NIOSH BIBLIOGRAPHY OF COMMUNICATION AND RESEARCH PRODUCTS 2025

U.S. Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Safety and Health Science
Can Help Shield Those at Risk

About the Cover

The cover represents NIOSH's commitment to protecting workers across occupations and industries. The shield surrounds a varied workforce, symbolizing the research, knowledge, and practical solutions that help prevent workplace injury and illness. The circular arrows show how prevention creates a continuing cycle of benefits: reduced hazards and risks, fewer injuries, illnesses, and fatalities, improved worker well-being, greater organizational value, and more resources for building safer, healthier workplaces.

NIOSH BIBLIOGRAPHY OF COMMUNICATION AND RESEARCH PRODUCTS | 2025

U.S. Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

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DHHS (NIOSH) Publication No. 2026-115

September 2026

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Use of Artificial Intelligence (AI)

OpenAI ChatGPT and OpenAI Codex (GPT-5.4 through GPT-5.6 Sol) were used to help prepare the *NIOSH Bibliography of Communication and Research Products 2025.* These tools assisted with extracting and organizing bibliographic records from NIOSHTIC-2 data; classifying, sorting, and formatting citations; developing indexes; verifying URLs; and supporting document layout, accessibility, and quality assurance. NIOSH staff provided the source data, editorial requirements, and front matter layouts; reviewed the AI-assisted output; compared bibliographic information with source records; and performed structural and visual quality checks. NIOSH staff designed all graphics. NIOSH staff approved the final content and take responsibility for its accuracy and integrity.

Foreword

As the director of the National Institute for Occupational Safety and Health (NIOSH), I am proud to present the *NIOSH Bibliography of Communication and Research Products 2025*. This bibliography lists a wide variety of NIOSH products published in 2025. Each focuses on improving the safety, health, and well-being of workers.

NIOSH communication and research products help fulfill the NIOSH mission to develop and put into practice new occupational safety and health knowledge. NIOSH and its partners work to make workplaces safer, healthier, and more productive.

Our research and recommendations focus on preventing work-related injuries, illnesses, and deaths. NIOSH also provides training and education to workers, employers, and other partners to help them understand and implement workplace safety and health best practices.

The products in this bibliography reflect the scope of NIOSH work. They include journal articles, research reports, fact sheets, training materials, and other workplace safety and health resources. Content covers preventing workplace injuries and illnesses, protecting workers from exposure to hazardous chemicals and other workplace hazards, and promoting workplace well-being.

Please explore the products in this bibliography to learn more about the work that NIOSH is doing to keep workers safe and healthy. I also encourage you to share this bibliography with your colleagues in the occupational safety and health community.

Thank you for your interest in NIOSH and our work to improve the safety and health of workers.

John Howard, M.D.
Director,
National Institute for Occupational Safety and Health

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Contents

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Research Highlights 2025

The following summaries highlight NIOSH studies that advanced worker safety and health research in 2025.

NIOSH researchers study cancer risks associated with sterilization chemical

Ethylene oxide is used to make many consumer products. It is also used to sterilize about half of all medical supplies in the United States. Workers and people living near sterilization facilities can breathe it in.

Although ethylene oxide is known to cause cancer in humans, updated risk estimates could inform future agency decisions about emission standards and other measures to reduce exposure.

In a study published in *Environmental Health Perspectives*, NIOSH researchers examined whether long-term workplace exposure to ethylene oxide increased the rates of death from breast cancer. They followed more than 7,500 women who worked in commercial

PHOTO ©2026 BY ALINA / ADOBE STOCK

Source: Kelly-Reif et al., Environmental Health Perspectives accepted manuscript, Table 3.

REACH

Roughly 270,000 U.S. workers are exposed to ethylene oxide, including those in industrial sterilization, healthcare, and chemical manufacturing.

WORKER BENEFITS

Reducing exposure helps protect workers' health across industries.

COST BENEFITS

Better exposure controls and clearer risk information can help employers protect workers, prepare for potential rule changes, and reduce disease-related liability.

CONTRIBUTION

The study builds on widely cited NIOSH research that the International Agency for Research on Cancer considered the strongest evidence on ethylene oxide.

sterilization facilities for up to 62 years. They also looked closely at risks from lower exposure levels.

The study found that higher cumulative exposure to ethylene oxide was associated with higher rates of death from breast cancer. Researchers also found that 10 years of exposure at 1 part per million tripled the breast cancer death rate. Risk rose steeply even at low cumulative exposures. These findings strengthen evidence that ethylene oxide causes breast cancer and support continued efforts to reduce worker exposure.

Kelly-Reif K, Bertke SJ, Stayner L, Steenland K [2025]. **Exposure to ethylene oxide and relative rates of female breast cancer mortality: 62 years of follow-up in a large US occupational cohort.** Environ Health Perspect *133*(5):57013.

REACH

Many thousands of U.S. workers in healthcare, laboratories, sterilization facilities, and related industries may use glutaraldehyde when equipment, instruments, or tools are cleaned or disinfected.

WORKER BENEFITS

This research may encourage workplaces to take a closer look at glutaraldehyde exposure. Studies suggest that even very small amounts in the air may matter for workers' nose and airway health.

COST BENEFITS

Employers can use the findings to consider exposure risks that may lead to illness, lost time, and costly workplace disruptions.

CONTRIBUTION

This work may inform risk-management or occupational exposure-limit discussions.

