

Finally, if inspections have any preventive value in triggering appropriate education and regulation, the ability of a poor inspection score to predict an outbreak would be underestimated. Our finding of several positive associations despite a small number of outbreaks and several biases that would distort our risk estimates toward the null suggest that the underlying association between poor routine inspection results and outbreaks in Seattle-King County restaurants is strong.

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## Susceptibility to Respiratory Conditions

We compared the relative risks of respiratory conditions for light and heavy smoking versus nonsmoking males and females in an American and a French population.

In Tecumseh (Michigan) 3,412 adult subjects ages 20-59 years were examined in 1978-79. There were 1,590 men (mean age = 38.6) of whom 47.6 percent smoked and 1,822 women (mean age = 38.7 years) of whom 32.4 percent smoked. In 1982-84, 1,747 sub-

jects working the Universities of Bordeaux (France) were examined; there were 860 men (mean age = 39.2 years) of whom 37.2 percent smoked and 881 women (mean age = 38.0 years) of whom 27.9 percent smoked.

In the two communities, data were collected by means of standard self-administered questionnaires derived with minor modification from the British Medical Research Council questionnaire. The questions were similar enough to obtain comparable definitions. Age-adjusted prevalence rates were calculated by the direct method using the combined distribution of the Tecumseh and Bordeaux study populations. The relative risks were computed from the age-adjusted rates.

In both populations, respiratory conditions were more frequent in smokers than in nonsmokers. In both Tecumseh and Bordeaux, the relative risks of respiratory conditions in smokers of less than 20 cigarettes a day compared to nonsmokers were as high or higher in men than in women. In smokers of 20 to 29 cigarettes a day compared to nonsmokers the same results were found in Tecumseh but not in Bordeaux where the relative risks were higher in women than in men as shown in Table 1.

In previous French studies, we also observed a higher susceptibility to respiratory conditions in smoking women compared to smoking men, both in adult and adolescent populations.<sup>1,2</sup> In the adult study, the relative risk of having chronic respiratory symptoms for females who smoked 20 or more cigarettes per day was 5.3 times higher than if they did not smoke, whereas in males that risk was 1.9 times higher. The results of the adolescent study showed that the greater vulnerability of females to the effects of smoking on respiratory symptoms begins during adolescence. An Italian study has recently shown similar results. C. La Vecchia,<sup>3</sup> studying a random sample of 72,284 Italian adults found a higher relative risk of chronic bronchitis, in age groups 15-44 and 45-64 years, in female smokers than in male smokers of 15 or more cigarettes per day

compared with nonsmokers of the same sex. The reason for this difference between relative risks in the US and Europe is not known and evidence on this subject is still inadequate. These results might reflect differences between American and European cigarettes and sex differences in the choice of cigarette brands or in the manner of smoking in each country, or they might reflect differences unrelated to smoking between American and European women who smoke compared with their nonsmoking compatriots.

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## Race/Ethnic-Specific AIDS Risk in New York City, 1981-87

Selik and colleagues have reported that, among foreign-born Hispanic residents in the United States, those from Puerto Rico have the highest reported cumulative AIDS (acquired immunodeficiency syndrome) incidence rates.<sup>1</sup> Our recent mortality study of New York City residents supports this finding.\*

\*Menendez BS, Drucker E, Vermund SH, Blum S, *et al*: AIDS mortality among Puerto Ricans and other Hispanics in New York City, 1981-87. (Unpublished data.)

TABLE 1—Relative Risks (and 95% confidence intervals) of Respiratory Conditions in Smokers of 20-29 Cigarettes/Day Compared to Nonsmokers

	Tecumseh		Bordeaux	
	Men	Women	Men	Women
Chronic cough	4.65 (1.99-10.85)	3.80 (2.32-6.24)	4.10 (1.50-11.19)	11.81 (6.59-21.16)
Chronic phlegm	3.06 (2.21-8.25)	3.01 (1.59-5.65)	2.72 (1.09-6.82)	7.60 (3.40-17.00)
Wheezing	4.78 (2.91-7.95)	2.65 (1.29-5.44)	2.10 (0.68-6.44)	6.00 (1.19-30.10)

Death certificates for NYC White (non-Hispanics), Black (non-Hispanics), Puerto Rican-born and other Hispanic were used with 1980 US Census of Population<sup>2</sup> to generate cumulative AIDS mortality rates between 1981 and 1987. Age-adjusted cumulative AIDS mortality rates (per 100,000 population, based on the US 1970 standard) among Puerto Rico-born males (362) were higher than rates among Whites (82), Blacks (267), and other Hispanics (217). Among females, cumulative age-adjusted AIDS mortality rates were higher among Puerto Rico-born (59) and Blacks (56) compared to Whites (14) and other Hispanics (25).

