THE EFFECTS OF DIETARY CHANGES ON CHIMPANZEE BEHAVIOR

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Keywords: chimpanzee, health, captive care, behavior

Captive chimpanzees (Pan troglodytes) often suffer from obesity-related health issues including arthritis, diabetes, and heart disease. It is becoming increasingly common to house captive chimpanzees in large social groups, which may increase aggression due to the competition over limited food resources. In order to improve the health of sanctuary chimpanzees at Chimp Haven, Inc, USA, we recently made some modifications to the chimpanzee’s diet. Diet formulations were created by our veterinarian using recommendations from Association of Zoos and Aquariums Nutrition Advisory Groups and National Research Council guidelines on daily nonhuman primate caloric needs. The current study examined behavioral changes in the chimpanzees when diet modifications included a reduction in the overall amount of produce given. As dietary changes were being implemented, animal care staff voiced concerns over the possibility of increased competition, abnormal behavior and aggression with the reduction in the amount of produce provided. We observed six groups of chimpanzees (N = 85; M = 34 F = 51, age: range 3-55, mean = 27.8) when produce was provided in the morning and afternoon for seven weeks before and three weeks after the dietary changes were made. We completed two 30 minute scans with six minute intervals per week on each group for a total of 820 scans. Groups ranged in size from 11-23 members (mean = 14.33). Although we found no significant changes in aggressive behavior after the dietary changes (t = .007, p = .99), there was a non-significant tendency towards an increase in abnormal behavior (t = 2.30, p = .06).