PHOTO ©2026 BY JENSDANNYSCHNEIDER/ADOBE STOCK

Packaged medical supplies move through an automated sterile-processing line inside a clean production facility. Enclosed machinery helps control the process as products advance toward final packaging and distribution for use in healthcare settings.

Assessing workplace risks of glutaraldehyde exposure

Glutaraldehyde is a chemical that can irritate the lungs and has been linked to breathing problems. Workers use glutaraldehyde in healthcare, laboratories, metalworking, oil and gas systems, water treatment, embalming, paper manufacturing, and other workplace settings. Though the chemical has many uses, there is limited information about quantitative risk assessments for exposure to this chemical in the scientific literature. The authors undertook this analysis to evaluate the relationship between different levels of glutaraldehyde exposure and respiratory health effects.

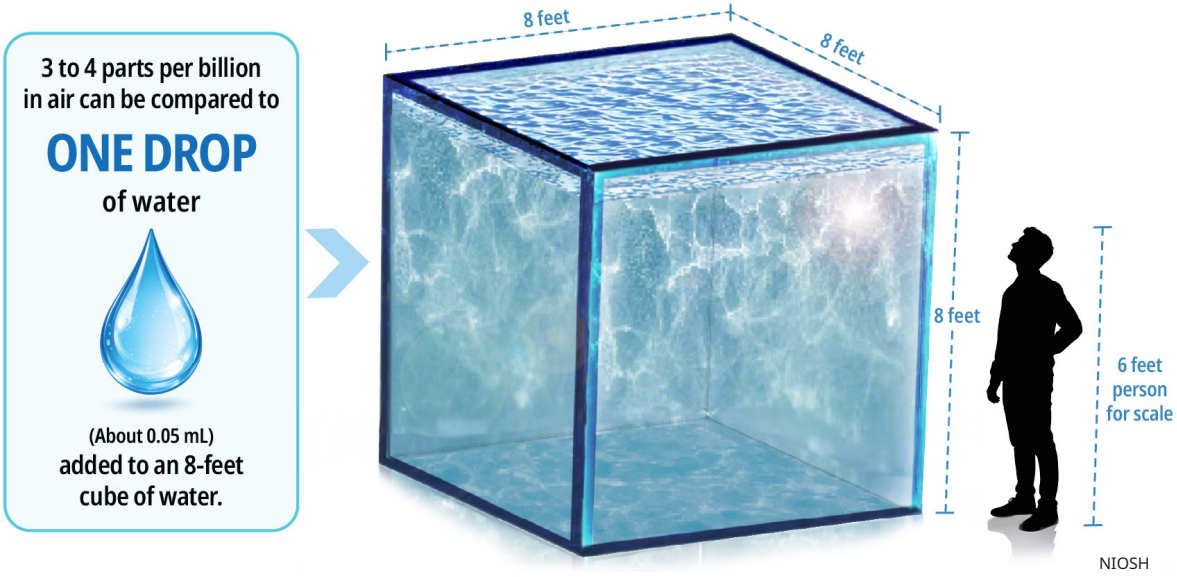
Researchers used publicly available data from long-term animal studies that involved breathing in glutaraldehyde. Information from animal studies can be used to better understand health effects from workplace exposures for humans.

Published in the *Journal of Applied Toxicology*, this study provides scientific evidence to inform discussions about workplace glutaraldehyde exposures and risk to workers.

Pandalai SP, Dankovic DA [2025]. **A preliminary quantitative risk assessment for inhalation exposure to glutaraldehyde**. J Appl Toxicol *45*(6):1019–1029.

Tiny Amounts Can Matter

Study finds that glutaraldehyde is associated with irritating airways at about **3 to 4 parts per billion** in air



Glutaraldehyde is used to disinfect medical equipment and in other workplaces. In a 2-year inhalation study in animals, glutaraldehyde was linked to irritation and injury in the nose and upper airways.

Study explores human factors in firefighter death investigations

Firefighters work in fast-changing and dangerous environments. Physical hazards can combine with human factors that affect safety, including fatigue, awareness of changing conditions, mental workload, decision making, communication, and department culture. NIOSH's Fire Fighter Fatality Investigation and Prevention Program investigates line-of-duty deaths and serious injuries, but human factors have not been assessed consistently.

In this study, published in the *Journal of Safety Research*, NIOSH researchers analyzed comments that members of the public submitted in response to a 2024 *Federal Register* notice and request for information. The comments focused on how to make human factors a more consistent part of firefighter fatality and serious injury investigations. Researchers reviewed 33 substantial comments from fire departments, universities, associations, companies, and government agencies using thematic qualitative analysis.

The study found broad support for including human factors in investigations. Researchers identified five priority areas:

REACH

More than 1 million active U.S. firefighters could benefit.

WORKER BENEFITS

Better attention to human factors may help investigations identify ways to reduce line-of-duty deaths, serious injuries, cardiac risks, traumatic exposures, and operational errors while focusing on prevention rather than blame.

COST BENEFITS

Potential benefits include stronger readiness, fewer recurring incidents, better protection of personnel and equipment, and more useful information for preventing future injuries and fatalities.

CONTRIBUTION

The article reports early stakeholder support for systematically considering human factors. It also helped support a newly funded NIOSH project on integrating human factors into incident investigations.

department culture, worker well-being, operational risk management and decision making, team dynamics, and training and education. Commenters also emphasized issues such as fatigue, fitness for duty, resilience, situational awareness, communication, psychological safety, and organizational support.

