio today



HEARTWORM DISEASE

TICKS & FLEAS

ROUNDWORMS & HOOKWORMS

All this protection for your dog, all in one monthly chewable:

- HEARTWORM DISEASE
- 5 TYPES OF TICKS*, AND FLEAS
- ROUNDWORMS & HOOKWORMS[†]

Demonstrated safe for puppies as young as 8 weeks old, weighing 2.8 lbs or more

*Lone Star tick, Gulf Coast tick, American dog tick, deer tick, and brown dog tick.

[†]Toxocara canis, Toxascaris leonina, Ancylostoma caninum, and Uncinaria stenocephala.

Simparica **TRIO**

(sarolaner, moxidectin, and pyrantel chewable tablets)

Monthly Simparica Trio kills **5 types of ticks*** including deer ticks that can spread Lyme disease

- Ticks can pass on diseases that can make your dog sick—including Lyme disease, Rocky Mountain spotted fever, anaplasmosis, and ehrlichiosis³
- Different types of ticks are active all year long³
- Tick-borne diseases can be transmitted in as little as 24 hours—but can have lifelong effects³

Defend against threats to your dog's health

In studies, monthly Simparica Trio delivered 100% protection from heartworm disease

Did you know **just one bite from an infected mosquito** can lead to heartworm disease?

- Heartworm disease has been diagnosed in all 50 states—and is on the rise¹
- When your dog travels or moves with you to areas where heartworm disease is common, it raises their risk of getting it²

Monthly Simparica Trio **starts killing fleas fast*** before they can lay eggs

- It only takes one "pregnant" flea to infest your dog and your home—they multiply fast!⁴
- Home flea infestations can take several months of work and a lot of money to get rid of
- For some dogs, flea bites can cause skin problems and hair loss that can make them miserable⁴

^{*}Simparica Trio starts killing deer ticks within 8 hours and starts killing fleas within 4 hours.

Simparica **TRIO**, (sarolaner, moxidectin, and pyrantel chewable tablets)

Monthly Simparica Trio gives proven protection

from intestinal worms

Roundworms & hookworms can harm more than just your dog

- Puppies can be infected at birth; and adult dogs can pick up worm eggs or larvae in the environment^{5*}
- Hookworms are blood suckers that can cause great harm to puppies⁶
- Roundworms can cause severe vomiting, weight issues, and other symptoms in puppies⁵
- Pets can be at risk when these worms contaminate the environment^{5,6}



Our Satisfaction Guarantee

We want you to be completely satisfied with Simparica Trio. We'll work with you to make sure you're satisfied with the product's performance. If for any reason you're still not completely happy, we'll send you a replacement or give you your money back.

Simply give us a call at 1-888-ZOETIS1 or visit SimparicaTrio.com to learn more



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Earn up to \$55 in rewards with your Simparica Trio™ purchase

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Simparica **TRIO**, (sarolaner, moxidectin, and pyrantel chewable tablets)

Speak with your veterinarian about Simparica Trio

IMPORTANT SAFETY INFORMATION: Use

with caution in dogs with a history of seizures. Simparica Trio contains sarolaner, a member of the isoxazoline class, which has been associated with neurologic adverse reactions including tremors, ataxia, and seizures in dogs with or without a history of neurologic disorders. The safe use of Simparica Trio has not been evaluated in breeding, pregnant, or lactating dogs. The most frequently reported adverse reactions in clinical trials were vomiting and diarrhea. **See full Prescribing Information in pocket.**

References: 1. AHS Canine Guidelines 2018. https://www. heartwormsociety.org/images/pdf/2018-AHS-Canine-Guidelines.pdf. Accessed October 7, 2019. 2. Self SW, Pulaski CN, McMahan CS, Brown DA, Yabsley MJ, Gettings JR. Regional and local temporal trends in the prevalence of canine heartworm infection in the contiguous United States: 2012-2018. *Parasit Vectors*. 2019;12(1):380. 3. Companion Animal Parasite Council. *Ticks*. April 12, 2017. https://capcvet.org/guidelines/ticks. Accessed October 7, 2019. 4. Companion Animal Parasite Council. *Fleas*. September 19, 2017. https://capcvet.org/guidelines/fleas. Accessed October 7, 2019. 5. Companion Animal Parasite Council. *Ascarid*. https:// capcvet.org/guidelines/ascarid. Accessed September 18, 2019. 6. Companion Animal Parasite Council. Hookworms. https://capcvet. org/guidelines/hookworms. Accessed October 7, 2019.

ZOETIS PETCARE

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Simparica TRIO_m

(sarolaner, moxidectin, and pyrantel chewable tablets)

FOR ORAL USE IN DOGS ONLY

CAUTION

Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian

DESCRIPTION

SIMPARICA TRIO (sarolaner, moxidectin, and pyrantel chewable tablets) is a flavored, chewable tablet for administration to dogs 8 weeks of age and older. Each tablet is formulated to provide minimum dosages of 0.54 mg/lb (1.2 mg/kg) sarolaner, 0.011 mg/lb (24 $\mu\text{g/kg})$ moxidectin, and 2.27 mg/lb (5 mg/kg) pyrantel (as pamoate salt).

Sarolaner is a member of the isoxazoline class of parasiticides and the chemical name is 1-(5'-((5S)-5-(3,5-Dichloro-4-fluorophenyl)-5-(irifluoromethyl)-4,5-dihydroisoxazol-3-yl)-3-H-spiro(azetliane-3,1'-(2) benzofuran)-1-yl)-2-(methylsulfonyl)ethanone. SIMPARICA TRIO contains the S-enantiomer of sarolaner.

Moxidectin is a semi-synthetic methoxime derivative of nemadectin which is a fermentation product of Streptomyces cyaneogriseus subspecies noncyanogenus. Moxidectin is a pentacyclic 16-membered lactone macrolide The chemical name for moxidectin is (6R,23E,25S)-5-0-Demethyl-28-deoxy-25-[(1E)-1,3-dimethyl-1-buten-1-yl]-6,28-epoxy-23-(methoxyimino) milbemvcin B.

Pyrantel belongs to a family classified chemically as tetrahydropyrimidines and the chemical name is (E)-1,4,5,6-Tetrahydro-1-methyl-2-[2-(2-thienyl) vinyl] pyrimidine 4,4' methylenebis [3-hydroxy-2-naphthoate](1:1). It is a yellow, water-insoluble crystalline salt of the tetrahydropyrimidine base and pamoic acid containing 34.7% base activity.

