



Construction workers at DOE nuclear sites show higher risk of cancer, asbestosis

Mortality of older construction and craft workers employed at Department of Energy (DOE) nuclear sites

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Overview

The U.S. Department of Energy (DOE) established medical screening programs at the four DOE-operated nuclear sites (Hanford Nuclear Reservation, Oak Ridge Reservation, the Savannah River site, and the Amchitka site) starting in 1996. Using data from the medical screening program for the cohort of 8,976 construction workers and from the National Death Index researchers found significant excess deaths from cancer, especially asbestos-related cancers, as well as from asbestosis.

Key Findings

- DOE construction workers in the cohort suffered 28% more cancer deaths than other Americans of a similar age.
- DOE construction workers in the cohort suffered 54% more lung cancer deaths than other Americans of a similar age.
- DOE construction workers were almost 6 times more likely to die of mesothelioma than other Americans.
- DOE construction workers were more than 30 times more likely to die of asbestosis than other Americans.

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See full report:

<http://bit.ly/1zRjGeX>

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Mortality of Older Construction and Craft Workers Employed at Department of Energy (DOE) Nuclear Sites

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Background The U.S. Department of Energy (DOE) established medical screening programs at the Hanford Nuclear Reservation, Oak Ridge Reservation, the Savannah River Site, and the Amchitka site starting in 1996. Workers participating in these programs have been followed to determine their vital status and mortality experience through December 31, 2004.

Methods A cohort of 8,976 former construction workers from Hanford, Savannah River, Oak Ridge, and Amchitka was followed using the National Death Index through December 31, 2004, to ascertain vital status and causes of death. Cause-specific standardized mortality ratios (SMRs) were calculated based on US death rates.

Results Six hundred and seventy-four deaths occurred in this cohort and overall mortality was slightly less than expected (SMR = 0.93, 95% CI = 0.86–1.01), indicating a “healthy worker effect.” However, significantly excess mortality was observed for all cancers (SMR = 1.28, 95% CI = 1.13–1.45), lung cancer (SMR = 1.54, 95% CI = 1.24–1.87), mesothelioma (SMR = 5.93, 95% CI = 2.56–11.68), and asbestosis (SMR = 33.89, 95% CI = 18.03–57.95). Non-Hodgkin’s lymphoma was in excess at Oak Ridge and multiple myeloma was in excess at Hanford. Chronic obstructive pulmonary disease (COPD) was significantly elevated among workers at the Savannah River Site (SMR = 1.92, 95% CI = 1.02–3.29).

Conclusions DOE construction workers at these four sites were found to have significantly excess risk for combined cancer sites included in the Department of Labor’ Energy Employees Occupational Illness Compensation Program (EEOCIPA). Asbestos-related cancers were significantly elevated. *Am. J. Ind. Med.* 52:671–682, 2009. © 2009 Wiley-Liss, Inc.

KEY WORDS: DOE; Amchitka; Hanford; Oak Ridge; Savannah River; construction; trades; mortality; cancer; surveillance

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