

COPPER TOXICOSIS

Copper toxicosis is characterized by **copper accumulation within the liver**, resulting in hepatitis, cirrhosis and **ultimately liver failure**. The cause is primarily thought to be **familial** in Bedlington, West Highland White and Skye Terriers and Doberman Pinschers; although, it has been seen rarely in other breeds. Dogs are **usually middle-aged when signs first become apparent**. Either sex can be affected.

The **most common clinical signs** are those of liver failure and include: lethargy, inappetance/anorexia, nausea, vomiting, increased drinking and urination and potentially mentation changes. A **presumptive diagnosis** can be made based on the dog's breed, clinical signs, elevated serum liver enzymes on routine blood work and liver changes on abdominal radiographs/x-rays and/or ultrasound. A **definitive diagnosis** is based on liver biopsy analysis showing changes consistent with hepatitis or cirrhosis and special staining to show accumulated copper within cells.

Copper toxicosis tends to be **progressive and ultimately fatal** through fulminant liver failure. The **progression can be slowed** for varying amounts of time **with copper chelating agents**, such as D-penicillamine and ?, which bind to the copper and aid in its excretion before it can accumulate within the liver. It is important to note that these chelators can have substantial side effects that limit their use. Treatment is otherwise based on supportive and symptomatic care for the liver failure. **The prognosis overall is grave.**