



ZOETIS DIAGNOSTICS

GetWell

The Vomiting Patient

Guidance on diagnostic decision-making
for vomiting cats and dogs

zoetis

Vomiting is a frequent reason for vet visits, yet many cases never make it to a veterinarian.¹

A study found that 95% of vomiting dogs don't have an exam with a veterinarian.¹ Therefore, when cases do make it to the clinic, their condition may be serious.

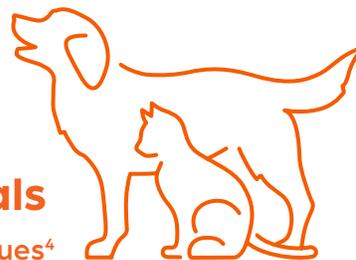
It is essential to determine the underlying cause of vomiting, as it may indicate a severe, potentially life-threatening condition.

Most common causes of vomiting in dogs and cats:^{2,3}

According to the Cost of Pet Health Care Report, at least

1 in 4 sick animals

present with gastrointestinal issues⁴



Category	Common Causes
Gastrointestinal Disorders	Parasites or bacterial infection, inflammation, dietary indiscretion, ulceration, neoplasia, foreign bodies, obstruction, motility disorders
Abdominal Disorders (Non-GI)	Pancreatitis, peritonitis, hepatitis, hepatobiliary disease, renal failure, pyometra, splenic disorders
Metabolic and Endocrine Disorders	Uremia, liver failure, diabetes mellitus (ketoacidosis), electrolyte disorders, acid-base disorders, hyperthyroidism, hypoadrenocorticism (Addison's disease)
Systemic Disorders	Septicemia, endotoxemia, multiple organ failure, systemic inflammatory disease
Nervous System Disorders	Encephalitis/meningitis, hydrocephalus, intervertebral disc disease (via pain)
Exogenous Medications/Toxins	Digitalis glycosides, ethylene glycol, erythromycin, heavy metals (copper, zinc, lead), chemotherapy drugs, strychnine, apomorphine, xylazine, nonsteroidal anti-inflammatory drugs (NSAIDs)
Other	Dietary changes, overeating, excitement, anxiety/anticipation, motion sickness



Things to know

- 1 A client can mistakenly describe regurgitation as vomiting. Regurgitation is the most important clinical sign of esophageal disease. In some situations, regurgitation and vomiting can occur in the same patient.⁵

Table 1. Difference between regurgitation and vomiting⁶

Features	Regurgitation	Vomiting
Process	Passive expulsion of undigested food	Active expulsion of stomach content with abdominal contractions
Timing	Often occurs shortly after eating	Can occur at any time, not necessarily related to eating
Ejected Material	Undigested food, often tubular in shape, covered with mucus	Partially digested food or liquid
Presence of Bile	Rarely present	Often present
Premonitory Signs	None	Nausea, hypersalivation, retching, and abdominal contractions

- 2 While many vomiting cases are acute and self-limiting, requiring only symptomatic treatment or monitoring, more serious conditions can present similarly.
- 3 Acute, self-limiting vomiting is less common in cats and vomiting in cats is more likely to need investigation.⁷
- 4 Vomiting accompanied by serious symptoms like hematemesis (vomiting blood), frequent vomiting (8-10 times in one day) or concurrent signs such as anorexia, lethargy, fever, apparent abdominal pain or pale, muddy, congested or jaundiced mucous membranes requires immediate veterinary attention.⁸
- 5 In a study, over 50% of dogs presenting with vomiting were found to have an underlying cause originating outside their gastrointestinal tract.⁹ This underscores the need to consider extra-gastrointestinal factors when diagnosing vomiting.
- 6 The same study showed that laboratory testing helped diagnose 39% of vomiting cases in dogs. This highlights the importance of the minimum diagnostic database in narrowing down differential diagnoses and guiding further investigation and treatment.⁹
- 7 Not only will diagnostic testing rule in or rule out causes of vomiting, but it will also guide supportive treatments such as those for electrolytes and acid base imbalance.

Collaborative care for vomiting patients



Everyone has a role to play in the clinic.

