behavioral sciences

Schizophrenia and socioeconomic status

Schizophrenia is a group of disorders characterized by disturbances of thought, mood and behavior. To a great extent the disease is hereditary, but sociologist Sam Stern of the New School for Social Research in New York says socioeconomic status is also involved.

He examined the relationship between social class and schizophrenia in a group of children with a high risk of becoming schizophrenic. The study group consisted of 200 children with schizophrenic mothers and a control group of 100 children with average mothers. Those children in the lowest socioeconomic groups had a greater incidence of psychiatric breakdown than economically average children. The children who spent substantial parts of their early lives in institutions, such as orphanages and children's homes (probably for economic reasons), were also more apt to have a breakdown. Stern hopes his findings will lead to further research that will clarify the relationship between social class, institutionalization and schizophrenia.

Brain disorders in delinquents

Juvenile delinquents often have histories of truancy and school failure. Their school lives are usually filled with inadequacy, humiliation before their family and peers, and continual reinforcement of the feeling that school is a painful experience. Emotional problems are often at the root of this syndrome, but University of Rhode Island psychologist Allan Berman says many juvenile delinquents may actually be suffering from subtle brain disorders—the same disorders encountered in nondelinquent children with learning disabilities.

Using a battery of tests designed to detect neurological disorders, Berman found that 17 of 30 delinquent boys in a randomly chosen sample evidenced brain disorders. At the international conference of the Association for Children with Learning Disabilities he reported that "individual youngsters had difficulties using information from their senses of sight, hearing or touch. Some showed difficulties in forming concepts, and some in sensing and controlling body movement." The results are tentative and the sample is small, he says, but the fact remains that these disorders have gone undiagnosed and untreated because of a simple mislabeling.

Amphetamines cut back

In December the Justice Department announced that the production of amphetamines would be cut by 40 percent. Last week officials at the Bureau of Narcotics and Dangerous Drugs said the actual quota will be in the range of 17 to 18 percent of last year's estimated production.

Recent research supports the move. Calvin Rumbaugh (SN: 11/20/71, p. 344) reported that methamphetamine may cause brain damage or stroke. Nashville, Tenn., researchers John D. Griffith, John Cavanaugh, Joan Held and John Oates report in the February GENERAL PSYCHITRY that long-term doses of dextroamphetamine caused subjects to feel depressed rather than elated. Within five days following supervised administration, eight out of nine subjects experienced paranoid psychosis which abated with drug discontinuance. Dextroamphetamine may deplete the central nervous system's store of catecholamine, the researchers say.

medical sciences

Lung cancer: A hormone deficiency?

In spite of the much publicized link between heavy cigarette smoking and lung cancer, the case is far from wrapped up. Now a Scottish scientist announces an entirely different kind of correlation—this time between lung cancer and low levels of the steroid hormone androsterone. In fact, in reporting his research results in the Jan. 28 NATURE, L. G. S. Rao of the Southern General Hospital, Glasgow, asserts that ". . . the association of lung cancer with cigarette smoking is far less significant than that with steroid abnormalities."

The cancer-steroid link is so strong, in fact, that an androsterone deficiency could be used to help diagnose for lung cancer, Rao believes. Since an androsterone deficiency is associated with a poor prospect for recovery from lung cancer, androsterone therapy might also improve a lung cancer patient's condition. Rao is far from clear, though, whether low androsterone levels might be a cause, an effect or an otherwise elusive marker of lung cancer. His research suggests that the low hormone levels do not result from the presence of lung tumors. Nor are they tied to the stage of the disease. Instead, androsterone levels correlate with bodily resistance to tumor growth.

Human virus makes animal cells cancerous

So far, in the race to implicate a virus as a cause of human cancer, several animal tumor viruses have induced tumors in human tissue under laboratory conditions. Last week in New York, at the Gustav Stern Symposium on Perspectives in Virology, Ronald Duff and Fred Rapp of the Milton S. Hershey Medical Center of Pennsylvania State University reported a first in making animal cells cancerous with a virus isolated from human tissue. The virus is Herpes Simplex Type 2. It was taken from a lesion in the cervix of a patient.

The Hershey, Pa., virologists are now trying to make human cells malignant with the virus.

Aspirin and ovulation

The prostaglandins, a class of natural body chemicals, are believed to serve as secondary hormone messengers in a variety of biological functions. Several scientists found that two kinds of prostaglandins can induce abortion or labor in women (SN: 10/10/70, p. 307). Others have found that aspirin and the arthritis drug indomethacin inhibit another prostaglandin (SN: 7/7/71, p. 38). Now Harvard physiologists Harold R. Behrman and Gayle P. Orczyk have successfully used aspirin and indomethacin to inhibit ovulation in female rats.

How prostaglandins can have so many biological effects and how they act at the tissue and cellular levels are not well understood. There are several explanations for ovulation suppression by two drugs that are also known to suppress prostaglandins. One is that the drugs block prostaglandin synthesis in the ovary. Another is that the drugs turn off luteinizing hormone, which is believed to be regulated by prostaglandins.

The Harvard researchers also have evidence that some women on high doses of aspirin or indomethacin have had trouble getting pregnant. But Orczyk says she has no idea whether aspirin might have birth control potential. Eight to 16 aspirin taken every day for contraceptive purposes could have serious toxic effects, she points out.

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