These findings may inform future investigation methods and prevention actions. Future research can explore practical tools and training to assess human factors without assigning blame.

Haas EJ, Robinson T, Attwood WR, Ringer SJ, Austin ET [2025]. **Considering human factors during firefighter fatality investigations: Insights from public feedback**. J Saf Res: Epub ahead of print, 2025 December.

NIOSH

PHOTO ©2020 BY DUSAN PETKOVIC / ADOBE STOCK

Firefighters meet at a fire station. Human factors such as department culture, worker well-being, decision making, teamwork, and training may inform future investigations and prevention efforts.

Updated CBRN handbook gives information on evolving threats

NIOSH approves respirators that help protect people from chemical, biological, radiological, and nuclear (CBRN) hazards. Emergency responders and workers can face these hazards during disasters, emergencies, or intentional attacks.

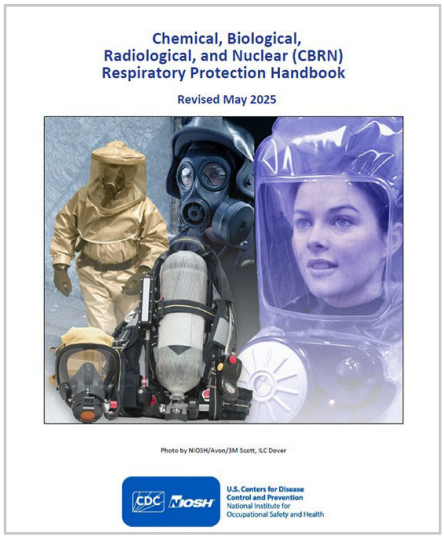
Because CBRN threats evolve over time, NIOSH worked with the Department of Defense (now Department of War) and the Department of Homeland Security to identify new and emerging hazards.

As a result, NIOSH updated and published its *CBRN Respiratory Protection Handbook* to include these hazards that NIOSH Approved® air-purifying respirators (APRs) would protect against.

Besides expanding the hazard list, the update reaffirmed the existing testing agents for CBRN respirator performance.

The update also reflected changes to National Fire Protection Association (NFPA) CBRN respirator performance standards.

This handbook is a key resource for emergency responders and safety professionals who manage respiratory protection programs and are responsible for the selection, use, and maintenance of CBRN respirators.



The 2025 update reflects new and emerging information regarding CBRN hazards.

NIOSH [2025]. **Chemical, biological, radiological, and nuclear (CBRN) respiratory protection handbook**. By Szalajda JV, Greenawald L, Janssen L, Johnson AT, Johnson JS, Mansdorf SZ, Medici OR, Metzler RW, Rehak TR. Pittsburgh, PA: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2025-111 (Revised 09/2025).

REACH

The updated handbook benefits emergency response organizations using CBRN respirators, including fire service, law enforcement, EMS, corrections, industrial, public works, construction, utility, and safety professionals managing respiratory protection programs.

WORKER BENEFITS

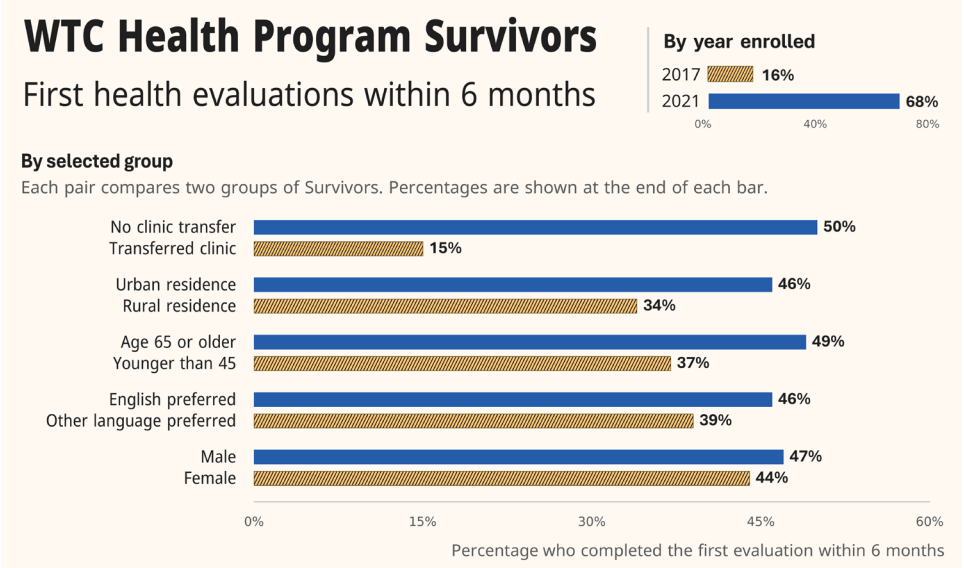
This handbook helps safety professionals make informed decisions about respiratory protection against CBRN hazards that may be encountered during emergencies and disasters and in other high risk settings.

COST BENEFITS

Stronger respiratory protection programs, better emergency preparedness, more informed respirator selection and maintenance, and fewer gaps in protection against emerging CBRN threats could prevent fatalities and acute and chronic worker illnesses.

CONTRIBUTION

The updated handbook expands the CBRN APR Protection List from 139 to 286 hazards, reaffirms the original 11 test agents, and updates NFPA-related standards information.



Source: Liu et al., BMC Health Services Research (2025), Table 3 and Figure 2.

REACH

The study reviewed 58,058 WTC Health Program members; 141,515 members were enrolled at the end of 2025.