- ✓ **Ask the client to describe the event in detail:** Note abdominal effort and retching (vomiting) versus passive expulsion of undigested food (regurgitation), distinguishing between vomiting and regurgitation. See Table 1 on the previous page.
- ✓ **Pay attention to red flags:** Hematemesis, frequent vomiting (8-10 times in one day), concurrent signs such as anorexia, lethargy, fever, apparent abdominal pain, pale, muddy, congested or mucous membranes, a client saying their dog or cat “looks sick” and puppies/kittens, specifically if unvaccinated.
- ✓ **Note the signalment of the animal:** Age and breed can predispose animals to certain conditions that cause vomiting. For example, infectious and parasitic diseases and foreign body ingestion are more common in puppies. Also, don't forget to ask for vaccination status.
- ✓ **Obtain history of vomiting:** Onset, duration, frequency and progression. Ask when it started, how often it occurs and if it's consistent or intermittent. Does it occur after eating or drinking? Is the dog or cat able to keep water down without regurgitating or vomiting? Did the client try any treatments at home? If so, what?
- ✓ **Obtain description of vomit content:** Ask the client to describe the vomitus, including its consistency, color, odor and contents (e.g., undigested food, bile, blood, parasites, hair). Note if fresh blood ('hematemesis') or digested blood ('coffee grounds' appearance) has been observed. Cats frequently vomit trichobezoars, which are commonly known as hairballs.
- ✓ **Inquire about associated signs:** Changes in appetite, diarrhea, lethargy, abdominal pain, “back pain”, splinting, prayer position (dogs), hiding, reluctance to jump, unusual aggressive behavior, weight loss, increased drinking or urination or unusual behaviors.
- ✓ **Gather dietary history:** Regular diet, recent changes, treats, table scraps, scavenging habits and if withholding food relieves vomiting.
- ✓ **Ascertain drug history and toxin exposure:** Current medications, dosage, frequency and potential ingestion of toxins or foreign objects.
- ✓ **Prepare for tests:** Explain that vomiting is a non-specific sign that can result from a life-threatening condition and that further investigation, such as blood tests, urinalysis, fecal examination or imaging (radiographs, ultrasound), may be necessary to determine the underlying cause. If possible, ask to collect feces and urine.



Explore additional resources for sick pet testing in your **GetWell toolbox**

References: 1. Hubbard, K., et al., Risk of vomiting and diarrhoea in dogs. *Vet Rec.* 2007;161: 755-757. 2. Twedt, D., Vomiting, in *Textbook of Veterinary Internal Medicine*. 2010, p. 195-200. 3. Washabau, R.J., Vomiting, in *Canine and Feline Gastroenterology*, EBSCO, Editor. 2013, Saunders: St. Louis, Mo, p. 167-173. 4. Insurance, H.P., 2019 Cost of Pet Health Care Report. 2019. 5. Woolley, C., Dysphagia & Regurgitation, in *Textbook of Veterinary Internal Medicine*. 2010, p. 191-194. 6. Washabau, R.J., Regurgitation, in *Canine and Feline Gastroenterology*. 2013. 7. Batchelor, D.J., et al., Mechanisms, causes, investigation and management of vomiting disorders in cats: a literature review. *J Feline Med Sur.* 2013;15(4): 237-265. 8. Armstrong, P.J. GI Intervention: Approach to diagnosis and therapy of the vomiting patient. *TVP.* 2013;18-27. 9. Rosé A, Neiger R. Causes of vomiting in dogs and usefulness of clinical investigations. *Tierarztl Prax Ausg K Kleintiere Heimtiere.* 2013;41(1):16-22.

Individualized care starts with comprehensive diagnostic insights

Diagnostic Decision Making: Diagnosing vomiting in dogs and cats involves thorough clinical evaluation and appropriate laboratory tests.

