

STRESS, TRAUMA, AND CORONARY HEART DISEASE AMONG NATIVE AMERICANS

In the May 2005 issue, which focused on Native Americans/Alaska Natives, we were especially interested in the article by the American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project (AI-SUPERPFP) Team, "Social Epidemiology of Trauma Among 2 American Indian Reservation Populations."¹ This study quantified exposure to trauma among American Indians, adding to the existing evidence^{2,3} that this population experiences a disproportional amount of trauma. We were intrigued by the statement "It may be that high rates of trauma exposure contribute to the increasing prevalence of cardiovascular disease among American Indian men and women, the leading cause of death among this population"^{1(p858)} and wanted to lend support to this assertion. Indeed, American Indians now have the highest rates of cardiovascular disease in the United States.⁴

In a study similar to the AI-SUPERPFP study, Koss et al.⁵ documented adverse childhood exposures among 7 Native American tribes and compared these exposures to levels observed in the Adverse Childhood Experiences (ACE) Study conducted by Kaiser Permanente and the Centers for Disease Control and Prevention in a health maintenance organization population. Compared with participants in the ACE study, not only did the American Indians have a significantly higher rate of exposure to any trauma (86% vs 52%), but they also had a more than 5-fold risk of having been exposed to 4 or more categories of adverse childhood experiences (33% vs 6.2%).

We know from the ACE study that there is a linear, dose–response relationship between the number of adverse childhood experiences and not only coronary heart disease (CHD) risk factors such as cigarette smoking⁶ but also the occurrence of ischemic heart disease.⁷ The INTERHEART study⁸ found that large traumatic exposures were associated with increased risk of myocardial infarction and, further, that current or recent psychosocial stress alone resulted in a population attributable risk of 33% for myocardial infarction. Because 1 of the 2 most important risk factors in the INTERHEART study was smoking, and

because there is a strong association between cigarette smoking and psychosocial stress, psychosocial stress may contribute even more strongly to CHD risk than even this high population-attributable risk would indicate.

We are indebted to studies such as these for helping to answer the myriad questions associated with the relationship between stress and trauma and CHD risk. Such research allows those of us in clinical and academic medicine to turn our attention to the challenge of developing interventions to mitigate the health effects associated with traumatic life experiences. ■

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doi:10.2105/AJPH.2005.072645

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