

DIETARY TREATMENT OF IRON STORAGE DISEASE IN CAPTIVE BIRDS OF PARADISE (*Paradisaea raggiana*)

Kelly E. Helmick, DVM, MS, Dip. ACZM,^{1*} Erin L. Kendrick, MS,² and Ellen S. Dierenfeld, MS, PhD, CNS³

¹Woodland Park Zoo, 601 N 59th St, Seattle, WA 98103 USA; ²Saint Louis Zoo, Saint Louis, MO 63110 USA; ³Novus International, Inc., St. Charles, MO 63304 USA

Abstract

Elevated serum iron parameters were lowered through dietary manipulation in captive Bird of Paradise (*Paradisaea raggiana*) using a modification of previously published low-iron diets.^{2, 3} Study birds were part of a captive breeding program consisting of two males and one female, captive born, 3.5 to 9 years of age. Serum iron, total iron binding capacity (TIBC), percent transferrin saturation, body weight, and hematocrit were monitored through routine examinations and blood samples collected before dietary treatment and at regular post-treatment intervals for 18 months. Routine diet consisted of a variety of fruits, vegetables, a multivitamin supplement, and a commercial low-iron avian pellet, with a total dietary iron content of 55 mg/kg (dry matter) or 1.12 mg iron/bird/day on an as-fed basis. Dietary treatment involved removal of the commercial avian pellet for 30 days at 12 month intervals, for a total iron content of 42 mg/kg (dry matter) or 0.64 mg iron/bird/day on an as-fed basis. Average serum iron and TIBC were significantly decreased by 75% (TIBC) to 80% (serum iron) of pre-treatment values after one 30-day treatment, achieving levels below published normal values for similarly susceptible species.⁴ Average percent transferrin saturation levels were lowered by 10% of pre-treatment values after one 30 day treatment but remained above the target value of 80%.¹ Average hematocrit and body weight remained unchanged. No adverse effects were noted throughout the 18 month evaluation period and breeding behavior was undisturbed. Periodic removal of low-iron commercial pellets from the diet of captive Bird of Paradise is a safe and effective method for lowering serum iron values without need for handling. Periodic application of this technique also may be useful as a preventive tool to maintain appropriate serum iron values in other avian species susceptible to iron storage disease.

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