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## Duke Scientist Reports On Vitamin E Effects

Urban dwellers choking on smog and auto exhaust fumes may have found an ally to help fortify their lungs—vitamin E.

A Duke researcher has turned up evidence that a vitamin E-rich diet can help protect the lungs from the effects of noxious air pollutants such as ozone and nitrogen dioxide.

The findings offer a possible answer to the prevention of emphysema and other chronic lung diseases which are environmentally triggered.

Dr. Daniel B. Menzel found that rats deprived of vitamin E in their diets for four weeks survived for only eight days when placed in an atmosphere with a concentration of one part per million of ozone or nitrogen dioxide. Rats given a vitamin E-supplemented diet for four weeks lived twice as long, 18 days, in the same concentration of pollutants.

Menzel is an associate professor of pharmacology and an associate professor in the Division of Environmental Medicine. He discussed his findings last week at a symposium for Continuing Medical Education for Pharmacists and Pharmacologists at Ohio State University.

The air pollutants ozone and nitrogen dioxide are strong oxidizing agents found in urban air. One part per million is the level that can be found during the peak pollution concentration hour of each day in Los Angeles and other

cities.

The pollutants cause lung damage through oxidation, the same chemical process which causes rubber to become brittle and cracked or causes butter to become rancid. Unsaturated fatty acids, a major constituent of all biological membranes, including the lungs, are subject to oxidation, too.

In Menzel's experiments, ozone and nitrogen dioxide caused oxidation of the lung tissue, bringing on edema and hemorrhaging in the lungs of the rats.

Menzel has also recently discovered that the causal agent in ozone intoxication appears to be a chemical produced by the reaction of ozone with unsaturated fatty acids in the lungs. This chemical can be made and purified chemically, and when injected into animals it produces the same effects as ozone inhalation.

Menzel said that although no one knows exactly how vitamin E works, the best unifying theory for its known effects is that it acts as an antioxidant. He said not much is known either about the biochemistry of the lungs and the causes of emphysema and other lung diseases in humans.

"We believe there is a genetic component to the disease," he said. "The body doesn't produce protective serum antiproteases as it's supposed to. The trigger for the disease is probably

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**NEW LOOK AT SCHOOL OF NURSING**—Snow covered the ground when the photographer shot this picture of Mrs. Susan Southard Lebo, a junior in the School of Nursing from Atlantic City, with the new addition to Hanes House in the background. The new building was dedicated at special ceremonies yesterday. Next week's Intercom will contain coverage of the dedication and pictures of the new facility. *(Photo by Jimmy Wallace)*

## Faculty Shifts Announced

Four appointments and three promotions at the medical center have been announced by University Provost Frederic N. Cleaveland.

Additional faculty responsibilities for a physician and the dean of nursing also were announced.

Dr. LuVern H. Kunze has been appointed professor of hearing and speech pathology. Kunze received his B.A. degree from Dakota Wesleyan University in 1950, his M.A. degree from Colorado State College in 1954 and Ph.D. degree from the University of Iowa in 1962.

Prior to his appointment at Duke, Kunze was an associate professor at the University of Washington and director of the Communication Disorders Research and Training Program at the university's Child Development and Mental Retardation Center.

Appointed assistant professor of pediatrics and associate in physiology, Dr. Page A. W. Anderson received his B.A. degree in 1960 from the University of California in Berkeley and M.D. degree in 1963 from Duke.

Before joining the Duke staff in 1970 as a fellow in pediatric cardiology, he served as a resident at the Children's Hospital in Los Angeles, Calif.

Dr. Lillian R. Blackmon has been named assistant professor of pediatrics. She received her medical school training at the University of Arkansas School of Medicine in Little Rock and was chief resident in pediatrics at the Children's Hospital of Northern California in Oakland.

Prior to her appointment at Duke, Dr. Blackmon was an assistant professor of pediatrics at the Medical College of Georgia in Augusta.

Marvin A. Schilder of Deerfield, Ill., is

a newly appointed assistant professor of community health sciences. He received his B.S. degree in industrial management from Bernard M. Baruch School of Business and Public Administration in 1964 and thereafter worked at the IBM Corporation, Federal Systems Division, in Gaithersburg, Md.

Prior to his appointment at Duke, Schilder has been an associate executive director of the Illinois Regional Medical Program in Chicago.

