

## **Breakfast, Lunch and Dinner: The Importance of Food and Water Intake**

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Do you know how much your cat or dog has eaten today? How about yesterday? Although these may seem like simple questions, awareness of an animal's food and water consumption is actually quite important and will benefit your pet's health. Many people have little to no idea how much their pet eats and drinks on a regular basis. When the bowl is empty, it gets refilled, and that is that. Though often regarded as the easiest approach, this is not always the best for an animal's well-being. While all pets may have mild day-to-day variation in how much food and water they eat and drink (and how fast they consume it), an animal's eating and drinking habits should largely stay the same. Significant changes may be cause for concern, and should at the very least warrant a closer look. Do not underestimate the power of your own observations. Your pet's veterinarians and veterinary technicians are not the only members of their health care team: you are too!

In this article, we will discuss common causes for increases or decreases in food and water consumption. We will review diagnostic tests usually done to identify these causes, explain simple steps that you can take to make monitoring easier, and discuss how to spot trends and changes early-on.

### **Food Consumption**

Minor and temporary increases in appetite may be due to something as simple as a recent increase in exercise; perhaps Fido spent an extra hour or two running on the beach or playing Frisbee. In particularly cold weather, animals who spend significant amounts of time outside may need to eat more due to the fact that they are burning calories to keep warm. Alternatively, hot weather can sometimes diminish an animal's appetite, particularly those who are prone to overheating to begin with, such as large, furry dogs or brachycephalic dogs (think pugs, bulldogs, etc). However, reasons for persistent appetite change may be more serious, including (but not limited to) those below.

#### *Common causes for increased appetite*

- Behavioral/Boredom
- Endocrine disease, such as diabetes mellitus (dogs and cats), Cushing's disease (dogs) or hyperthyroidism (cats)
- Exocrine pancreatic insufficiency (dogs)
- Gastrointestinal parasites (typically kittens and puppies)
- Gastrointestinal tract disease, such as inflammatory bowel disease
- Hypoglycemia (low blood sugar)
- Medications, such as anticonvulsants or steroids
- Nutritional deficiency
- Pregnancy and lactation

If the increase in appetite is accompanied by other symptoms, this will often help your veterinarian to narrow the diagnosis. An animal who is ravenous, losing weight and has frequent bowel movements is very different from an animal who is gaining weight and eating, drinking and urinating excessively.

#### *Common causes for decreased appetite*

- Difficulty or pain while chewing or swallowing
- Fear, stress or pain
- Infection
- Inflammation
- Nausea (usually accompanied by vomiting or lip-licking)
- Neoplasia (cancer)
- Palatability of food
- Systemic disease, such as of the liver or kidneys
- Upper respiratory disease (difficulty smelling food)

A decrease in appetite has many possible explanations, and again, knowing what other symptoms are present will help your veterinarian to determine what may be at fault. A pet who has gradually had a mild but persistent decrease in appetite over weeks or months poses a different problem from an animal who takes a few bites of food but then vomits thirty minutes later.

A thorough exam and medical history will help narrow down a list of possible causes, as well as indicating the next most appropriate testing options. Whether the appetite is increased or decreased, the duration and severity of the change can be useful information as well. Has Fluffy been gradually showing a slight decrease in appetite over the past two months, or did she abruptly stop eating last night? While a marked difference in appetite is generally obvious, a gradual, subtle change in appetite can be difficult for an owner to detect, and it will be all the more so if the bowl is simply refilled when it looks low.

Another good reason to pay attention to how much you are feeding your dog or cat is that you may in fact be overfeeding them. Feeding the appropriate type and amount of food for your pet's size, age, health status and activity level is very important, as overfeeding can lead to obesity, and obesity can cause many health problems and worsen others. This can be both dangerous and expensive - just ask any owner whose overweight dog has had knee surgery, or any owner of a diabetic "fat cat" requiring twice-daily insulin injections. Additionally, as we know, quality pet foods are not inexpensive, so overfeeding will also waste money. Keeping your pet slim and trim is actually a great way to help fatten your wallet! If you are not sure how much you should be feeding your pet, just ask your veterinarian. For them to provide you with the most accurate information, it is helpful if you know the brand and type of food you are currently feeding, as ingredients and calorie counts can vary dramatically among different foods.

