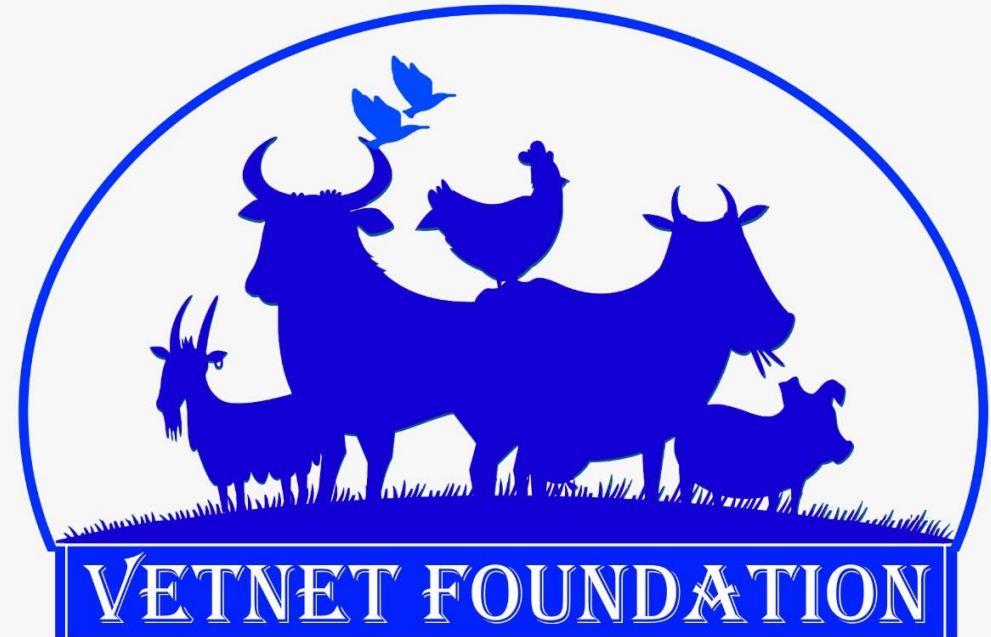


# Acute Vomiting in the Dog

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## A Systematic Approach



### Contact :

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**"REACHING OUT TO THE UNDER PRIVILEGED USING VETERINARY  
MEDICINE"**



## CHECKING IN

- How's everyone doing?
- What challenges are you facing currently?



**Acute** – vomiting for a duration less than 5 days

## **Epidemiology**

- young – more likely abnormal ingestions, infections (viral), parasitic
- older – concurrent disease, tumors

## **Risk factors –**

Drug interactions – steroids, NSAIDS

Associated conditions – dietary indiscretion most common cause, but other gastrointestinal or systemic diseases can also cause vomiting

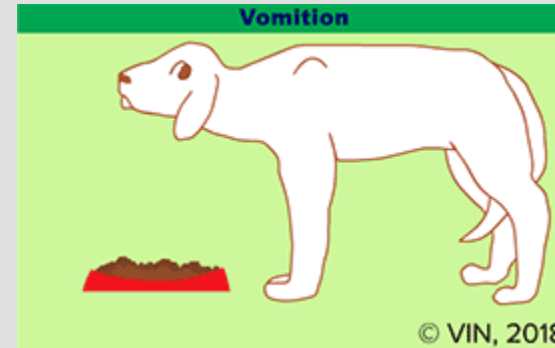
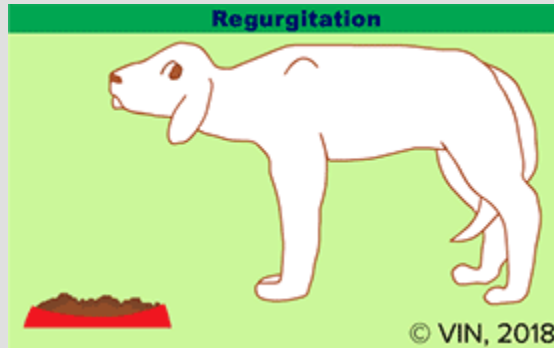
## **Class as “non-serious” or “serious”**

Non-serious – patients look healthy – no signs of other disease

Serious – have concurrent clinical signs such as lethargy, dehydration, fever, icterus

# Vomiting Vs Regurgitation

Important to differentiate vomiting (active expulsion of GI contents) from dysphagia (difficulty swallowing) and regurgitation (passive movement of ingesta from the esophagus out of the mouth)



# History



Age



Vaccination status



Diet



Abnormal ingestion



Description of vomitus - food, fluid, hematemesis, productiveness (non productive with GDV)



