

Feline Constipation

What are the three main functions of the colon?

1. Fermentation and production of nutrients from indigestible ingesta by colonic flora (microbiome).
 - Vitamins
 - Short chain fatty acids
2. Electrolyte and water absorption
 - mainly in the ascending and transverse colon
3. Storage of feces
 - Mainly descending colon

Predisposing Factors for Constipation

- Sedentary lifestyle
- Obesity
- Hx of trauma
- Dehydration
- Diets
 - Low fiber diets or diets high in indigestible material (bone fragments etc.)

Presenting Complaints

- Constipation
- Tenesmus
- +/- dyschezia
- +/- hematochezia
- +/- diarrhea
- +/- hyporexia, weight loss
- +/- vomiting

Physical Exam Findings

- Distended colon with firm feces
- Abdominal pain
- +/- dehydration
- +/- weight loss and poor BCS
- +/- neurologic deficits

- Sedated rectal exam
 - Evaluate for pelvic fractures/stenosis, colonic FB, strictures or masses, perineal hernia

Underlying Causes of Constipation

Functional	Mechanical
<p><u>Neurologic Disease</u></p> <ul style="list-style-type: none"> • Pelvic trauma • Sacrocaudal luxations (tail pull inj.) <ul style="list-style-type: none"> • Dysautonomia • Ganglionopathies (Hirschsprung's disease) <p><u>Dehydration</u></p> <ul style="list-style-type: none"> • Systemic disease (CKD, DM/DKA, chronic vomiting, neoplasia) • Lack of water access or anorexia <p><u>Electrolyte changes (severe)</u></p> <ul style="list-style-type: none"> • Hypokalemia • Hypercalcemia 	<p><u>Intraluminal</u></p> <ul style="list-style-type: none"> • Colorectal masses <ul style="list-style-type: none"> • Strictures • Atresia ani in kittens • Foreign bodies <p><u>Extraluminal</u></p> <ul style="list-style-type: none"> • Orthopedic stenosis or fractures <ul style="list-style-type: none"> • Masses • Pelvic trauma, orthopedic, soft tissue <ul style="list-style-type: none"> • Manx sacral deformity

Underlying Causes of Constipation

- Idiopathic megacolon
 - A diagnosis of exclusion
 - Unknown cause but suspected to be a disturbance in colonic smooth muscle contraction
- Chronic enteropathy (anecdotally)

Top Causes of Feline Obstipation

- Idiopathic megacolon (62%)
- Orthopedic (23%)
- Neurologic (11%)

Diagnostic Work-Up for Constipation

- History
- Neurologic Examination

- Decreased anal tone, perineal reflex
 - Paraparesis
- CBC/Chem (with lytes), Urinalysis
 - Usually unremarkable unless there is an underlying dz
 - May have signs of dehydration
 - Increased HCT, Albumin, Crea
- Sedated rectal exam
 - Palpate for masses/stricture/stenosis
 - Palpate pelvis for fractures/stenosis
- Radiographs
 - Evaluation of amount and character of feces
 - Evaluation of fractures, stenosis, mass, FB
 - Colonic diameter (use L5)
 - <1.3 = normal
 - >1.5 = abnormal / megacolon
- Abdominal ultrasound
 - Extraluminal masses
- Colonoscopy/proctoscopy/contrast radiographs *these are not always necessary 3rd and 4th tier diagnostics
 - Barium enema if colonoscopy isn't possible *requires deobstipation first

Plan for Obstipated Cats

- Hospitalization
 - Rehydrate with IVF therapy
 - Serial warm water enemas 10ml/kg
 - Monitor electrolytes
 - Cats almost always have hypokalemia
- Manual deobstipation
 - Done if above treatment is unsuccessful

Medical management

- First-time offenders may require less aggressive intervention
- Recurrent offenders warrant more aggressive treatment
- Obstipated cats need to be hospitalized
- Address the underlying disease
- Lifestyle changes
 - Increase physical activity
 - Intentional weight loss

- Diet
 - Canned to increase water intake
 - High fiber diets or fiber additions
 - Canned pumpkin *pay attention to the carb content
 - Psyllium
 - Highly digestible diets to reduce stool volume
- Stool softener
 - Hyperosmotic polysaccharide laxatives
 - Miralax (OTC) ~1/4 tsp/cat po bid
 - Lactulose syrup (Rx) ~ 0.5mL/kg po bid-tid
- Rectal suppositories (questionable value)
 - DSS emollient laxatives – softens stool
 - Glycerin – lubricant laxative
 - Bisacodyl – stimulant laxative
- Prokinetics
 - Cisapride 0.5-1 mg/kg po bid-tid
 - MOA: serotonin 5-HT4 agonist
 - Must be compounded
 - Do not use oral metoclopramide (short $T_{1/2}$ no effect on colon)

NEVER use Fleet enemas in cats/dogs (or any hypertonic Na^+ phosphate enema)

- Can cause marked electrolyte derangements
- Hypernatremia
- Hyperphosphatemia
- Hypokalemia
- Hypocalcemia
- Leading to vomiting, weakness, dehydration, and acute death

*Never use mineral oil orally in cats – can lead to lipid aspiration pneumonia

Subtotal Colectomy (last resort procedure!)

- Idiopathic megacolon is a diagnosis of exclusion and a radiographic dx
 - Likely a disturbance in colonic smooth muscle contraction
- Subtotal colectomy for refractory idiopathic megacolon cases after exhausting all medical options
 - Ideally spare the ileocolic junction
 - Colon has poorer blood supply and slower wound healing than the SI
 - Morbidity issues: post-op septic peritonitis, dehiscence at anastomosis, stricture formation, recurrence of megacolon if too much colon is left behind
 - Diarrhea post-op, but usually resolves in weeks to months if the ICJ is spared