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## DIETARY AND DIGESTIVE DIFFERENCES OF PRIMATES IN RELATION TO FOLIVORY/FRUGIVORY AND BODY SIZE

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There is considerable variability in natural dietary requirements and digestive adaptations across primate taxa. We studied the food preference, intake, digestion and nutrition of eight species of primates at the Singapore Zoo (ring-tailed lemur, white-faced saki, de Brazza's monkey, patas monkey, brown headed spider monkey, red-shanked douc langur, proboscis monkey and Javan langur) to investigate how diet and digestion is related to differences in the degree of folivory and frugivory, as well as inter- and intra-specific body size in captivity. Our results showed that species with more frugivorous, less fibrous diets, and which have smaller bodies (both inter- and intra-specific), have shorter transit and mean retention times compared to species with more folivorous, higher fiber diets and larger bodies. More frugivorous and smaller bodied species select for higher energy food compared to more folivorous and larger bodied species, and their higher energy intake was related to higher activity levels. These results show that captive primates retain the evolutionary dietary and digestive characteristics typical of their species when subjected to appropriate dietary regimes.

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