

# Acute Vomiting & Diarrhea Overview & Presentation

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Vomiting and diarrhea may indicate a primary gastrointestinal (GI) disorder or a manifestation of a systemic, non-GI disease. A thorough history helps characterize the problem as acute, chronic, intermittent, recurrent, and/or progressive. The veterinary team's initial goal is to distinguish between a mild, self-limiting GI problem and a more serious disorder. If the condition is determined to be serious, the patient may require a more complete diagnostic workup and possibly hospitalization for advanced treatment.

There are many causes of acute vomiting and diarrhea (see **Table 1**), and more than one may be present. Primary GI disorders may be distinguished from metabolic or systemic diseases that can affect more than one system.

## INITIAL ASSESSMENT

The team should first record a clinical history that includes: signalment; vaccinations (especially for puppies and kittens); travel history; environmental, foreign body, or toxin exposure;

weight history; current and previous medical conditions and medications; and a thorough dietary history (eg, recent diet changes, appetite, meals, treats, supplements, human food, water intake [see **Dietary History**]).

**Table 1.** Common causes of GI signs

GI	Systemic
Dietary indiscretion	Cardiorespiratory disorder
Drug reaction	Electrolyte imbalance
Food allergy	Endocrinopathy
Infection	Liver or biliary disorder
Inflammation	Neoplasia
Motility disorder	Neurologic disorder
Neoplasia	Pancreatitis
Obstruction	Peritonitis
Parasites	Septicemia, endotoxemia
Toxicosis	Urologic disease, uremia
Ulceration	

## DIETARY HISTORY

Use these forms to guide the gathering of a full dietary history:

- **Pet Nutrition Alliance:** [petnutritionalliance.org/Veterinary\\_Tools.aspx?section=Sample\\_Forms](http://petnutritionalliance.org/Veterinary_Tools.aspx?section=Sample_Forms)
- **World Small Animal Veterinary Association (WSAVA):** [wsava.org/sites/default/files/Diet%20History%20Form.pdf](http://wsava.org/sites/default/files/Diet%20History%20Form.pdf)

The client should be asked to describe the frequency, volume, and characteristics of the vomitus or feces; many online resources are available to assist clients with identifying these characteristics (eg, Waltham Faeces Scoring System; [waltham.com/dyn/\\_assets/pdfs/resources/FaecesQuality2.pdf](http://waltham.com/dyn/_assets/pdfs/resources/FaecesQuality2.pdf)). Vomiting should be distinguished from regurgitation, coughing, retching, or gagging. Diarrhea is defined as an increase in the fluid content of feces, often with increased volume and frequency of defecation.

## PHYSICAL EXAMINATION

Thoroughly examine all patients that present for vomiting and/or diarrhea. Lethargy, fever, or hypothermia often indicates a more serious disease. Evidence of dehydration, icterus, or pallor may be detected with an oral/pharyngeal examination and skin turgor assessment. Abdominal palpation may reveal pain, distension, effusion, thickened intestinal loops, organomegaly, or masses. Perform a rectal examination to detect any masses, strictures, blood, foreign material, or anal sac disorders and to collect a fresh fecal sample.

## STEP 2 Treatment Plan ▶

# Diagnostic & Treatment Plan

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## DIAGNOSTIC WORK

In addition to history and physical examination results, the minimum database for a patient with acute vomiting and/or diarrhea includes diagnostic imaging, a fresh fecal sample for analysis, and blood for packed cell volume (PCV) and total protein (TP). Values gleaned from rapid measurement of electrolytes (ie, K<sup>+</sup>, Na<sup>+</sup>, Cl<sup>-</sup>) can be helpful, as can other in-practice tests (eg, blood glucose, blood urea nitrogen [BUN]). Fecal analysis should go beyond simple flotation for parasites and include a gross examination for color, consistency, foreign material, mucus, and the presence or absence of blood (eg, melena, hematochezia). Other diagnostic testing should include:

- **Wet mount (saline smear):** Reveals protozoa or other parasites
- **Stained fecal cytology (dry mount):** Detects blood cells and (rarely) fungal organisms or neoplastic cells. Stained smears can identify bacteria and yeast, which are visible but nondiagnostic.
- **Flotation by centrifugation:** Detects parasite ova and oocysts
- **Fecal culture:** Rarely diagnostic except for detection of *Tritrichomonas blagburni* (foetus) in cats
- **ELISA (enzyme-linked immunosorbent assay):** Detects antigens

associated with parvovirus, giardiasis, and cryptosporidiosis

- **PCR GI panels:** Detects multiple organisms. These recently became available at some laboratories; however, interpretation can be difficult because both false-positive and false-negative results are possible.

