Veterinary Practice News
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Food for thought

Supporting optimal health in pets

Plus

- A nutritionist's guide to food options
- Can you spay pets in heat?

CHANGE THEIR BODY, CHANGE THEIR DIET.

INSIDE:

Are spayed & neutered pets missing key nutrients?

It's more than just a change in anatomy

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Contents

A GLOBAL FOCUS

World Spay Day takes place every February on the fourth Tuesday of the month. In 2023 it falls on **February 28**.

Additionally, the United States recognizes **February** as **National Spay/Neuter Awareness Month**.

WHAT HAPPENS HERE CHANGES THEIR METABOLISM.

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Rethinking "just feed less" to reduce calorie intake

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By Laura Gaylord, DVM, DACVIM (Nutrition), Board Certified Veterinary Nutritionist® , Fuquay Varina, N.C.

One of the most common questions we are asked as veterinarians is, "How much should I feed?"

Given that currently >60percent of our clients' pets are overweight, this question is critically important.[1] As veterinarians we need to ask, "How can we support our clients in choosing the best foods so that they can feed their pets appropriately?" At each exam we might assess the pet's weight and body condition score, then, when pressed for time, simply say, "Just feed less." Yet this answer may not be providing the best advice for the pet or the client.

Eighty-five percent of our dogs and 93 percent of our cats are spayed and neutered2

While spaying and neutering is advocated for virtually all dogs and cats, this intervention does have consequences. It is the largest risk factor for obesity for our pets.[3,4] This happens primarily through a decrease in metabolic rate and an increase in desire for food intake.[5-7] The removal of sex hormones can result in an increased appetite, up to 63percent in dogs and 23percent in cats.[8,9] If no changes in diet are instituted, weight gain is likely.

"Just feed less" may ignore the amount of food being fed and the diet type

This is critical information needed to confirm that the pet is consuming the proper amount of food and the best diet appropriate for its life stage. Can the diet be safely reduced in quantity and still meet nutritional needs? We need to collect information about other foods, treats, etc., that are offered, as these could be unbalancing the total daily diet.

"Just feed less" may create hungry pets

Hungry pets beg. Food and treats are an expression of our love for our pets and an important part of the human-animal bond. Not acknowledging this and failing to have strategies to manage begging may result in clients giving in to their pet. As "food is love," "just feed less" may feel like we are giving less "love." Reducing the volume of food fed reduces the volume of food within the stomach, which is a known trigger for satiety.[10,11] With average diets, less food also means reducing intakes of protein (amino acids) and fiber, two nutrients that have been confirmed to help reduce voluntary food intakes and begging behaviors in dogs.[12,13]

"Just feed less" may put pets at risk of nutrient deficiencies

Studies have confirmed that restricting adult maintenance diets and weight management diets will result in nutrient intakes that fall below recommended guidelines from the Association of American Feed Control Officials (AAFCO) and the Recommended Allowances from the National Research Council (NRC).[14-17]

Changing puppies or kittens from growth diets directly to adult foods while still within their growth phase is not an optimal recommendation. Diets intended to support growth have been specifically formulated to provide the necessary higher levels of amino acids, fatty acids, vitamins and minerals, even up to two to three times that provided in adult maintenance foods. This means that if we select an adult diet prematurely when growth is still occurring, we are potentially underfeeding nutrients needed for optimal development.[18]

It is often difficult to clinically appreciate the effects of nutrient deficiencies in our pets unless they are severe.

Protein or amino acid deficiencies may manifest as poor muscling and skin/haircoat, poor immune function and even heart disease (dilated cardiomyopathy). Insufficient intake of omega-3 fatty acids may result in poor nervous system and/or retinal development as well as suboptimal trainability in young dogs. Severe mineral deficiencies may result in suboptimal growth, impacts on bone metabolism, pica, muscle dysfunction, anemia and even fluid imbalances. Vitamin deficiencies may cause poor growth, impaired bone metabolism, poor skin, mucous membrane and haircoat quality, anemia, nervous and cardiovascular system dysfunction, impaired clotting as well as many other adverse effects.[19,20] The best option is to ensure a proper diet is fed, with adequate nutrient levels included to support growth to its completion.

How then do we intervene and do better?

