

## DOCTORING ALLERGIES

# Drop by Drop

*Patients flock from all over the Midwest and beyond to receive a novel treatment offered by David Morris MD'54.*

BY NIKI DENISON / PHOTOS BY BOB RASHID '87

Allergies. They can be a minor annoyance, or they can make life miserable. In extreme cases, they can be fatal.

People in Austin, Texas, have been known to suffer so much congestion when the cedar trees are pollinating that

they have to leave town for a few days just to catch their breath. Sometimes, these victims of “cedar fever” leave for good.

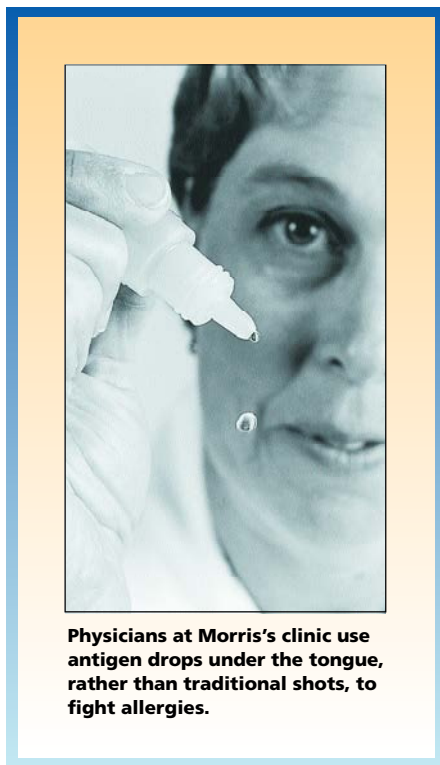
The sorry symptoms of sniffles, sneezing, and itching have been with us since ancient times. King Menes of Egypt is thought to have died from the bite of an insect that caused an allergic reaction in 2641 B.C. But it's only in modern times that allergies have been steadily increasing at an alarming rate, although this increase has been largely restricted to developed nations.

An estimated forty to fifty million Americans, or about 20 percent of the population, suffer from allergies. Some seventeen million Americans have asthma, which is triggered by allergies, and the incidence of asthma increased 75 percent between 1980 and 1994.