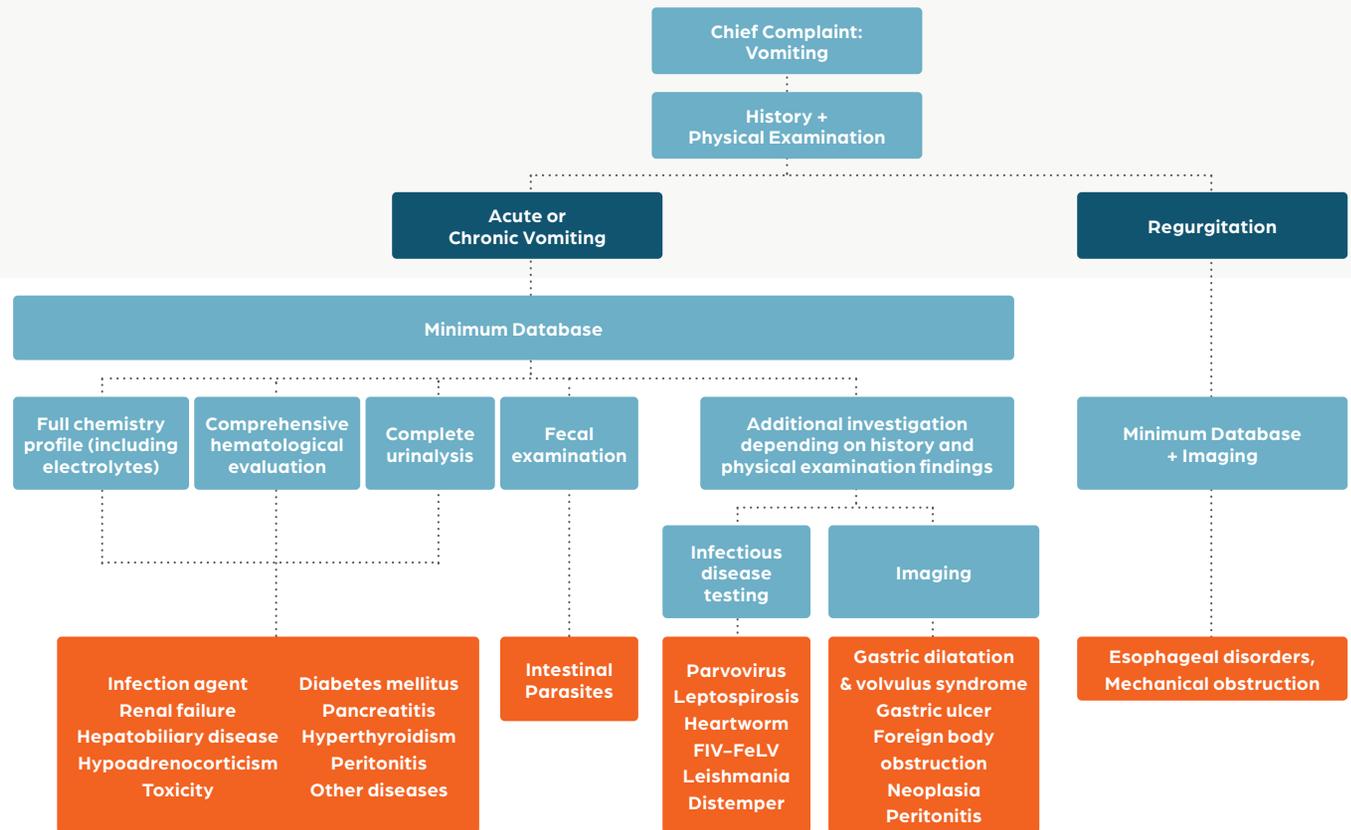
STEP 1 Distinguish between vomiting and regurgitation

- ✓ Obtain a detailed history and description of the event from the client to determine the process, timing, premonitory signs and appearance of ejected material to distinguish between vomiting and regurgitation

STEP 2 Conduct minimum database (MDB) testing

- ✓ Complete a full diagnostic workup to establish baseline insights, including comprehensive chemistry and hematology profiles, urinalysis, and fecal examination:

Vetscan Opticell™
Vetscan Imagyst®
Vetscan VS2®
Vetscan Vue+
Vetscan® UA



STEP 3 If MDB testing is insufficient, perform additional tests to confirm or refine the differential diagnosis

- ✓ Schedule a complimentary consultation with a board-certified specialist anytime* via Zoom or email for additional guidance and support

Chemistry:

- Bile acid
- ACTH
- T4
- Cortisol
- Canine Pancreatic Lipase

Infectious disease testing:

- Other serology tests
- PCR

Imaging:

- Abdominal ultrasound
- Endoscopy
- Contrast radiography
- Exploratory laparotomy
- Internal organ cytology
- Histology

LIST NON-EXHAUSTIVE

* Dependent on consultant availability