#### **Water Consumption**

Minor or temporary increases in water intake are often due to increased physical activity, at least in dogs. They are notoriously prone to coming home and gulping down an entire bowl of water after a strenuous workout. While we do not recommend limiting overall water intake in situations like this, you may wish to moderate your dog's pace of drinking, giving them the water they want gradually over the course of 30-60 minutes, rather than letting them down it all in two or three minutes. A dog who bolts an entire bowl of water in sixty seconds is more likely to bring it all back up momentarily.

#### *Common causes for increased water intake*

- Behavioral/Boredom
- Bladder calculi (stones)

- Cystitis (inflamed/irritated bladder)
- Endocrine disease, such as diabetes mellitus (dogs and cats), Cushing's disease (dogs) or hyperthyroidism (cats)
- Kidney disease
- Medications, such as anticonvulsants or steroids
- Neoplasia (cancer)
- Urinary tract infection

*Common causes for decreased water intake*

- Fear, stress or pain
- Nausea (often accompanied by vomiting or lip-licking)

You may notice that the list of explanations for decreased water intake in cats and dogs is quite short, as compared to that for increased intake. Unlike humans, who often do not drink when they should and are frequently mildly dehydrated, dogs don't "forget" or get too busy to drink. When they need water, they go get it. Cats fall in between dogs and humans on the "thirst drive" scale; they are better about drinking water when needed than humans are, but not as good as dogs. An animal who consumes a primarily canned food diet, however, will drink less than an animal of similar size who eats dry food. This is due to the fact that a considerable portion of their hydration need is met by the food. However, cats who eat canned food are generally better hydrated than those who eat dry food, as they don't always drink enough to make up for the difference in water content between food types. Animals may also have preferences about where their water comes from; some dogs think toilet water is delicious, while certain cats practically beg their owners to turn on the faucet for them. No matter what your pet's preference, it is important that they have fresh, clean water available each and every day.

### **Diagnostic Testing**

In this section, we will briefly review the various types of diagnostic tests your veterinarian may recommend for an animal whose food or water intake is abnormal. Please keep in mind that it is often necessary to perform a series of tests in order to obtain an accurate diagnosis.

*Blood Tests*

- CBC (complete blood count):
  - Measures levels of red blood cells, white blood cells (part of the immune system), and platelets. Cell shape, size and appearance may also be evaluated.
  - Abnormal cells levels may point toward a diagnosis of infection, inflammation, parasitic disease, or allergic disease. A low red cell count may indicate bleeding, immune-mediated disease, or chronic underlying disease that suppresses the body's ability to make red blood cells.
- Chemistry Profile
  - Varying profiles available. A "mini-chem" measures basic liver and kidney values, protein levels, and blood glucose (sugar). A "full" chemistry profile measures a larger spectrum of liver and kidney values, and also includes electrolytes and gastrointestinal (GI)/pancreatic enzyme levels.

- Low protein levels may indicate gastrointestinal maldigestion or malabsorption disorders; other protein changes may be markers of inflammation. Especially high blood glucose is diagnostic of diabetes. Elevated kidney values can indicate dehydration or kidney disease, or even point to muscle wasting; these levels are best interpreted in conjunction with a urinalysis. Abnormal GI and pancreatic enzyme levels may be indicative of inflammation in the intestines or pancreas, but are often non-specific. Electrolyte abnormalities can help to localize a pet's problem(s), and are often useful in determining whether a pet requires nutritional supplementation.
- Pancreas-specific lipase (spec PLI)
  - Test to diagnose or rule-out pancreatitis. More accurate than relying on general GI/pancreatic enzyme levels.
- Trypsin-like Immunoreactivity (TLI)
  - Diagnostic for exocrine pancreatic insufficiency (dogs).
- B12 (cobalamin) & Folate
  - Small intestinal health indicators, particularly (but not exclusively) in cats. B12 is absorbed only by a small portion of the small intestine, and low levels indicate the presence of GI disease and the need for B12 supplementation. Elevated folate levels indicate an excess of bacterial in the small intestinal tract, which can happen with GI disease.