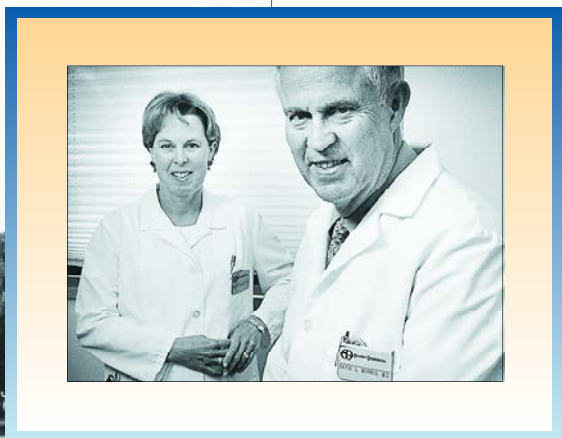
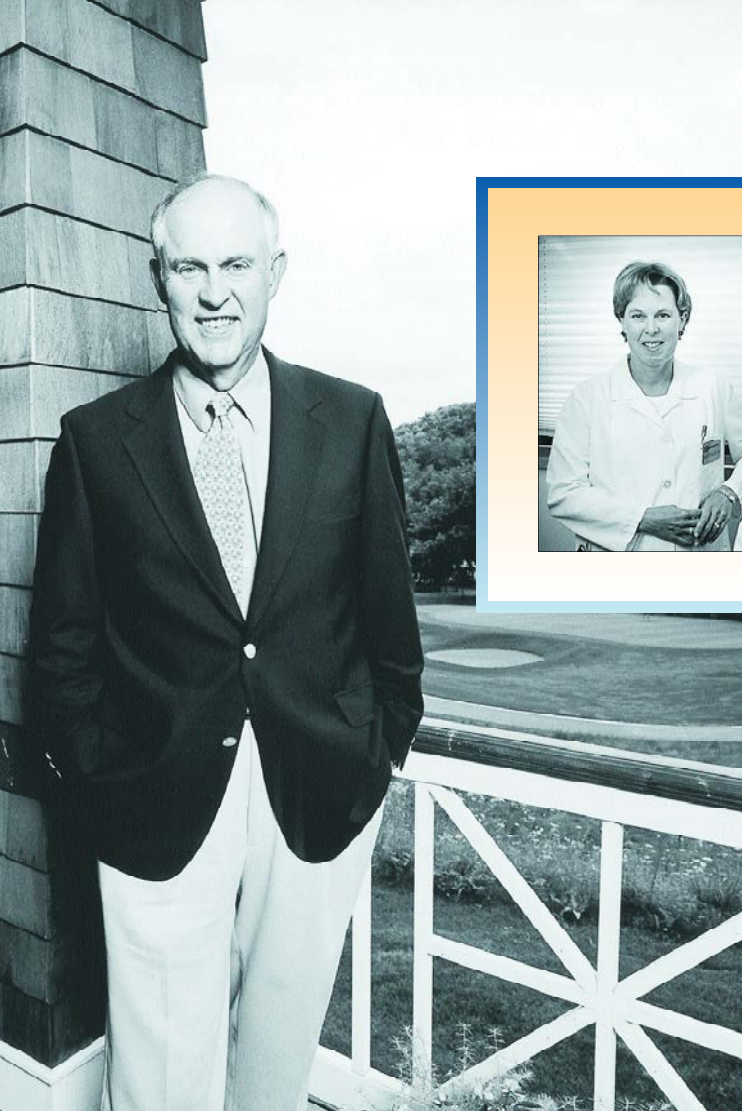
No one knows for sure why the number of allergies is soaring. But a recent theory posits that the virtual epidemic may have been fostered by the fact that we have actually created too clean of an environment for ourselves. Improved hygiene, vaccinations, and antibiotics

may not give young immune systems enough of a challenge to fully develop.

One researcher has found that farm children, who grow up near the plentiful bacteria of the barn that have coexisted with humans for eons, actually had fewer allergies. It is thought that early exposure to these pastoral microbes may have some sort of protective effect. Other studies have found that having a cat or dog in the house, growing up in a large family, or starting day care before the age of one seem to confer a similar benefit on infants.



Physicians at Morris's clinic use antigen drops under the tongue, rather than traditional shots, to fight allergies.



**Mary Morris MD'83 (inset, left) works with her father, David Morris MD'54, at Allergy Associates in La Crosse, Wisconsin. A rising tide of allergic disease, coupled with the popularity of the clinic's less invasive treatment, has attracted some 50,000 families to the clinic in the last 20 years. David Morris, left (at his home in Onalaska, Wisconsin), spends his spare time overseeing the construction of a family retreat near Bozeman, Montana.**

## A Diet of Rice and Peas

Whatever the causes, the specter of allergy suddenly took on an ominous meaning in the life of Stewart Macaulay, a UW-Madison professor of law. He had always had a severe allergy to crabmeat and lobster, and suffered from hay fever. But when he hit his late forties, food allergies kicked in with a vengeance.

His ability to do his job was compromised, he says, because his tongue became covered with sores and swelled up so much that he sounded as if he were drunk when he gave his lectures. He was worried about his throat closing up. Macaulay says that the only things he could eat without experiencing symptoms were rice and peas. After physicians had ruled out other causes, the professor was diagnosed with food allergies and told he had to live with them.

"Essentially," says Macaulay, "I was being told I couldn't go out to a restaurant, I couldn't go out to a dinner party, and I was being asked to limit the plea-

sures of eating at home to just about nothing."