It starts at the puppy and kitten visits. We need to train our technicians and nurses to take good diet histories (what food, how much, how many treats/snacks, etc.) and document this at every visit. Make nutrition important! Just having the discussion acknowledges that we care about nutrition, that we are interested and that we understand the powerful tools that nutrition and food are in our pets' lives. Train

Our goal as veterinarians is to support optimal health in pets throughout every life stage.

staff to check body weight when the pet is present for any visit, and we can also teach them to be excellent at body condition scoring and muscle mass scoring. Document this information consistently in the medical record and follow it throughout the pet's life. We can also track diet changes and how these have impacted the pet's health over its lifetime.

Train clients to do body condition scoring

Making clients proactive in monitoring their pets can prevent excessive weight gain or at least catch it before it is affecting a pet's health status. Start talking about calories or kcals in foods early and often so that clients will monitor this and appreciate how much their pet is eating. Adjust feeding amounts according to changes in body weight. Give specific guidelines and recommendations for exact foods and feeding amounts. Suggest a defined limit on treats. Teach clients that they should use a gram scale to weigh foods rather than cup volume measurements, especially for smaller dogs and cats.

Most importantly, choose diets that set us up for success

Feeding a diet that provides a lower caloric density, higher protein and higher fiber level will promote satiety, reduce potential begging behaviors and may prevent weight gain. A critical time to assess diet and feeding amounts is at the time of spay or neuter. It is our obligation as veterinarians to educate our clients on the changes that have occurred with this procedure. We can put steps in place to keep pets healthy and at an optimal body weight.

Key factors of weight management success are compliance and follow-up for any recommendations made concerning diet [21-23]

This means we must have continued interaction with our clients after recommendations are given to ensure they understand and are following our recommendations moving forward. Scheduled rechecks can enhance

our ability to keep clients on track as well as build our veterinary client-patient relationship. Keeping in touch with clients often will greatly improve success in achieving our weight management goals.

Our goal as veterinarians is to support optimal health in pets throughout every life stage

Educating clients about weight management and choosing the best diet for the pet is part of optimal wellness care. We can proactively choose diets at the time of spaying and neutering that provide optimal nutrient levels such as protein and fiber to promote satiety, reduce begging and prevent weight gain, rather than telling clients to "Just feed less." This intervention alone will reduce that pet's risk of disease conditions associated with obesity, improve quality of life and potentially extend their life span by avoiding weight gain. ●

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Spayed and neutered pets enjoy many health and behavioral benefits,[1] the permanent metabolic shift that occurs post-procedure can decrease a pet's energy and increase appetite.[2] The risk of becoming overweight or obese also increases — doubling in dogs[3] and tripling in cats.[4]

For puppies and kittens, traditional weight maintenance solutions—feeding them less or switching them to an adult or low-fat diet—can leave them hungry or even deprive them of the essential nutrients necessary for healthy growth.[2]

How can veterinarians help balance the nutritional needs of still-growing spayed and neutered pets with their increased risk of obesity?

EXERCISE
Recommending frequent walks and active games can keep pets active.

BODY CONDITION SCORE
Teach pet owners to use their pet's body condition score to monitor weight changes.[5]

LIMIT TREATS
Help pet owners choose treats that make up less than 10% of their pet's diet.

DIET CHANGE
Recommend a high protein, fiber-rich diet that promotes healthy muscle growth while also increasing feelings of satiety.

VETERINARY HPM® Junior Diets are designed to meet these unique needs by nourishing healthy growth and supporting a healthy metabolism.

To learn more about VETERINARY HPM Junior Diets, contact your Virbac representative, or visit vet-us.virbac.com.

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Photo by Hanna Boydell, Imagery Unleashed Photography (imageryunleashed.ca), Orangeville, Ont.

Can animals in heat be SPAYED?

Though easier and more common than years past, spaying a dog in heat still carries some risk

By Don Vaughan

In decades past, spaying animals in heat was a somewhat controversial procedure within the veterinary community. However, attitudes have changed greatly in recent years, to the point where ovariohysterectomy during estrus is now relatively commonplace—though it does require a steady surgical hand, experts observe.

There is no solid evidence complications are higher when an animal is in heat, and with good surgical technique, the outcome is anticipated to be the same. The published guidelines from the Association of Shelter Veterinarians also considers it a safe procedure," says Sara A. Colopy, DVM, PhD, DACVS, clinical assistant professor, small animal general surgery, University of Wisconsin School of Veterinary Medicine in Madison.

Dr. Colopy prefers to spay when a patient is not in heat, but notes estrus would not prevent her from performing the procedure. "As part of our training program, our students frequently spay animals in heat as we do not have the ability to select our patient population," she reports.