Additional laboratory work (eg, CBC, serum chemistry panel, urinalysis, specific GI testing [eg, pancreatic function, cobalamin, folate]) can be performed based on severity or responsiveness.

## IMAGING

Imaging (eg, survey radiographs, contrast studies, abdominal ultrasonography) should be used during a more comprehensive evaluation. Two views of the abdomen (ie, right lateral, ventrodorsal) should be obtained routinely, but consider the opposite lateral when assessing for obstruction or masses. Barium can be administered orally or rectally for contrast studies of the entire GI tract or specific areas (eg, esophagus, colon). A skilled ultrasonographer can perform imaging of the stomach, intestines, and associated organs (eg, pancreas, liver, kidneys, adrenal glands). Endoscopy, CT, MRI, and other imaging techniques may be available; however, these require anesthesia and are thus generally reserved for more serious or chronic cases.

## TREATMENT

Treatment should be directed toward the underlying cause. Symptomatic therapy may include fluids and electrolytes, nutritional support, and various medications. Administer a balanced crystalloid solution if dehydration is present or suspected.

Previous recommendations to “rest” the GI tract by withholding food and water are considered outdated except during active vomiting. Highly digestible, low-residue, energy-dense veterinary therapeutic diets are available to help restore GI health (eg, Purina Veterinary Diets EN Gastroenteric, [purinaveterinarydiets.com](http://purinaveterinarydiets.com); Iams Veterinary Formula Intestinal Plus *Low-Residue*, [iams.com](http://iams.com); Hill’s Prescription Diet i/d Gastrointestinal Health, [hillsvet.com](http://hillsvet.com); Royal Canin Veterinary Diet Gastrointestinal, [royalcanin.com](http://royalcanin.com)). Fat restriction is recommended for dogs that have confirmed or suspected acute pancreatitis.

Many medications are available for the management of vomiting and diarrhea. Maropitant is often effective and is approved for control of vomiting in dogs and cats. Antacids are frequently prescribed for vomiting and/or diarrhea, but they are not antiemetics and are indicated only if gastric ulceration is suspected. In general, routine use of antibiotics should be avoided in acute cases unless there is a clear bacterial etiology or risk of septicemia. Some studies indicate faster recovery from acute diarrhea with probiotic use.<sup>1,2</sup>

**Editor’s note:** Dr. Craig Datz is employed by Royal Canin, in addition to his affiliation with University of Missouri.

# Team Roles & Responsibilities

Ed Carlson, CVT, VTS (Nutrition)

## RECEPTIONIST

### Patient and client bonding expert, client educator

- Actively listen to the client's concerns and advise him or her to bring the patient to the practice for an examination
- Greet the client and alert the veterinary technician of his or her arrival
- Clean and disinfect the waiting room according to practice protocol
- Oversee any financial transactions
- Schedule recheck appointments as directed by the veterinary team

## TECHNICIAN

### Patient caregiver, client educator

- Obtain a patient and nutritional history
- Obtain and record the patient's weight and vital signs
- Assist the veterinarian in the examination room
- Obtain diagnostic samples as directed by the veterinarian
- Administer medications and fluid therapy as directed by the veterinarian
- Monitor the patient's appetite, eliminations, attitude, and vital signs
- Educate the client about acute gastroenteritis, prescribed medications, and nutritional support
- Review the treatment plan, associated costs, and discharge instructions with the client
- Make follow-up phone calls