Fortunately, Macaulay's family physician, Jay Keepman '49, MD'54, told him there was a doctor in La Crosse who had had success in treating food allergies. Keepman, who had gone to medical school with David Morris MD'54, had also gone to his former classmate seeking relief for his own

allergies. So Macaulay went to see Morris, who tested him and prescribed a treatment called "sublingual therapy." The patient was told to squirt antigen drops under his tongue, count for fifteen to twenty seconds, and then swallow, repeating this procedure three times a day.

Morris says that the antigens, which are substances that stimulate the production of antibodies, are made up of the same substance that allergists use for injections. Both shots and drops fall under the category of immunotherapy, which seeks to increase tolerance to allergens by exposing patients to successively higher doses of the offending material.

It took about two years, but "I now eat almost everything," Macaulay says. (He must still avoid milk and MSG.) "I can teach my classes," he continues. "I am a totally satisfied patient."

There's only one problem with this happy ending. Although Morris says that he has been able to help thousands of

patients like Macaulay over the years, the professional organizations governing the practice of allergy in the United States regard sublingual therapy as "unproved and invalid." The drops are also used to treat a wide range of other allergies, including those that cause reactions to mold, pollen, and pet dander. But practitioners who use the novel method of delivering antigen are frowned upon and can even be the targets of hostility from their peers.

Proponents of sublingual therapy say that the drops are less expensive and more convenient, since patients can take them at home and don't have to visit the doctor's office once a week for shots. Advocates believe the approach works especially well for children, who may have a fear of needles.

But much more common is the view of Susan Hefle '83, MS'87, PhD'92, who is co-director of the Food Allergy Research and Resource Program at the University of Nebraska. She says that sublingual therapy "has not been proven to work for food allergies. . . . Currently, there is no treatment for food allergies."

She points out, however, that potential cures may be on the horizon. Researchers are in the process of developing a vaccine for peanut allergy. Another potential new treatment is a drug that blocks the antibody known as immunoglobulin E, or IgE. Preventing this antibody from attacking foreign substances may in turn prevent symptoms from food and other allergies.

Todd Mahr MD'84, an allergist in the La Crosse area, also represents the traditional view. "Sublingual immunotherapy is

controversial,” he says. “There are those who believe that it works, and then there are those traditional allergists who need to have more scientific proof. . . . Studies that are larger and better controlled need to be performed.”