INDICATIONS

SIMPARICA TRIO prevents heartworm disease caused by *Dirofilaria immitis*, kills adult fleas (*Ctenocephalides felis*) and is indicated for the treatment and prevention of flea infestations, the treatment and control of tick infestations with Amblyomma americanum (lone star tick), Amblyomma maculatum (Gulf Coast tick), Dermacentor variabilis (American dog tick), Ixodes scapularis (black-legged tick), and Rhipicephalus sanguineus (brown dog tick), and the treatment and control of roundworm (immature adult and adult Toxocara canis and adult Toxascaris leonina) and adult hookworm (Ancylostoma caninum and Uncinaria stenocephala) infections for one month in dogs and puppies 8 weeks of age and older, and weighing 2.8 pounds or greater

DOSAGE AND ADMINISTRATION

SIMPARICA TRIO is given orally once a month, at the recommended minimum dose of 0.54 mg/lb (1.2 mg/kg) sarolaner, 0.011 mg/lb (24 μ g/kg) moxidectin, and 2.27 mg/lb (5 mg/kg) pyrantel (as pamoate salt).

Dosage Schedule

Body Weight (Ibs)	Sarolaner per Tablet (mg)	Moxidectin per Tablet (mg)	Pyrantel per Tablet (mg)	Number of Tablets Administered	
2.8 to 5.5	3	0.06	12.5	One	
5.6 to 11.0	6	0.12	25	One	
11.1 to 22.0	12	0.24	50	One	
22.1 to 44.0	24	0.48	100	One	
44.1 to 88.0	48	0.96	200	One	
88.1 to 132.0	72	1.44	300	One	
>132.0	Administer the appropriate combination of tablets				

SIMPARICA TRIO can be offered to the dog with or without food.

Care should be taken to ensure that the dog consumes the complete dose and that part of the dose is not lost or refused. If a dose is missed, give SIMPARICA TRIO immediately and resume monthly dosing.

Heartworm Prevention:

SIMPARICA TRIO should be administered at monthly intervals year-round or at least within one month of the animal's first seasonal exposure to mosquitoes and continuing until at least 1 month after the dog's last seasonal exposure. If a dose is missed, give SIMPARICA TRIO immediately and resume monthly dosing. When replacing a monthly heartworm preventive product, SIMPARICA TRIO should be given within one month of the last dose of the former medication.

Flea Treatment and Prevention:

Treatment with SIMPARICA TRIO may begin at any time of the year SIMPARICA TRIO should be administered year-round at monthly intervals or started at least one month before fleas become active.

To minimize the likelihood of flea re-infestation, it is important to treat all dogs and cats within a household with a flea control product.

Tick Treatment and Control.

Treatment with SIMPARICA TRIO can begin at any time of the year. SIMPARICA TRIO should be administered year-round at monthly intervals or started at least one month before ticks become active

Intestinal Nematode Treatment and Control:

For the treatment of roundworm (immature adult and adult *Toxocara canis* and adult *Toxascaris leonina*) and adult hookworm (*Ancylostoma caninum*) and Uncinaria stenocephala) infections, SIMPARICA TRIO should be administered once as a single dose. Monthly use of SIMPARICA TRIO will control any subsequent infections.

CONTRAINDICATIONS

There are no known contraindications for the use of SIMPARICA TRIO. WARNINGS

Not for use in humans. Keep this and all drugs out of reach of children

Keep SIMPARICA TRIO in a secure location out of reach of dogs, cats and other animals to prevent accidental ingestion or overdose.

PRECAUTIONS

Sarolaner, one of the ingredients in SIMPARICA TRIO, is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders

Prior to administration of SIMPARICA TRIO, dogs should be tested for existing heartworm infections. Infected dogs should be treated with an adulticide to remove adult heartworms. SIMPARICA TRIO is not effective against adult D. immitis

The safe use of SIMPARICA TRIO has not been evaluated in breeding, pregnant, or lactating dogs.

ADVERSE REACTIONS

In a field safety and effectiveness study, SIMPARICA TRIO was administered to dogs for the prevention of heartworm disease. The study included a total of 410 dogs treated once monthly for 11 treatments (272 treated with SIMPARICA TRIO and 138 treated with an active control). Over the 330-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported in the SIMPARICA TRIO group are presented in the following table.

Table 1. Dogs with Adverse Reactions

Clinical Sign	SIMPARICA TRIO n = 272	Active Control n = 138
Vomiting	14.3%	10.9%
Diarrhea	13.2%	8.0%
Lethargy	8.5%	6.5%
Anorexia	5.1%	5.8%
Polyuria	3.7%	3.6%
Hyperactivity	2.2%	0.7%
Polydipsia	2.2%	2.9%

In a second field safety and effectiveness study, SIMPARICA TRIO was administered to 278 dogs with fleas. Adverse reactions in dogs treated with SIMPARICA TRIO included diarrhea.

In a third field safety and effectiveness study, SIMPARICA TRIO was administered to 120 dogs with roundworms. Adverse reactions in dogs treated with SIMPARICA TRIO included diarrhea and vomiting.

For a copy of the Safety Data Sheet or to report adverse reactions, call Zoetis Inc. at 1-888-963-8471. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or www.fda.gov/reportanimalae.

CLINICAL PHARMACOLOGY

Following oral administration of SIMPARICA TRIO in Beagle dogs (13 to 15 months of age at the time of initial dosing), sarolaner and moxidectin were rapidly and well-absorbed. Following a single oral dose of SIMPARICA TRIO (sarolaner dose of 1.2 mg/kg), the sarolaner mean maximum plasma concentration (C_{max}) was 523 ng/mL with a mean time to maximum concentration (T_{max}) of 3.5 hours and an absolute bioavailability of 88%. At a moxidectin dose of 0.024 mg/kg, the moxidectin mean C_{max} was 13.1 ng/mL with a mean T_{max} of 2.4 hours and an absolute bioavailability of 67%

Following intravenous (IV) dosing of a combination solution of sarolaner and moxidectin, the sarolaner volume of distribution (V_{ss}) was 2.4 L/kg and systemic clearance (CL) was 6.0 mL/kg/hr. For moxidectin the V_{ss} was 7.65 L/kg and CL was 26.6 mL/kg/hr. The terminal half-lives were similar after oral and IV dosing for both sarolaner (12 days) and moxidectin (11 days). The primary route of elimination of both sarolaner and moxidectin is biliary excretion with minimal metabolism.

Following an oral dose of SIMPARICA TRIO containing 5 mg/kg pyrantel (as pamoate salt), pyrantel has measurable plasma concentrations, but they are low and highly variable. Pyrantel pamoate is intended to remain in the gastrointestinal tract allowing for delivery of effective concentrations to gastrointestinal nematodes

MODE OF ACTION

EFFECTIVENESS

SIMPARICA TRIO contains three active pharmaceutical ingredients, sarolaner, moxidectin, and pyrantel pamoate.

Sarolaner is an acaricide and insecticide belonging to the isoxazoline group. Sarolaner inhibits the function of the neurotransmitter gamma aminobutyric acid (GABA) receptor and glutamate receptor, and works at the neuromuscular junction in insects. This results in uncontrolled neuromuscular activity leading to death in insects or acarines

Moxidectin is an endectocide in the macrocyclic lactone class. Moxidectin acts by interfering with the chloride channel-mediated neurotransmission in the parasite. This results in paralysis and death of the parasite.

