

## International Family Medicine Literature

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Feature Editor

*This series features precis of international journal articles related to family medicine education. Feature Editor Anne D. Walling, MD, is professor and vice-chair of Family and Community Medicine at the Wichita campus of the University of Kansas School of Medicine. These summaries are provided, in part, through her responsibilities with American Family Physician, published by the American Academy of Family Physicians. Your comments regarding this column are welcome. 316-261-2607. E-mail: awalling@kumc.edu.*

### Breast-feeding Can Prevent Diabetes

Valuable information about the complex etiology of diabetes continues to come from studies of populations with high prevalence, such as the Pima Indians of Arizona. A recently published study correlates lower than expected rates of noninsulin-dependent diabetes in those who were exclusively breast-fed. Even when adjusted for age, gender, birth weight, and parental diabetes, the odds ratio was .4 for exclusively breast-fed individuals, suggesting less than half the risk of diabetes, compared with the rest of the population studied. The authors suggest that this effect could be due to changes in circulating levels of insulin, glucagon, and neurotensin following bottle feeding, as well as the tendency for bottle-fed infants to consume more calories at each feeding and develop inappropriate satiety mechanisms. In populations such as the Pima Indians, who have increased vulnerability to diabetes, these changes could be sufficient to precipitate the clinical stages of the condition at an early age. Although the mechanism has yet to be elucidated, there is sufficient evidence to encourage breast-feeding as a protective mechanism against diabetes.

*(Pettitt DJ, Forman MR, Hanson RL, et al. Breast-feeding and incidence of noninsulin-dependent diabetes mellitus in Pima Indians. Lancet 1997;350:166-8.)*

### Canadian Toxoplasmosis Cases Linked to Water Supply

An increase in cases of toxoplasmosis in an area of British Columbia during 1995 has been linked to unfiltered water from a reservoir supplying parts of Victoria. It is suspected that increased rainfall produced greater surface runoff water that was contaminated with toxoplasma oocysts from domestic and feral cats and cougars. The water was chlorinated but not filtered, thus potentially allowing transmission of parasites such as toxoplasma, cryptosporidium, and giardia. Of the 100 cases of toxoplasmosis identified, 63 sought medical attention because of symptoms, and 37 pregnant women were identified through a screening program. The most common clinical presentations were nodes, followed by eye symptoms. The authors estimate that up to 7,000 people could have been infected but remain undiagnosed.

*(Bowie WR, King AS, Werker DH, et al. Outbreak of toxoplasmosis associated with municipal drinking water. Lancet 1997;350:173-7.)*

*Editor's Note:* Those with an interest in medical history will appreciate the similarities between this modern epidemiological mystery and the classical study of cholera in London by John Snow. In both cases, the city had two discrete water distribution systems, one of which was contaminated. Although not as dramatic as the al-

leged dismantling of the Bow Street pump, the reservoir that was implicated in the toxoplasmosis outbreak has been closed.

### Research Needs a New PACE?

Hematology oncologists in northern England have collaborated to include every eligible patient in a region of more than 3 million people in research studies. By gathering and using data on every patient with a hematological malignancy, the group aims to study a large and representative population in a strategy called Population Adjusted Clinical Epidemiology (PACE). Advocates of this controversial strategy claim it overcomes much of the selection bias inherent in randomized clinical trials to provide "reality-based" results.

*(Anonymous. Is this the end of research as we know it? BMJ 1997;315:388.)*

### Why Are Mortality Rates Rising in Russia?

After declining between 1984 and 1994, mortality rates in Russia have rapidly increased. Since 1990, male life expectancy has fallen by 6.2 years to 57.6 years. Although it was first suspected that these observations could be artifacts, new analyses indicate real changes in mortality for men and women, particularly in the age 40-50 group. The greatest increases appear related to alcohol and violence. Other factors such as nutrition and disruption of health

services could have contributed to the declines in life expectancy. (Leon DA, Chenet L, Shkolnikov VM, et al. *Huge variation in Russian mortality rates 1984–1994: artifact, alcohol, or what? Lancet 1997;350:383-8.*)

### **Australia Tries Medical “Smart Cards”**

Patients at the University of South Australia will shortly be issued “smart cards,” which contain health-related data in four screens. The information includes demographic data, medical and social history, immunization and allergy information, current health status, and medications. The credit card-sized cards can be read by devices in physicians’ offices, hospitals, and other health sites.

