

Cummings School of Veterinary Medicine at Tufts University



CATNIP



The Newsletter for Caring Cat Owners

UPDATE ON ALLERGIES



For more than a decade, Patricia Smith and her two cats, Sunshine and Stormy, were a firmly-bonded trio. Then, quite unexpectedly, Patricia met Gary, who would eventually become her husband. As love blossomed, so did Gary's allergies.

As it turned out, Gary was highly allergic to many things, from perfumes and household cleaning products to cats. Especially cats. The couple went to great lengths to remedy the problem. They sacrificed by living separately for more than three years. Patty also gave up wearing perfume and scented lotions. They replaced cleaning products with environmentally-friendly, unscented ones.

Gary even tried allergy pills and incurred the time and expense of painful allergy shots. All to no avail. Just the mere sight of Patricia's cats sent him into a severe episode of wheezing and sneezing. Ultimately, Patty made the heart-wrenching decision to find a new home for Stormy and Sunshine.

One day, this distressing scenario may never have to occur again.

NEW THERAPY SHOWS PROMISE

For the past four years, researchers at the University of California at Los Angeles and the University of New Mexico have been working on an experimental therapy that may, in essence, stop the molecular process that triggers a person's allergic reaction to cats. This new research is showing promise in animal studies and could be a potential treatment against the misery-causing cat allergies in humans in the not-too-distant future. In addition, it may also benefit patients with severe allergies to peanuts.

Andrew Saxon, lead researcher and director of UCLA's Clinical Immunology and Allergy Center explains, "We made a cat-human fusion protein that binds to the inhibitory receptor of a human allergic cell. At the same time, it binds to the allergic antibody that people have to cats on those cells and turns those cells off. One of the receptor molecules works like a gas pedal by triggering the allergic reaction. The other receptor molecule works like a brake. In essence, the gas pedal and brake are pushed at the same time, thereby turning off the allergic response to cats."

Keith Hnilica, DVM, an associate professor of dermatology in the department of small animal clinical sciences at the University of Tennessee, adds, "In order to get the allergic reaction, you must have a lock-and-key kind of fit with these molecules - the antibodies and the antigens. Once you have that lock and- key fit, it opens the door, and all sorts of chemicals are released that cause the symptoms. Basically, it's almost like putting a big glob of glue on the key so that it can no longer unlock that door and let out the chemical."

According to Dr. Hnilica, the cat allergen is one of the top five most potent allergy-inducing compounds. Others include allergies to cockroaches and dust mites. The feline allergen is very prevalent in the environment, Dr. Hnilica notes, because people with cats carry it wherever they go - they take it to school, to work, and on the subway. It's relatively easy to avoid exposure to say, bees or wool, but it's nearly impossible to avoid cat allergens.

“Even people who don’t own cats can be exposed to the cat allergen through other people who do own cats,” he says.

Until this treatment is approved for use by the general public, what’s an allergic person to do? Gene Nesbitt, DVM, a veterinary dermatologist and clinical professor at Cummings School of Veterinary Medicine at Tufts University, offers these helpful tips to ease symptoms:

- * Conduct grooming outdoors
- * Bathe your cat weekly, weather permitting
- * Use a vacuum that has a Hepa filter on your carpet regularly
- * Use a room air cleaner

CURE MAY BE YEARS AWAY

Before you throw out those tissue boxes, realize that a cure for cat allergies may still be years away. Many of the treatments currently on the market work partially, but nothing seems to work completely. To date, there is no silver bullet or magic cure. *“This is a new technique that has only been used in lab animals,”* stresses Dr. Nesbitt. *“It is still a long time in coming into clinical use.”*

Dr. Hnilica concurs, adding, *“We’re still trying to find answers to solve that problem and help control allergy symptoms in people. This experimental treatment does a lot to show what can be done to alter the mechanisms of the allergic reaction at the molecular level. Will it ever become a functional product? Maybe, but I think it’s probably going to be a long way down the road.”*