WORKER BENEFITS

Improving first health exams can help responders and survivors get faster, fairer access to 9/11-related care and treatment benefits.

COST BENEFITS

Earlier access to no-cost Program care may reduce untreated illness and lost work time.

CONTRIBUTION

The study identified access gaps and points to practical fixes: flexible scheduling, more language support, telehealth, transportation help, and accessibility assistance.

WTC Health Program studies timeliness of first health exams

The World Trade Center Health Program provides high-quality medical monitoring and treatment for health conditions related to the September 11, 2001, terrorist attacks. Completing an initial health evaluation (IHE) is highly encouraged for newly enrolled members to start to receive care and establish a baseline for future care. The Program is always looking for new ways to improve prompt completion of IHEs.

This study, published in *BMC Health Services Research*, examined whether IHE completion differed among Program members who enrolled between 2012 and 2022. NIOSH researchers analyzed data from more than 58,000 newly enrolled members. They evaluated whether the members completed an IHE within 6 months of enrollment ("timely IHE") and whether they ever completed one as of February 2024 ("any IHE").

NIOSH researchers found that "timely IHE" completion among survivor members improved substantially over time, rising from 16% among those enrolled in 2017 to 68% among those enrolled in 2021. They also found that some groups were less likely to complete a timely IHE. People in these groups included younger members, rural residents, survivors who preferred non-English languages, and female survivors. The study also found higher "any IHE" completion rates among non-Hispanic Black members compared with non-Hispanic White members.

These findings highlight both the achievements of the Program and remaining opportunities to improve IHE completion through flexible scheduling and expanded language support.

Liu R, O'Reilly M, Rockhill S, Fu L, Smith KC, Butturini E, Santiago-Colón A, Shaw RL, Pressley K, Calvert GM [2025]. **Equity in initial health evaluation utilization among World Trade Center Health Program members enrolled during 2012–2022**. BMC Health Serv Res *25*:1024.

Report delves into causes of rare blastomycosis outbreak at paper mill

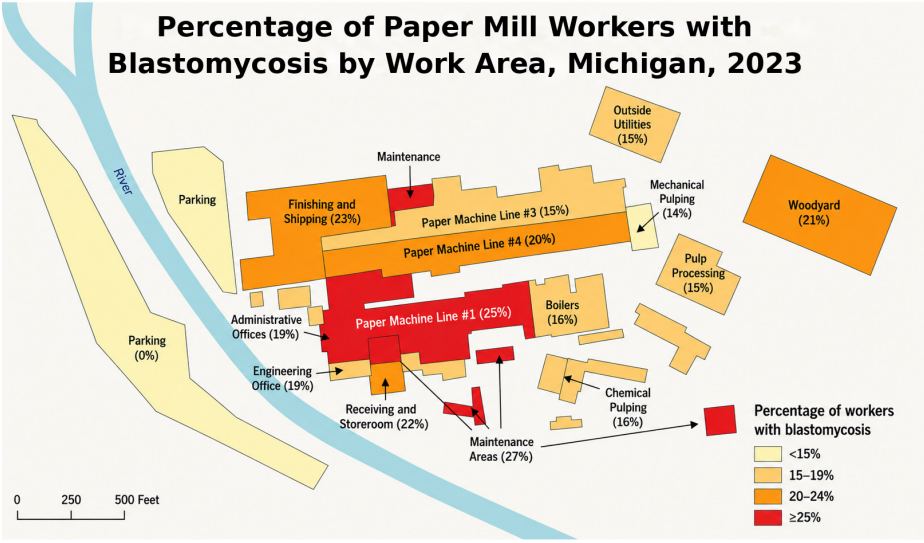
Blastomycosis is a rare fungal infection that can be fatal. It is caused by inhaling *Blastomyces* spores. Often, people who become infected have been outdoors in parts of the midwestern and eastern United States. In 2023, the largest recorded U.S. blastomycosis outbreak occurred among workers at a paper mill in Michigan's Upper Peninsula.

This report, published in *PLoS One*, was based on a NIOSH Health Hazard Evaluation conducted with state and local health departments. NIOSH investigators performed a cross-sectional medical survey and an environmental survey to assess possible workplace risk factors for blastomycosis. Among the 603 workers included in the medical survey analysis, 120 workers (20%) had blastomycosis.

Investigators identified specific areas of the mill where workers had increased risk of blastomycosis. Workplace exposure to indoor pooling water and visible mold were also identified as potential risk factors for blastomycosis. Although investigators tested 533 indoor and outdoor environmental samples, all were negative for *Blastomyces*.

These findings may help guide future outbreak investigations and prevention efforts. They also highlight the importance of improved environmental detection methods.

O'Connor AW, Park JH, Stanton ML, Liang X, Shi D, Callaway PC, Harvey RR, LeBouf R, Bailey RL, Hennessee I, Toda M, Meece J, Sterkel A, Dargle S, Bree O, Olstadt J, Reik R, Stobierski MG, Snyder M, Yin R, de Perio MA, Hines S, Cox-Ganser J [2025]. **Assessment of environmental risk factors for blastomycosis during a large outbreak at a Michigan paper mill.** PLoS One *20*(9):e0332398.



NIOSH

This map shows how common blastomycosis was by mill process area from October 2022 through April 2023, based on workers' reported work, office, and break/lunchroom locations.

REACH

About 1,000 mill workers were potentially affected; 603 joined the NIOSH survey, and 120 were classified as blastomycosis cases.