Both studies identify Puerto Ricans as a high priority group in HIV (human immunodeficiency virus) prevention and AIDS treatment. Data collection practices by the Centers for Disease Control and by state departments of health should consider specifically including Puerto Rico as a place of birth in data collection instruments (currently not the situation) as well as collecting data on national origin or ancestry. These procedures will improve the accuracy of future data and assist in evaluating the impact of HIV prevention programs on a national scale within subgroups of the Hispanic population.

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TABLE 1—Cumulative Age-adjusted<sup>a</sup> AIDS Mortality Rates<sup>b</sup> by Sex and Race/Ethnicity among New York City Residents, 1981-87

Sex	White Non-Hispanic	Black Non-Hispanic	Puerto Rico-Born	Other Hispanic
Males	82	267	362	217
Females	14	56	59	25

<sup>a</sup>Based on 1970 US standard population.

<sup>b</sup>Rates are per 100,000 population.

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## Caffeine and Premenstrual Syndrome

I read with interest the recent report on the relationship between caffeine intake and the severity of premenstrual syndrome (PMS) in young women.<sup>1</sup> This report reemphasizes similar findings made in an earlier study by the same author.<sup>2</sup> The relationship between caffeine consumption and PMS may be explicable on the basis of recent experimental findings made on neurons in the rat cerebral cortex. The firing of these neurons is powerfully depressed by the purine, adenosine, which is released by central neurons, and this depressant action of adenosine is antagonized by caffeine.<sup>3</sup> Indeed, it is very likely that the central stimulant actions of caffeine result from its blockade of adenosine receptors on central neurons.<sup>3</sup> Further studies on rat cerebral cortical neurons have now established that the depressant actions of adenosine can be influenced by the reproductive steroid hormones,  $\beta$ -estradiol and progesterone.  $\beta$ -estradiol antagonizes the inhibitory actions of adenosine<sup>4</sup> and this action of the hormone may account for the positive feelings of "well-being," "energetic," "active" etc., that women characteristically attribute to the late follicular phase of the menstrual cycle. Conversely, progesterone potentiates the actions of adenosine, by inhibiting its reuptake into nerve and glial cells,<sup>5</sup> and this may explain the "fatigue" and "depression" associated with the initial luteal phase of the cycle. Falling progesterone levels at the end of the luteal phase, with a consequent rapid reduction in purinergic inhibitory tone, may account for the feelings of tension, irritability, and anxiety that precede menstruation and the increase in seizure frequency associated with menstruation itself.<sup>6</sup> Appropriate changes in their level of caffeine consumption may help women to control the emotional

fluctuations associated with the menstrual cycle. It can be proposed that caffeine consumption should be reduced during the period preceding ovulation, and gradually increased during the luteal phase to counteract the actions of progesterone. Consumption should be decreased to zero 3-4 days prior to the onset of and during menstruation, to coincide with the rapid fall in progesterone levels during this period. Careful management of the levels of caffeine consumption may provide an appropriate strategy for control of the emotional aspects of premenstrual syndrome.

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## Costs Related to ER Use

The article by Hurley, Freund and Taylor<sup>1</sup> in the July issue of the Journal contains several statements concerning costs related to emergency room utilization. The final sentence projects "...real, although modest, cost savings for Medicaid agencies." In the narrow context of expenditures made by these agencies for these services, the statement, as well as the general supporting comments in the body of the article, may well be true. In the larger picture of health care expenditures, however, no evidence is cited that the emergency rooms which experience reduced utilization are able to reduce their expenditures to any measurable extent. Since emergency room costs are driven primarily by their capacity and availabil-