

Diet selection and nutrient intakes of captive lion tamarins (*Leontopithecus spp*): A preliminary study

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It is known that Callitrichids have specific nutritional requirements and zoos offer heterogeneous diets that not only supply the necessary nutrients, but also provide sensory stimulation and promote natural feeding behaviours. However, the free choice given to these primates will invariably result in the diet consumed being different to the diet offered. Food preferences will consequently influence the consumption of nutrients and create possible imbalances in diets consumed. A diet intake study was carried out to assess the existence of food preferences and the resulting nutrient intakes of two groups of captive *Leontopithecus* (*L. chrysomelas* n=5 and *L. rosalia* n=3) when offered a heterogeneous diet. This was carried out at Colchester Zoo using continuous focal observation of each individual. Weight measurements of food items were also recorded before and after being offered and published food composition data were obtained so that nutrient intakes could be estimated. There were clear preferences shown towards food items that contained soft sweet pulp (e.g. bananas, blueberries and grapes), over others such as spring onions, peas and beans, and diets selected by individuals were less diverse than diets offered. There were no significant differences detected between group intakes of dry matter (DM), total dietary fiber (TDF), crude protein (CP), crude fat (CFat), ash, calcium (Ca) and phosphorus (P). However, at the individual level, differences were observed. Nutrient intakes of both *Leontopithecus* groups were compared to the suggested levels of feeding that were found in the literature. It was seen that the mean intakes of TDF, CP and Ca for both groups were below the suggested levels stated in the literature, whereas mean CFat and energy intakes were above published levels. It was concluded that food preferences probably influenced the intake of nutrients observed, although dietary composition was also likely to be influential. However, although differences did occur in individual nutrient intakes, due to small sample size and short duration this study can only yield preliminary data.

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