PUBLIC HEALTH

The Case Against Alcoholism

Alcoholism is a disease and a social problem. It affects family life, the crime rate, deaths from accidents and the number of patients in mental hospitals, Faye Marley reports.

➤ ONE OUT OF EVERY 15 persons who drink becomes an alcoholic according to present estimates. But only three percent of this number will be found among the Skid Row derelicts.

Of the 5,000,000 alcoholics in the United States, there are around 2,000,000 alcoholics, many of them unrecognized, working in the professions, business and industry. Many are in the early or middle stages of alcoholism, and can be helped before their problem becomes acute.

The National Institute of Mental Health, National Institutes of Health, Bethesda, Md., is spending $1,900,000 this year in an effort to get more knowledge about the physical, psychological and social factors related to alcoholism.

Dr. Carl L. Anderson, Institute consultant on alcoholism program services, told SCIENCE SERVICE that in his travels to various states he finds that people are more readily seeking treatment as alcoholism becomes less of a stigma.

"It used to be that tuberculosis and venereal disease carried such a stigma that they were not openly discussed," Dr. Anderson said. "Now the public schools as well as the medical schools are giving more attention to alcoholism, which is still an area of high emotion."

Some physiology textbooks do not even mention alcohol. Others refer to it as a poison, which makes students wonder why their fathers who drink beer occasionally are still alive.

More Research Needed

More research is needed to find out the point at which a person becomes an alcoholic and what makes him lose control of his drinking.

At hearings before a House subcommittee on appropriations for 1962, Dr. Robert H. Felix, director of the National Institute for Mental Health, reported that 56,216 persons were under care for alcoholism in public mental hospitals in the United States during 1959, the last year for which figures are available.

"There are two kinds of alcoholics," Dr. Felix reported. "You have the so-called spree-drinking alcoholic," who may be on a binge for two to ten days or so after two or three months of being perfectly dry. These persons apparently are not damaged as much as the person who drinks more steadily.

The steady drinker, on the other hand, may consume two or three fifths of liquor a day, or more. There may be brain damage, harm to the peripheral nerves and frequently a psychosis. Also the nutrition is impaired, inasmuch as such persons often reach the point where they are drinking and not eating.

The Institute's alcoholism program is directed toward getting knowledge on alcoholism problems and finding out what further research is urgently needed. Dr. Nevitt Sanford, professor of psychology at the University of California, is scientific director of a project by the Cooperative Commission on the Study of Alcoholism, which is being supported by a research grant from NIMH.

In the division of alcoholic rehabilitation of California's State Department of Public Health alcohol usage patterns are being studied. In an attempt to measure deviation in drinking patterns, this project will develop "instruments for gathering data about nonpathological alcohol consumption."

A Colorado study under an Institute grant will deal with "the values and habits surrounding alcohol usage as they are affected by the cultural factors of various ethnic groups."

The second year of a four-year demonstration on public health approach to problems of alcoholism in the family is continuing in Prince Georges County, Md., through cooperation of the Institute's Mental Health Study Center and the County Health Department.