Technique differences

There are slight differences in technique between spaying an animal in heat and one not in heat, Colopy notes. For example, spaying while the patient is in heat often requires more time, based on the skill level of the surgeon, as well as more suture materials, depending on the method.

One of the most common concerns performing a spay on a patient in heat is the vascularity of the uterus, Colopy says. "There is a perception there is increased risk for hemorrhage when the animal is spayed during heat," she explains. "During proestrus/estrus, vasodilation occurs, increasing the blood supply of the uterus. The vessels appear more numerous and larger in surgery. This can be daunting for a less experienced or less confident surgeon.

"The tissues are also potentially more friable, and thus handling the tissues delicately is important to avoid accidental tearing," Colopy adds. "Spaying a dog in heat may push the comfort zone of the veterinarian performing the procedure. The specific consequences of this are difficult to measure or assess, but likely contribute to increased time and potential for error."

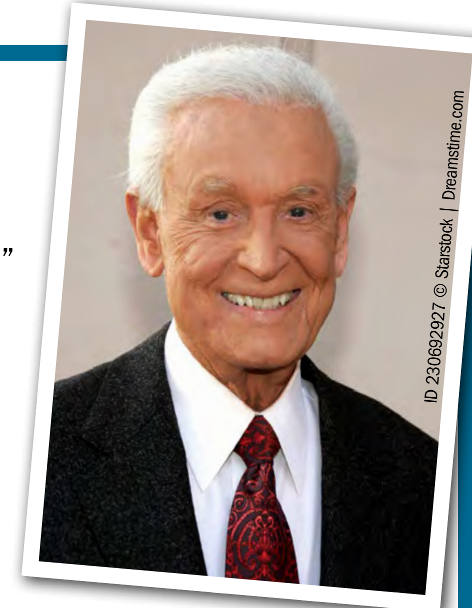
Indeed, a surgeon's skill plays a significant role when it comes to performing a spay on an animal in heat, confirms Lauren LaRue, DVM, chief of community surgery service at the University of California, Davis (UC Davis), Veterinary Medical Teaching Hospital. "I believe the risk of bleeding more with an in-heat dog could be real in the hands of an inexperienced surgeon," she observes. "But in savvy hands, the risk is really nonexistent. In fact, dogs in heat often have more elastic reproductive tracts; that makes it easier to exteriorize them out of the incision, a benefit."

A variety of factors appear to have played a role in the growing acceptance of spay during estrus. "For one, practices are larger than they used to be," Colopy says. "General practitioners in some larger practices have the option of performing surgery or not, and, thus, veterinarians with more confidence and a higher surgical caseload are more likely to feel comfortable spaying a dog in heat."

Advancements in technology and standard of care also play a role, Colopy notes. More practices have access to cautery and a diverse array of surgical instruments and suture materials than previously, and practices are larger with more potential options for mentorship.

"In addition, research and surgical knowledge have advanced, as well as access to this information via the internet, electronic databases, and social media to disseminate this knowledge to a wider group of veterinarians," Colopy says.

A MESSAGE TIME CAPSULE



For anyone who has ever watched "**The Price is Right**," recently, they are familiar with host **Drew Carey**'s end-of-episode reminding people to have pets spayed and neutered. He wasn't the one who started it, though. The previous host, **Bob Barker**, began his signature sign-off in 1979: "This is Bob Barker reminding you to help control the pet population – have your pets spayed or neutered."

Does age matter when it comes to neutering or spaying?

"The effects of social media likely can't be overstated, as large groups of veterinarians exist on Facebook and other platforms that grant access to mentorship/advice from thousands of colleagues in a minimum amount of time."

The laparoscopy factor

Advances in laparoscopic surgery offer some additional benefit, including improved visualization, though the uterus and ovaries must still be manipulated with instruments, requiring care when handling the tissues due to the potential for increased friability.

Most spay surgeries are fairly routine, especially when a dog is not in heat. However, if the dog happens to be in heat at the time of the procedure, a skilled surgeon can ensure the same safe results.

Perhaps the greatest benefit of laparoscopic surgery is the ovary does not need to be exteriorized before pedicle ligation, avoiding the need to break down the suspensory ligament. Additionally, the pedicle ligation/transection occurs with the use of a special vessel-sealing device, which, when used appropriately, is approved for sealing and transecting vessels up to 7 mm in size, Colopy reports.