WORKER BENEFITS

The findings can help protect workers by pointing to practical controls: improving ventilation, reducing standing water, limiting dust disturbance, using respiratory protection for high-risk tasks, and encouraging early medical care.

COST BENEFITS

Preventing future cases could help reduce missed work, outbreak response demands, medical disruption, and interruptions to normal mill operations.

CONTRIBUTION

The health hazard evaluation showed that blastomycosis may occur in indoor industrial workplaces. The evaluation showed that some indoor work areas and environmental conditions were potential risk factors for blastomycosis. This may help guide future outbreak investigations and prevention strategies.

REACH

This study surveyed 135 mining workers in the United States and Indonesia. Findings may help the mining industry understand how exoskeletons could support workers who do physically demanding jobs, including lifting, overhead work, equipment handling, and work in tight spaces.

WORKER BENEFITS

Exoskeletons may help reduce muscle strain, fatigue, and injury risk during mining tasks such as lifting and overhead work. The study also shows that workers prefer devices that are comfortable, safe, lightweight, easy to use, and compatible with mining conditions.

COST BENEFITS

Preventing muscle and joint injuries could help employers reduce workers' compensation costs, lost workdays, productivity losses, and the need for more expensive job redesigns or staffing changes.

CONTRIBUTION

These findings could help employers choose exoskeletons that miners will use, avoiding costly trial and error and potentially reducing musculoskeletal injuries and workers' compensation costs.

PHOTO ©2020 GORODENKOFF / ADOBE STOCK

A worker wears an occupational exoskeleton while handling material in an industrial setting. NIOSH-funded research examined miners' views on using exoskeletons to reduce strain during tasks such as lifting and overhead work.

Study gathers miner attitudes on wearing exoskeletons

Mine workers suffer high rates of musculoskeletal disorders (MSDs), which are injuries or disorders that affect the muscles, tendons, joints, nerves, or other parts of the body used for movement. Wearable robotic devices called exoskeletons can help reduce MSDs, but little has been reported about whether mine workers would use exoskeletons on the job.

Researchers surveyed 135 miners in the United States and Indonesia to understand their views on the benefits, concerns, and likelihood of using exoskeletons. The findings were published in *Mining, Metallurgy & Exploration*.

Miners in both countries saw promise in the technology for physically demanding tasks like lifting and overhead work, but they also shared concerns about comfort, weight, and cost. U.S. respondents were more likely to consider using exoskeletons despite expressing concerns about their use. Indonesian respondents were hesitant to use exoskeletons despite reporting more health and safety hazards.

This research identified adaptability, weight, cost, lack of knowledge, and working in confined spaces as key concerns about exoskeletons for miners in both countries. Understanding these key concerns can allow manufacturers, employers, and safety professionals to design better devices and training programs, ultimately reducing back and shoulder injuries.

Akinwande F, Kim S, Ojelade A, Muslim K, Iridiastadi H, Nasarwanji M, Kim JH, Nussbaum MA [2025]. **Perspectives of mining personnel on adopting occupational exoskeletons: comparisons between a developed and a developing country.** Min Metall Explor *42*(2):523–536.

Study explores health effects with cutting SSC materials

Solid surface composite (SSC) materials, also called engineered stone, are used to make countertops. To install the countertops, workers cut, drill, grind, and polish the finished countertops to fit each project. These processes create dust that, when breathed in, can harm the health of the lungs and airways.

Previous studies have looked at possible hazards in SSC materials. However, less was known about how workplace tasks, such as cutting, may affect the amount and type of dust workers breathe in.

In a study published in *Inhalation Toxicology*, researchers developed a real-time cutting system to determine if breathing SSC dust from cutting can cause lung injury soon after exposure or after repeated exposures over time. No clear lung tissue damage was seen in this study, but total protein in lung fluid increased 1 day after exposure. This finding is consistent with a mild, short-lived increase in lung permeability/inflammation. Other inflammatory markers, cell counts, and oxidative stress measures were largely unchanged.

These results can be used by employers, occupational health clinicians, regulators, and workers who cut or fabricate SSC. The cutting and inhalation system created for this study and the findings can support exposure monitoring and help guide controls such as ventilation, safer tool choices, personal protective equipment, and future exposure limits to better protect workers' lungs.

Mandler WK, McKinney WG, Jackson M, Knepp AK, Keeley SL, Friend SA, Battelli LA, Qian Y [2025]. **Mouse pulmonary response following solid surface composite dust inhalation**. Inhal Toxicol *37*(1):18–30.

PHOTO ©2023 DESIGNPICS / ADOBE STOCK

A worker cuts countertop material. NIOSH research studied how dust from cutting solid surface composite materials can affect the lungs, using a workplace-like inhalation exposure system.

REACH

The U.S. Bureau of Labor Statistics estimates that about 112,300 U.S. flooring installers and tile and stone setters may do related material-cutting work, including 52,600 tile and stone setters.

WORKER BENEFITS

The findings can help workers and safety professionals better understand lung risks from dust created when SSC materials are cut or shaped. The study supports stronger attention to dust controls, ventilation, respiratory protection, and safer practices during countertop and other fabrication work.

COST BENEFITS

The findings can help employers make informed decisions about dust controls and resources to reduce exposures to SSC dust during cutting and shaping.

CONTRIBUTION

Researchers created a real-time system to study dust exposure. Future studies will use the system to study dust from engineered stone, another countertop material. Inhaling engineered stone dust has been linked with silicosis, a chronic lung disease.

