

Chimps Do Get "AIDS," Study Finds

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for [National Geographic News](#)

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For the first time, and in a surprise to scientists, chimps have been found infected with what is essentially AIDS, a new study says.

The monkey and ape equivalent of HIV—simian immunodeficiency virus, or SIV—has long been thought to be harmless in the animals, never developing into a lethal AIDS equivalent.

Wild, SIV-positive chimps in Africa, the researchers found, are 10 to 16 times more likely to die in a given year than uninfected chimps—giving conservationists one more worry in the struggle to save already at-risk ape and monkey species.

Past evidence had supported the view that SIV doesn't lead to a lethal condition in apes and monkeys, explained AIDS researcher Daniel Douek of the U.S. National Institute of Allergy and Infectious Diseases.

But the study authors "have now conclusively challenged this notion," said Douek, who was not involved in the new research.

(Related: ["HIV-Like Virus Found in Gorillas."](#))

SIV is considered the source of human immunodeficiency virus, or HIV, the virus that causes AIDS. A mutated form of SIV, [HIV is thought to have jumped from chimps to humans, perhaps in the late 1800s.](#)

Disease as Ape-Extinction Threat

The study began in 2004 "because of global worries about disease being a major conservation concern for apes," said study co-author Elizabeth Lonsdorf, a primatologist at the Lincoln Park Zoo in Chicago.

At Gombe Stream National Park in [Tanzania](#)—made famous by [Jane Goodall](#)—researchers collected observational data and, from chimps that had died, tissue samples.

Feces and urine tests pinpointed which living chimps were SIV positive. SIV is spread via bodily fluids, during sexual contact and probably during birth, Lonsdorf said. The virus may also spread through biting and fight wounds, she added—"which will be the topic of further study over the next several years."

At the outset of the study, there was little sense that anything was wrong with the SIV-positive chimps, said Lonsdorf, a former [National Geographic Society emerging explorer](#), who has spent considerable time at Gombe. (The Society owns National Geographic News.)

Then the researchers began noticing the much higher death rate among the SIV-positive chimpanzees. And infected females, it turned out, were much less likely to give birth. When they

did, their babies had a very low chance of survival.

Other symptoms of the AIDS-like syndrome remain unknown, though preliminary results suggest weight loss and lethargy may be among the side effects. "Again, this will be the focus of intensive study over the next several years, since we just discovered the death hazard," Lonsdorf said.

"Just Like AIDS"

Searching for the culprit, veterinary pathologist Karen Terio, looked at tissue samples from an SIV-positive female chimpanzee that had died at Gombe.

"As I was looking through her tissues I was completely taken aback," said Terio, also a co-author of the study, published today in the journal *Nature*.

"I couldn't believe what I was seeing, as the tissue changes looked just like those of AIDS. I kept looking for another reason and couldn't find one. ... " recalled Terio, of the University of Illinois.

Study co-author Dominic Travis remains cautious.

"We don't really know how bad this is in Gombe, let alone if or how it happens elsewhere," said Travis, a veterinary epidemiologist at the Lincoln Park Zoo.

Hope for Fighting AIDS in Humans?

The researchers are optimistic that their potentially dispiriting study could hold blessings in disguise, in the form of increased funding for ape-health research—or potential medical advances for humans.

(Also see ["Search for a Cure: AIDS Turns 20"](#) from *National Geographic* magazine.)

"We can learn a lot about disease mechanisms by studying the same disease in different species," the University of Illinois's Terio said.

Study leader Beatrice Hahn, of the University of Alabama, added, "Chimps may be one [evolutionary] step ahead of us humans in managing the disease. And figuring out how they deal with their infection may ultimately help people infected with HIV."