

Effects of Midazolam on Food Intake in Budgerigars (*Melopsittacus undulatus*)

Anna Martel, DVM, Grayson Doss, DVM, Dipl ACZM, Colin Berg, DVM, Christoph Mans, Dr med vet, Dipl ACZM, Dipl ECZM (ZHM)

Abstract: Currently, drug-induced stimulation of appetite is not commonly performed in hyporexic or anorexic companion psittacines. Instead, to prevent a catabolic state and weight loss, supplemental feedings are routinely performed via crop gavage. However, crop gavage is not without complications, stressful to the patient, and labor intensive. The objective of this study was to evaluate the effect of midazolam on food intake in healthy budgerigars (*Melopsittacus undulatus*). In a randomized, blinded, controlled study, change in food intake following intramuscular administration of midazolam (1 mg/kg) or a placebo-control treatment (0.9% saline) was evaluated in 12 healthy adult budgerigars. Food intake was quantified for 1 hour before and after drug administration. Birds were monitored for feeding behavior as well as signs of sedation. Following midazolam administration, a median 6-fold (1.1 – 28) increase in food intake was recorded. In 3/6 (50%) birds, the food intake increase following midazolam administration was > 10-fold (median: 17-fold [10 – 28]), while in the remaining 3 birds, food intake increased by only 1.7-fold (1.1 – 1.8). The median amount of food ingested (16.7 g/kg [3.2 – 43.2 g/kg]) was significantly higher following midazolam administration compared to the control group (1.9 g/kg [0.0 – 19.7 g/kg], $P = .015$). The median time birds spent displaying feeding behavior following the midazolam injection was 18% (0 – 43%), compared to 1% (0 – 20%) in the control group after saline injection. Five out of 6 (83%) birds showed signs consistent with mild sedation following midazolam administration. This study demonstrates that midazolam is an appetite stimulant in budgerigars. Future studies are needed to evaluate if midazolam's effects on food intake are dose dependent and if the duration of effect exceeds 1 hour.