Impacts of Contraception on the Social Behavior of Gorillas: Welfare Concerns

Susan W. Margulis\textsuperscript{a}\textsuperscript{b}\textsuperscript{c}, Sylvia Atsalis\textsuperscript{d} & Anna Sarfaty\textsuperscript{e}\textsuperscript{f}

\textsuperscript{a} Department of Animal Behavior, Ecology and Conservation, Canisius College
\textsuperscript{b} Department of Biology, Canisius College
\textsuperscript{c} Lincoln Park Zoo, Chicago, Illinois
\textsuperscript{d} Student Center for Science Engagement, Northeastern Illinois University
\textsuperscript{e} Department of Biology, University of Chicago
\textsuperscript{f} Cornell University, Ithaca, NY

Published online: 30 Sep 2013.


To link to this article: http://dx.doi.org/10.1080/10888705.2013.827934
Impacts of Contraception on the Social Behavior of Gorillas: Welfare Concerns

Susan W. Margulis,1,2,3 Sylvia Atsalis,4 and Anna Sarfaty5

1Department of Animal Behavior, Ecology and Conservation, Canisius College
2Department of Biology, Canisius College
3Lincoln Park Zoo, Chicago, Illinois
4Student Center for Science Engagement, Northeastern Illinois University
5Department of Biology, University of Chicago

Reproductive management is a critical component of maintaining healthy populations in zoos. Strategies for limiting reproduction include social manipulation, chemical management, and permanent sterilization. Chemical contraception, the usual method of choice, can alter social and sexual behavior. The results of a study on the effect of chemical contraception on sociosexual behavior in gorillas are described, and the implications for the management and well being of zoo-housed primates are discussed. An examination was done of temporal trends of estrus, aggressive and affiliative behaviors, and activity budgets in 4 females on combination birth control pills at the Lincoln Park Zoo in Chicago, Illinois, using point sampling, all-occurrence records, and one-zero sampling. Estrous behavior occurred more frequently in Week 1 of the cycle (the placebo week) than any other week. Females exhibited affiliative and aggressive behaviors evenly across their cycles, and activity budgets did not change. The results highlight that the use of chemical contraception can alter behavior and that there are several implications of the shift in timing of sexual behavior. First, contracepted females tend to be less overt in their sexual solicitations than noncontracepted females. Second, chemical contraception may result in tight synchrony of estrous behavior (concentrated during the no-pill week). Third, chemical contraception may obscure existing patterns of social dominance. Finally, contraception itself alters the normal pattern of estrus, pregnancy, and infant care that characterizes most mammals. It is critical to be aware of the possible effects of such alterations on group dynamics and take these changes into account when considering reproductive management options.

Anna Sarfaty is now at Cornell University in Ithaca, NY.

Correspondence should be sent to Susan W. Margulis, Department of Animal Behavior, Ecology and Conservation, Canisius College, 2001 Main Street, Buffalo, NY 14208. Email: margulis@canisius.edu