Pyrantel pamoate is a nematocide belonging to the tetrahydropyrimidine class. Pyrantel acts as a depolarizing, neuromuscular-blocking agent in susceptible parasites, which causes paralysis and death or expulsion of the organism.

dogs inoculated with infective larvae 30 days before treatment.

In a well-controlled US field study consisting of 246 dogs administered SIMPARICA TRIO and 119 administered an active control, no dogs treated with SIMPARICA TRIO tested positive for heartworm disease. All dogs treated with SIMPARICA TRIO were negative for D. immitis antigen and blood microfilariae at study completion on day 330.

Flea Treatment and Prevention

In a well-controlled laboratory study, SIMPARICA TRIO began to kill fleas at 4 hours and demonstrated 100% effectiveness at 8 hours after initial administration. After weekly re-infestations, SIMPARICA TRIO reduced the number of live fleas by ≥97.8% within 12 hours of infestation for 28 days

In a separate well-controlled laboratory study, SIMPARICA TRIO demonstrated 100% effectiveness against adult fleas within 24 hours following treatment and maintained ≥99.7% effectiveness against weekly re-infestations for 35 days

In a study to explore flea egg production and viability, SIMPARICA TRIO killed fleas before they could lay eggs for 35 days.

In a well-controlled 60-day US field study conducted in dogs with existing flea infestations of varying severity, the effectiveness of SIMPARICA TRIO against fleas on Day 30 and 60 visits was 99.0% and 99.7%, respectively, compared to baseline. Dogs with signs of flea allergy dermatitis showed improvement in erythema, papules, scaling, alopecia, dermatitis/pyodermatitis and pruritus as a direct result of eliminating fleas.

Tick Treatment and Control

In a well-controlled laboratory study, SIMPARICA TRIO began to kill existing I. scapularis within 8 hours, SIMPARICA TRIO reduced the number of live ticks by ≥94.2% within 24 hours of infestation for 28 days.

In well-controlled laboratory studies, SIMPARICA TRIO demonstrated ≥98.9% effectiveness against an existing infestation of Amblyomma maculatum, Ixodes scapularis, Rhipicephalus sanguineus, and Dermacentor variabilis 48 hours post-administration and maintained ≥90.4% effectiveness 48 hours after re-infestation for at least 28 days. Against Amblyomma americanum, SIMPARICA TRIO demonstrated ≥99.4% effectiveness 72 hours after treatment of existing infestations, and maintained ≥98.4% effectiveness 72 hours after re-infestation for at least 28 days.

Intestinal Nematode Treatment and Control

Elimination of roundworms (immature adult and adult *Toxocara canis* and adult *Toxascaris leonina*) and adult hookworms (*Ancylostoma caninum* and Uncinaria stenocephala) was demonstrated in well-controlled laboratory studies

In a 10-day multi-center field study, SIMPARICA TRIO was effective against Toxocara canis and reduced fecal egg counts 99.2%

ANIMAL SAFETY

Margin of Safety: SIMPARICA TRIO was administered orally to 8-week-old Beagle puppies at doses of 1, 3, and 5X the maximum labeled dose (2.4 mg/kg sarolaner, 48 $\mu\text{g/kg}$ moxidectin, and 10 mg/kg pyrantel) at 28 day intervals for 7 treatments. Dogs in the control group received placebo. There were no clinically-relevant, treatment related effects on clinical observations, body weights, food consumption, clinical pathology (hematology, coagulation, serum chemistry, and urinalysis), gross pathology, histopathology, or organ weights. During the end-of-study ophthalmic examination, the following change was found: one 1X dog had retinal dysplasia (OS folds).

Ivermectin-sensitive Collie Safety: SIMPARICA TRIO was administered orally once at 1, 3 and 5X the maximum labeled dose to Collies that had been pre-screened for avermectin sensitivity. Dogs in the control group received placebo. Clinical signs (ataxia, muscle fasciculations, mydriasis) associated with avermectin sensitivity were observed in the 5X group. All dogs were completely recovered by the third day of the study.

Heartworm-Positive Safety:

SIMPARICA TRIO was administered orally at 1 and 3X the maximum labeled dose at 28 day intervals for 3 treatments to Beagle dogs with patent adult heartworm infections and circulating microfilariae. Dogs in the control group received placebo. Diarrhea occurred more commonly in the treated dogs and also more often in the 3X group compared with the 1X group. Two dogs (1 each in 1X and 3X) developed a fever less than 24 hours after the first dose. The fever may have been a transient reaction to a rapid microfilaria reduction. Both dogs recovered without treatment.

Field Safety: In three well-controlled field studies. SIMPARICA TRIO was used concurrently with other medications such as vaccines, antimicrobials, anthelmintics, antiprotozoals, steroidal and non-steroidal anti-inflammatory agents, anesthetic agents and analgesics. No adverse reactions were associated with the concurrent use of SIMPARICA TRIO and other medications

STORAGE CONDITIONS

Store at or below 30°C (86°F).

HOW SUPPLIED

SIMPARICA TRIO is available in six flavored tablet sizes (see DOSAGE AND ADMINISTRATION). Each tablet size is available in packages of one, three, or six tablets

Approved by FDA under NADA # 141-521

zoetis

Distributed by: Zoetis Inc. Kalamazoo, MI 49007 September 2019 51000400A&P

Heartworm Prevention In two well-controlled laboratory studies, a single oral dose of SIMPARICA TRIO was 100% effective in preventing the development of adult D. immitis in

call our own-a sanctuary of and crates are a perfect solution. Most viding her with her own "safe haven," Part of raising a healthy dog is prosorts. Your pet is no different We all need a special place to spending time in their crates. dogs can be easily trained to enjoy

sufficient social interaction, exercise. allowing your dog to wander through and an opportunity to eliminate benor unfair, provided your puppy has and potentially dangerous. gate, chew, and eliminate is unwise fore she is placed in the crate. In fact, the home unsupervised to investi-Crate training is neither cruel

Will Love Crates You and Your Dog

There are numerous benefits to crate

- Security far your dog training your dog:
- Prevention of household damage Safety for your dog
- (chewing, elimination, etc.)
- Help with housetraining
- Preparation for travel, boarding,
- and spending time alone Improved relationships (fewer
- problems mean less frustration
- and discipline)

How to Choose a Crate

collapsible crates with tray floors and stand up and turn around in-even Two basic styles of crates exist: metal that is large enough for your dog to plastic traveling crates. Look for one type of bedding on which your dog when she is full-grown. Provide the

