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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