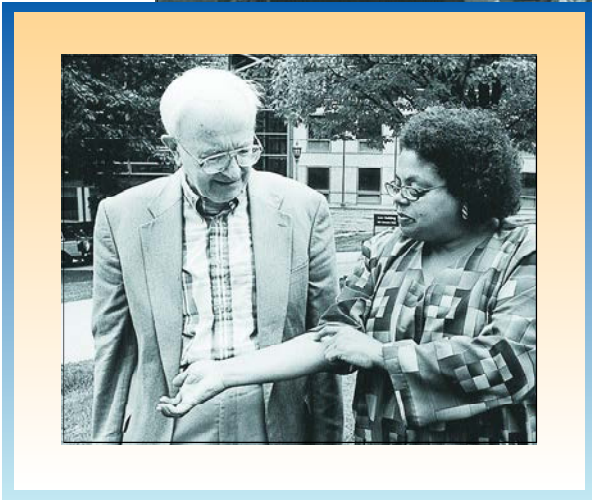
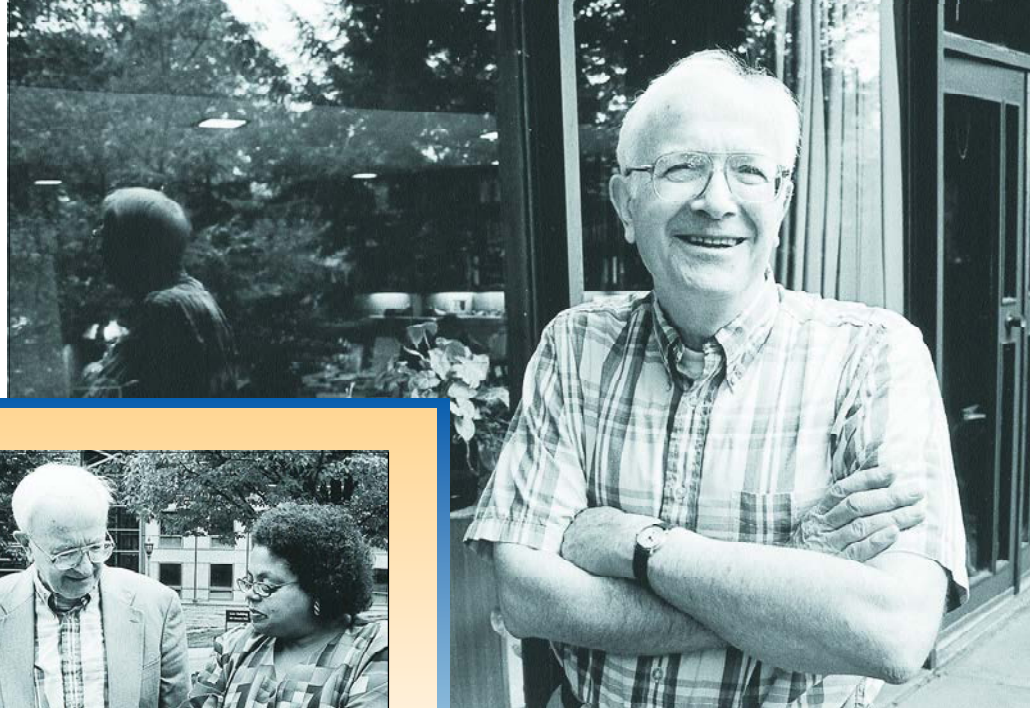
Macaulay knows the treatment he received was controversial, but he says he doesn't care. His problems were severe enough, he says, that “I was willing to drive to La Crosse for a try, rather than having the locals tell me that they didn't have double-blind tests that would prove decisively that they could do something to control my allergies. Well, while I sat waiting for the double-blind tests, why, I still wouldn't be able to eat much of anything.”

After all, he adds, “I was interested in solving my problems, not in establishing great scientific principles. If somebody says, ‘Well, maybe it's the placebo effect, maybe it would have happened anyway’ — frankly, I don't care. As a university professor, I'm all for science. As a patient, [Dr. Morris] solved the problem. And that's what I care about.”

Macaulay still sees Morris twice a year, in the spring and fall pollen seasons. He often shares the drive to La Crosse with his colleague and fellow patient Beverly Moran, a UW-Madison professor of law and women's studies.

Moran says she's had allergies since childhood, but it was only when she saw Dr. Wayne Konetzki in Waukesha, Wisconsin, that she began to improve. Konetzki is another Wisconsin physician who asked Morris to treat his own allergies, and then was so impressed that he learned the sublingual therapy technique from Morris and is now using it in his own practice. “He was my mentor,” says Konetzki. “Just as he does, I get patients from North Dakota, South Dakota, Kentucky, Florida, and Texas.”

Moran says that she has now become a patient of Dr. Morris, since it



**UW law professors Stewart Macaulay, above, and Beverly Moran (inset, right), have both endured severe allergies and sought relief at Morris's clinic. Macaulay, who was down to a diet of rice and peas, says he can now eat “almost everything.”**

is easier to share the driving with Macaulay. When her allergies are acting up, she experiences symptoms that range from an excessive need for sleep to intense itching and burning in her feet and hands. Moran also visited the Mayo Clinic this summer for an extensive allergy work-up.

“I showed them the test that [Morris] had done for these allergies that I have,” she says, “and they said, ‘We don't accept this test, so we have to redo the test.’” The Mayo allergists nevertheless confirmed Morris's diagnosis — that Moran was allergic to dust mites, certain hormones, yeast, and mold. “Speaking just from the impression of the patient,” she says, “it seems like what he's doing is just as cutting edge as Mayo.”

