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The NIOSH Nanotechnology Research Plan for 2018-2025

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The use of engineered nanomaterials in commercial applications had its beginnings only about 20 years ago. High-volume applications are occurring with a few, select nanomaterials while broader use of a wide variety of these new and advanced materials is still evolving. Research focused on the potential health, safety, and environmental implications of nanomaterials began roughly around 2002 and has been steady since. Progress has been made, but there are still many unanswered questions about the risk management continuum of *hazard, exposure, risk, and control* for this new class of materials that will be used across nearly every sector of the economy. As use of nanomaterials grow in commerce, the potential for human exposure increases, resulting in the need for more research and information on human health implications; exposure assessment methods; and risk analysis and management strategies along the entire life cycle. Employers, workers, and other decision makers are asking for information on every element of the risk management continuum simultaneously, from hazard identification to control, adding to the overall challenge for research in this area.

Many knowledge gaps remain on how to work safely with these materials. Through strategic planning, research, partnering with stakeholders, and making information widely available, NIOSH is providing national and world leadership to prevent work-related illness and injury. The NIOSH Nanotechnology Research Plan presents an outline for the work the Institute proposes to undertake over the next seven years.