NIOSH develops controls to make fishing winches safer

REACH

NIOSH estimated there were about 39,000 U.S. commercial fishermen in 2017. This study is most relevant to fishermen who work around deck winches, especially purse seine and shrimp trawl crews.

WORKER BENEFITS

Winch safety equipment can help protect fishermen from severe entanglement injuries, including amputations and death. The study found fishermen often see winches as a major hazard but value equipment that is affordable, practical, and easy to install.

COST BENEFITS

For vessel owners, better winch safety could help reduce severe injuries, lost work time, emergency response needs, crew disruption, and costs tied to replacing or retraining injured workers.

CONTRIBUTION

The research explains why safety equipment is not always adopted, even when fishermen know winches are dangerous. It points to practical fixes: lower costs, clearer injury information, easier installation, better visibility, and technical support for vessel owners.

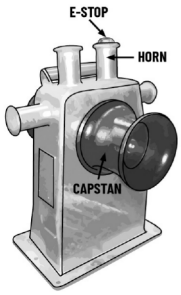
Deck winches on commercial fishing vessels can seriously injure or kill crew members. NIOSH has developed engineering controls to help reduce this risk, including emergency stop devices and stationary machine guards. However, many commercial fishing crews have not adopted these safety measures.

In this study, published in the *Journal of Agromedicine*, researchers examined why winch safety equipment is not used more widely. From 2019 to 2021, they interviewed 19 fishing captains, vessel owners, and equipment vendors. Researchers used Everett Rogers' Diffusion of Innovations theory, which focuses on why people do or do not adopt new ideas. They focused on five factors that can affect adoption: whether the equipment seems better than current practices, how difficult it is to use or install, how well it fits existing work, whether people can try it before committing to it, and whether they can see others using it successfully.

Researchers found six main factors that affected whether captains and vessel owners adopted winch safety equipment: how they viewed the risk, cost, whether the equipment seemed better than current practices, how difficult it was to install or use, other safety needs competing for time and money, and how well the equipment fit fishing operations.

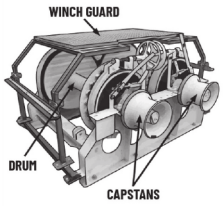
Potential ways to increase adoption included financial support, installation guides, and connections with qualified installation contractors. A subsidy program

Capstan Winch



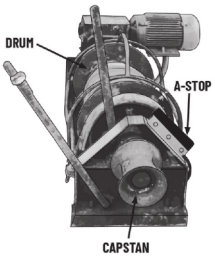
Safety control
An emergency stop shuts down the capstan and locks it in place. Mounting it on the winch keeps the control within reach.

Drum Winch

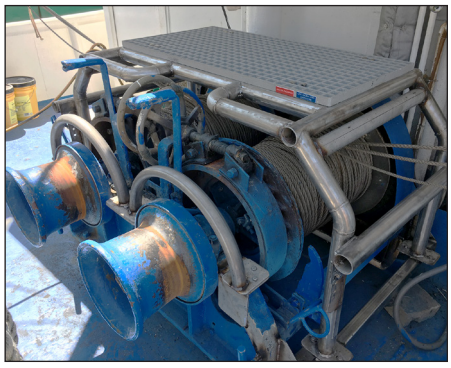


Safety control
A fixed guard blocks access to rotating drums and nearby grab bars, reducing fall, snagging, and entanglement hazards.

Try-net Winch



Safety control
A knee-level auxiliary stop puts emergency control within reach, allowing an entangled operator to stop the winch.



NIOSH

The top three illustrations show controls for different winch types. Above, this drum winch has a safety guard to protect workers.

modeled on the National Rollover Protective Structure program for farmers could offer a practical path for increasing adoption of winch safety equipment on U.S. commercial fishing vessels.

Victoroff TM, Teske TD [2025]. **Barriers and facilitators to adoption of winch safety equipment in two U.S. commercial fisheries**. J Agromedicine: Epub ahead of print, November 2025.

Using fiber-optic sensors can help improve safety in mines

Coal bursts are sudden, violent releases of energy in underground coal mines. They can cause coal or rock to break and move rapidly, creating serious safety risks for mine workers. Coal bursts remain a significant challenge for some underground longwall mines in the United States. Longwall mining is a method that removes coal in large panels using specialized equipment.

Seismic monitoring is a valuable tool for monitoring and managing the risks associated with these events. However, it is not commonly applied in these mines due to various operational challenges.

This study, published in the *International Journal of Rock Mechanics and Mining Sciences*, evaluated distributed acoustic sensing as a possible alternative to traditional seismic monitoring in underground longwall mines.

Distributed acoustic sensing uses fiber-optic cables instead of electronic instruments. Because the sensing cable does not require power, it can be used in explosive environments where traditional sensors may be more difficult or impossible to use.

Researchers demonstrated several ways distributed acoustic sensing can be installed in coal mines and how different strategies for deploying the fiber-optic cable can be used for different monitoring objectives.

NIOSH

A fiber-optic sensing array was used to monitor coal bursts on a longwall mining face. The red cables and yellow microphone units recorded ground vibrations and sound waves, helping researchers identify the location and severity of coal bursts.

More research could improve the understanding of how reliable and durable this technology would be in mine conditions.

However, distributed acoustic sensing could improve future mine safety monitoring. It could also help mines better manage coal burst risks and monitor how the surrounding ground responds during mining.