### **“No One Was Lining Up for Shots”**

**M**orris started treating allergy as part of his family practice in West Salem, Wisconsin. For ten years, he pursued the usual allergy treatments, which consisted of injections complemented by allergy drugs. But, he says, “I was disappointed in what I could do for my farmers, particularly with sinus problems and lung

problems.” At a conference in 1966, Morris heard a talk on using sublingual therapy to test and treat food allergies by Dr. Frank Waickman of Akron, Ohio, and he decided to see if it would also work for molds and inhalants.

For three years, Morris gave his patients a choice of drops or injections, and at the end of that period, he says, “no one was lining up for shots anymore.” What's more, he says, his patients were getting better. “I still use every standard method and every standard pharmaceutical treatment, but this is a step beyond to help the people whom those things don't help,” he says.

Morris shares his practice with his daughter Mary Morris MD'83 and two other physicians at Allergy Associates in La Crosse. David says that the clinic has treated some fifty thousand families since they began keeping computerized records in 1980. The clinic's patients come mostly from the Midwest, but many travel farther, such as the couple who came from Switzerland to get treatment for their child. Morris adds that several physicians in Wisconsin, Illinois, and North and South Dakota routinely send him their “tough” allergy cases.

Morris's medical school classmate Keepman says that this isn't the first time the allergist has been brave enough to try

something new. In the early sixties, before he became board certified to specialize in allergy, Morris was one of the first physicians to use a defibrillator, or "the paddles," on a patient who was experiencing rapid heartbeat outside of a surgical setting. Use of the paddles was originally restricted to a particular type of rapid heartbeat that occurs during surgery. Morris subsequently published a paper on this use of the defibrillator. "At that point I was criticized for using that type of treatment," he says, "but now it saves thousands of lives a day."

Keepman says that although Morris was president of his medical school class all four years, and previously president of his undergraduate class at Carroll College, "he's a leader by default. He just kind of leads by a subtle mode of example."

Although he's not ready to retire, Morris now has another undertaking to occupy his free time. He and his family are rebuilding a retreat on twenty acres near Bozeman, Montana. Near the west fork of the Gallatin River, the West Fork Camp will include two homes and three guest houses at the Yellowstone Club, a private ski and golf resort. They're members of the club through Morris's son-in-law Greg LeMond, the only American to win the Tour de France bike race three times. (LeMond is married to Morris's daughter Kathy. Some readers may remember her as the pregnant wife cheering Greg on when he won the race during France's bicentennial year.)

The family is close. Mary Morris says she was inspired to go into medicine when she worked in her father's office during the summers, helping to file charts. "I'm very happy to be working with Dad," says the mother of three who has been with the clinic for eleven years.

## Only the Nose Knows For Sure

Since 1967, David Morris has been crusading for the validity of sublingual treatment for allergy, and most conventional allergists wish he'd just drop the subject. Morris published papers on sublingual therapy

in 1968 and 1970, but professional journals have only agreed to publish one other paper since then. "There's been a lot of prejudice against it," he says.

Why does he continue to swim against the tide? "We've been able to help so many people with difficult problems," he says gravely. "I don't need any more money or any more patients. But really, there are so many people who could be helped who aren't helped [now.]"

But he feels the tide may finally be starting to turn. Morris is honored that he has been asked to speak on sublingual therapy at the International Rhinologic Society meeting (known as "Nose 2000") in Washington, D.C., this September, something he considers to be an unprecedented opportunity. And a recent position paper by the World Health Organization stated that

"sublingual therapy may be a viable alternative" to injection therapy and calls for more studies on it.

The treatment is more commonly used in Europe. Allergist Jean Bousquet, who is researching the therapy in France, says that "sublingual immunotherapy is used in around 30 percent of immunotherapy courses in France . . . and probably 20 percent in Spain and Germany." Italian allergists say that it is used even more frequently there.

