

MONSANTO STUDY

Summary

Because of recent interest in the carcinogenicity of acrylonitrile, a standardized mortality analysis was conducted on workers exposed to this compound. Three-hundred fifty-two males exposed to acrylonitrile for six months or longer prior to 1968 at two Monsanto plants were selected for study. One-hundred percent of the study cohort was traced for deaths occurring through 1977. Observed deaths did not differ significantly from expected deaths for any of the twenty-one cause-of-death categories examined. For all causes of death, 15 deaths were observed and 18.11 were expected. The three cancer deaths included one death each from cancers of the lung and prostate and one death from lymphoma. There were no deaths observed from colon cancer. Results of this analysis indicate no apparent excess in total mortality of deaths due to malignant neoplasms. No trends were observed to corroborate previous reports of excess cancer mortality in acrylonitrile-exposed workers. However, the small size of the study population and the small number of deaths observed necessitate further follow-up of the study cohort and comparisons with other acrylonitrile-exposed worker populations.

Introduction

In June 1977, the Occupational Safety and Health Administration issued a general request for information relating to the health effects of occupational exposure to acrylonitrile. This information would be reviewed to determine if the then current exposure level of 10 ppm (11 mg/m³) for acrylonitrile was sufficiently protective of exposed workers. This reevaluation of the hazards of acrylonitrile exposure was precipitated by the preliminary findings of a toxicology study conducted for the Manufacturing Chemists Association and an epidemiology study conducted by duPont Company.

UCC 085658