"It is important to realize, however, there is a somewhat steep learning curve to laparoscopic surgery, and acquiring the laparoscopic instruments, tower, and vessel-sealing device can be cost-prohibitive," Colopy says. "The equipment is more often found in emergency hospitals or secondary/tertiary referral hospitals. The speed of a laparoscopic ovariectomy versus an open ovariohysterectomy, specifically of dogs in heat, will likely vary considerably with the experience level of the surgeon."

Risky business?

Though easier and more common than years past, spaying a dog in heat still carries some risk, Colopy warns.

"It really comes down to adjusting your surgical technique to the specific condition of the patient," she says. "You must adjust your tissue handling and vessel ligation technique accordingly. When I am spaying a dog in heat, I will take extra care to handle the uterine tissue gently, avoiding large crushing instruments or excessive traction. I may choose to use a Balfour retractor for the abdomen so I can see easier and avoid having to exteriorize the issue as much.

"I would likely ligate the pedicles no differently than during a standard spay, but I am more apt to ligate the broad ligament, as well, due to the gross dilation of the vessels. As with any surgery, I closely examine the abdomen before closing to ensure there is no residual hemorrhage. With good surgical technique, the risk for post-surgical hemorrhage should be no higher than a standard spay."

Spaying an animal in heat typically poses few complications, but practitioners are still encouraged to educate clients on the importance of having their pets spayed before the first heat cycle.

"This reduces the risk for mammary cancer as well as virtually eliminating the risk for emergency surgery for pyometra, or unwanted pregnancy," Colopy explains. "Further, there may be some increased bleeding during spay for an animal in heat with a less experienced surgeon, and the procedure may take longer, potentially increasing the anesthetic risk.

"Though the outcomes have ultimately not been scientifically proven to be different, many veterinarians will charge more to spay a dog in heat due to the time and increased materials required for the procedure," she continues. "The client should be aware many veterinarians are reluctant to spay a dog in heat and should be prepared to reschedule the procedure."

Clients also should be informed a female dog will still be in heat behaviorally even with the reproductive tract gone, adds Dr. LaRue. "They will still accept a male," she explains. "Sadly, if a female ties with a male shortly after an in-heat spay, the ejaculate can be forced up through the cervix into the abdomen, causing a nasty thing called semen peritonitis. Dogs spayed in heat need to be separated from males for at least two to three weeks." ●

Don Vaughan is an award-winning writer who frequently writes about veterinary-related topics.

IT'S MORE THAN JUST A CHANGE IN ANATOMY

After the spay or neuter procedure, dogs and cats experience permanent metabolic changes that decrease caloric need while increasing appetite. Because of these physiological changes, a pet's risk of becoming overweight or obese also increases needs.[1] For veterinarians, this is a critical time to recommend nutrition that supports a healthy metabolism without sacrificing key nutrients.

DOGS MAY FEEL LIKE THEY NEED ALMOST **2.5X** THEIR ACTUAL CALORIC NEEDS

CATS MAY FEEL LIKE THEY NEED **1.5X** THEIR ACTUAL CALORIC NEEDS

1. Council NR. Nutrient Requirements and Dietary Nutrient Concentrations. In: Nutrition AHCoDaC, ed. Nutrient Requirements of Dogs and Cats. Washington, D.C.: The National Academy of Sciences, 2006;355-373.

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Veterinary nutritionists: A secret ingredient for pet health

Specialists can help take the pressure off time-consuming and emotional cases

By Renee Streeter, DVM, DACVN

Veterinary nutritionists are often a secret ingredient for pet health. Veterinarians are the most utilized source of information for owners regarding their pet's health and nutrition.[1] Yet, so many of us are stretched for time during our exams, with scarce opportunity to delve into the complex and, often, emotional questions owners have surrounding nutrition for their pets.

Owners are pressured through marketing and media to constantly reassess what they are feeding their pets, which creates confusion and mistrust. Relationships with pets are humanized, which further affects feeding and exercise practices.[2] Since all our patients eat, and owners are expecting advice on how best to nourish their pet, general practitioners should have a sound, working knowledge of nutrition. Further, they should be aware of recent advances in nutrition and products available to help them meet their patients' nutritional goals. A thorough

diet history, weight, and body condition should be assessed at each visit, and changes to the diet made, if needed. All veterinarians should feel comfortable calculating daily energy requirements and adjusting recommended intake based on diet history and body condition. They should also be knowledgeable of the nutritional goals associated with the management of various conditions. Often times, however, there is more involved regarding a case, and at some point, there may be a need to enlist the help of a board-certified veterinary nutritionist to help manage a patient.

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Much like with humans, obesity remains a significant problem for pets, too.

