

Monkey Business - A Brief Summary of the Dangers of Non-human Primates As Pets

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Public health officials frequently warn that keeping non-human primates (NHPs) as pets, in addition to being illegal, is a threat to the health and well being of those persons caring for the animals. Most NHPs become quite aggressive at the time of sexual maturity, especially males, and aggressive bites to human caretakers are virtually inevitable. The response of the medical and public health community to non-human primate (NHP) bites, even relatively minor bites, is often perceived as excessive; however several health consequences, some devastating, can result.

In bites from Old World primates, particularly those of the genus *Macaca*, the primary concern is the transmission of B virus (*Cercopithecine herpesvirus 1*, *Herpesvirus simiae*). Transmission of this disease is particularly a risk in bites from mature macaques. B virus causes a lifelong infection characterized by periods of reactivation and shedding in the NHP, and periods of reactivation characterized by signs similar to those observed with *Herpesvirus simplex* infection in humans. In humans, however, B virus causes severe disease that often involves the central nervous system and, more often than not, leads to death. In cases reported to the Centers for Disease Control and Prevention (CDC), 79% (19/24) of people infected have died. Humans are exposed to the virus primarily through bites, but NHPs may potentially infect humans through scratches, other salivary exposures and the handling of infected tissues. Early diagnosis is imperative since antiviral therapy can save the victim if initiated soon after onset of illness. Reporting of bites is crucial. Old World primates that bite should be serologically screened so that victims may be administered prophylaxis.

NHP bites also are not exempt from rabies prevention and surveillance procedures mandated in the public health sanitary code. Many believe erroneously that monkeys and apes are resistant to infection with the rabies virus; however NHPs are no more or less susceptible to rabies than humans. NHPs are considered wild animals and, although very few cases have been reported in these animals over the past century, health officials often are required to euthanize NHPs to rule out the possibility of transmission to humans.

Wound infections from NHP bites are also a common problem. Several different bacterial species and strains have been isolated from NHP bites. Bacterial species of concern include alpha hemolytic streptococci, staphylococci, enterococci, *Haemophilus parainfluenza*, *Neisseria* species, and *Eikenella corrodens*, a facultative anaerobe known to cause extensive tissue damage.

Tuberculosis transmission, which can be a problem in illegally imported non-human primates, is also a concern. Enteric disease has been transmitted from NHPs to humans. Many of the same agents of enteric diseases in humans are present in NHPs and careless, non-hygienic handling of the animals may result in accidental exposure.

Ownership of NHP pets is illegal. Persons who illicitly harbor NHPs should surrender these animals to state wildlife officials or to one of several legally operated NHP rescue groups, where the animals are permitted to live in a safe, appropriately controlled environment.