

SOCIAL GROOMING IN PRIMATES: HYGIENIC OR HEALTH RISK?

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Social grooming among animals has long been viewed as a behavioral strategy aimed at reducing the numbers of parasites on wild animals. It is well known that parasitic organisms have the potential to reduce host fitness by suppressing the immune system and increasing the host's susceptibility to other diseases. Social grooming has thus been generally considered to have a hygienic function in primate social systems. Very few studies, however, have examined links between social grooming and parasitic infections in nonhuman primates, and those that have focused on ectoparasites, or parasites that live on the outside of the body, including mites and ticks. Here we focus on direct links between social grooming and gastrointestinal parasite infection patterns, using a combination of behavioral and parasitological data, and vervet monkeys (*Chlorocebus aethiops*) as a model species. Specifically, this study examines whether the close contact involved in social grooming actually increases transmission of gastrointestinal parasites. Focal animal sampling and continuous recording were conducted on 54 recognized individuals from 3 groups at Loskop Dam Nature Reserve in South Africa, with a focus on grooming and other close contact behaviors. Fecal samples were collected and analyzed for presence of various gastrointestinal parasites, using primarily fecal flotation with centrifugation, fecal sedimentation, and immunofluorescent antibody detection. Results from this study contribute towards a better understanding of the role of parasitic infections in primate population trends and primate conservation efforts. These results also have implications for the role of social grooming in the evolution of primate sociality.

Keywords: behavioral ecology, gastrointestinal parasites, *Chlorocebus*, primate health