

Table 1. Serum Concentrations of Selenium, Copper, and Zinc in Patients with Alcoholic Cirrhosis and Control Subjects.

Group (No. or % of cases)	Selenium	Copper	Zinc
	nmol per liter		
Controls (40)	1.51±0.25	18.0±3.5	13.0±3.0
Patients with alcoholic cir- rhosis (11)	0.64±0.20*	18.8±5.0†	9.5±3.8‡

*P<0.001 by Student's t-test.

†Not significantly different from control values.

‡P<0.01 by Student's t-test.

rhosis, prophylactic selenium supplementation should be considered.

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CANCER IN INDIA

To the Editor: In 1979 we were invited by the World Health Organization to address the cancer problem in India, as the first recorded joint Soviet-American health mission to a third country. In India the incidence of cancer and its mortality appear to have increased in recent years, with 500,000 to 700,000 new cases per year^{1,2} and an estimated mortality of 500,000 in 1978 (Thangavelu SD. Personal communication) — a figure somewhat higher than the 300,000 to 400,000 estimated only a few years earlier.³ The remarkable improvement in life expectancy at birth, from about 20 years in 1950 to over 50 years currently,⁴ has resulted in a marked increase in the size of the population. Current projections set the country's population at nearly 800 million by 1990.

Cancer of many types occurs in India in patients 10 to 15 years younger than those in the United States and most Western countries. Since the incidence of cancer is about 100:100,000 in India^{1,2} and 300:100,000 in the United States,⁵ it is possible that the comparative youth of Indian patients with cancer simply reflects the lower average age of the population. On the other hand, there are observations that racial or geographic differences may exist in the biologic behavior of some forms of cancer (Shant V. Personal communication); therefore genetic or environmental factors may be involved in this phenomenon.

Although the only population-based cancer registry is located in Bombay and includes only the population of that area, individual hospital statistics clearly indicate that the two organ sites most commonly involved are the uterine cervix in women and the oral cavity in both sexes. These two sites represent approximately half

the cancer cases in the country, with oropharyngeal cancer about 1.5 times as prevalent as cervical cancer. Control of these two kinds of cancer would provide the major part of cancer control in India.

There seem to be several causative factors in these two principal cancers. Oropharyngeal cancer appears to be associated with chewing pan (a mixture of betel nuts and various seeds and spices, usually including tobacco in a betel leaf) and smoking bidai (a crude tobacco cigarette).⁶ Cervical cancer is probably related to the poor genital hygiene found in many women, the early age of marriage, and multiparity.⁷ It may or may not be related to the absence of circumcision among Hindu husbands. It is important to note that both kinds of cancer are easily accessible for physical examination and can be diagnosed by cytologic techniques at the early stages of the disease. The cure rate for these neoplasms is very high if they are treated surgically at Stage I or II.

In most cases, patients go to a medical facility when the disease is far advanced and no longer amenable to curative treatment. About 80 to 90 per cent of patients are first seen at Stage III or IV. Consequently, a large portion of India's resources for the management of cancer is allocated to facilities for radiotherapy, to which cervical and oropharyngeal cancer are sensitive and which only provide palliation for a large proportion of patients. The supply of physical facilities and personnel is inadequate to treat the many patients who present with far advanced disease; the delay allows progression of the disease and probably contributes to the high mortality rate.

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POLLUTANTS IN BREAST MILK

To the Editor: In the June 26 issue of the *Journal*, Rogers, Rudnicka, and Diemer gave a thorough and current report on the status of pollutants in human breast milk. At our milk bank (San Jose, Calif.) we have had an interest in the possibility that chemical pollutants are present in the milk of donors to the bank. We are studying methods of collecting, processing, and distributing human milk to sick infants unable to obtain sufficient milk from their mothers.

In 1979 we analyzed 25 samples of milk from approved donors. This study was done in conjunction with the Environmental Health Agency (Waukegan, Wash.). A careful history of the donor was taken, which included place of birth, exposure to pesticides, and history of smoking. The level (in parts per billion) of p,p' -DDT was 180 ± 140 , and that of p,p' -1,1-dichloro-2,2-bis ethylene (DDE) 2130 ± 1450 . The following residues were not found at the level of sensitivity of the test methods used: dieldrin (at 1 ppb), heptachlor, heptachlor epoxide, oxychlorodane, p,p' -DDT, 2-benzene hexachloride, hexachlorobenzene (at 1 ppb), TNC (at 1 ppb), chlordane (at 30 ppb), mirex (at 30 ppb), and polychlorinated biphenyls (at

Amesbury, Mass.—The DDT levels found in the samples were similar to levels in various reports by Rogan et al. Other pesticides reported by Savage² were not found at detectable levels in our samples.

