



UNIVERSITY AT ALBANY

State University of New York

[CONTACT UALBANY](#) || [DIRECTORIES](#) || [CALENDARS & SCHEDULES](#) || [VISITORS](#) || [SITE INDEX](#) || [SEARCH](#)[ADMISSIONS](#) || [ACADEMICS](#) || [RESEARCH](#) || [IT SERVICES](#) || [LIBRARIES](#) || [ATHLETICS](#)

News

Release

UAlbany Scientists Link Hazardous Waste to Heart Disease

Contact: Catherine Herman (518) 437-4980

ALBANY, N.Y. (June 7, 2005) -- Exposure to environmental pollutants may contribute to the development of coronary heart disease and heart attacks, says a report this month from the University at Albany's Institute for the Health and the Environment.

The report, "Hospitalization Rates for Coronary Heart Disease in Relation to Residence Near Areas Contaminated with Persistent Organic Pollutants and Other Pollutants," published in the June 2005 issue of *Environmental Health Perspectives*, was authored by Alexander V. Sergeev, a graduate student at the School of Public Health during the study and currently with the Smolensk State Medical Academy in Russia, and professor of environmental health and toxicology David O. Carpenter, director of the Institute. The researchers examined hospital discharge rates from 900 hazardous waste sites identified by ZIP code and compared them with hospitalization rates from "clean" ZIP codes, or areas not containing identified hazardous waste sites, and found that residents living in areas containing or abutting sites contaminated with persistent organic pollutants (POPs) such as PCBs and dioxins had a 15 percent elevation in coronary heart disease and 20 percent elevation in acute myocardial infarction.

In order to mitigate other factors that contribute to heart disease, the researchers investigated a focused group of contaminated sites by studying hospital discharges along a 200-mile stretch of the Hudson River, from Hudson Falls to Manhattan, where average income is higher and residents smoke less, have a better diet, and get more exercise. This group yielded a rate of hospitalization for coronary heart disease that was nearly 36 percent greater than in clean sites, and 39 percent greater for myocardial infarction than in clean sites.

In all, the scientists studied hospitalization statistics for 418 New York State ZIP codes with an average population of 1,798,249 over the period 1993-2000, containing or abutting a POP-contaminated site, compared to 996 "clean" ZIP code sites, hosting a population of 3,199,867. The sites were identified by the Environmental Protection Agency (EPA) and the New York Department of Environmental Conservation (DEC), as well as the International Joint Commission (IJC), a U.S.-Canadian body that advises the two governments on issues relating to boundary waters.

The authors conclude that although the cross-sectional design of the study prevents definitive conclusions on causal inference, the results indirectly support the hypothesis that living near hazardous waste contaminated sites constitutes a risk of exposure and of eventual development of coronary heart disease and acute myocardial infarction. The materials that comprise the hazardous site cause the liver to produce more lipids (hydrophobic molecules such as fats and oils), which the authors believe forms the basis of the relationship between contaminants and heart disease.

Read the full report in pdf format, or visit the *Environmental Health Perspectives* Web site, <http://ehp.niehs.nih.gov/>.