

Behavior

Bruce Bower reports from Washington, D.C., at the annual meeting of the American Psychiatric Association

Vitamin E may ease movement disorder

In the last five years, several research teams have reported mixed results in using vitamin E to treat tardive dyskinesia (TD), a serious movement disorder induced by antipsychotic drugs. A new study now lends support to the notion that this nutrient often eases the involuntary twitches, jerks and grimaces that develop in roughly 20 percent of persons taking an antipsychotic medication (SN: 5/11/91, p.293).

Symptoms of TD decreased sharply among nine of 16 psychiatric patients treated for eight to 12 weeks with large daily doses of vitamin E, reports Lenard A. Adler of the Department of Veterans Affairs Medical Center in New York City. Only one of 12 psychiatric patients with TD treated for the same time period with placebo pills showed comparable improvement. During the trials, patients took prescribed doses of an antipsychotic medication and other drugs.

Vitamin E appears to hold more promise for relatively young TD sufferers, Adler contends. In his study, four of five patients under age 58 improved markedly on vitamin E, compared with five of 11 patients over 58.

Reasons for the conflicting results of recent vitamin E studies remain unclear, Adler maintains. Some evidence indicates that recent-onset TD cases respond best to vitamin E, but two prior reports of the nutrient's ineffectiveness in treating TD do not specify when abnormal movements first appeared in treated patients, he points out. Adler's team also could not document the duration of TD among their study participants.

Vitamin E may offer relief from TD by helping protect key areas of the brain from free radicals, says Sally R. Szymanski of Long Island Jewish Medical Center in Glen Oaks, N.Y. Antipsychotic drugs trigger the production of these toxic molecules by increasing the metabolism of various neurotransmitters, such as dopamine.

Schizophrenic kids' memory muddle

Schizophrenia usually develops during late adolescence or early adulthood, but this wide-ranging disruption of thought and emotion sometimes appears among children. Research conducted by Robert Asarnow of the University of California, Los Angeles, and his colleagues indicates that schizophrenic children suffer from attention and memory problems that undermine their ability to communicate with others.

In a series of experiments, Asarnow's group studied a total of 60 schizophrenic children less than 13 years old. Simple motor and perceptual skills remain largely intact among schizophrenic youngsters, but they falter badly on tests requiring rapid mental activity within a set time limit. Such tests include simple arithmetic problems and the recall of short lists of digits. Schizophrenic children also show considerable difficulty in copying a simple shape that they viewed 15 seconds earlier and in identifying a series of letters presented on a screen, each for a fraction of a second.

Struggles on these tests reflect a limited ability to carry information in "working," or short-term, memory, Asarnow contends. This memory deficit undermines effective monitoring of others' responses during social encounters and often results in illogical and disconnected statements, he says.

The UCLA researchers also find that during mental tests the brains of schizophrenic children produce a weaker version of a specific type of electrical activity associated with focused attention among healthy children and adults. Tasks that typically spark surges in electrical activity in one or the other brain hemisphere have no such effect among schizophrenic youngsters, Asarnow adds.

"The right and left hemispheres of the brain don't seem as finely specialized in schizophrenic children, compared with healthy controls," he asserts.

Biomedicine

Michael Stroh reports from Baltimore at a joint meeting of three pediatric research societies

Home workouts: Exercise caution

After pediatrician John H. Gould saw his second case in which a home exercise bike had torn off a child's finger, he began to wonder: Is this injury common?

His first attempt to answer the question ended in frustration. "The medical literature had not addressed the problem of injuries related to home exercise equipment," he says. But his second inquiry ended with a surprise.

Using case reports collected by the Consumer Product Safety Commission, Gould and pediatrician Allan R. Dejong, both at Thomas Jefferson University Hospital in Philadelphia, found that in 1990, about 25,269 people were admitted to emergency rooms with injuries caused by exercise equipment — a 400 percent increase over the 1982 figures. Furthermore, over half of these cases involved children less than 15 years old.

Exercise bikes and jump ropes proved most dangerous, say the researchers. Exercise bikes were involved in 55 percent of all the accidents, jump ropes in 25 percent. In most cases, the bikes amputated a finger or toe. Even more alarming were the figures on jump ropes: in the majority of these accidents, the rope's user was strangled to death.

"The statistics we looked at tell a disturbing story," says Gould. In more than 80 percent of the cases involving children, the victims were playing alone or unsupervised, he adds.

It's risky to be a lefty

A new study suggests that left-handed children may have more accidents than right-handed ones.

Pediatrician Charles J. Graham and his colleagues at the Arkansas Children's Hospital in Little Rock studied 761 children age 6 to 18 who had been admitted to a pediatric emergency room. They divided the children into two groups: a trauma group, containing 267 kids admitted for various bumps, scrapes and bruises; and a nontrauma group, made up of 494 children with problems such as a sore throat or earache.

The researchers found that 16.5 percent of the children in the trauma group were left-handed, compared with 10.5 percent in the nontrauma group. "Approximately 10 percent of the U.S. population is left-handed," says Graham, "so 10.5 percent in the control [nontrauma] group is about what we'd expect."

Why the difference? No one knows for sure, says Graham. One common explanation is what some lefties might call the conspiracy theory. "We live in a right-handed world," explains Graham, himself a southpaw. "Doorknobs, automobiles and even toys are designed by right-handed people and are used best by right-handed people." An alternative explanation proposes that there's a physiological difference between lefties and righties that may affect motor control or coordination. Graham says finding the cause will be his next goal.

I want my MTV

Apparently, the Madonna video did the trick. Researchers at the Arkansas Children's Hospital in Little Rock studied 30 females age 13 to 20 who were slated to undergo a colposcopy and found that those allowed to watch MTV during the exam fidgeted less and needed less reassurance than those with no form of entertainment.

Colposcopy is a procedure that enables gynecologists to view the vagina and cervix through a magnifying instrument in order to confirm cervical cancer or to perform a biopsy. Although the procedure is relatively painless, first-timers usually experience considerable anxiety, says study co-author Vaughn I. Rickert, a psychologist at the Arkansas Children's Hospital. Patient anxiety often translates into a longer examination, he adds.

Some pediatricians suggest that future studies should test MTV's effectiveness on patients in the dentist's chair.