## VETERINARIAN

### Medical expert, client and team educator

- Review the patient and nutritional history
- Perform a physical examination
- Discuss the examination findings with the client
- Express any concerns regarding symptoms and explain the differential list to the client
- Order diagnostic tests
- Interpret the test results and explain the findings to the client
- Prescribe medications
- Document patient treatment orders and discharge instructions
- Determine when a recheck appointment is warranted

## PRACTICE MANAGER

### Workflow facilitator, team and education coordinator

- Provide team education about proper specimen handling and preparation
- Provide education for veterinary technicians about proper radiograph positioning and techniques
- Ensure adequate quantities of laboratory supplies are kept in stock
- Provide personal protective equipment (PPE)
- Assist the medical team in developing and making available client handouts

STEP 4  
Team Training Plan ►



# Team Training Plan

Ed Carlson, CVT, VTS (Nutrition)

Excellent client service and patient care starts with understanding the client's concerns. Training on active listening skills is important for the entire team.

The front-desk team should receive training to understand the basic signs of acute gastroenteritis, diarrhea, and/or vomiting. Training should include an understanding that while mild cases are often treated on an outpatient basis, more severe cases may require hospitalization. Patients that have concurrent medical conditions (eg, diabetes mellitus, kidney disease) should be examined by the veterinarian as soon as possible.

Obtaining a complete patient and nutritional history is important for all patients, especially those showing any signs of acute gastroenteritis. Veterinary technicians should receive training and become comfortable with obtaining a complete nutritional history (see **Dietary History**, page 29).

Team training on sample collection, handling, preparation, and reading

*Obtaining a complete patient and nutritional history is important for all patients, especially those showing any signs of acute gastroenteritis.*



fecal flotations, wet mounts, and fecal smears is necessary to ensure accurate results. Education on these topics is available online and at continuing education veterinary conferences, and can be organized within the practice. Veterinarians and experienced veterinary technicians can also assist with educating other team members. Training veterinary technicians in the proper positioning and techniques to obtain diagnostic abdominal radiographs will allow veterinarians to identify masses, obstructions, and other abnormalities.

STEP 5  
Communication Keys ►

# Communication with Clients

Ed Carlson, CVT, VTS (Nutrition)

There are many causes of acute gastroenteritis, including infectious, toxic, and dietary factors. Most mild cases are the result of dietary indiscretion, consuming raw or undercooked meat, and diet changes.<sup>3</sup> It is important to explain to clients the necessity of gradually transitioning a pet from one diet to another. The veterinary team should explain the importance of feeding a low-fat, easily digestible therapeutic diet exclusively and avoiding high-fat foods and treats—as well as educate how to transition back to the normal diet at the appropriate time.

Every team member should be familiar with the practice protocols regarding the recommended diagnostic testing and be comfortable discussing these options with clients. Clients may not retain all the veterinarian's information, so it is important that other team members

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are able to answer questions and explain why certain diagnostics were recommended. When reviewing the costs of the diagnostic plan with the client, a team member should explain how recommended tests may help the veterinarian diagnose the patient's condition.

The veterinary team should explain to the client that, although many cases of acute gastroenteritis resolve with medical and nutritional support, some cases may require more aggressive therapy. Clients should be advised to closely monitor the patient at home and to contact the practice if the symptoms worsen or do not improve. The veterinary team

should be available to answer questions, consult with the veterinarian when necessary, and offer advice and provide support to the client. A team member should call the client 1–2 days after discharge for an update on the patient's condition and to answer any questions. ■

## References

1. **Clinical benefits of probiotic canine-derived *Bifidobacterium animalis* strain AHC7 in dogs with acute idiopathic diarrhea.** Kelley RL, Minikhiem D, Kiely B, et al. *Vet Ther* 10(3):121-130, 2009.
2. **Effects of a probiotic intervention in acute canine gastroenteritis—A controlled clinical trial.** Herstad HK, Nesheim BB, L'Abée-Lund T, et al. *J Small Anim Pract* 51(1):34-38, 2010.
3. **Small Animal Clinical Nutrition**, 5th ed. Hand MS, Thatcher CD, Remillard RL, et al—Topeka: Mark Morris Institute, 2010.