Three physicians who have received promotions are Dr. Herbert F. Crovitz, promoted to professor of medical psychology in the Department of Psychiatry; Dr. James R. Urbaniak, promoted to associate professor of orthopaedic surgery; and Dr. John D. Hamilton, promoted to assistant professor of medicine.

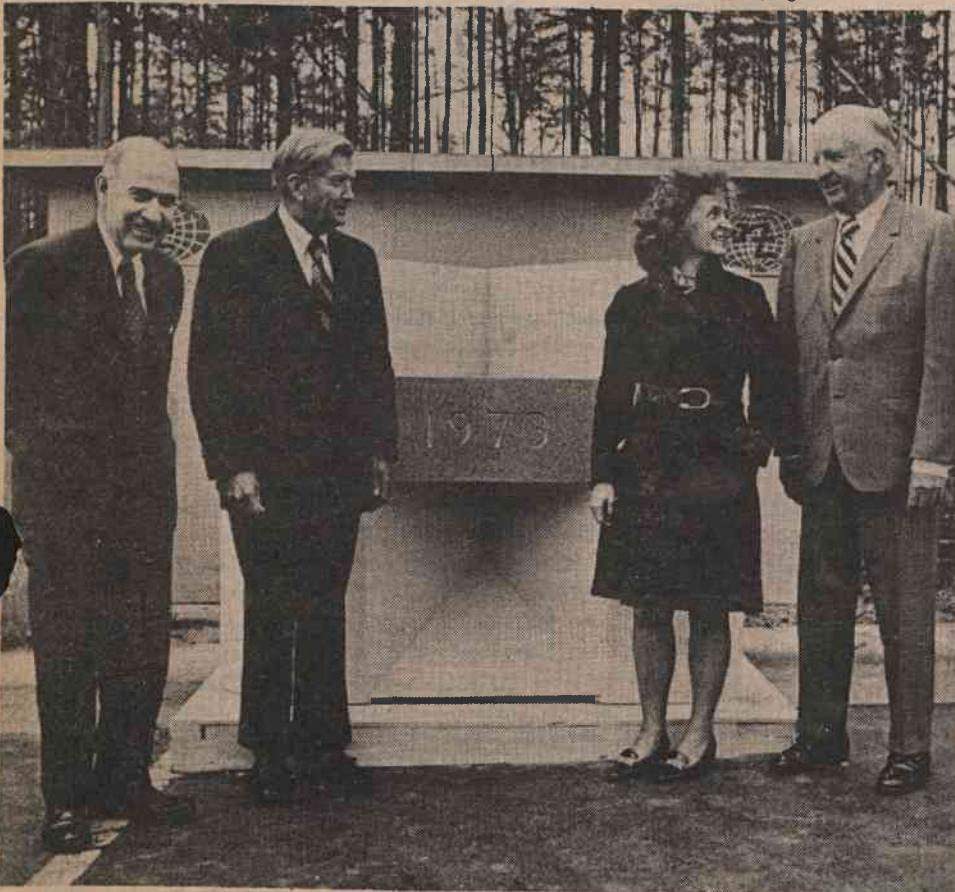
Crovitz of Providence, R.I., received his A.B. and M.A. degrees from Clark University in Massachusetts. Upon obtaining his Ph.D. degree from Duke in 1960, he worked as a postdoctoral trainee in physiological psychology at the Durham VA Hospital and was a visiting professor at North Carolina College.

He joined the Duke staff in 1961 as a lecturer in the Department of Psychology.

As a 1962 graduate of Duke's Medical School, Urbaniak won the senior medical student literary award for a basic research paper. He served both his surgical internship and orthopaedic residency at Duke.

Along with his recent promotion, Urbaniak holds the titles of chief of orthopaedic surgery at the Durham VA Hospital and chief of Duke's Upper Extremity Amputee Clinic.

A native of Longmont, Colo., *(Continued on page 3)*



**LIBRARY CORNERSTONE CEREMONY**—The rain held and the ceremony to unveil the cornerstone for the Seeley G. Mudd Building, the medical center's new library, went on as scheduled last Friday. Participants in the ceremony, from left to right, were: Dr. William G. Anlyan, vice president for health affairs; Duke President Terry Sanford; Mrs. Mary Semans, a university trustee and a longtime friend and supporter of the medical library; and Robert D. Fisher, chairman of the Seeley G. Mudd Fund of Los Angeles, which contributed \$1.5 million toward construction of the \$5.3 million library. The building is scheduled to be completed in two years. *(Photo by Jimmy Wallace)*