

## High blood pressure and organic nitrates

Organic nitrates, which get into streams from agricultural runoff, could be responsible for geographic patterns of high blood pressure, according to William E. Morton of the department of public health and preventive medicine at the University of Oregon Medical School in Portland. High nitrate levels in drinking water usually came from animal and plant wastes and fertilizer residues, said Morton.

In a report to the American Chemical Society, Morton said hypertension mortality and Selective Service data from Oregon and Colorado show an increased risk of high blood pressure in certain locations (in the southern and far eastern regions of Oregon and in eastern agricultural counties in Colorado). The geographic risk can be correlated with increased organic nitrate levels in municipal water supplies.

There is currently no economical way to remove nitrate from drinking water and Morton expects nitrate concentrations to rise in ground water. In addition to implicating modern agricultural practices, Morton pointed to a related industrial hazard (workers chronically exposed to organic nitrates such as TNT and nitroglycerin) and questioned the chronic medicinal use of such organic nitrates.

## Danger of nondegradable pesticides

Parathion, although highly toxic, is a pesticide of the organophosphorus class widely used as a "nonpersistent" substitute for DDT. But, according to studies by Donald C. Staiff, H. R. Wolfe, J. F. Armstrong and F. W. Comer of the Environmental Protection Agency's Wenatchee Research Station, parathion does not degrade rapidly in soil. Spillage areas retain dangerous levels for more than five years and remain hazardous to animals and children. Staiff, in a recent American Chemical Society meeting, recommended that users dispose of organophosphorus pesticides by burial in authorized locations rather than by spreading it over soil to hasten degradation.

Tests show that there was a one percent residue level (10,000 parts per million), from an original concentration of six to nine percent of the pesticide, in one inch of soil after five years of exposure to the elements. Study also indicated, according to Staiff, that there was very little movement of parathion either in a lateral or vertical direction.

## Nontoxic control of mosquito larvae

A new substance called ENTOCON™<sup>ZR-515</sup>, developed by Zoecon Corp. of Palo Alto, Calif., is said to control three species of mosquito larvae. One of them, *Anopheles albimanus*, is the principal malaria vector of Central and South America. According to Charles Schaefer, director of the University of California Mosquito Control Research Laboratory in Fresno, test results show control was achieved by using as little as two ounces per acre on new insect growth. The new substance is nontoxic and nonpersistent.

<sup>ZR-515</sup> was applied manually and from air-boats in waters ranging in depth from four inches to 15 feet. Larvae contacted at their sensitive stage were controlled 100 percent. Those contacted after 24 hours of the application were controlled over a range of 50 to 90 percent.

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## Psychiatric effects of hashish

Hashish, a potent product of the marijuana plant, is a favorite drug of United States servicemen in West Germany. Forest S. Tennant Jr. and C. Jess Groesbeck of the U. S. Medical Corps worked with hashish users of the Seventh Army in Heidelberg, Germany. They report in the July ARCHIVES OF GENERAL PSYCHIATRY that approximately 46 percent of the 36,000 soldiers there have used hashish at least once and 16 percent smoke it more than three times a week.

Panic reactions, toxic psychosis, flashback phenomena and prolonged schizophrenia-like reactions have been reported as the usual adverse effects of hashish. After medical and psychiatric consultation with 720 users, Tennant and Groesbeck report that panic states and toxic psychosis were uncommon. Only 18 cases of acute adverse effects were reported during a three-year period. Simultaneous consumption of hashish and alcohol or other psychoactive drugs did, however, produce 85 cases of acute toxic psychosis. Those who smoked from 10 to 12 grams per month suffered only minor respiratory ailments without ostensible adverse mental effects. Those who smoked 50 to 600 grams per month (the equivalent of 500 to 6,000 marijuana joints) were characterized by apathy, dullness, confusion and memory loss.

## Moonlight murder

The man in the moon has often been accused of influencing the actions of humans. Wolf Man, for instance, would grow a beard and run amuck under every full moon. There has been little scientific evidence to back up these tales. But Arnold L. Lieber and Carolyn R. Sherin of the University of Miami School of Medicine feel there may be more fact than fancy to moon lore. Data on all homicides committed in Dade County, Fla., from 1956 to 1970 and in Cuyahoga County, Ohio, from 1958 to 1970 were collected and compared to a lunar model. In Dade County, homicides peaked at full moon and again just after the new moon. In the Cuyahoga sample the results were less significant but showed some lunar influence. In the July AMERICAN JOURNAL OF PSYCHIATRY the researchers note that the human body is at least 80 percent water. The moon's gravitational pull, they suggest, could cause cyclic changes in water flow among the fluid compartments of the body, as well as changes in the total body water. These biological tides could cause psychological reactions.

## Employee behavior and layoffs

When is the right time to announce an intended cut-back in personnel? Labor wants to know as soon as possible. Management wants to wait until the last minute, fearing the information will cause a decrease in productivity and increases in absenteeism and lateness. Robert Hershey of the Bulova Corp. in Woodside, N.Y., attempted to test management's theory. Four factories participated. Each supplied records of 25 men who had been laid off and 25 men of similar background who were still employed. All who lost their jobs had been notified one month in advance. Hershey says in the June JOURNAL OF APPLIED PSYCHOLOGY, "Strikingly, the knowledge of the layoff was not detrimental to the companies." He concludes that employees about to lose their jobs actually work harder in order to earn as much as possible before they leave.

43