Hyperactivity grows into adult problems

A substantial minority of hyperactive boys enter adulthood holding low-paying, nonprofessional jobs, abusing illicit drugs, and regularly committing irresponsible and violent acts, according to a long-term study published in the July ARCHIVES OF GENERAL PSYCHIATRY.

However, childhood hyperactivity — officially known as attention-deficit hyperactivity disorder (ADHD) — does not increase the likelihood of chronic unemployment as an adult, assert Salvatore Mannuzza, a psychologist at the New York State Psychiatric Institute in New York City, and his colleagues. About one in three hyperactive boys completes all or part of college, and a surprisingly large number end up owning their own small business, the researchers note.

"Regardless of adult psychiatric status, ADHD placed children at relative risk for educational and vocational disadvantage," Mannuzza's team reports.

The study consisted of 91 white males, with an average age of 26, who first received a diagnosis of hyperactivity between the ages of 6 and 12. All had been treated for the disorder, primarily with a stimulant medication that often eases symptoms. Three categories of symptoms typify ADHD: inattention, including difficulty concentrating on school projects; impulsivity, such as constantly jumping from one activity to another; and hyperactivity, often signaled by an inability to stay seated or to sit still without fidgeting.

Another 95 men who had displayed no evidence of ADHD as children served as a control group.

Nearly one-quarter of the hyperactive boys failed to finish high school, compared with only two of the controls. Only one hyperactive boy, compared with eight controls, went on to obtain a graduate degree.

Far fewer members of the ADHD group held professional-level jobs, such as accountant, stock broker, or scientist.

In contrast, 16 of these same men owned and operated their own small business, compared with five controls. The reasons for this finding remain unclear, and further study is needed to determine its accuracy, the scientists say.

Overall, 30 men who grew up with ADHD experienced an ongoing mental disorder, compared with 15 controls. Two diagnoses accounted for most of the psychological disturbances in the former group: antisocial personality disorder, characterized by long-standing irresponsible, aggressive, and often criminal behavior; and abuse of illegal drugs.

Only 10 of the men with an earlier diagnosis of hyperactivity received either a current ADHD diagnosis or suffered from substantial ADHD symptoms, the researchers maintain. This probably represents an underestimate, in their opinion, since interviewers did not ask 15 men in the ADHD group about symptoms of adult hyperactivity because those men denied having had significant signs of hyperactivity as children. — *B. Bower*

Biting flies flee elephants' swatters

Elephants make their own fly swatters and use them most frequently in the heat of the day, when biting pests are out in force, a new study finds. Presented at the annual meeting of the Animal Behavior Society in July, the report shows how elephants use their heads — and their trunks — not only to employ a tool, but also to modify and save it. This behavior illustrates the elephant's highly evolved, complex brain, says study coauthor Benjamin L. Hart.

Benjamin L. Hart

He and Lynette A. Hart, both animal behaviorists at the University of California, Davis — site of the July meeting — traveled to Nepal, where they observed the swatting behavior of 15 captive Asian elephants. The animals fashioned fly swatters out of whatever they could wrap their trunks around — leafy branches, banana stalks, burlap. Sometimes the elephants altered the branches, shortening sticks or trimming side stems.

Charles Darwin observed elephants swatting flies in 1871, but his and other reports remained isolated sitings. The new study is the first to systematically document tool use in elephants, Benjamin Hart says.

Panel weighs health impact of herbicides

The National Academy of Sciences' Institute of Medicine (IOM) this week released a report that finds a statistical link between three cancers, two other disorders, and exposure to chemicals in herbicides used during the Vietnam War.

U.S. troops sprayed nearly 19 million gallons of herbicides over about 4 million acres in Vietnam between 1962 and 1971. The herbicides defoliated large areas of thick jungle, thus enabling U.S. military forces to scan for enemy troops. Concerns about the health effects of herbicides, such as the dioxin-tainted Agent Orange, first surfaced in 1970. Since that time, the debate over the health effects of herbicides has been clouded by scientific uncertainty, politics, and a maelstrom of strong emotions.

The 16-member IOM panel of epidemiologists, toxicologists, and other experts stepped into the fray after Congress passed a law calling for a review of the existing scientific evidence on the possible health effects caused by exposure to herbicides. The panel issued the report, "Veterans and Agent Orange," at a July 27 press conference held in Washington, D.C.

"For the very first time, veterans and the American public have a solid reason to believe that their concerns about exposure to Agent Orange, dioxin, and other toxic chemicals are at long last being taken seriously," said Sen. Thomas Daschle (D-S.D.) at a hearing of the Senate Committee on Veterans' Affairs, held the same day to review the IOM report.

The panel found strong evidence of a statistical association between herbicides or dioxin and soft-tissue sarcoma, non-Hodgkin's lymphoma, and Hodgkin's disease, three types of cancer. The panel's review also turned up substantial evidence of a link between herbicide exposure and chloracne, an acne-like skin disorder, as well as porphyria cutanea tarda, a liver disorder that causes skin blistering.

The government acted quickly on those findings. At the Senate hearing, Secretary of Veterans Affairs Jesse Brown announced that Vietnam veterans with Hodgkin's disease and porphyria cutanea tarda will now be entitled to disability payments based on their service in Vietnam and their exposure to herbicides. The VA already compensates veterans suffering from non-Hodgkin's lymphoma, soft-tissue sarcoma, and chloracne.

The IOM panel reviewed data from 230 epidemiological studies. Most of the studies focused on people who reported on-the-job contact with the chemicals in herbicides or people exposed as a result of an industrial accident. They generally did not include Vietnam veterans, whose