Chambers D, Ankamah A, Tourei A, Martin ER, Dean T, Shragge J, Hole JA, Czarny R, Goldswain G, du Toit J, Boltz MS, McGuiness J [2025]. **Distributed acoustic sensing (DAS) for longwall coal mines**. Int J Rock Mech Min Sci 189:106090.

REACH

The Bureau of Labor Statistics reported 39,200 U.S. coal mining jobs in June 2026. This research is most relevant to workers in underground longwall coal mines, especially mines where coal bursts or mining-related seismic events can occur.

WORKER BENEFITS

Fiber-optic sensing could help mines detect ground movement and coal bursts earlier, giving workers and mine operators better information to manage dangerous areas and reduce injury risk.

COST BENEFITS

Better monitoring could help reduce damage from coal bursts, improve decisions about mine re-entry, limit downtime, and support safer, more efficient longwall operations.

CONTRIBUTION

The study shows that distributed acoustic sensing may help overcome limits of traditional seismic monitoring in coal mines, but more research would be helpful before routine use.

Journal Articles

Journal articles, written or co-written by NIOSH researchers, advance the scientific evidence used to protect workers across all industries and occupations. These publications strengthen the nation's understanding of work-related risks and support practical solutions to prevent injury, illness, and death on the job. "NIOSHTIC-2" numbers are assigned by the NIOSH bibliographic database.

Akinwande F, Kim S, Ojelade A, Muslim K, Iridiastadi H, Nasarwanji M, Kim JH, Nussbaum MA [2025]. **Perspectives of mining personnel on adopting occupational exoskeletons: comparisons between a developed and a developing country**. Min Metall Explor *42*(2):523–536.
NIOSHTIC-2: 20070656 | NORA: Mining

Alexander BM, Graydon PS, Pena M, Feng HA, Beamer BR [2025]. **Hazardous exposures and engineering controls in the landscaping services industry**. J Occup Environ Hyg *22*(3):189–202.
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Books or Book Chapters

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NIOSH Numbered Products

NIOSH Numbered Products share practical information from NIOSH research and recommendations. They include fact sheets, reports, tools, and other resources for workplaces. These products help workers, employers, and safety professionals prevent injuries, illnesses, and deaths on the job.

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Proceedings

NIOSH proceedings share research presented at scientific and professional meetings. They document new findings, methods, and workplace safety solutions. These papers help move NIOSH science into practice across many fields.

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Abstracts

NIOSH abstracts present concise research findings from NIOSH scientists and their collaborators. They highlight new methods, early results, and emerging workplace safety and health issues. These summaries help share NIOSH science with research and professional audiences.

Afshari A, McKinney W, Cumpston JL, Leonard HD, Cumpston JB, Friend S, Kodali VK, Meighan TG, Lee E, Antonini JM [2025]. **Characterization of particles generated by a novel powder flame thermal spray coating system**. Abstract. Toxicologist *204*(S1):257.
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Steenland K, Tan Y, Kelly-Reif K [2025]. **Mortality and cancer incidence in a large cohort of lead-exposed workers**. Abstract. Occup Environ Med *82*(Suppl 2):A40.
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Stollar D, Santiago-Colón A, Smith K, Chovancek N, Liu R, Pressley K, Shaw R [2025]. **Who you gonna call? The Data Group: creating a team and process for responding to evolving data needs of a limited health benefits program**. Abstract. J Clin Transl Sci *9*(S1):173.
NIOSHTIC-2: 20071541

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NIOSHTIC-2: 20071583 | NORA: Manufacturing

Thompson JA, Stueckle TA, Boots T, Sinsel EW, McKinney W, Johnston RA [2025]. **Effect of peracetic acid vapor on THP-1 macrophages in an air-liquid-interface culture**. Abstract. Toxicologist *204*(S1):165–166.
NIOSHTIC-2: 20071573 | NORA: Healthcare and Social Assistance

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NIOSHTIC-2: 20071567

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NIOSHTIC-2: 20071578

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NIOSHTIC-2: 20071587

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NIOSHTIC-2: 20071590

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NIOSHTIC-2: 20071569

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NIOSHTIC-2: 20071580 | NORA: Construction / Manufacturing

Control Technology Reports

NIOSH Control Technology Reports evaluate workplace controls that reduce hazardous exposures. They document how engineering controls work in real-world settings. These reports help employers and safety professionals choose practical ways to better protect workers.

NIOSH [2025]. **Exposure assessment of peracetic acid-based disinfectant chemicals in a hospital during terminal room cleaning**. By Dunn KH, Grant M, Alexander B, Barnes C, Glassford E, Feng A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Control Technology Report No. EPHB-2025-DFSE-2033.
NIOSHTIC-2: 20071683 | NORA: Healthcare and Social Assistance / Manufacturing

NIOSH [2025]. **Exposure assessment of peracetic acid-based disinfectant chemicals in a pediatric hospital during terminal room cleaning**. By Dunn KH, Grant M, Omari A, Barnes C, Garcia A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Control Technology Report No. EPHB-2025-DFSE-2041.
NIOSHTIC-2: 20071682 | NORA: Healthcare and Social Assistance / Manufacturing

NIOSH [2025]. **Laboratory evaluation of angle grinder discs for grinding and cutting engineered stone**. By Thompson D, Ku E, Qi C. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Control Technology Report No. EPHB-2025-DFSE-2042.
NIOSHTIC-2: 20071681 | NORA: Construction / Manufacturing

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Fire Fighter Fatality Investigation and Prevention Reports

NIOSH Fire Fighter Fatality Investigation and Prevention Reports examine firefighter line-of-duty deaths. They identify factors that may have contributed to these incidents. These reports share lessons and recommendations to help prevent similar deaths and injuries.

