

## **Masturbation (nonhuman primates)**

Ruth Thomsen<sup>1,2</sup> and Volker Sommer<sup>2</sup>

<sup>1</sup>Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

<sup>2</sup>University College London, UK

Autosexual behavior (masturbation) is the most common sexual activity of humans, but surprisingly little is known about how it evolved and why it occurs. For centuries, masturbation has been considered taboo or regarded as an unnatural and even pathologic behavior (Laqueur 2004). During the past decade however, it has been revealed that masturbation is also a common part of the sexual repertoire in nonhuman primate populations. Masturbation is more prevalent in species that exhibit a polygynandrous (multi-male, multi-female) breeding system but it also occurs in harems and in solitary taxa. This suggests that masturbation is an ancestral, phylogenetically widespread trait within the order of primates and further implies that it is a facet of our own hominin ancestor's sexual repertoire (Thomsen et al. 2003).

In around eighty species from all major radiations of the living anthropoid primates, males were observed to exhibit masturbatory behaviors that slightly differ in some peculiarities. In several species of New World monkeys, Old World monkeys, lesser apes and great apes, males are reported to masturbate frequently using their hands, feet, or mouth to stimulate their genitals until ejaculation occurs. In prosimians, one of the most evolutionarily ancient primate taxa, masturbation is known in mouse lemurs and galagos.

In females, masturbation is described in fifty primate species (Jones 2005). Females exhibit more sophisticated kinds of masturbatory behaviors than males. Besides the whole ano-genital region they include stimulation of the breast region using various substrates. Females of species that are known for the use of tools use "tool-like" objects to masturbate. Orang-utans prepare sticks of adequate size, bonobos use pieces of lianas and capuchin monkeys use plant parts for vaginal stimulation. However, it is more difficult to rate the level of arousal in females. Vocalization, distinctive facial expressions, or excitement visibly occur in some taxa (macaques, cebids, guenons), but usually female orgasm (if any) seems concealed.

From an evolutionary perspective, masturbation is a striking behavior because sexual behaviors traditionally are invoked to be exclusively evolved to sire offspring. At a proximate level of explanation masturbation results from the coincidence of sexual desire and lack of sexual opportunity, and may lead to a hormonally-induced relaxation that reduces aggression. This might be of importance especially in social living primate species.

However, in males, where masturbation also occurs during the presence of estrous females and where energetically costly ejaculates are putatively wasted in a large scale (Thomsen et al. 2006), there are incidences when masturbation can be ultimately adaptive. Masturbation might be beneficial for males of species with severe sperm competition (Baker and Bellis 1993) or prior to mating with a newly fertile female, since it helps to flush out old and low-quality sperm from the genital tract allowing the production of new sperm with enhanced fitness, thereby increasing the chances of fertilizing the egg (Thomsen 2002).

In nonhuman primate females, beyond the satisfaction of sexual desire, all evolutionary hypotheses that have been formulated until now (e.g., maintenance of genital health, avoidance of sexually transmitted diseases, attracting males, enhancing pheromone production, manipulating inseminated sperm) lack empirical evidence.

**SEE ALSO:** fitness; masturbation; orgasm (primates); primate sexuality; proximate and ultimate explanation; auto-sexual behavior; evolution; masturbation nonhuman primates.

## References

- Baker, R. R., and M. A. Bellis. 1993. "Human Sperm Competition: Ejaculate Adjustment by Males and the Function of Masturbation." *Animal Behaviour*, 46: 861–885.
- Jones, E. 2005. "Masturbation in Female Primates: Taxonomic Distribution, Proximate Causes and Potential Evolutionary Functions." MSc Diss. University College London, Department of Anthropology.
- Laqueur, T. M. 2004. *Solitary Sex. A Cultural History of Masturbation*. New York: Zone Books.
- Thomsen R. 2002. "Sperm Competition and the Function of Masturbation in Japanese Macaques (*Macaca fuscata*)." Diss. Ludwig-Maximilians-Universität München, Germany.
- Thomsen, R., J. Soltis, and C. Teltscher. 2003. "Sperm Competition and the Function of Male Masturbation in Non-human Primates." In *Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions*, edited by C. B. Jones, 436–453. Norman, American Society of Primatologists.
- Thomsen, R., J. Soltis, M. Matsubara, K. Matsubayashi, M. Onuma, and O. Takenaka. 2006. "How Costly are Ejaculates for Japanese Macaques?" *Primates*, 47: 272–274.

## Further Readings

- Dixson, A. F. 2012. *Primate Sexuality: Comparative Studies of the Prosimians, Monkeys, Apes, and Humans*, 2nd ed. Oxford, Oxford University Press.

## Abstract

Male and female nonhuman primates from all living major radiations are known to perform autosexual behaviors (masturbation) implying that masturbation is a facet of our own hominid ancestor's sexual repertoire. At a proximate level masturbation satisfies sexual desires leading to a hormonal state of relaxation and reduced aggression in both sexes. This might be of importance above all in social living primate species. Ultimately, masturbation might be beneficial for males since it helps to discard old and low-quality sperm from the genital tract allowing the production of new sperm with enhanced fitness. For female masturbation, however, an ultimate explanation is still lacking.