

Proposed alcoholism gene gets doused

A team of scientists recently created much hoopla with the announcement that one form of the dopamine-receptor gene confers susceptibility to alcoholism, at least in its most severe incarnation (SN: 4/21/90, p.246). But a new report casts considerable doubt on that claim.

Annabel M. Bolos of the National Institute on Alcohol Abuse and Alcoholism in Bethesda, Md., and her colleagues isolated DNA from 40 unrelated alcoholics, eight alcoholic and six nonalcoholic members of two families (each with one alcoholic parent) and 127 nonalcoholic controls. Two chemical probes sought out the specific dopamine receptor gene.

Slightly more than one-third of the alcoholics and just under one-third of the controls possessed the gene, a statistically insignificant difference, the researchers report in the Dec. 26, 1990 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. The gene showed no preference for alcoholics with the most severe drinking problems, longest histories of alcoholism, or violent and criminal streaks. And alcoholics in the two families displayed no excess inheritance of the gene.

Different methods of diagnosing alcoholism may contribute to the contrast between the two gene studies, Bolos and her co-workers suggest in their report. The first study relied only on medical records, while the latest project involved face-to-face interviews with participants and their relatives.

Charting the aftermath of child abuse

Children experiencing physical abuse at home show an excess of aggressive and violent behavior by the time they enter kindergarten, regardless of whether they come from well-off or poor families, live in two- or one-parent homes, or regularly observe cooperative or physically violent behavior among adults, according to a report in the Dec. 21 SCIENCE.

Many abused children display remarkable emotional resilience, says psychologist Kenneth A. Dodge of Vanderbilt University in Nashville, who conducted the study with John E. Bates of Indiana University in Bloomington and Gregory S. Pettit of Auburn (Ala.) University. But at school, about one-third of these kids continually express anger and provoke conflict. Abused children often misinterpret frustrating social encounters, unfailingly attribute hostile intentions to others, and view aggression as the only solution to problems with teachers or classmates, Dodge says.

The researchers studied 309 kindergarteners, all 4 years old when the study began. Physical examinations and interviews with mothers identified 46 children subjected to consistent physical abuse at home. A nearly equal number of boys and girls fell into the abused category, Dodge notes.

Aggressive behavior was calculated through teacher and classmate ratings, as well as experimenter observations. Children also viewed videotape depictions of negative events, such as having one's building blocks knocked over by a peer, and described how they would handle the situation.

More than one in three abused children displayed unusually high levels of aggression and deficient social skills, compared with about one in eight of the other youngsters. The findings strongly support the notion that physical abuse leads to a cycle of violence, particularly among boys, Dodge contends.

Abused children also showed more signs of emotional withdrawal and social isolation than their peers, he says.

The researchers hope to follow the entire sample into adolescence to see if the abused children develop high rates of delinquency, drug abuse, depression and anxiety.

In a separate, multi-university study, Dodge and others will chart the effectiveness of social-skills training for highly aggressive (but not necessarily abused) first graders, combined with behavior-management training for their parents.

Crash threat for diabetics, epileptics

Drivers with diabetes or epilepsy face a greater threat of automobile accidents than people without such disorders, according to a controversial new report.

Neurologist Phiroze Hansotia of the Marshfield Clinic in Marshfield, Wis., and his colleagues examined state transportation department records covering the period from 1985 through 1988. Statistical analysis revealed that diabetics and epileptics faced a 30 percent greater risk of traffic accidents and a 14 percent greater risk of moving violations (such as running a red light) than did other drivers.

The study, described in the Jan. 3 NEW ENGLAND JOURNAL OF MEDICINE, "provides important information about the crash risks of drivers with diabetes or epilepsy but leaves equally important questions unanswered," comments Julian A. Waller of the University of Vermont in Burlington in an accompanying editorial. Waller notes, for example, that the analysis lumped all diabetics and epileptics together and failed to identify specific factors — such as severity of illness — that could affect the behind-the-wheel hazard.

Hansotia agrees that further research must characterize the risk for an individual driver with diabetes or epilepsy. For example, he says he believes insulin-dependent diabetics who suffer frequent episodes of low blood sugar (which can cause confusion or, in severe cases, blackouts) may face greater risks in traffic than diabetics with milder disease. In future studies, Hansotia plans to address such questions and examine how age, duration of illness and other factors may affect driving ability.

Most states require that epileptics and diabetics obtain a doctor's approval before receiving a driver's license. Until more data come in, Hansotia believes states should not place further driving restrictions on these individuals.

Vasectomy, prostate cancer: Unexplained link

Two epidemiologic surveys have turned up a surprising association between vasectomy and the risk of prostate cancer. The researchers caution, however, that the findings do not necessarily indicate a causal connection.

Both reports appear in the December 1990 AMERICAN JOURNAL OF EPIDEMIOLOGY. In one, Lynn Rosenberg of the Boston University School of Public Health in Brookline, Mass., and her colleagues describe their retrospective survey of vasectomy histories among 220 men with prostate cancer and 1,531 controls hospitalized for cancer or other medical conditions. The study uncovered a statistical link between vasectomy and prostate cancer, prompting speculation that men who undergo this common sterilization procedure might face an increased risk of prostate cancer later in life.

Working separately, Curtis J. Mettlin and his colleagues at the Roswell Park Cancer Institute in Buffalo, N.Y., studied 614 men with prostate cancer and 2,588 men hospitalized with other types of cancer. Men who reported a history of vasectomy experienced approximately double the incidence of prostate cancer, the team found.

Rosenberg warns against jumping to the conclusion that vasectomy causes prostate cancer, noting that the link could be a statistical fluke. According to Stuart S. Howards of the American Urological Association in Baltimore, previous studies have failed to uncover any link between prostate cancer and vasectomy. However, Howards cautions that both new studies "certainly are cause for discussion, concern and further research." Both he and Rosenberg stress that the causes of prostate cancer remain poorly understood. They suggest that the new findings may accelerate research aimed at finding the origins of the disease, which kills about 30,000 men in the United States each year.