Time related to food intake – longer time – motility issues



# Physical Exam

- Thorough physical exam (head to tail)
- Temperature
- Hydration status
- Mouth inspection – Teeth, ulcers, MM – colour, Capillary refill time, FB – bones, sticks
- Abdominal palpation (abdominal pain, distension, FB, mass, organomegaly,
- Rectal exam – melena, FB (grass, hair, bones)

# Differential diagnosis

GI causes vs. non -GI causes

## GI Causes

- Food Reactions – Dietary indiscretion, food intolerance
- Infections – Viral (Parvovirus, coronavirus, distemper)
  - Bacterial
- Foreign Bodies
- Parasitic
- Toxins – Arsenic toxicity, garbage toxicosis
- Motility disorders
- Gastric Dilatation/Volvulus

## Non- GI or Extra -GI causes

- Extra-abdominal – azotemia/uremia, hypoadrenocorticism, diabetic ketoacidosis
- Intoxications
- Drugs (NSAIDS, chemotherapy, glucocorticoids)
- Neurological
- Infectious - Leptospirosis
- Intra-abdominal – Hepatic failure, Pancreatitis, Peritonitis, Pyometra

## Non-Serious Cases

### Testing

Non-serious – history and physical exam, fecal floatation, and then based on response to tx.

### Therapeutics

Goals – Rehydrate, Allow GI tract to rest, control vomiting as needed

Non-serious – NPO 12-24 hours then small amounts of water. Then small amounts of bland, highly digestible low fat food, (rice or rice with boiled chicken). Gradually transition back to regular diet

## Serious Cases

### Testing

Serious – history and physical exam, fecal floatation, more specific testing may be needed – CBC, chemistry, parvo test, radiographs

### Therapeutics

Goals – Rehydrate, Allow GI tract to rest, control vomiting as needed, treat underlying cause

Serious – Fluids – IV or subcutaneous, NPO 12-24 hours then small amounts of water. Then small amounts of bland, highly digestible low fat food, (rice or rice with boiled chicken). Gradually transition back to regular diet



## Case 1

Signalment – “Lily” – 4 yo Female Greyhound

History – fine yesterday, ate regular dog food last night, up and restless during the night, vomited food at 1:00am, then vomited blood at 3am and frothy fluid at 5am.



What do you want to know about her physical exam?



Treatment –  
NPO,  
small meals,  
antiemetic

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## Case 2 – Rex

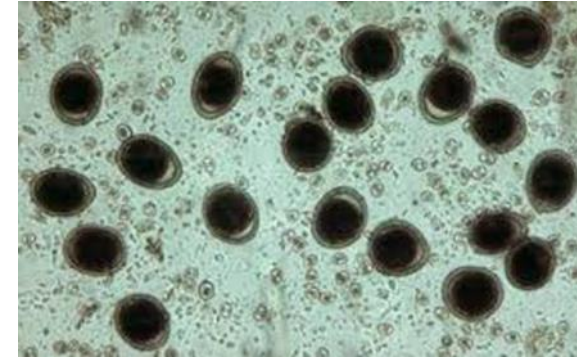
12 week old German Shepherd Dog

History – new to owners 7 days ago, vomiting after he eats, still active, playful

PE – BAR, normal temp. abdominal palpation – a bit distended.



Testing – fecal floatation – Roundworm eggs



Treatment – deworming – pyrantel pamoate, fenbendazole



## Common Parasites of Dogs

Hookworms (Ancylostoma caninum)

Roundworms (Toxocara canis and leonina)

Tapeworms (Dypilidium caninum, Diphylobothrium latum)

Whipworms (Trichuris vulpis)

Coccidia – Sulfadimethoxine (50-60mg/kg daily for 5-20 days)

Giardia – Trophozoite, can see seen best with iodine stain



<https://capcvet.org/>

<https://youtu.be/b6YoyB7y6Yc>

Prevalence of endoparasitic infections of non descript dogs in Mathura, Uttar Pradesh

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4554565/>

# Summary of Common Drugs used to treat Vomiting

## Antiemetic therapy –

Maropitant (Cerenia) SQ - 1 mg/kg , oral – 2 mg/kg (comes in 16,24,60, 160 mg tabs)

Metoclopramide 0.2-0.5mg/kg IM or SC Q 8 hr

Ondansetron – Inj or liquid – (0.1-0.2 mg/kg IV bolus Q 12 hr)

Chlorpromazine 0.1-0.5mg/kg IM or QS q 8-24 hr (may cause sedation)



## Other-

Sucralfate – 250 mg – 1 g PO Q 6-8 hours

Activated Charcoal - liquid or powder – make a slurry and mix with food or give by syringe