We speculate that careful screening and selection of donors to a milk bank may reduce the risk of contamination with chemical pollutants.

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²Savage EP. National study to determine levels of chlorinated hydrocarbon insecticides in human milk, 1975-1976; supplementary report to the National Milk Study: 1975-1976. Springfield, Va.: National Technical Information Service, 1977.

The above letter was referred to the authors of the article in question, one of whom offers the following reply:

To the Editor: I thank Dr. Harrod and Ms. Asquith for their comments. Although it is always heartening to hear of "unpolluted" milk, two points should be made. First of all, despite comparable sensitivities, laboratories vary to an extraordinary degree in the determination of trace amounts of chemicals. This is true of any high-technology, relatively new procedure for which no national quality-assurance program exists. Thus, Harrod and Asquith's findings may represent a different laboratory technique or different levels. Secondly, it should be emphasized that with our current ignorance of illness attributable to chemicals at these levels in breast milk, "speculation" about screening is indeed speculation. An otherwise "qualified" donor should not be barred from participating in a program solely on the basis of small amounts of chemical contaminants in her milk.

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STOOL CAMOUFLAGE BY COLORED TOILET WATER

To the Editor: Some patients are unable to report hematochezia or melena; some may not be able to see well enough because of poor sight or color blindness, and others may have a dark bathroom or use an outdoor privy, where the stool escapes their observation. Some people simply pay no attention to their feces.

I recently cared for a woman whose melena was masked by blue toilet water. In her bathroom a popular toilet cleaner and deodorizer had been placed in the toilet tank. This product contains a blue dye to indicate its level of effectiveness, but unfortunately it may camouflage an abnormal stool.

When inquiring about hematochezia or melena, the clinician should be alert for confusing coloration in the commode!

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BRINGING ORDER TO HEALTH-EDUCATION LITERATURE

To the Editor: In his Sounding Board in the June 26 issue, Davies castigated the health-education literature for consumers (and, by implication, health educators) for having an "untidy" house. I think that Davies' house-cleaning proposal is unfounded. Much of the diversity in health-education materials exists because the items are designed for differing groups with differing needs, differing cultural characteristics and skills, and differing goals for changes in health behavior. This kind of diversity in the availability of materials is valuable, if perhaps untidy, since it demonstrates sincere attempts to reach new populations with useful information. We must also recognize that a certain percentage of this material is produced by charlatans; recognition of this problem, however, should

not lead to a costly compulsion toward classicism, for three reasons. First of all, the literature on planned behavioral change makes it clear that simply providing information to an audience does not lead to massive changes in behavior.^{1,2} Furthermore, when massive efforts are mounted to promote behavioral change with the latest behavior-management techniques, a high percentage of the cases revert back to base-line behavior levels within a year.³ With such results among persons who are presumably sophisticated in promoting behavioral change, we should not get too upset with even the most mischievous efforts at public misinformation or with the resulting untidiness in the health-education literature.

Secondly, any such attempt to curtail the health-education information that is available to the public will only encourage a variety of "liberation" groups to produce underground or alternative publications. Many people in our society not only have no interest in scientific respectability but actively rebel against it. If nonscientific health-education materials are available, it is because a market exists for these materials, i.e., a considerable number of people are willing to purchase that kind of product, for whatever reason. Unless some restrictive and oppressive censorship is imposed, the availability of a house-tidying program open will do little to affect this market and may only further encourage it.

Finally, even though it would take 10 years to produce, this project would be outdated the minute it was produced because of the great advances in medical and health knowledge and in behavioral, social, and educational practices. This would lead to an unending series of 10-year efforts, each with substantial budgets: a very costly product with little justification or need.

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To the Editor: As a librarian, I take exception to some of the comments in Dr. Davies' Sounding Board. He singles out minerals and vitamins as examples to include among the interests of "rabbits, faddists, and opportunists." Further in his article, he says, "For the first time, people will be able to go to the public library, select a book on health care that is listed in the library for health education, and know that what they read is scientifically acceptable."

Are we to infer that vitamins and minerals are unacceptable? To delete one type of material in favor of another in censorship, and censorship is anathema to good librarianship. Furthermore, "scientifically acceptable" is a subjective term. What is so to Dr. Davies may not be so to another. Have there not been medical regimens that began with great fanfare and were subsequently withdrawn and discredited?

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To the Editor: The Health Education Center Library in Pittsburgh is one of a growing number of resources with easily stored and retrievable health-education material "that can be located by anyone with reasonable intelligence." The Community Health Information Network at Mt. Auburn Hospital in Cambridge, Mass., the Planetree Health Research Center in San Francisco, and the Center for Medical Consumers and Health Care Information in New York are others that immediately come to mind.

We agree with Dr. Davies that it is difficult to obtain authoritative