



WORK-RELATED LUNG DISEASES

WHAT IS THE PUBLIC HEALTH PROBLEM?

- From 1968 through 2000, pneumoconiosis (lung disease caused by inhalation of dusts) was an underlying or contributing cause of nearly 125,000 deaths in the United States, including over 2,860 in 2000.
- Among adults, 20%-30% of asthma is caused or aggravated by work exposures.
- An estimated 15% of chronic obstructive pulmonary disease (the Nation's fourth leading cause of death) is work-related.
- The estimated annual cost of occupational chronic obstructive pulmonary disease (COPD) is \$5 billion.

WHAT HAS NIOSH ACCOMPLISHED?

The National Institute for Occupational Safety and Health (NIOSH) conducts surveillance, research, and service aimed at the prevention and elimination of occupational respiratory diseases. The prevention of COPD is an important public health issue in the United States. Drawing from a representative sample of the U.S. adult population, a NIOSH study estimated that nearly 20% of COPD among working adults is occupationally related and identified industries and occupations with a higher-than-expected prevalence of COPD. Increased risk for COPD was identified in the rubber, plastics, and leather manufacturing industries, the textile mill products manufacturing industry, the food products manufacturing industry, agriculture, and construction. COPD was substantially more prevalent in blue-collar industry sectors than in white-collar industry sectors. The study results also suggest an increased risk in other industries, such as utilities and office building services that have not previously been associated with a risk for COPD.

Example of program in action:

NIOSH has initiated collaborative research studies with Tulane University and the University of California on the risk of COPD associated with dust exposures not otherwise regulated. The burden of COPD, particularly among the blue-collar industrial workforce, can be reduced or prevented through measures to reduce hazardous occupational exposures and through effective workplace pulmonary function screening for timely identification and treatment of COPD in its early stages. Reducing the burden of work-related COPD also would significantly reduce the overall burden of COPD in the U.S. adult population. COPD is included as a priority area identified by NIOSH and its partners under the National Occupational Research Agenda (NORA) for research that will do the most to protect workers from job-related illnesses and injuries. NORA was developed and implemented by NIOSH and diverse outside partners with input and review by more than 500 individuals and organizations.

WHAT ARE THE NEXT STEPS?

NIOSH must continue to identify and promote the control of workplace exposures that cause debilitating and deadly respiratory diseases. Epidemiological research is needed to provide the scientific basis for preventing work-related COPD. NIOSH will evaluate the risks and potential preventive interventions for workers exposed to beryllium and for certain workers in the food processing industry (i.e., microwave popcorn production workers) who may be routinely exposed to substances causing bronchiolitis obliterans, a severe form of COPD. In addition, NIOSH recently began an aggressive program of research to prevent work-related asthma, including asthma related to nonindustrial building air quality.

Additional information is available at www.cdc.gov/niosh/topics/pneumoconiosis/, www.cdc.gov/niosh/topics/asthma/, and www2a.cdc.gov/NORA/. For more information on other NIOSH programs, visit www.cdc.gov/niosh/docs/pib/ March 2004