Omeprazole 0.5-1.0mg/kg Q 2 hr Human formulation ( 10-20mg tabs, oral suspension 2mg/ml)

Succimer – (for chelating arsenic) – 10mg/kg PO Q 8 hours – 7-10 days

# Summary of Common Drugs used to treat Vomiting

## Dewormer –

Pyrantel - 5-10 mg/kg PO

Fenbendazole – 50 mg/kg PO Q 24 hr; repeat in 3 weeks (whipworms also repeat in 3 months)

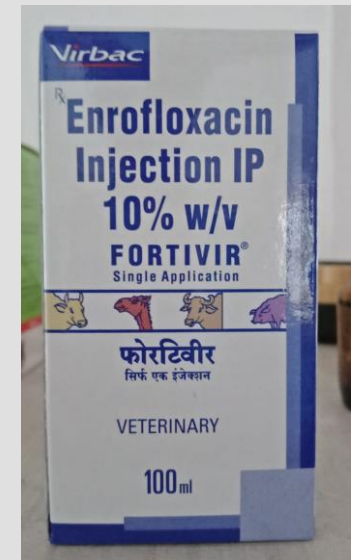
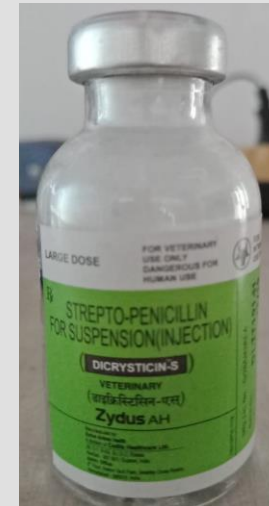
Sulfademetoxine - 50-60mg/kg daily for 5-20 days

## Antibiotics –

Enrofloxacin 2.5 – 10 mg/kg Q 12 hr

Streptopenicillin –

Ceftriaxone with Sulbactam



### Case 3 – Buddy

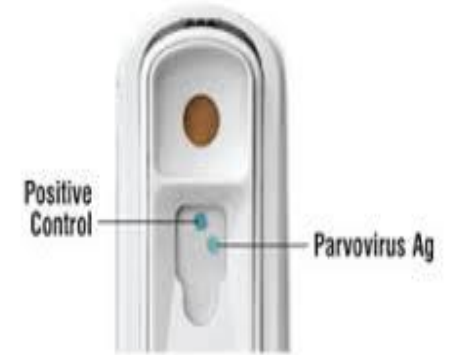
16 week old Lab Mix

History – not moving around, not eating, vomited 2 days, liquid diarrhea, diarrhea is bloody

PE – depressed, pale MM, elevated temperature, abdominal palpation – painful, rectal exam – liquid bloody fluid on glove – “Serious”



Differential diagnosis:  
Viral – parvovirus  
Toxicity – garbage, arsenic  
Foreign body



Testing –  
Fecal floatation  
CBC, TS  
Parvo snap test

Treatment – hospitalization or out-patient  
SQ or IV fluids, Antibiotics, pain meds,



# Treating Parvovirus on an Outpatient Basis

Primary recommendation is still to manage in hospital

Outpatient – patients that aren't as sick or

Vomiting lethargy, malaise, severely dehydrated (dehydrated (interstitial) vs hypovolemia)

With neonatal pediatric puppies – they can become so dehydrated that they become hypovolemic

- Standard of care is hospitalization but keep it real “Colorado protocol”
- Ideal WU – exam, history, young less than 1 year, history of GI distress
- IV catheter – CBC, electrolytes or blood smear to get estimate of WBC
- In hospital – isotonic crystalloid – 4 parts – mental exercise – are they in shock (poor intravascular volume, depression, increased HR)
- Shock volume 90ml/kg (give about ¼-1/3 bolus and reassess – recheck MM, CRT, MM colour and give another bolus as needed)
- Dehydration – skin turgor, eyes sunken, tacky MM (BW in kg X % dehydration ie 15kg X .05 = .75 l or 750 ml) over 24 hours 30ml/hr
- Ongoing Losses – vomiting, diarrhea – need to adjust this a few times a day
- Maintenance – may be higher than for adults 60 – 180 ml/kg/day - 15kg X 60 ml
- Weigh your patients several times a day – 1 kg = 1l fluid

1. Venn EC, Preisner 2017;27(1):52-65. K, Boscan PL, et al. Evaluation of an outpatient protocol in the treatment of canine parvoviral enteritis. J Vet Emerg Crit Care
2. Sarpong KJ, Lukowski JM, Knapp CG. Evaluation of mortality rate and predictors of outcome in dogs receiving outpatient treatment for parvoviral enteritis. J Am Vet Med Assoc 2017;251:1035-1041.