> sider a pen or dog-proofed room for remnants than she is blankets or towflat, tightly woven carpet samples or your pup might be less likely to chew more than four hours at a time, conels. If your dog must be left alone for other option is an exercise pen that confinement rather than a crate. Anlikes to nap, but keep in mind that from a dog walker. about. Also consider a midday visit allows a little more room to move

time, such as the kitchen, den, or bedpunishment. or CD may help calm your dog and or furnace room. A radio, television, room, rather than an isolated laundry where your family spends a lot of location for the crate is in a room Finally, for the crate to remain a posimask noises that may trigger barking tive, enjoyable retreat, never use it for Because dogs are social, the ideal



Training Puppies

soon as possible. Place treats, toys, chews, or food in the crate to moby tossing pieces of kibble in the given a chew toy. Practice frequently can teach her to go into the crate on tivate her to enter voluntarily. You Introduce your puppy to the crate as command at feeding time or when

> command and point to the crate. will learn to enter when you give the "Go to your crate." Eventually she crate. Each time she runs inside, say

ercise, and elimination (when she is should be after a period of play, exyour puppy is separated from family close enough to hear her. You can excrate with a treat and a toy and close with a toy). Place your puppy in her ready to take a nap or quietly play members, but she should soon settle pect some distress the first few times the door. Leave the room but remain until the crying stops and release her cries or whines. Instead, ignore her the pup by letting her out when she down if she is tired. Never reward she is ready to relax or nap. that she has recently eliminated so had sufficient play and exercise and that you choose a time when she has won't settle in her crate, make sure before it starts again. If your puppy The first confinement session

needs to eliminate. something to keep her occupied. placing her in the crate so she has toy or food-dispensing toy when be sure to give her a favored chew return and release your pet before she in her crate. However, be certain to the amount of time your pet spends Are Good Dogs.") Gradually increase (See also our brochure "Busy Dogs As the crate training continues,

a toy. Crating your dog is really not when it's time to rest or to chew on may soon begin to enter voluntarily when your dog goes to her crate, she If you have a regular routine for

> pervise her directly. crate in a similar manner, allowing in a crib or playpen. You can use the toys in the crate when you can't suyour dog to take a nap or play with much different from placing a baby

try the following: the crate. If she continues to vocalize is quiet before you release her from Remember to wait until your dog

"no" command through an intercom Interrupt the behavior with a firm

placed near the crate. Gently throw an aluminum can

floor near the crate. containing a few pennies onto the

spray of air each time your dog barks. • Use a device that emits a sound or

excessive fear. not immediately successful or cause strong enough to stop the barking, but do not repeat them if they are These disruptions should be

Training Adult Dogs

training puppies, except that the ina baby gate to keep the pet in the or sleeping area with the door open crate by setting it up in the feeding Training adult dogs is similar to able bedding so she is likely to stay longer. Introduce your dog to the troduction period should be much Some dogs may adapt more quickly the door for short periods of time. to enter on her own. Add comfortthe crate so your dog is encouraged room. Place food, treats, and toys in Close the door to the room or use crate freely, you can begin to close inside and rest. Once she enters the

if you have crates available in more than one area of the home where the family spends time.

Some dogs do not deal well with confinement. These are usually pets who have not been properly crate trained, older pets that are used to more freedom, or pets with anxiety disorders. If your pet panics each time she is placed in her crate with signs of

drooling, destructive escape behavior, biting the crate (hard enough to break teeth), anxious vocalizations, or elimination, stop using the crate and consult your veterinarian.

The authors, Wayne L. Hunthausen, DVM, and Gary M. Landsberg, DVM, DACVB, dip ECVBM-CA, are practicing veterinarians and pet behavior consultants.

Crathe Reaven





2010 American Animal Hospital Association

PET BEHAVIOR RROCHIIPE SEDIES



BRUSH...BRUSH...BRUSH

It is best to start early with your puppy or kitten. Training is part of good hygiene. Your Pet may even be trained to love "toothbrush time."

Proper home dental care is important because plaque begins to accumulate within 24-48 hours after eating and begins to mineralize into calculus also called tartar. As this infection builds up, the bacteria spread under the gum line where the real damage occurs, such as the gums beginning to separate from its associated tooth.

- □ **STEP ONE:** When your pet comes seeking attention, pet and praise him/her and touch the muzzle and sides of the jaw. Reward with a treat. Play with his/her mouth for several weeks, working up to gently lifting the lips and rubbing the teeth with your finger. With a little patience, your pet will soon accept your attention. Use a lot of love and especially praise to gain his/her confidence. Let your pet lick the pet toothpaste off your finger or off the toothbrush. Choose a flavor of toothpaste he/she enjoys (we have several to choose from). You can use a training phrase like "brush time" to tell your pet you are going to give him/her some attention and a yummy treat.
- □ **STEP TWO**: After your pet has gained confidence in you, you will be able to rub the teeth and gums with your finger. Place toothpaste on the toothbrush and work on the long canines that are on each side (upper and lower) for several weeks, then work up to more teeth, concentrating on the large canines and the "cheek teeth," the large premolars on top and the large molars on bottom. These teeth tend to build up the most calculus due to the fact that salivary gland excretes minerals near these teeth. The lips do not have to be pulled back to see. You can brush with the mouth closed just going "by feel."

Minerals plus Bacteria=Calculus (the hard concrete like-substance that builds up on teeth)

□ STEP THREE: Once your pet accepts the handling of the mouth, the toothbrush on the front and back teeth, and sits patiently, you can work on brushing technique. Hold the toothbrush at a 45 degree angle to the tooth and brush from the gum line down to the tip of the crown. A light touch is all that is needed. If the toothbrush becomes bloody, we recommend an exam. Tooth brushing should not be painful. Chewing on the bristles during a tooth brushing session is fine and may help to remove plaque. If you have your pet trained to accept brushing of all "outside" surfaces of the teeth, you can progress to opening the mouth and brushing the tongue side of the lower teeth and inside or palate side of the upper teeth.

Take your time. Your pet will determine the speed at which you progress from step one to three. If your pet reacts negatively, stop and start at step one. Remember, you are training. Take it slowly with lots of praise, affection, and rewards.





6535 East Lake Sammamish Pkwy NE Redmond, WA 98052 Email: clientservices@redmondvet.com

Ph: 425-895-8888

BOARD-CERTIFIED VETERINARY DENTAL SPECIALIST Fraser Hale, DVM, FAVD, DipAVDC DENTAL AND ORAL SURGERY FOR PETS 519-822-8598 PHONE TOLL-FREE 866-toothvet (866-866-8483) 519-763-6210 FAX Toothvet.ca WEBSITE Toothvet@toothvet.ca EMAIL 159 Fife Road, Guelph, ON, N1H-7N8 MAIL ENTISTRY NE D C A N I NILE

Introduction:

Congratulations on your new puppy. Like most clients with a brand new puppy, you want to do all the right things so that you will have a healthy, happy and well mannered pet. You will be seeing a lot of your veterinarian over the next several months to ensure that your pet is properly immunized, is free of internal and external parasites, is getting the right food, is growing properly, is being trained properly and so on.

