

# BEHAVIOR

## Terpsichore's syndrome

Sylph-like is a description that normally can be applied to ballerinas, but the excessive thinness of some of these women may be associated with certain abnormal psychological and physiological conditions. At least two studies have found young, female dancers and dance students to be susceptible to anorexia nervosa (SN: 6/9/79, p. 376). And now researchers find that delayed menarche and irregular menstrual cycles are seen more often among ballerinas than among well-nourished nondancers.

A questionnaire on age, height, weight, duration of training, age at menarche and menstrual periodicity was distributed to 89 dancers. The results are reported in the July 3 *NEW ENGLAND JOURNAL OF MEDICINE* by Rose E. Frisch of the Center for Population Studies at the Harvard School of Public Health. She and colleagues Grace Wyshak and Larry Vincent found that 10 percent of the dancers, some older than 18 years of age, had not yet begun to menstruate. Another 15 percent reported secondary amenorrhea—lack of cycles for longer than three consecutive months—and 30 percent reported irregular cycles. These dancers were all significantly leaner than those who reported regular cycles.

Two reasons are suggested to explain this phenomenon: Either late maturers choose to be ballet dancers or the hard training and low food intake typical of ballet dancers can cause excessive thinness that delays puberty. But, say the researchers, "the occurrence of menarche after an injury preventing dancing, supports the hypothesis that a change in fat/lean ratio and the accompanying changes in metabolic and hormonal levels characteristic of hard physical exercise may be involved in the delay of menarche and menstrual disturbances in these ballet dancers."

Discussions of what triggers puberty have focused on two possibilities. One is that the process is controlled by an independent neurologic clock that is genetically coded. Another is that a biological signal outside the central nervous system—such as attainment of a specific body weight or body composition—triggers puberty. The latter hypothesis "has received substantial, although controversial, experimental support," says Jack Fishman of Rockefeller University in an editorial accompanying the research report. But he concludes that "the evidence on the ballet dancers adds considerable weight to the arguments in its favor."

## The economy: Bad and getting worse

Who do you blame for the sorry state of our economy? There are numerous candidates, but we may have to take part of the blame ourselves. That, at least, is the contention of psychologist/economist George Katona, who says that changes in consumer behavior are largely responsible for economic trends. Katona, of the University of Michigan's Institute for Social Research, instituted surveys of consumer attitudes in the early 1950s. His findings have since shown that changes in economic expectations are measurable and that changes in consumers' attitudes, expectations and aspirations can foretell fluctuations in the nation's economy as a whole.

If Katona is right, the worst is yet to come. The most recent consumer survey (March and April) documents the most pessimistic consumer attitudes and expectations recorded in more than 25 years. And April was the second consecutive month that the index of consumer sentiment was below its prior record low. The largest declines recorded in the survey involved attitudes toward buying household durables, vehicles and houses. Favorable attitudes toward buying durable goods declined from 54 percent to 45 percent from March to April, for cars from 45 percent to 35 percent and for houses from 32 to 19 percent.

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# BIOMEDICINE

## MSH/ACTH and the mentally retarded

Various brain proteins, when injected as drugs, have been found to produce a variety of positive psychological effects. And one of the most exciting discoveries within this arena is that a protein derivative of the pituitary hormones MSH and ACTH can help the mentally retarded.

In the 1970s Abba J. Kastin of the Veterans Administration Medical Center in New Orleans, Curt A. Sandman of Ohio State University and Lyle Miller of Boston University School of Medicine injected 20 retarded patients with either the brain protein MSH/ACTH 4-10 or a placebo and gave them the task of selecting particular shapes or colors. The patients who got the protein comprehended the task more rapidly than those given a placebo. Kastin, Sandman and Miller also found that an orally administered analog of MSH/ACTH 4-10 increased the workshop performance of mentally retarded subjects (SN: 11/25/78, p. 375). And now Sandman (who is with the University of California Medical Center in Irvine), along with Barbara B. Walker of Lafayette Clinic in Detroit and Cheryl A. Lawton of Ohio State University, reports in the spring *PEPTIDES* that an analog of MSH/ACTH 4-9 can make the mentally retarded more sociable. Twenty-two mentally retarded patients in a sheltered workshop received either the analog or a placebo, then were observed for their behavior. Those getting the analog were found to talk and gesture significantly more than those getting the placebo.

## New treatment suggested for MD

Behind the poster children and the telethons, the search for a cure for muscular dystrophy (MD) continues. European researchers are reporting "encouraging" results with allopurinol, a drug marketed in the United States for use in treating gout.

Spanish researchers report in a recent issue of *LANCET* (Vol. 1 No. 8182) that seven of 10 children with Duchenne MD, the most common form, recovered partially or fully after taking daily doses of the drug for four to 12 months.

M. L. Moss, director of research development for the Muscular Dystrophy Association, says that the MDA is currently supporting two clinical trials in this country, and a third will be reported in a journal soon, but he expects no dramatic findings in the near future. "We're interested but we're not encouraged by what we've seen in the literature," says Moss. Still, the MDA is optimistic enough to continue supporting the research.

Allopurinol was first reported as a possible treatment for MD three years ago by two Scottish researchers who hypothesized that MD is caused by a lack of adenosine triphosphate (ATP), necessary for muscle contraction, growth and repair. Allopurinol, they say, prevents the breakdown of ATP.

## Patient, heal thyself

Books on health care regularly top the best-seller lists, yet according to a study in the June 13 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, self-care health books don't lead to a significant decrease in physician visits.

In the study, three University of Washington researchers distributed "Take Care of Yourself: A Consumer's Guide to Medical Care" to 460 families on a pre-paid health plan, and monitored subsequent office visits. A financial incentive was given to 223 families to make fewer office visits.

"The book had no significant effect on the number of physician's visits during 6- and 12-month study periods even though one half of the families read most or all of the book and more than one third used it for a specific medical problem," the researchers report. They conclude that people are unlikely to trust a book without reinforcement of a more personal nature.

41