Copper Requirements in Cats

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Function of copper

Copper is necessary for a number of body processes including the formation of collagen, bone and connective tissue, the absorption of iron, the development and maturation of red blood cells, the function as an antioxidant, and the development of pigment in hair.

Dietary sources of copper

Copper is found in liver, fish, whole grains, and legumes. Most quality commercial cat foods are supplemented with copper to assure adequate intake.

Daily copper requirements

The recommended daily requirement for a kitten, pregnant, or nursing cat is 2.3 mg of copper for every pound of canned cat food eaten (on a **dry matter basis**), but 7 mg per pound of extruded (dry) food. This recommendation is based upon unpublished data that suggested that copper in the dry food was not as easily absorbed by pregnant queens. The recommended daily requirement for adult cats is 2.3 mg per pound of food (on a dry matter basis), regardless of the type of food. The copper should be in a form other than copper oxide.

Copper absorption

Copper is absorbed in the stomach and small intestine, and stored in the liver, kidneys, and brain. A number of substances can decrease the absorption of copper. These include high levels of ascorbic acid (Vitamin C), increased levels of calcium, zinc, iron, and sulfur, and some toxic metals such as cadmium, silver, or lead. Zinc supplementation is actually used as a therapy in dogs with copper storage disease (a liver disease).

Copper deficiency

Copper deficiencies are rare in cats and dogs. Cats with copper deficiency may develop anemia, have poor reproduction, fetal deformities, and abnormalities in bone development.

Copper toxicity

Copper toxicity is generally not a problem in cats, but some dogs have a specific problem in copper storage that can result in symptoms of copper toxicity. Bedlington Terriers and West Highland White Terriers have been shown to have this hereditary disorder, which causes copper to accumulate in the liver and results in inflammation of the liver (hepatitis). Doberman Pinschers can also develop hepatitis with an associated accumulation of copper in the liver. The typical symptoms of toxic levels of copper in the liver include lethargy, vomiting, jaundice, and weight loss.

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