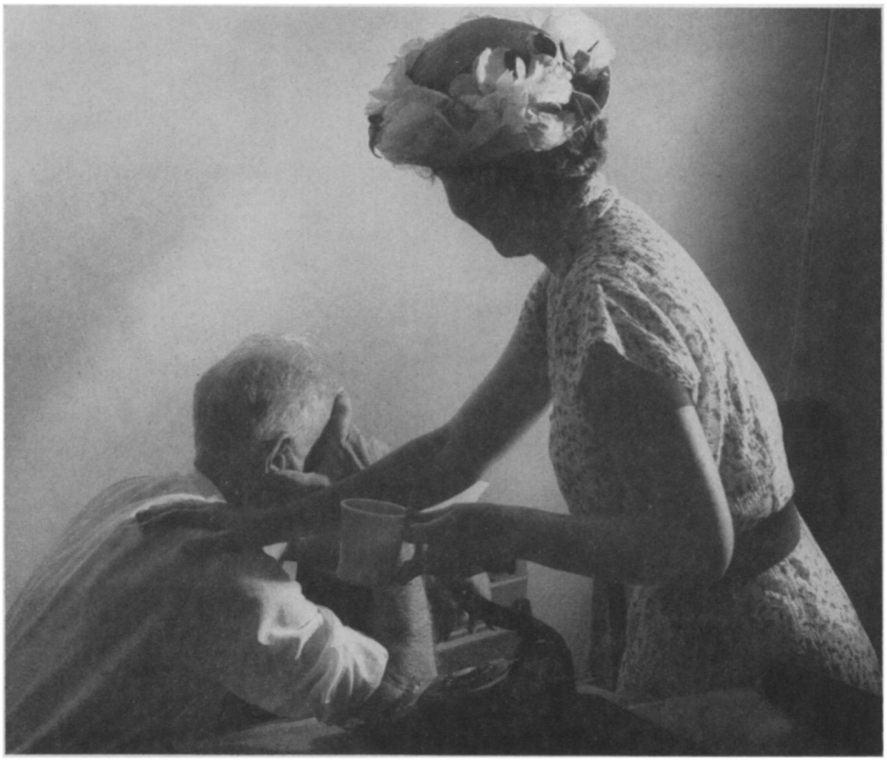
This pilot project aims at rehabilitation of the alcoholic and his or her family through the combined efforts of appropriate community facilities, development of an educational and preventive program, and evaluation.

Dr. Marvin A. Block, of the University of Buffalo School of Medicine, chairman of the American Medical Association Committee on Alcoholism, said that almost every medical college includes some teaching on alcoholism.

The AMA Committee on Alcoholism, Dr. Block said, has worked out a comprehensive curriculum that has been approved by the Association of American Medical Colleges, and as a result, more medical students are coming out better equipped to handle alcoholics.

"Our idea is to teach alcoholism not as a subject," Dr. Block explained, "but as it is related to medical, psychiatric and sociologic problems. Alcoholism is a part of our culture, and we must learn to discern the difference between social drinking and drinking as an illness."

Among courses recommended throughout four years of medical college are the physiology of alcohol, its biochemistry and



SUBSTITUTE DRINK—The executive on the job is helped if an understanding friend brings him coffee when the need for alcohol overcomes him, as shown in this posed photograph.

related psychiatry, the action of alcohol as a drug and as an addictive drug, the treatment of alcoholism with the drugs Antabuse and Temposil.

Also recommended are courses in demonstration of changes in body systems associated with chronic alcoholism, neurological signs, liver findings and motivations for psychiatric treatment. Students also should learn something about forensic medicine, about laws on the management of the non-cooperative alcoholic.

Both the AMA and the American Hospital Association have recommended admittance of alcoholism patients to general hospitals. Since only a minority of such patients are uncooperative, these hospitals have been urged to "base the decision as to admission or non-admission" upon the condition of the individual patient.

The individual differences in alcoholic patients was pointed out by Dr. Carl G. Jung, the psychiatrist who died recently at the age of 85.

Dr. Jung told a businessman alcoholic patient that he might be one of those rare cases who made a recovery even though he had become intoxicated after leaving the psychiatrist's care, and returned in acute depression.

Once in a while, said Dr. Jung, alcoholics have had vital experiences in the nature of huge emotional displacements. Ideas, emotions and attitudes that were once the guiding forces of these men are suddenly cast to one side, and a completely new set of conceptions and motives begin to dominate them.

His businessman patient had such an experience and lost his obsession to drink. He was partly instrumental in starting Alcoholics Anonymous. There are 12 steps suggested to alcoholics by A. A. Boiled down, they mean first, admission of alcoholism; second, personality analysis and catharsis; third, adjustment of personal relations; fourth, dependence on a higher power; and fifth, working with other alcoholics.

Al-Anon and Alateen, an outgrowth of Al-Anon, which is closely allied with Alcoholics Anonymous, include family groups and teen-agers, respectively. Information about both these programs can be obtained from P. O. Box 182, Madison Square Station, New York 10.

The National Council on Alcoholism, 2 East 103 St., New York 29, is the national voluntary health agency for control of alcoholism.