#### *Additional Tests*

- Fecal Testing
  - Fecal float, cytology, Giardia test, etc.
  - Evaluates for intestinal parasites and other infectious GI diseases.
- Urinalysis
  - Evaluates kidney function (ability to concentrate urine appropriately)
  - Checks for crystals, bacteria, white or red blood cells, and any abnormal cells.
- Urine Culture & Sensitivity
  - May be performed in instances where urinary tract infection is known or suspected, to confirm infection and determine which antibiotic is the most appropriate for use.
- Abdominal Radiographs (x-rays)
  - Evaluates overall organ size and placement; checks for the presence of bladder stones, gallstones, and kidney stones. First-line imaging method to evaluate gastrointestinal tract for abnormalities.
- Abdominal Ultrasound
  - Evaluates internal structure of abdominal organs; looks for evidence of abnormal growths, inflammation, intestinal or bladder wall thickening, lymph node enlargement, etc.
- Endoscopy
  - Visual evaluation of internal surface of stomach and upper small intestines, or of rectum/lower large intestine. Usually accompanied with biopsy of any suspicious regions.

## At-Home Monitoring

Now that we have reviewed the “why” of monitoring your pet’s food and water intake, it is time to address the “how”. Keeping a relatively close eye on your animals’ consumption is easier than you might think! Here are some basic guidelines:

- Instead of leaving a bowl of kibble down and refilling it as it empties (known as “free choice feeding” or “free-feeding”), meal feed your pets. Divide their food intake into two to three meals at consistent times of day.
- Some cats and dogs do not take to meal feeding and prefer to graze throughout the day, but you can still observe how much they eat each day. Measure how much food you put into the bowl at the start of the day, how much is left at the end of the day, and subtract to calculate the amount consumed. This will only take a few moments.
- If you are feeding dry food, measure the amount fed with an actual measuring cup. “A handful” is not a useful measurement, nor is “a bowl”. Take a few extra seconds each day to measure the quantity you are feeding. A see-through cup is preferable, so that you can easily adjust fractions of a cup without having to guess. However, if you have a small dog and you are only feeding  $\frac{1}{4}$  cup at a time, for example, you may find it easier to just use a  $\frac{1}{4}$  cup measuring cup. For cats, you can use a teaspoon or tablespoon measurement for dry food.
- Feed level scoops, not rounded ones, for consistency’s sake.
- For canned food, it is relatively easy to measure in fractions of a can.
- Feed all pets separately. This one is especially important, so we’ll say it again: **feed all pets separately, both cats and dogs**. They may start out at their own bowl when you fill it, but many animals are more interested in their companion’s bowl than their own. Additionally, if you have a fast eater at home, they may scarf their food and start in on another pet’s breakfast before you have a chance to catch them. Not only will separating help you monitor food intake, but it reduces the likelihood that your pets will squabble over a bowl, or that the lab puppy will eat the cat’s food. Separation during feeding may entail feeding in different rooms with the door closed, feeding a pet in their crate, or feeding a cat on an elevated surface the dog cannot reach. If you are having trouble coming up with a plan for how to separate your pets at mealtimes, just ask your veterinarian or veterinary technician
- If there is more than one person in the home responsible for feeding your pet(s), make sure you are all on the same page as regards time and quantity of feeding. Don’t rely on your pet to tell you whether they’ve been fed: those soulful eyes could mislead you!
- Change and refill water bowls daily; if you are having to refill the bowl(s) more often than normal, start keeping track of how often. If you find your cat or dog spending more time at the water dish than they used to, mention it to your vet.

Your at-home perceptions are tremendously important, and this includes observations of your pet’s food and water intake. Regular monitoring of how much your pet eats and drinks is a useful tool, one that will help both you and your vet keep your beloved pet healthy and happy for years to come.