COBALAMIN DEFICIENCY IN DOGS & CATS

Cobalamin Deficiency

- Cobalamin deficiency alone can cause gastrointestinal symptoms, but this deficiency is most often a comorbidity with other gastrointestinal diseases.
- Cobalamin deficiency may exacerbate the symptoms of gastrointestinal disease.
- Patients with cobalamin deficiency may not respond to the treatment of an underlying gastrointestinal disease unless cobalamin supplementation is implemented.
- Cobalamin-deficient dogs and cats usually show clinical signs only of GI disease, which may be the cause or the effect of cobalamin deficiency. Signs can include:
  - Weight loss
  - Central neuropathies
  - Peripheral neuropathies
  - Immune deficiencies

Potential Candidates For Cobalamin Supplementation

- Chronic and severe small intestinal disease
- Exocrine pancreatic insufficiency (EPI)
- Short-bowel syndrome
- An exclusively vegetarian or vegan diet
- A single case of pancreatic lipase deficiency
- Hereditary cobalamin deficiency
- Diabetes
- Hypothyroidism in dogs

Cobalamin Concentration Testing

For a sick animal, blood serum cobalamin concentrations appear to decrease more slowly than cellular levels, which are more clinically significant. Thus, cobalamin supplementation should be considered even when serum cobalamin concentration is “low-normal.”

FOLATE DEFICIENCY IN DOGS & CATS

- Cobalamin serves as a cofactor in folate metabolism, and cats with severe hypocobalamimemia and histories of GI signs tend to gain weight and have reduced symptoms after cobalamin supplementation. As cobalamin is supplemented, and cobalamin serum concentrations normalize, activity of the methionine synthase enzyme may increase and lead to a decrease in serum folate concentration as it is consumed.
- Dogs with chronic kidney disease have been shown to have decreased concentrations of folate.