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OCEANOGRAPHY

Oceanographic Research

➤ AN EXPANDED oceanographic research program is vitally necessary for the national defense.

Although increased knowledge of the oceans is seen by many as a solution of any future United States food and water problems, the U. S. Navy pointed to the need for protecting U. S. shores from a nuclear submarine attack.

Reports about the Russian build-up of a fleet of nuclear submarines and the reportedly porous U.S. submarine defense system has forced the Navy to make an all-out effort to plug up these gaps.

A 10-year, $1 billion naval underwater research program (TENOC 1961-1970) has been set up to learn more about the environment in which U. S. defense systems will be operating. Scientists must learn more about such important variables as currents, salinity and noise levels before they can make detection equipment more accurate and reliable.

A new anti-submarine experimental program under the code name Artemis "has evolved from the Navy's basic and applied oceanographic research program," Rear Adm. L. D. Coates, chief of the Office of Naval Research, told a House subcommittee hearing on oceanography in Washington, D. C. The hearing was on a House bill to expand and coordinate oceanographic research.

Adm. Coates also gave credit to oceanographers at private institutions who through their research not only push back the frontiers of oceanography but also increase the effectiveness of naval operations.

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ROCKETS AND MISSILES

Missile Clock Computer

➤ AN ELECTRONIC clock computer for missile systems, first of its kind to be readied for actual use, had its first public showing at the three-day National Convention on Military Electronics in Washington, D. C.

The tiny, microminiaturized device is small enough to fit into a soup can. It weighs only 14 ounces, compared to the 15 pounds of the mechanical unit now used in the Bomarc missile.

Representatives of Cleveland (Ohio) Metal Specialties Company, where the system was packaged, and the U. S. Army's Diamond Ordnance Fuze Laboratories, Washington, D. C., where it was designed, said the ultra-compact unit is "10 to 100 times more accurate" than standard mechanical systems now used in ballistic missiles.

The research prototype has been successfully test flown in five different Army missiles. For actual use, the Army will concentrate first on its application to a small, portable field missile system that can be operated by two or three men.

The programmer-timer operates according to the advance instructions given to it before the missile is launched. The built-in logic system tells the power-handling equipment "when to go and when not to go".

Production costs, based on limited output of a few units each month, are estimated at $750 to $1,100 per unit.

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Transmitter for Space

➤ DEVELOPMENTS of the first solid-state microwave transmitter for space communications was reported by General Telephone and Electronics Corporation, New York, at the National Convention on Military Electronics in Washington, D. C.

The compact new unit, smaller than a cigarette carton, occupies about one-seventh the space required for conventional transmitters, and reportedly has 11 times the life expectancy and 10 times the frequency stability.

The transmitter could be linked with a solid-state radio receiver to form a complete space communications system. It is adaptable to space probes or communications relay satellites.

The engineering model, shown at the meeting, weighs about three and one-half pounds. It has an operating life expectancy of more than two and one-half years.

It operates with two watts of output power within the S-Bank—1,700 to 2,300 megacycles. This is believed to be the minimum power and frequency requirement for transmitting information between two points on the earth by way of a relay satellite in a stationary equatorial orbit.

The transmitter was developed for the Air Force by Sylvania Electric Products, Amherst, N. Y., under a $95,000 study contract. Supplemental awards total about $1,000,000. Sylvania is a subsidiary of General Telephone and Electronics Corporation.

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ANIMAL HUSBANDRY

Breeding Not Feeding Makes Steak Tender

➤ IT IS BREEDING, not feeding, that makes a tender steak, scientists at the Florida Agricultural Experiment Stations, Gainesville, Fla., have discovered. Popular opinion, backed by Federal meat grading standards, holds that the most tender cuts of beef are the more expensive, well-marbled ones.

But Drs. A. Z. Palmer and J. W. Carpenter of the Gainesville staff, and Dr. W. G. Kirk of the Range Cattle Experiment Station in Ona, have found that marbling actually has very little to do with tenderness, although a certain amount is desirable for juiciness.

Breeding is the biggest factor in tenderness, the scientists said. Some bulls sire calves that have tender meat, while others sire only tough-meat calves.

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