ONE OF THE MOST COMMON QUESTIONS WE ARE ASKED AS VETERINARIANS IS "HOW MUCH SHOULD I FEED?"

Given that currently >60% of our client's pets are overweight or obese, the answer to this question is becoming critically important. As veterinarians, given that so many pets are overweight, we ask, "How can we best support our clients in choosing the best foods and feeding them appropriately?"

85% OF OUR DOGS AND 93% OF OUR CATS ARE SPAYED AND NEUTERED ACCORDING TO A SURVEY PERFORMED BY THE AMERICAN PET PRODUCTS ASSOCIATION (AAPA 2017-2018).

Spaying and neutering is a critical time that changes the body in many ways, both hormonally and metabolically, and this is also a key time for us to intervene. While spaying and neutering is advocated for virtually all dogs and cats, this intervention does have consequences. It is, in fact, the largest risk factor for obesity later in life for our pets. This happens primarily through a decrease in metabolic rate and an increase in desire for food intake. The removal of sex hormones can result in an increased appetite, up to 63% in dogs and 23% in cats. This starts immediately following the procedure. If no changes in diet are instituted, weight gain is likely.

TELLING CLIENTS "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. It also fails to confirm that this diet can be safely reduced in quantity and still meet all nutritional needs. There is often a better diet choice for this scenario. In addition to inquiring about the food itself, we need to collect information about other foods, treats, snacks, etc. that are offered as these may be fed in excess and could be unbalancing the total daily diet. A family meeting is often necessary to get all persons in contact with the pet on board and aware of the need to control food intake throughout the day for that pet.

"JUST FEEDING LESS" MAY CREATE HUNGRY PETS.

Hungry pets will beg and then owners will often give in with food and treats. Remember, food and treats are an expression of our love for our pets and an important part of the human-animal bond. Not acknowledging this issue and failing to have strategies to manage begging may result in clients giving in to their dog or cat's wishes. Because "food is love", "just feeding less" may feel like we are giving less "love." Reducing the volume of food fed reduces the mass or volume of food within the stomach which is a known trigger for satiety or that "sense of fullness" after eating. With average pet 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. Certain amino acids from proteins may directly trigger satiety and reducing their intake when restricting average commercial foods may work against us when trying to manage appetite and weight.

"JUST FEEDING LESS" MAY PUT PETS AT RISK OF NUTRIENT DEFICIENCIES.

Studies have confirmed restricting adult maintenance diets and even 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 While we do not know the exact nutrient requirements of overweight pets undergoing

weight loss and the long term effects of restricting nutrients during weight loss is still unknown, underfeeding nutrients is certainly not ideal. Recent studies have demonstrated that minimum amino acid requirements may vary between breeds or sizes of dogs and previously determined minimum requirements may not be sufficient for certain amino acids.

Changing puppies or kittens from growth diets directly to adult foods while still within their growth phase is not an optimal recommendation as an attempt to manage or prevent inappropriate weight gain. 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 2-3x that provided in adult maintenance foods. This means if we select an adult diet prematurely when growth is still occurring we are potentially underfeeding nutrients needed for optimal development.21

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, poor skin/hair coat quality or color, poor immune function, fluid imbalances and even heart disease (dilated cardiomyopathy). Insufficient intake of the 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, poor hair coat and even fluid imbalances. Vitamin deficiencies may cause poor growth, impaired bone metabolism, poor skin, mucous membrane and hair coat quality, anemia, nervous and cardiovascular system dysfunction, impaired clotting, as well as many other adverse effects. It is a better option 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 puppy/kitten visits. We need to train our technicians/nurses to take good diet histories (what food, how much, how many treats/snacks, etc.) and document this at every hospital exam visit. Make nutrition important! It starts at puppy/kitten visits. We need to train our technicians/nurses to take good diet histories (what food, how much, how many treats/snacks, etc.) and document this at every hospital exam visit. Make nutrition important! Just having the discussion acknowledges that we care about nutrition and are interested, that we understand the powerful tools that nutrition and food are in our pets' lives. We need to train our staff to always check body weights when the pet is present for any visit, but also we can teach them to be excellent at body condition scoring (and also muscle mass scoring). Document this information consistently in the medical record and follow it along throughout the pet's life. Through this, we can see diet changes and how these have impacted the pet's health over its life.

TRAIN CLIENTS TO DO BODY CONDITION SCORING.

Use the 9 point scale and repeat this training for clients every puppy/kitten visit and then into the adult years. Making clients pro-active in monitoring their pet can prevent excessive weight gain or at least catch it before it's advanced and affecting the 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 day to day. Adjust feeding amounts often according to changes in body weights. 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 the smaller dogs and cats, as the most accurate way to control food intake.

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, therefore reducing potential begging behaviors and possibly preventing weight gain. These diets may also serve well for a "soft weight loss" plan which is a weight reduction plan with no intensive effort required. A critical time to assess diet and feeding amounts is at the time of spay/neuter. This is an optimal time and it is our obligation as veterinarians to educate the client on the changes that have occurred with this procedure. We can put steps in place to keep their pet healthy and at an optimal body weight. Follow up with these clients to ensure that our recommendations have been followed and the pet is on track.

THE KEY FACTORS OF WEIGHT MANAGEMENT SUCCESS ARE CLIENT COMPLIANCE AND FOLLOW UP FOR ANY RECOMMENDATIONS MADE CONCERNING DIET.24-26

This means we must have some continued interaction with our clients after recommendations are given to ensure they understand and are following our recommendations moving forward. Scheduled rechecks, either in person to check weight and body condition scores or by phone or email just to check in and see if there are any questions, can enhance our ability to keep clients on track as well as build our veterinary-client-patient-relationship. Our veterinary staff can do most, if not all, of this follow up. Keeping in touch with clients often will greatly improve success in achieving our weight management goals.

OUR GOAL AS VETERINARIANS IS ALWAYS TO SUPPORT OPTIMAL HEALTH OF THE PET 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 can provide optimal nutrient levels of protein and fiber to promote satiety, reduce begging and prevent weight gain. This intervention alone will reduce that pet's risk of disease conditions associated with obesity, improve quality of life, and potentially extend their lifespan by avoiding weight gain.