

# Here's Looking A-choo, Kid

Scientists are studying the common cold harder than ever, getting closer to controls, if not a cure. Rx in the meantime: use uncommon sense

A little honking and wheezing, please: it's time, once again, for a rerun of that horror classic, Attack of the Rhinovirus. Rhino is Greek for nose, and the all-too-common cold is caused by more than a hundred different forms of this virus. Colds are perennial and incurable, zapping legions of students every fall. Scientists say it's not that the autumnal chill causes the yearly cold epidemic; it's just that the brisk temperatures drive humans indoors, where they infect each other. And what better place for the rhinovirus to get around than in crowded college dorms, dining halls and classrooms?

Suitably enough, universities are now developing an arsenal of high-tech weapons such as interferon, monoclonal antibodies and antiviral drugs. It will be years, however, before we know if these potions really work or whether they will prove more toxic than the cold itself. The problem is that viruses are slippery devils. Tiny protein-coated bits of genetic matter, they hardly qualify as living things. Many viral diseases—such as polio and measles—are prevented with vaccines. But the sheer number of viruses that cause colds makes a vaccine close to impossible. Each season

brings another variety to look forward to: after the fall rhinoviruses come winter's coronaviruses and parainfluenza viruses, followed by the adenoviruses of spring. And in summer the coxsackieviruses and echoviruses cause colds accompanied by fever. "We don't know why certain cold viruses have certain seasons," admits Dr. Elliott C. Dick, virologist at the University of Wisconsin.

As if suffering from their own sniffles weren't enough, scientists are subjecting student guinea pigs to all manner of indignities. Dr. Jack M. Gwaltney Jr. and his colleagues at the University of Virginia give volunteers a new drug or placebo, drop the virus in their noses, then watch to see if the virus has made itself at home. Students deposit their used tissues in a special plastic container. The tissues are weighed "to tell how much nasal mucus they've produced," says Gwaltney. "It's a nice job."

One of the most successful drugs being tested at UVa is interferon, a natural substance released by infected cells that has been used in the war on cancer. But it's expensive and irritates the nasal membranes. The UVa team has also been testing the preventive capabilities of mono-

clonal antibodies, which are cloned in the lab from natural antibodies. They block the receptor sites on the cells in the nasal passages where the virus would normally attach itself. In the first trial the antibodies delayed the onset of the cold but did not prevent it. "This strategy is in a stage of relatively early development," says Gwaltney. "The effect is not marked compared to interferon, but it might well be safer and better tolerated."

The search for antiviral drugs is being aided by knowledge about the three-dimensional structure of the rhinovirus. It looks something like a soccer ball, with 20 triangular sides. Last year a team of researchers led by Michael G. Rossman at Purdue revealed that each side has peaks and valleys caused by the irregular shape of the protein molecules. This fall the Purdue team reported on two drugs that can nestle into one of the valleys on the protein coat and keep the virus from releasing its genetic material and replicating. One of the drugs, called WIN 51711, has reached the stage of being tested for side effects.

**Vitamin C:** Of course, there are still those who believe that home remedies are best and that the cold can be fought with everyday vitamins and minerals. One of the most eminent scientists of our time, Nobel Prize winner Linus Pauling, advocates large doses of vitamin C. However, other researchers have not verified his claims that this strategy prevents or shortens colds. Meanwhile, the newest "natural" remedy is sucking on zinc lozenges. One study by Texas entrepreneur George Eby found that zinc shortened the duration of colds, and Gwaltney's team is trying to repeat the study; the drawback is that the lozenges taste horrific and may cause nausea.

Experts recommend that you treat each cold symptom with a different over-the-counter remedy, rather than taking a pill that contains a little of everything. "Multiple-ingredient remedies are not as effective, because the concentrations of individ-