One area that requires close monitoring is the growth and development of the mouth and teeth. This is an area of the body where things can change very rapidly and if a problem goes unnoticed for some time, there may be permanent damage.

Puppies are usually eight to twelve weeks old when they are taken to their new homes. By this age, they should have a full set of primary or deciduous (baby, milk) teeth. Each quadrant of the mouth should have three incisors at the front, one long, sharp canine tooth and then three pre-molar teeth behind the canines.

Most of the permanent or adult teeth start as buds forming at the root tip of the deciduous teeth, so if a deciduous tooth fails to develop by twelve weeks of age, likely the permanent tooth that should follow will not develop either.

Starting around three months of age, the developing permanent incisors should be erupting, and as they do, they should cause resorption of the roots of the deciduous incisors. Therefore, the deciduous teeth become loose and fall out. This exfoliation of the deciduous teeth often goes unnoticed by the owners as the tiny crowns of the

baby teeth are lost in toys or are swallowed. Next, the permanent canines start to erupt between four and five months of age, followed by the premolars and the molars. All the permanent teeth should have erupted by seven months of age in most dogs. Giant breeds sometimes develop more slowly.

If everything went according to the plan, by seven or eight months of age, all deciduous teeth will be gone, all permanent teeth will have erupted into the correct position and there will be no swelling or inflammation of the gums. Unfortunately, things do not always go according to the plan.

Persistent Deciduous Teeth:

A common problem, particularly in small breeds, is persistence of deciduous teeth, especially the canines. The exact mechanisms for this are rather complex, but it is enough to know that it is usually an inherited problem in which the permanent tooth erupts beside the deciduous and so does not cause the deciduous root to resorb. Now we have two teeth occupying a space that was designed for just one tooth. This over-crowding can lead to serious and painful orthodontic problems such as lower canine teeth biting into the roof of the mouth.

Another problem with retained deciduous teeth is that the permanent and deciduous teeth are often so close together that there is no gum tissue between them to keep out infection. Therefore, debris and bacteria have easy access to the tooth sockets and deep-seated periodontal disease rapidly develops.

The rule to follow is that never should there be a deciduous tooth and its permanent replacement visible in the mouth at the same time. If the permanent has broken through the gum and the deciduous tooth is still in place, the deciduous

tooth should be extracted immediately. This will then allow the permanent to erupt into its desired location without crowding and with a healthy collar of protective gum tissue.

1-

Waiting until it is time for your puppy to be neutered is a bad idea. By then, the permanent tooth has erupted considerably and will likely be in the wrong place. Also, there may already be deepseated periodontal disease by then.

It is considered by many to be unacceptable to perform an extraction at the same time as a sterile surgical procedure. During extraction, bacteria in the mouth will have direct access to the blood stream. These bacteria can then travel to all parts of the body, including the other surgical site, where they may colonize the traumatized tissues and suture materials, leading to post-operative infection. It is safer for the animal and provides a better chance for normal development if retained deciduous teeth are extracted as soon as they are noticed.

Many puppies are given their final puppy vaccine at four months of age and then are not seen by their veterinarian again until neutering at six months of age. Therefore, it will be your job to check the mouth at least weekly to ensure that deciduous teeth are falling out properly, as the permanents erupt.

Fractured Deciduous Teeth:

Another common problem in puppies is fracture of deciduous teeth, especially the canines. As you will find out (if you haven't already) puppies do a lot of chewing. Therefore, it is not surprising that these delicate teeth are prone to damage. When a deciduous tooth is broken, there is almost always exposure of the pulp of the tooth. Pulp is the soft tissue inside the tooth which contains many blood vessels and nerves.

Once exposed to oral bacteria, the pulp becomes infected and inflamed, causing considerable pain to the pet. After a time (several days) the pulp starts to die and the pain subsides. Now the tooth is full of dead pulp and bacteria. The bacteria and their toxic waste products leak out through the root tip and cause infection and inflammation around the root tip. That in itself is bad enough, but remember that the permanent tooth is trying to develop right

beside the tip of the root of that dead deciduous tooth. The result can be a permanently deformed permanent tooth.

Another factor to keep in mind is that a growing puppy is learning all the time. If there is an ongoing source of dental pain, the puppy may grow up being wary of anyone handling its mouth and head. This can lead to behavior problems later in life.

As with retained deciduous teeth, the best thing to do is have a fractured deciduous tooth extracted as soon as it is noticed. Early treatment gives the best chance for the prevention of permanent dental and behavioral problems.

Interceptive Orthodontics:

Some puppies develop orthodontic problems early in life. The most obvious problems are when the lower jaw is either too long or too short. This can lead to deciduous teeth biting in to oral soft tissues, causing pain. Also, abnormal dental interlocks can prevent proper growth of the jaws so the short jaw is prevented from "catching up". Early intervention through Interceptive Orthodontics is the treatment of choice. This usually involves extraction of some deciduous teeth to remove the source of oral trauma and to allow unhindered jaw development. Many severely affected puppies will also have problems when the permanent teeth erupt and will require further dental work in their first year of life.

Conclusion:

The main lesson from all of this is to be observant of your puppy's mouth and teeth and to seek veterinary advice as soon as a problem or question arises. Waiting does no good and can do much harm.



Recommended Preventative Dental Care Products

Availability:	Product Name:	Product Category:	*VOHC Approved Claim
	CANINE	Products:	
	CET VeggiDent	Treat	Tartar
	OraVet Dental Hygiene	Treat	Plaque, Tartar
	Chews		
Available at	Dog::ESSENTIAL Healthy	Water Additive	Plaque
Brookfield	Mouth		
Veterinary Hospital	CET Toothpaste and	Toothpaste	*NOT VOHC APPROVED*
	Toothbrush		*Only to oth pastes approve d
			are HealthyMouth (not available) and Petsmile (ONLY
			in dogs)*
	Science Diet Oral Care	Diet	Plaque, Tartar
	Eukanuba Adult	Diet	Tartar
	Maintenance Diet		
	Purina Busy Hearty Hide	Treat	Tartar
	Chews		
	Tartar Shield Soft Rawhide	Treat	Tartar
Available OTC	Chews		
Available OTC	HealthyDent, Bright Bites,	Treat	Plaque, Tartar
	and Checkups Chews		
	Milk-Bone Brushing	Treat	Tartar
	Chews		
	VetIQ Minties Medium	Treat	Tartar
	Dental Treat		
Can be special-	Purina Dental Chewz	Treat	Tartar
ordered at	Hill's Prescription Diet T/D	Treat	Tartar
Brookfield or set up	Purina Veterinary DH	Diet	Tartar
for home delivery	Royal Canin Dental	Diet	Tartar
	-	Products:	
	Cat::ESSENTIAL Healthy	Water Additive	Plaque
	Mouth		
Available at	CET Toothpaste and	Toothpaste	*NOT VOHC APPROVED*
Brookfield	Toothbrush		*Only to oth paste approved
Veterinary Hospital			for cats is HealthyMouth (not
		Treat	a va ilable)*
Con he special	CET Oral Hygiene Chews	Treat	Tartar
Can be special- ordered at	Royal Canin Feline Dental	Diet	Plaque
	Diet	Ċ.	
Brookfield or set up	Hill's Prescription Diet T/D	Diet	Plaque, Tartar
for home deliver	Purina Veterinary DH	Diet	Plaque, Tartar
Available OTC	Science Diet Oral Care	Diet	Plaque, Tartar