Professor Giovanni Passalacqua, who researches the therapy in Genoa, Italy, says that "at present, more and more specialists prefer sublingual immunotherapy to injections, especially in children." This type of therapy, he adds, represents "about 50 percent of immunotherapy prescriptions, but it

continued on page 52

## Allergy Treatment through the Years

According to Gregg Mitman MA'84, PhD'88, who will join the UW-Madison faculty in 2001, allergies began to increase after 1860, when they were seen as the bane of the privileged classes. Mitman, who is one of the university's new interdisciplinary "cluster hires," will have a joint appointment in the Departments of History of Science, History of Medicine, and the Institute for Environmental Studies. A severe asthmatic himself as a child, Mitman is writing a book on the history of allergies, which were originally thought to result from the stress of urban living.

During the 1880s, hay fever resorts arose, most notably on Michigan's Mackinac Island and in New Hampshire's White Mountains, which were at that time free of ragweed. Although there was no effective treatment available, says Mitman, wealthy sufferers simply spent six weeks out of the year there to escape the fall pollen season.

"In the late nineteenth century, the term allergy wasn't even used," he says. "It really didn't come into prominence within the popular literature until the 1920s or '30s." The first desensitization shots, which were quite experimental, were developed in the teens and '20s. In the late '30s and '40s, the first antihistamines came out, he says, and the public was very suspicious about them because the danger of drowsiness was even greater than it is now.

In the 1930s, pollen counts became part of the daily weather report, and a bizarre treatment called "parentectomies" arose. Asthmatic children were removed from their parents and sent to a treatment center in Denver, since it was thought that the emotional facets of the home environment gave rise to their symptoms.

Today, the typical treatment protocol may include the injection of allergen extracts via shots, the use of decongestants and other drugs, and efforts to control the home environment through reducing such irritants as cat dander and dust mites. — *N.D.*

## Allergies

continued from page 41

is expected to further increase.”

According to one Italian marketer of immunotherapy materials, the 50-percent estimate may be a little high, but it's not too far off. A representative of Stalergenes Italia says that in the first five months of 2000, Italian market share was 54.9 percent for injection antigen and 45.1 for the sublingual variety.

Passalacqua is one of the authors of some forty papers, almost all conducted by European researchers, that have found positive results using sublingual therapy. In the United States, some ear, nose, and throat doctors tend to be more open to the therapy, but Morris estimates that fewer than 1 percent of U.S. allergists currently use it.

An alternate method of delivering antigen does not seem all that revolutionary when you consider one proposed mechanism for action. According to Frank Waickman, the physician whose

talk first inspired Morris's work, “when you inject something in the skin, the dendritic cells pick up the antigen, take it to the regional lymph nodes, and then the regional lymph nodes crank out the necessary antibodies.” The area under the tongue is known to be especially rich in dendritic cells, he adds.

So why aren't more American physicians interested in pursuing this novel and less invasive treatment? U.S. doctors, typically more skeptical about trying new treatments than their European counterparts, believe that more comprehensive studies are needed.

Dr. Emil Bardana, president-elect of the American College of Allergy, Asthma, and Immunology, is one of them. He says that “even the Italians who have done most of the work — most of it has come out of Walter Canonica's area in Genoa, and another big part of the work has come out of the Milan area — even they, if you talk to them, will tell you that though there is some statistical improve-

ment, the results are not really compelling, they're not really overwhelming, and I think what we need are larger studies, better controls, and continued documentation of significant benefit.”

Passalacqua, who is a member of Walter Canonica's research group in Genoa, says, “I would like to underline that there is a position paper by the World Health Organization stating clearly that sublingual immunotherapy is a viable alternative to injection immunotherapy.” Further studies with larger groups are needed, Passalacqua says, “not to assess the effectiveness, but to establish the optimal dosage and schedule, and in particular to verify whether sublingual immunotherapy has preventive and long-lasting effects similar to injection immunotherapy.”

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As an allergy sufferer herself, Niki Denison has been very interested to learn more about both sides of the treatment issues involved.

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