

**CONTINUING CHALLENGES OF FIBERS
IN THE WORK ENVIRONMENT**

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Abstract

The National Institute for Occupational Safety and Health (NIOSH) has been mandated by Congress to conduct occupational safety and health research and training, and provide recommendations for the prevention of work-related illnesses and injuries. Specifically, NIOSH has the responsibility to: enumerate hazards present in the workplace; identify the causes of work-related diseases and injuries; evaluate hazards of new technologies and work practices; create ways to control hazards; train safety and health professionals; and recommend occupational safety and health standards. Historically, NIOSH has played a major role in identifying occupational hazards, conducting field and laboratory research to elucidate the health risks, and developing intervention strategies that eliminated or greatly reduced the hazard to workers. Research regarding the potential health risks from occupational exposure to fibers has been an important objective of the Institute for the past 28-years. Throughout this period, NIOSH has conducted workplace assessments of workers exposed to asbestos and other mineral and synthetic fibers, that have included, medical and epidemiologic evaluations, sampling and analytical method development, and the development of recommendations for the prevention of disease. The advent of the commercial development of many synthetic, and organic and inorganic fibers for use in new products and different applications has heightened the awareness of the need for the ongoing health surveillance of exposed workers; a thorough characterization of the the fibers; and the assessment of workplace conditions under which exposures occur. NIOSH has initiated several efforts to elucidate the potential health concerns of exposure to fibers. These efforts have focused on the critical evaluation of data relevant to an understanding of fiber characteristics that cause disease and the development of a tiered research approach aimed at describing the mechanisms of toxicity. This paper outlines those efforts.