Toys and Chews Safe for Teeth



****Note**: Any chew toy can potentially cause harm and play time should be supervised. ******



Recently, there have been many reports regarding the link between grain-free diets and the development of heart disease and heart failure in dogs. As more information is acquired, we have discovered that this is caused by not only grain-free diets, but also exotic meat diets, boutique diets, and diets using peas or legumes as the primary source of carbohydrate. The veterinary nutrition service at Tufts Veterinary School has a great summary of what we know so far: <u>http://vetnutrition.tufts.edu/2018/11/dcm-update/</u>

Allergies in dogs are common, but most dogs have flea allergies, environmental allergies (pollen, dust mites, plants) or dietary protein allergies (chicken, beef). *If you suspect your dog may have allergies, we would love to discuss prevention and treatment with you.* Unless your dog has a documented grain allergy or other disease process, which is very rare, it is not necessary to feed a grain-free food. There is no documented medical benefit for grain-free diets. Many dog food companies are creating an unsafe "niche" selling food which could be harming your pet.

In very recent news, the FDA has published a study naming not only the most affected breeds of dogs (although ANY dog can get this), but even the top brands that are contributing to this problem. Here is the link for a very thorough assessment to date: <u>https://www.fda.gov/animalveterinary/newsevents/ucm630993.htm</u>

We realize how difficult it can be to choose the right food for your dog and know there are hundreds of food options available right now. In order to help you choose the best food for your pet, we want to offer the following resources and guidelines.

1. Check that your pet food company follows the recommendations put forth by The World Small Animal Veterinary Association <u>https://www.wsava.org/WSAVA/media/Arpita-and-Emma-editorial/Selecting-the-Best-Food-for-your-Pet.pdf</u>

**Note the first question on this list! It asks whether or not this food company employs a "full time QUALIFIED nutritionist". Testimonials by people who are passionate but not educated in nutrition do not count.

- 2. Choose a food that is AAFCO approved. The Association of American Feed Control Officials (AAFCO) helps define and standardize pet food labels and diets to make sure formulas are safe for the intended use. For more information on AAFCO: <u>https://www.aafco.org/Consumers</u>
- 3. Because this issue is so complicated and multi-factorial, we recommend feeding a diet that's been formulated based on safety and efficacy of long term feeding trials. There are only four companies that have performed feeding trials: Royal Canin, Hill's/Science Diet, Purina, and Iams/Eukanuba. Therefore, we recommend selecting a food made from one of these companies. If you choose another company, double check the above recommendations (1& 2) to ensure the food follows recommended guidelines.

In summary, we at Brookfield are recommending against grain-free diets due to the potential heart disease associated with these diets. We want to help you continue to take amazing care of your dogs and much of that care starts with proper nutrition. Please call to schedule an appointment today if you would like to further this discussion!

**Disclaimer- science and medicine are constantly evolving. We will continue to provide additional recommendations as new data emerges.



WSAVA Global Nutrition Committee: Recommendations on Selecting Pet Foods

Factual information must be provided on pet food labels but it is important to be aware that the label is also a promotional tool to attract pet owners. This means that much of the information provided - including the ingredient list and use of unregulated terms such as 'holistic'; 'premium' or 'human grade' - is of little practical value in assisting nutritional assessment. The veterinary team plays a vital role in helping pet owners make informed decisions based on two key pieces of information:

A. The manufacturer's name and contact information. This allows a member of the veterinary team or the pet owner to contact the manufacturer to ask the following questions:

- 1. Do you employ a full time qualified nutritionist? Appropriate qualifications are either a PhD in animal nutrition or board-certification by the American College of Veterinary Nutrition (ACVN) or the European College of Veterinary Comparative Nutrition (ECVCN). What is this nutritionist's name and qualifications?
- 2. Who formulates your foods and what are his/her credentials?
- **3.** Are your diets tested using AAFCO feeding trials or by formulation to meet AAFCO nutrient profiles? If the latter, do they meet AAFCO nutrient profiles by formulation or by analysis of the finished product?
- 4. Where are your foods produced and manufactured?
- **5.** What specific quality control measures do you use to assure the consistency and quality of your ingredients and the end product?
- 6. Will you provide a complete nutrient analysis for the dog or cat food in question? (Can they provide an average/ typical analysis, not just the guaranteed analysis which is only the minimums or maximums and not an exact number)? You should be able to ask for any nutrient e.g. protein, phosphorus, sodium, etc. - and get an exact number. This should ideally be given on an energy basis (i.e. grams per 100 kilocalories or grams per 1,000 kilocalories), rather than on an 'as fed' or 'dry matter' basis which don't account for the variable energy density of different foods.
- **7.** What is the caloric value per gram, can, or cup of your foods?
- **8.** What kind of product research has been conducted? Are the results published in peer-reviewed journals?

If the manufacturer cannot or will not provide any of this information, owners should be cautious about feeding that brand.

B. In some countries, the AAFCO adequacy statement is included on the label. This statement confirms three important facts:

- Whether the diet is complete and balanced. All overthe-counter foods should be complete and balanced. If the statement reads 'for intermittent or supplemental use only,' it is not complete and balanced. That may be acceptable if it is a veterinary therapeutic diet and is being used for a specific purpose - e.g. in a case of severe kidney disease - but should be avoided in overthe-counter pet foods.
- 2. If the food is complete and balanced, what life stage is it intended? AAFCO provides nutrient profiles and feeding trial requirements for growth, reproduction, and adult maintenance, but not for senior/geriatric pets. A food that is formulated to meet the AAFCO profiles for all life stages must meet the minimum nutrient levels for both growth and adult maintenance.
- **3.** If the food is complete and balanced, how did the company determine this? Labels may include one of two statements regarding nutritional adequacy.
 - "[Name] is formulated to meet the nutritional levels established by the AAFCO Dog (or Cat) Food Nutrient Profiles for [life stage(s)]." (Analysis of food.)
 - "Animal feeding tests using AAFCO procedures substantiate [Name] provides complete and balanced nutrition for [life stage(s)]." (Feeding trial evaluation of food.)

