

BIOCHEMICAL AND PHYSIOLOGICAL OBSERVATIONS IN MEERKATS (*SURICATA SURICATA*) AT TWO ZOOS DURING A DIETARY TRANSITION TO A DIET DESIGNED FOR INSECTIVORES.

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Abstract

These studies assess the short-term and long-term effects of a commercially available manufactured diet (Mazuri[®] Insectivore, PMI Nutrition International, P.O. Box 66812, St. Louis, MO 63166-6812) intended for the feeding of insectivorous animals. The initial study evaluated palatability of the diet and the maintenance of health in captive meerkats over a 6-week period. Five animals at two zoos were obese and healthy at the start and finish. Measurements of blood chemistries including cholesterol and cell blood count remained within physiologic expected ranges throughout the study. Plasma and serum amino acid levels also remained within normal expected ranges, except taurine, which was much higher than expected throughout (275 ± 52 and 338 ± 104 nmol/ml, respectively). No significant change in taurine occurred over time. After the initial six weeks, it was decided to keep the animals on the test diet indefinitely, and there was opportunity to monitor their long-term status. Individuals at one zoo were restricted in their access to diet, and achieved a beneficial weight loss while maintaining good health. All animals remained healthy through the assessment at five months on the test diet. Taurine was maintained at high values throughout the extended study (266 ± 33 nmol/ml plasma and 306 ± 49 nmol/ml serum, overall), and cholesterol levels did not exhibit a significant change. Approximate dietary energy requirement for captive meerkats in our study during Southern California spring and summer was found to be 158 ± 3 kcal/meerkat/day, and weight loss was accomplished at approximately 114 kcal/meerkat/day.