

## Vacuums Suck Life From Fleas

**An overwhelming majority of fleas die when they pass through a vacuum cleaner, researchers say.**

Posted: December 31, 2007, 5 a.m. EST

Pet owners fighting fleas on their pets and in their homes have a new weapon in their arsenal. Vacuuming fleas kills the parasites in all stages of their lives, according to researchers at Ohio State University.

Researchers studied the cat flea, the most common type of flea to latch on to family pets and plague pet owners. The study revealed 96 percent of adult fleas and 100 percent of younger fleas were destroyed after passing through a vacuum. After finding such definitive results, scientists repeated the experiment several times to ensure the numbers were accurate; subsequent trials mimicked the initial results.

“No matter what vacuum a flea gets sucked into, it’s probably a one-way trip,” said Glen Needham, associate professor of entomology at the university and co-author of the study.

Needham theorized the vacuum’s brushes damage the waxy outer layer of the fleas, that layer allows the bugs to remain hydrated. Without it, fleas most likely dry up and die, he said.

“We didn’t do a post-mortem, so we don’t know for sure,” he said. “But it appears that the physical abuse they took caused them to perish.”

To further test which portion of the vacuuming process kills fleas, researchers placed fleas in a vacuum bag to test for toxicity, however only 5 percent of adult fleas died. And when simply placed in circulating air, just 3 percent of adult fleas perished.

Each round of experiments tested 100 adult fleas as well as 50 in the pupae stage and 50 in the larvae stage on tightly-woven carpet. Researchers conducted the experiments on adult fleas six times, three times on pupae-stage fleas, and once on the larvae-stage fleas, which resulted in an average of 96 percent of adult fleas killed and 100 percent younger fleas.

“For a while, fleas owned us, but now they’re on the run,” Needham said. “There are all kinds of ways to manage the problem, but how people feel about insecticides and how much money they want to spend factors into what they’re going to do for flea control. Vacuuming is a great strategy because it involves no chemicals and physically removes the problem.”