Formulated foods are manufactured so the ingredients meet specified levels, either based on the recipe or on analytical testing of the finished product, without testing via feeding trials. While feeding trials help to test for the food's nutritional adequacy, the use of feeding trials does not guarantee that the food provides adequate nutrition under all conditions. It is important to ensure that the criteria in section A also help to ensure that the food is made by a reputable and knowledgeable company with strict quality control measures.



15 POISONOUS PLANTS FOR PETS © University of Illinois Extension





Humane Dog Trainer <u>Resourc</u>es

Puppies + Basics							
Seattle Puppy Works	info@seattlepuppyworks.com						
Beyond the Tail Dog Training	www.Beyondthetaildogtraining.com						
Kokoro Dog	202-341-1210						
Fear + Reactivity							
Dog Matters	206-785-9590						
Thrive Canine Behavior	425-246-1460						
Companion Animal Solutions	800-920-2858						
Dogs + Children							
Dogs Day Out	206-706-4875						
Wiggles & Woofs	206-920-3023						
Thrive Canine Behavior	425-246-1460						
Multi-Dog Household							
Eric w/ Companion Animal Solutions	800-920-2858						
Gentle Ways Dog Training	253-632-6310						
Laying Down the Paw	206-910-6057						
Socialization							
Dogs Day Out	206-706-4875						
Seattle Puppy Works	info@seattlepuppyworks.com						
Crawford Canine Connection	425-330-9639						
Separation Anxiety							
Tullys Training	925-603-3647						
Ardent Dog	kelly@ardentdog.com						
Dog Matters	206-785-9590						
Agility							
Little Furry Things	206-428-6259						
A Savvy Dog Training	206-883-1149						
BlueHoula Training/Argus Ranch	206-295-4730						

Animal Emergency Hospitals





Animal Emergency & Specialty 12305 120th Ave NE , Suite K Kirkland, WA 98034 Ph # 425-827-8727 www.aesvets.com

Open 24/7

Animal Medical Center 14810 15th Ave NE, Suite B

Shoreline, WA 98155 Ph # 206-204-3366 https://animalmedicalspecialists.com/ **Open 24/7**



Seattle Veterinary Specialists

11814 115th Ave Ne Bldg. J Kirkland, WA 98034 Ph # 425-823-9111 <u>www.svsvet.com</u> ** Emergency open 24/7, Various Specialists on staff **



Animal Critical Care Emergency Hospital (ACCESS)

11536 Lake City Way Ne Seattle, WA 98125 Ph # 206-364-1660 x 1 www.criticalcarevets.com ** Open 24/7, Various Specialists on staff **

Aerowood Animal Hospital 2975 156th Ave Se Bellevue, WA 98007 Ph # 425-746-6557 www.aerowoodanimalhospital.vetsuite.com ** Open 24 Hours for emergencies **

ACCESS (Renton Location)

4208 Lind Ave SW Renton, WA 98057 PH # 206-364-1660 x 2 www.criticalcarevets.com ** Open 24 hours **

Veterinary Specialty Center

20115 44th Ave West Lynnwood, WA 98036 Ph # 425- 697-6106 <u>www.vcavsc.com</u> ** Open 24 hours **

Pilchuck Veterinary Hospital

11308 92nd St Se Snohomish, WA Ph # 360-568-9111 <u>www.pilchuckvet.com</u> ** Emergency Open Mon- Friday 6pm –8am & Weekends**

Animal Emergency Hospital Of Redmond

16421 Cleveland St. Suite H Ph # 425-250-7090 www.aehredmond.com ** Open 24 hours **

VETSOURCE: BROOKFIELD'S ONLINE PHARMACY

Through our online pharmacy, we are able to provide you with:

- Compounded medications
- Auto-shipments for prescription food
- Pre-approved medications to make ordering easier
- Lower prices for some products
- Free shipping for prescription food or orders over \$50

All products are direct from the manufacturer so quality is guaranteed *All information provided is kept confidential and used strictly for order and shipment purposes*

HOW TO BEGIN:

- You can access this pharmacy by going onto our website, <u>http://www.redmondvet.com/pharmacy.php</u>
- Begin by selecting the Vet Source "SHOP NOW" button
- You can log in or create an account under the "My Account" button in the upper right-hand corner
 We recommend using the same preferred email address as you use with us

If you have any questions about how to access this pharmacy after completing these steps, please don't hesitate to contact us!

Sincerely, Brookfield Veterinary Hospital (425) 895-8888

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Through our online pharmacy, we are able to provide you with:

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Sincerely, Brookfield Veterinary Hospital (425) 895-8888

