

Copper-Associated Hepatitis & Diet

Copper-associated hepatitis (CAH) has a complex inheritance pattern in Labrador retrievers. After silently progressing for years, the clinical phase often results in liver failure and death within months. Dietary copper and zinc may play roles in pathogenesis. To investigate association between hepatic copper and zinc levels, histology, and dietary copper and zinc, 55 client-owned Labrador retrievers fed a single brand and type of commercial dry food for ≥ 1 year were evaluated. Eighty percent were first-degree relatives to dogs with CAH. Liver biopsies were used to determine copper and zinc content. Diets were analyzed at a commercial laboratory.

Hepatic copper concentrations were high (>400 mg/kg dry weight liver) in 75% of dogs. Hepatic copper concentrations were significantly higher in dogs with hepatitis lesions than those without; hepatic zinc concentrations were not significantly different. There was a significantly positive association between dietary and hepatic copper and a negative association between dietary zinc and hepatic copper. Results no longer reached significance when data from 8 dogs fed a diet with a higher zinc:copper ratio

and significantly lower hepatic copper concentrations were removed from analysis.

Copper levels in many commercial diets may be too high for dogs genetically predisposed to CAH. These results cannot yet be applied to the general Labrador retriever population without greater understanding of CAH genetics.

■ Commentary

This study supported the need for breed-specific diets. It would be helpful to have diets formulated to address each breed's specific healthcare need—in this case, inherited CAH in Labrador retrievers, which may be more common than previously thought. Finding over-the-counter diets with lower copper levels is almost impossible, as label reporting is not required or may not represent entire copper content.—*Sandra Sawchuk, DVM, MS*

■ ■ Source

Association of dietary copper and zinc levels with hepatic copper and zinc concentration in Labrador Retrievers. Fieten H, Hooijer-Nouwens BD, Bierge VC, et al. *JVIM* 26:1274-1280, 2012.

Feline Pelvic Injury

Feline pelvic disease, which most commonly occurs from trauma, requires complete orthopedic and neurologic examination, noting presence or absence of neurologic tone and/or sensation in the distal limbs, perineum, tail, anus, and bladder. Careful physical and radiographic investigation of crepitus, abnormal anatomical landmarks or limb movements, and the presence of pelvic canal stenosis are also important in determining therapy. Surgery for pelvic trauma is best within 7 days, before granulation tissue and muscle contracture complicate exposure, fragment manipulation, and fracture reduction.

Traumatic sacroiliac luxations are common in cats. The spinal cord terminates at the level of L7 or the LS junction (vs L5 in

dogs); therefore, disease can cause urinary, fecal, and/or hindlimb neurologic dysfunction. Sacrocaudal luxation, or tail-pull injury, causes traction on caudal nerve roots and compromised tail motor and sensory function, resulting in a paretic or paralyzed tail with no sensation. Prognosis depends on presence or absence of perineal sensation or sensation to pressure applied to the tail base with tissue forceps. Urinary or fecal incontinence should be managed for 4 weeks to allow recovery; prognosis is poor if improvement is not made within this time. Other conditions and surgical approaches, including surgical management of acetabular fractures, are discussed. Most cases of feline pelvic injury have a favorable prognosis with appropriate management.

■ Commentary

The cost of orthopedic surgery or availability of surgical expertise often deters clients from aggressive care. Fortunately, cats often do well with conservative therapy if weight-bearing surfaces and neurologic function are not compromised. Alternative therapies (eg, acupuncture, physical rehabilitation) are not mentioned but can help cats return to function as quickly and painlessly as possible. Off-label pain management is often employed to address signs, and certified pain practitioners are well-versed at managing many of these cases after surgery or throughout conservative care.—*Heather Troyer, DVM, DABVP, CVA*

■ ■ Source

Conditions of the feline pelvic region. Witte P, Scott H. *IN PRACT* 34:498-511, 2012.