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ENVIRONMENTAL TOBACCO SMOKE AND DEATHS FROM CORONARY HEART DISEASE IN CANADA.

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Although the number of coronary heart disease (CHD) deaths resulting from active smoking have been estimated for Canada, similar estimates for environmental tobacco smoke (ETS) exposure are lacking. In this study, we estimate the number of CHD deaths among nonsmokers attributable to ETS exposure in their home. The numbers of CHD deaths among those aged 25 years or older by province were obtained for 1997 from Statistics Canada. Prevalence data on household exposure to passive cigarette smoking by province were obtained from the Canadian Tobacco Use Monitoring Survey. Relative risks associated with exposure to ETS were estimated from two recent meta-analyses. An estimated 800 Canadians died in 1997 from coronary heart disease as a result of involuntary tobacco smoke exposure in their home, or about 4 in 105 for Canada as a whole, a rate that far exceeds what is acceptable for other toxic exposures. The number of estimated deaths per 100,000 population was significantly lower in British Columbia (B.C.), reflecting their lower active smoking rates and the very low prevalence of household exposure to second-hand cigarette smoking in B.C. If the prevalence of home exposure to environmental tobacco smoke in Canada could be lowered to the levels observed in British Columbia, there would be an estimated 480 fewer coronary heart disease deaths a year in Canada. Our results underestimate the number of CHD deaths attributable to ETS because it does not include workplace attributable deaths. However, even this partial picture highlights the burden of disease resulting from this type of involuntary exposure.

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HEART DISEASE AND CANCER MORTALITY BY SOCIOECONOMIC STATUS AMONG 232 MILLION EMPLOYED PERSONS AGED 35-64 FROM 1984-1997 IN THE US.

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We have analyzed mortality data by socioeconomic status for 232 million employed persons aged 35-64 from 1984-1997 in the U.S. Numerators came from death certificates coded for occupation in approximately 20 states. Denominators came from U.S. Census estimates for specific occupations. Four socioeconomic groups were formed based on assigning Nam-Powers scores (which reflect income) to each occupation. For heart disease there was a strong gradient from poorest to richest (rate ratios 2.11, 1.63, 1.40, 1.00). Heart disease mortality for men dropped more quickly over the 14 year period for the wealthier (annual % decrease, poorest to richest, 1.4, 2.4, 3.2, 3.1), but this was not true for women (2.3, 1.6, 2.8, 2.2). For cancer, there was a strong gradient for men (RRs poorest to richest, 1.86, 1.54, 1.35, 1.00) but not for women (1.04, 0.90, 1.01, 1.00). Cancer showed a 0.7% annual decrease over the 14 year period, which did not differ by social class. Analysis of specific sites revealed a strong gradient for lung cancer (RRs poorest to richest, 2.16, 1.77, 1.52, 1.00), a very slight gradient for colorectal cancer (1.16, 1.06, 1.09, 1.00), and an inverse gradient for breast cancer (0.77, 0.80, 0.91, 1.00). All three cancers decreased slightly over 14 years; lung and colorectal cancer dropped more quickly for the wealthier. NHANES1 and NHANES3 data suggested that change in risk factors would not fully account for heart disease mortality trends over time, nor for the more rapid decline among the wealthier; it is likely that better treatment for the wealthier is an important factor.

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BLOOD PRESURE AND HYPERTENSION. RACIAL DIFFERENCES IN CUBA AND THE USA.

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Race differences in hypertension between African Americans and Whites in the USA have sparked a debate on the role of genes and the environment in explaining such differences. The purpose of this study is to compare blood pressure in these two ethnic groups in two socio-cultural settings: Cuba and the USA. We compared results from the First National Survey for Chronic Disease Risk Factors conducted in Cuba with results from the Third National Health and Nutrition Examination Survey or NHANES III. In Cuba there were 13,112 men and women ages 20+ (White=9267, Other or mulatto-2384, Black=1461) and in NHANES III there were 18,128 men and women ages 20+ (White=12,926, Black=5202). Age-adjusted mean blood pressures (mmHg) for Cuban men were (DBP: White=79.8, Other=81.1, Black=82.6; SBP: White 126.6, Other 128.0, Black 129.0); percent with hypertension (HBP) was White=34.8, Other=35.1, Black=38.4. The results for men from NHANES III were DBP: White=76.9, Black 79.0; SBP: White=125.4, Black=129.6, percent with HBP; White=25.3, Black=35.4. Mean blood pressures (mmHg) for Cuban women were DBP: White=77.4, Other=79.1, Black=81.0; SBP: White=123.4, Other=125.7, Black=127.6; percent with HBP was White=36.7, Other=41.2, Black=44.4. The results for women from NHANES III were DBP: White=72.0, Black=74.7; SBP: White=120.1, Black=125.8; percent with HBP: White=22.5, Black=37.0. Results indicate that ethnic differences in hypertension between African Americans and Whites are more pronounced in the USA than in Cuba suggesting that environmental exposures may play an important role in determining the ethnic differences observed in the USA.

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CARDIOVASCULAR RISK FACTORS AND MORTALITY IN JAMAICA: SIGNIFICANT SEXUAL DIMORPHISM.

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Jamaica has seen significant disease transition. Cardiovascular diseases (CVD) now account for 42% of mortality. Risk factors for CVD include hypertension(HTN), obesity, elevated lipids, diabetes(DM), smoking and excess alcohol. A prevalence survey for CVD risk factors in an urban population from Spanish Town, Jamaica between 1993 and 1998 recruited a random sample of 2096 persons 25-74 years old (848 men; 1248 women and collected medical history, anthropometry, blood pressure, plasma glucose and serum lipids. Mean age for men and women was similar (~ 46 years) but there was significant sexual dimorphism in body composition: body mass index (BMI) (23.9 vs 28.0 Kg/m2); waist circumference (WC)(81.0 vs 83.3 cm); waist hip ratio (WHR)(0.84 vs 0.80); fat mass (FM)(15.8 vs 26.9 Kg); % fat mass (FM%)(21.0 vs 35.3) for men and women respectively. Based on published criteria for increased CVD risk a higher percent(%) of females appeared to be at risk : increased WC 59 vs 15.9; obesity 34.0 vs 8.7; increased WHR 46.0 vs 7.3; (DM)15.6 vs 11.3; HTN 28.5 vs 20.0; increased total cholesterol 31.8 vs 23.9; and increased LDL cholesterol 39.3 vs 28.8. Higher percent(%) of men were at increased risk in tobacco use 36.5 vs 11.4; alcohol use 61.4 vs 18.2 ar low HDL cholesterol levels 12.7 vs 10.3. These findings are consistent with local mortality data where rates in women and men per 100,000 ar CVD 86.3 vs 69.4; heart diseases 62.1 vs 70.9; HTN diseases 36.6 vs 2 and DM 76.2 vs 47.7 respectively. These data have implications for hea policy and education.

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