				TAB	LE. PET INSURAN	CE PRIMER: PO	LICY FEATURES E	BY COMPANY			
	AKC Comprehensive Medical and Wellness Combined	ASPCA No lifetime benefit cap	Embrace Ability to mix and match benefit limits, reimbursement rates, and deductibles	Healthy Paws One plan for coverage, with no set limits	Pets Best Three plans are available with wellness benefits available through a rider. No upper age limit to enroll.	PetFirst Healthcare Offers both customized and standard plans. Family Plans up to 3 animals.	Petplan "Covered for Life" Guarantee	Purina Care Three plans ranging from accident only to medical plus wellness.	Trupanion No incident, annual, or lifetime limits.		24 PetWatch 8 (Dog) and 10 (Cat) pre- set programs with up to 100% reimbursement.
C	Offering Policies in	n the U.S. since:					Offering Policies in	the U.S. since:			
	2003	2006	2003	2010	2005	2005	2005	2008	2008	1982	2008
C	Deductible Range										
	\$75 - \$125 Annual	\$100 - \$500 Annual	\$100 - \$1,000 Annual	\$50 - \$500 Annual	\$0 - \$1,000	\$50 - \$500 per inci- dent	\$50 - \$200 per incident	\$100 - \$1,000 Annual	0 - \$1,000 per incident	\$100 - \$1,000 annual	\$50 - \$200 per incident
Ν	Aaximum Reimbur	sement of Invoice					Maximum Reimburs	ement of Invoice	1		
	90%	90% of usual and customary	90%	90%	100%	90%, 80% senior pets	100%	80%	90%	Defined Payment Sched- ule	100%
L	ifetime Limit	j	1		1	1	Lifetime Limit	1	1		
	\$13,000	None	\$50,000	None	\$200,000	None	None	None	None	Not Defined	\$72,000 illness, unlimited accident
4	Annual Limit						Annual Limit	1			
	None	None	\$15,000	None	\$20,000	\$15,000	20,000	\$20,000	None	\$14,000	None \$6,000
1	ncident Limit		1				Incident Limit	1			
	\$5,000	\$7,500	None	None	\$14,000 (Aetna underwritten plans)	\$3,500	None	None	None	Defined Payment Sched- ule	\$6,000
h	ncidents Are Cons	sidered:	1				Incidents Are Consi	idered:	1	uio	
	N/A - Annual limits & deductible	Single accident or illness during the policy period	Any given accident or illness	N/A	Specifically identifiable accident or illness. Recurring and/or chronic conditions are considered as one incident.	Specific illness or accident. Multiple incidents in a single visit are possible.	Deductible is applied "per condition," per policy year.	N/A, no incident limits	"Condition- Any manifes- tations of clinical symp- toms consistent with a diagnosis or diagnoses, regardless of the number of incidents or areas of the body affected"	N/A	Condition that affects one of 12 body systems
A	Are Exam Fees Co	vered?					Are Exam Fees Covered?				
		Yes, as long as "usual and customary"	Yes	No	Yes	Yes (those deemed usual and customary)	Yes	Yes	No	Yes	Yes
k	s Specialty Covera					usual and customary)	Is Specialty Coverage	ge Eligible?			
		Yes, as long as "usual and customary"	Yes	Yes	Yes	Yes	Non-life threatening care capped at 80%	Yes	Yes	Yes	Yes
A	Are Alternative & H	Iolistic Treatments E	ligible?				Are Alternative & Ho	listic Treatments Eligible?)		
	No	Yes	Yes	No	Available	Yes	Yes	Yes	Available	Yes	Yes
A	Are Diets Covered	?					Are Diets Covered?				
	No	No	No	No	No	Available as a Rider	No	No	Yes	?	25% of prescriptions diets
A	Are Wellness Servi	ices included?	1		1	1	Are Wellness Servic	es included?	1		0.000
8	30% of preventive care	spending plan	Rewards Program	No	Available	Yes	No	Available	No	Available	No
Δ	Are Congenital and	d Hereditary Conditio	ons Eligible?			1	Are Congenital and	Hereditary Conditions Elig	gible?		
	No	Excluded from base pack- age unless included as a rider	Yes	Yes	No	Available	Yes	Yes	No	No	No
H	low are Cruciate I	Benefits Managed?					How are Cruciate Be	enefits Managed?			
D	lescribed as "expanded ligament coverage", liagnostics are covered beginning day 1 of policy.	12 month waiting period	Yes, however a previ- ous occurrence in one leg is considered pre- existing in the other limb.	ous occurrence in one	Twelve month waiting period before coverage. Injury in one limb does NOT exclude other limb from eligibility.	12 month waiting period for coverage	Six-month exclusionary period on cruciate and	Cruciates are considered an illness and an occurrence during the waiting period will be considered a pre-existing condition for both limbs.	Yes, however a previous occurrence in one leg is considered pre-existing in the other limb.	12 month waiting period before eligible.	Yes, however a previous occurrence in one leg is considered pre-existing in the other limb.
V	Vhat You Should K	Now Before Buying					What You Should Kn	now Before Buying			
(Exclusions include diabetes, chronic renal failure, cardiomegaly,	In 3 of the 4 plans, dogs who are > 9 years, and cats > 11 years at initial enroll- ment are not eligible for Continuing Care, which cov- ers ongoing conditions.	Prescription Drug Coverage is additional		Recurring or chronic conditions are treated as one incident and therefore subject to the per incident limit, not the lifetime limit	Limits and policies reset each year upon renewal. Extra rider is required for ongoing chronic conditions or will be deemed pre- existing.	Benefits from Care at Specialty and ER facilities are capped at 20% (regardless of plan) unless	Cruciates, patella, GDV, and	Deductibles are applied per incident, which means multiple conditions diag- nosed in a single exam (Diabetes and Cystitis) equals payment of multiple deductibles.	benefit schedule. Reimbursements are pre- set and independent of	Benefits are grouped by body system, and do not reset with each new occurrence.

Pet Grooming

<u>A Fur Affair Inc</u>

425-868-7155 648 228th Ave NE Sammamish, WA 98074 www.afuraffair.net

Best Friends Grooming Salon (425) 562-9448 2205 140th Ave NE Bellevue, WA 98005 Bestfriendsbellevue.com

<u>A Plush Pet</u>

(425) 454-1789 12005 NE 12th Bellevue, WA 98005 www.aplushpetgrooming.com

<u>Der Pet Haus</u> (425) 746-7990 15015 Main St # 120 Bellevue, WA 98007 www.derpethaus.com

<u>Pup Scrub</u> (425) 823-9757 9718 NE 119th Way Kirkland, WA 98034 www.pupscrubonline.com

<u>Scruff to Fluff</u> (425) 827-3144 222 Central Way Kirkland, WA 98033 www.scrufftofluffkirkland.com

<u>Tesslan Dog Spa</u>

(425) 747-4731 14210 NE 20th St Bellevue, WA 98007 www.tesslanddogspa.com

<u>All Things Pawsitive</u> (425) 443-9684 7265 W Lk Sammamish Pkwy NE Redmond, WA 98052 www.allthingspawsitive.com

Mobile Grooming

<u>4 Paws Mobile Grooming</u> (425) 888-7297 www.4pawsmobilegrooming.com *Serves Marymoor Park*

<u>Pet-Go Mobile Grooming</u> (425) 443-9684 www.pet-gomobile.com





Pet Boarding & Sitters



Boarding:

Paradise Pet Lodge 10324 Paradise Lake Road Woodinville, WA 98077 425-483-3647 www.paradisepetlodge.com * Themed kennels for cats & dogs!*

Cascade Kennels 20005 178th Ave Ne Woodinville, WA 98072 425-483-9333 <u>info@cascadekennels.com</u> www.cascadekennels.com

Dog Works Ranch 25827 NE 80th St Redmond, WA 98053 425-643-2516 www.dogworksranch.com *Boarding and day care*

Dogs -A- Jammin <u>www.dogs-a-jammin.com</u> 425-558-4976 *Kennel-free boarding*

Camp Charlie 29337 Northeast Big Rock Road Duvall, WA 98019 425-788-2008 www.campcharlie.com *Kennel-free boarding & day care* Bone -A- Fide Dog Ranch 7928 184th ST SE Snohomish, WA 98296 206-501-9247 www.bone-a-fide.com *Kennel-free boarding & day care*

Roscoe's Ranch 10526 221st Pl SE Snohomish, WA 98296 360- 668-6139 www.roscoesranch.com *A portion of profits are donated to

A portion of profits are donated to PAWS Animal Shelter

Pet Vacations Various Locations 425-644-7387 <u>www.petvacations.net</u> *In-home boarding, pick your locations!*

Cozy Cat Boarding & Grooming 17809 WA-9 #3 Snohomish, WA 98296 360-863-2549 www.cozycatboarding.com

Sitters:

Windance Eastside 888-946-3738 www.windancepetsit.com Bellevue Pet Sitters 425-738-1176 www.bellvuepetsitters.com Bebe Pet Sitting Redmond 425-998-7870 www.bebepetsitter.com