

# Thiamine Deficiency

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**T**his 3-year-old, neutered male domestic short hair cat has the typical “starry-eyed” expression and markedly dilated pupils seen with mildly to moderately altered states of consciousness. Such altered consciousness occurs with thiamine deficiency and grossly resembles that induced by ketamine administration. The second image depicts the classic “thiamine seizure.” Note the tense ventral neck flexion that lasts only seconds.

Thiamine deficiency in cats can occur from inadequate dietary supplementation, diets containing certain fish products (herring and mackerel) that include the enzyme thiaminase, prolonged food storage, excessive heat processing, and inadequate food intake or intestinal malabsorption. Affected cats show signs of central vestibular dysfunction, head tremor, mydriasis, and cervical ventroflexion. Signs can progress to coma and death. Cats treated initially with thiamine hydrochloride (50–100 mg SC or IM) show remarkable improvement over 24 to 48 hours. Lower maintenance doses should continue daily for one month along with any necessary dietary correction.