

Vitamin E for premature infants

Although incubators rich in oxygen are helping save the lives of premature babies, the oxygen causes some visual loss in 1,300 such infants and severe visual loss in 250 others born in the United States each year. Helen Mintz Hittner of Baylor College of Medicine in Houston and colleagues investigated the possible role of antioxidant vitamin E in preventing such visual damage. They gave a pharmacological dose of vitamin E (100 mg. per kilogram of body weight daily) to 50 premature infants in oxygenated incubators from the first day of life throughout their hospital stay and a control dose of vitamin E (25 mg. per kilogram of body weight daily) to 51 others under the same conditions. Although the pharmacological dose of vitamin E didn't significantly reduce *mild* visual loss, it did significantly reduce *serious* visual loss, Hittner and her co-workers report in the Dec. 3 *NEW ENGLAND JOURNAL OF MEDICINE*.

Exercise and sleep

Although one would expect exercise to increase the need for sleep, and especially for restorative, deep slow-wave sleep, studies attempting to demonstrate that this is the case have produced equivocal results. Colin M. Shapiro of the University of Witwatersrand, Witwatersrand, South Africa, and colleagues attempted to resolve the question by studying the sleep needs and especially the slow-wave sleep needs of four subjects after they had run a marathon. Such extreme exercise, the scientists contended, would reveal whether exercise increases sleep needs or not. And as they report in the Dec. 11 *SCIENCE*, their subjects significantly increased both their total sleep time and slow-wave sleep on each of the four nights after the marathon as compared to control nights. Surprisingly, though, the subjects' longest sleep occurred on the second night after the marathon, not the first, perhaps because they were kept partly awake during the first night by muscle and blister pains.

Night terror and a deadly sleep

Since February, 38 young, apparently healthy, male Southeast Asian refugees in the United States have gone to bed never to wake up, the Centers for Disease Control in Atlanta reports. "It is a completely new syndrome — death in young, healthy people that occurs at night, that occurs in minutes and lacks explanation after autopsy," CDC investigator Roy Baron says.

The only clues as to why the young men died are that they breathed abnormally or groaned before they died. Some witnesses believed that when the victims groaned, they were dreaming terrifying dreams, and that these dreams killed them. Other testimony, however, indicated that the groans were like the sounds of people experiencing terminal heart failure.

Interferon news not all good

Although the antiviral substance interferon has been getting a glowing press lately, it may not be a total health boon, suggests research reported by Charles J. Pfau and colleagues of Rensselaer Polytechnic Institute in Troy, N.Y., in the December *JOURNAL OF GENERAL VIROLOGY*.

First the researchers found that mice inoculated with weak strains of the virus that causes lymphocytic choriomeningitis rarely die, but that those inoculated with aggressive strains of the virus do. Then they injected mice with weak strains of the virus and stimulated their bodies to produce interferon; the mice died from lymphocytic choriomeningitis. This finding, the investigators conclude, suggests that interferon may not be a valuable treatment for all viral diseases.

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Infant mortality: What trends show

Infant mortality — the death rate for children under a year old — serves as a more sensitive social indicator of a nation's overall level of well being than gross national product does, some observers say. And Kathleen Newland draws attention to the growing list of variables being correlated with infant mortality, both in developed and developing nations, in a report published recently by the Worldwatch Institute in Washington.

That there exists no direct relationship between national income and infant mortality is portrayed most dramatically by examining countries with the highest per capita incomes, Newland says; among them infant mortality rates can vary by a factor of 19. For instance, oil-rich Libya and Qatar have rates of 130 and 138 infant deaths per thousand live births, respectively. Meanwhile, Japan, with per capita income roughly half that in Qatar and only \$500 more than Libya, has a mere 9 infant deaths per thousand live births.

In the United States, Washington, D.C., holds the worst infant-mortality rate for the nation's largest metropolitan areas. Its rate, twice the national average, climbed 10 percent in one year alone — from 22.2 per thousand in 1979 to 24.6 per thousand in 1980. Why? In 1980, 58 percent of all births there were illegitimate, and Newland notes that a growing proportion of the District's pregnant women are "poor, young, unmarried mothers who because of inability to pay, ignorance, inertia or logistical difficulties, [fail] to get adequate prenatal care." Many babies suffer complications, which stem from poor nutrition, drug abuse and untreated infection. And that helps explain, she says, why the city's incidence of babies with very low birth weight (below 2,500 grams) is three times the national average.

Among factors associated with lower infant mortality are breast feeding, especially for periods of six months to a year; a mother's education, which in low-income countries seems to at least partially compensate for poverty and reduced nutrition; fewer births and longer spacing between them; and refraining from use of alcohol and tobacco, the two toxic substances deemed most responsible for infant mortality.

Women in science: Prospects better, but . . .

Though data are not as good as statisticians would like, there's ample evidence that the proportion of women who study science and engineering, who graduate and who enter the workforce is increasing. "However," notes Betty Vetter of the Scientific Manpower Commission, "women still have more difficulty than men in finding employment and in advancing in careers." In a survey of the prospects for women in science and engineering, published in the Dec. 18 *SCIENCE*, Vetter adds that "except for beginning engineers, women's initial salaries are lower than those of men and the difference increases with age." What Vetter finds most disturbing, though, "is that the equalization of opportunities is considerably better for women with only bachelor's degrees than for those with either master's degrees or Ph.D.'s. Women are rewarded far less than men for the larger investment in career preparation represented by graduate degrees."

Adopt a wilderness

Some 924 areas — a total of 150 million acres of federally owned wilderness — are being reviewed to determine which should receive designation by the Interior Department as a federal wilderness and be protected from development activities such as drilling for energy minerals and logging. The Sierra Club and Wilderness Society are recruiting "watchdogs" to "adopt" a given area, to participate in public hearings and to report on illegal activities that warrant prosecution.

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