(Harrigan P. *Medical “smart cards” trialled in Australia. Lancet 1997;350:420.*)

### **Japan’s Minamata Bay Free of Mercury**

One of the classical sites of occupational/environmental disease, Minamata Bay in Japan, has been declared free of mercury contamination. Seafood contaminated with mercury compounds were blamed for hundreds of cases of neurological disease and congenital defects in the 1950s, 1960s, and 1970s. Compensation for the many victims of Minamata Disease has only recently been agreed on, and a new international center was established to research mercury poisoning.

(Watts J. *Minamata Bay finally declared free of mercury. Lancet 1997;350:422.*)

### **Do Submissive Women Have Stronger Hearts?**

Further research on the relationship between personality traits and coronary artery disease concludes that submissiveness was inversely associated with symptomatic coronary disease or death from myocardial infarction. In multiple logistic regression, submissiveness was independently associated with

decreased risk of myocardial infarction only in women. This longitudinal study has been following more than 1,500 Scottish men and women since 1988 and concludes that the personality trait of submissiveness seemed to confer protection against myocardial infarction, especially in women. Based on knowledge of her homeland, the editor wonders where they found “submissive” Scottish women for the study!

(Whiteman MC, Deary IJ, Lee AJ, Fowkes FGR. *Submissiveness and protection from coronary heart disease in the general population: Edinburgh artery study. Lancet 1997;350:541-5.*)

### **Save the Ozone Layer, Risk the Liver**

Damage to the ozone layer has led to the widespread substitution of hydrochlorofluorocarbons (HCFCs) for chlorofluorocarbons (CFCs), particularly as refrigerants, industrial solvents, and cleaning agents. In animal studies, HCFCs have caused hepatotoxicity and could be expected to cause liver damage in humans similar to that caused by halothane. A report from Belgium describes extensive liver damage in industrial workers exposed to chronic low-grade levels of HCFCs. The workers showed hepatocellular necrosis, and at least two had clinically significant illness. The authors call for greater vigilance in avoiding exposure to these compounds and the urgent development of safer alternatives. (Hoet P, Graf MLM, Bourdi M, et al. *Epidemic of liver disease caused by hydrochlorofluorocarbons used as ozone-sparing substitutes of chlorofluorocarbons. Lancet 1997;350:556-9.*)

### **Brazil Has Serious Measles Outbreak**

A severe outbreak of measles in Sao Paulo, Brazil, has caused at least six deaths and more than 2,800 reported cases. The clustering of cases in adolescents and

young adults has led to suspicion that the immunization campaigns of 1987–1992 were not as thorough as reported. More than 300 infants younger than 1 year have been infected, mainly through contact with infected adolescents or young adult family members. It is feared that the numbers of cases in children could rise, since vaccination rates have been reported to be low during recent years. As an emergency measure, all children older than 6 months are to be offered vaccination.

(Csillag C. *Brazil burdened with measles outbreak. Lancet 1997;350:572.*)

### **Diseases Burden Kenya’s Children**

In coastal areas of Kenya, bilharzia infection has reached alarming levels in schoolchildren; 78%–90% of children in some areas are infected with bilharzia or other parasites. These infestations produce anemia, poor nutrition, stunted growth, and impaired school performance. Sickness causes many children, especially girls, to drop out of school and fail to achieve their potential.

In the six highland districts, an outbreak of malaria has resulted in more than 10,000 hospital admissions and more than 300 deaths. Malaria is usually confined to lowland areas but has been spreading due to heavy rainfall and increased drug resistance. The efficacy of chloroquine-based drugs in Kenya is now estimated to be less than 50%. Children have been particularly hard hit by the epidemic, and schools in certain areas have closed because of the high rates of absenteeism. The government plans a campaign to reduce mosquito density and to promote the use of more effective drugs.

(Kigoto AW. *Bilharzia interrupts children’s education in Kenya. Lancet 1997;350:573.*)

(Kigoto AW. *Services stretched as malaria reaches Kenyan highlands. Lancet 1997;350:422.*)