Client beliefs versus pet health

Nutrition is an emotional topic. Owners may have strong feelings and beliefs about the best way to feed their companion. There are times when the pet's well-being necessitates reeducating the owner to help them realize feeding their pet in a different manner will be best for them. However, often it's about being able to find or create a diet plan that takes into account aspects of feeding the owner is most comfortable with, and one that also works for the pet's needs. This is something a veterinary nutritionist can accomplish through discussion with the client and getting a diet history, freeing up time for the referring veterinarian to focus on other aspects of preventive medicine and health care.

Multiple disease processes

There are times when a patient presents with multiple issues, requiring various, and sometimes conflicting, nutritional goals. For instance, a patient with renal disease may also need a novel and/or low-fat diet to manage concurrent chronic enteropathy or pancreatitis. A veterinary nutritionist can present commercial diets that may help manage multiple disease processes, or be able to create a balanced homemade diet to meet all nutritional requirements and goals.

The overweight or obese patient

Obesity remains a common problem in the pet population.[2,3] A veterinary nutritionist can create a weight-loss plan using appropriate diets as well as determine nutritional goals for the patient. These plans take into account owner concerns and feeding practices, and involve scheduled rechecks and diet adjustments. This all helps clients feel they have a partner in the process and someone who holds them accountable, which may help improve the chances of success.

Patients needing help to gain weight

Cases with chronic enteropathies, cachexia of chronic disease, starvation, and refeeding may benefit from consultation with a veterinary nutritionist. Here, they determine the best

Veterinary nutritionists can also give exercise tips for "pet workouts."

> "Often times, there is more involved regarding a case, and there may be a need to enlist the help of a board-certified veterinary nutritionist to help manage a patient."

diet to help the patient's underlying condition, creating a feeding plan to get them eating the appropriate daily caloric intake for weight gain within an appropriate timeframe.

Enteral, parenteral nutritional support

Creating tube-feeding instructions can certainly be performed by a general practitioner. Example calculations can be found in various textbooks.[4,5] It is important to keep in mind appropriate feeding volumes, maximum gastric capacity calculations, and any adjustments needed in IV fluid administration. A veterinary nutritionist can help create feeding plans, including recommendations for any adjustments in IV fluid volumes. For patients who cannot tolerate enteral feeding, nutritionists can create custom total parenteral nutrition (TPN) or partial parenteral nutrition (PPN) formulations and send them to compounding pharmacies to be made or give recommendations for premade products, as well as administration instructions.

Homemade diets

While homemade diets are unnecessary for most patients, more owners are feeding them to their pets than previously.[6] For some patients who have multiple conditions with various nutritional goals, homemade diets may be the best choice, as they can be

customized. In addition, these diets can be very palatable and preferred by some dogs over commercial food, which makes them very useful for picky or inappetant dogs. General practitioners can guide owners to programs that can help create balanced homemade diets for their pets.[7] However, if there are health issues to consider, a consultation with a veterinary nutritionist is ideal.

While clinical nutrition consultation is a major aspect of what a board-certified veterinary nutritionist does, these professionals also work in the pet food industry. Manufacturers often employ their own veterinary nutritionists to help make decisions, review diets, and provide consultation to owners or continuing education. Some board-certified veterinary nutritionists own their own supplement companies, while others consult for various food, treat, and supplement suppliers/makers, educate owners.

Veterinary nutritionists can help take the pressure off time-consuming and emotional cases. Some specialists require in-person consultations, while others—particularly at universities—take remote consultations. Many provide diet recommendations to the referring veterinarian with the help of the patient's records and diet history. ●

Renee Streeter, DVM, DACVN, obtained her undergraduate degree in animal science from Cornell University and served as a farm animal nutritionist for a major feed company before attending veterinary school at Ross University School of Veterinary Medicine (RUSVM). Her clinical rotations were done at Cornell University's College of Veterinary Medicine, where she stayed on to do her clinical nutrition residency. There, Dr. Streeter saw clinical nutrition cases and researched the relationship between omega-3 fatty acids, adipokines, and canine obesity, as well as selenium deficiency and white muscle disease in horses. While working in general practice and clinical nutrition for the next six years, she also founded a veterinary nutrition consulting company. Streeter currently helps industry clients through her position as the clinical nutrition services practice principal at BSM Partners and helps veterinary patients as a clinical nutritionist, taking referrals through veterinarians and seeing patients at a specialty hospital in upstate New York.

Many nutritionists can provide diet recommendations to the referring veterinarian with the help of a patient's records and diet history.

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