NIOSH [2025]. **Industrial silo fire and subsequent explosion kills one firefighter and critically injures another—Iowa**. Line of Duty Death Report. By Attwood WR, Hales T, Bowyer M. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2019-01.
NIOSHTIC-2: 20070442 | NORA: Public Safety

NIOSH [2025]. **Industrial silo fire and subsequent explosion kills one firefighter and critically injures another—Iowa**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2019-01rs.
NIOSHTIC-2: 20070443 | NORA: Public Safety

NIOSH [2025]. **A military firefighter killed and two firefighters injured by a wall collapse at a barn fire—West Virginia**. Line of Duty Death Report. By Loflin M, Attwood WR, Ringer SJ. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-09.
NIOSHTIC-2: 20071019 | NORA: Public Safety

NIOSH [2025]. **A military firefighter killed and two firefighters injured by a wall collapse at a barn fire—West Virginia**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-09rs.
NIOSHTIC-2: 20071025 | NORA: Public Safety

NIOSH [2025]. **Firefighter dies and lieutenant seriously injured at a multi-family residential structure fire—Connecticut**. Line of Duty Death Report. By Loflin ME, Attwood WR, Funke J. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-11.
NIOSHTIC-2: 20071026 | NORA: Public Safety

NIOSH [2025]. **Firefighter dies and lieutenant seriously injured at a multi-family residential structure fire—Connecticut**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-11rs.
NIOSHTIC-2: 20071027 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies after becoming lost during a residential structure fire—Pennsylvania**. Line of Duty Death Report. By Loflin ME, Attwood WR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-12.
NIOSHTIC-2: 20071020 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies after becoming lost during a residential structure fire—Pennsylvania**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-12rs.
NIOSHTIC-2: 20071021 | NORA: Public Safety

NIOSH [2025]. **Captain falls into the basement and dies while fighting a fire in a large residential structure—Maryland**. Line of Duty Death Report. By Loflin ME, Attwood WR, Reichard AA, Austin ET. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-14.
NIOSHTIC-2: 20071035 | NORA: Public Safety

NIOSH [2025]. **Captain falls into the basement and dies while fighting a fire in a large residential structure—Maryland**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-14rs.
NIOSHTIC-2: 20071036 | NORA: Public Safety

NIOSH [2025]. **Career candidate firefighter found unresponsive at a residential structure fire and dies 5 days later—Illinois**. Line of Duty Death Report. By Loflin ME, Saunders R. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-20.
NIOSHTIC-2: 20070761 | NORA: Public Safety

NIOSH [2025]. **Career candidate firefighter found unresponsive at a residential structure fire and dies 5 days later—Illinois**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-20rs.
NIOSHTIC-2: 20070762 | NORA: Public Safety

NIOSH [2025]. **Firefighter dies from head injury during tire inflation—Louisiana**. Line of Duty Death Report. By Attwood WR, Funke J, Kline K. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-21.
NIOSHTIC-2: 20070765 | NORA: Public Safety

NIOSH [2025]. **Firefighter dies from head injury during tire inflation—Louisiana**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2021-21rs.
NIOSHTIC-2: 20070766 | NORA: Public Safety

NIOSH [2025]. **Three firefighters die and another seriously injured during the collapse of an abandoned, derelict, 3-story row house fire—Maryland**. Line of Duty Death Report. By Funke J, Attwood WR, Haas EJ, Miles ST, Bowyer M, Loflin ME. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-01.
NIOSHTIC-2: 20071004 | NORA: Public Safety

NIOSH [2025]. **Three firefighters die and another seriously injured during the collapse of an abandoned, derelict, 3-story row house fire—Maryland**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-01rs.
NIOSHTIC-2: 20071028 | NORA: Public Safety

NIOSH [2025]. **Career lieutenant dies and five injured in structural collapse of mixed-use occupancy during cause and origin investigation—Pennsylvania**. Line of Duty Death Report. By Ringer SJ, Loflin ME, Knuth R. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-02.
NIOSHTIC-2: 20070976 | NORA: Public Safety

NIOSH [2025]. **35-Year-old volunteer firefighter dies from smoke inhalation injury sustained during initial fire attack—Kansas**. Line of Duty Death Report. By Eisenberg J, Saunders R, Wilkinson A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-03.
NIOSHTIC-2: 20071029 | NORA: Public Safety

NIOSH [2025]. **Career firefighter killed in a structural collapse while conducting fire attack and search in a derelict single-family residence—Missouri**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-04rs.
NIOSHTIC-2: 20070438 | NORA: Public Safety

NIOSH [2025]. **Career firefighter killed in a structural collapse while conducting fire attack and search in a derelict single-family residence—Missouri**. Line of Duty Death Report. By Richardson M, Miles S. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-04.
NIOSHTIC-2: 20070437 | NORA: Public Safety

NIOSH [2025]. **58-Year-old driver/engineer with diabetes dies from heart attack, Florida**. Line of Duty Death Report. By Eisenberg J, Saunders R, Wilkinson A, Barger A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-05.
NIOSHTIC-2: 20071030 | NORA: Public Safety

NIOSH [2025]. **31-Year-old firefighter cadet collapses during academy training exercise and dies—Alabama**. Line of Duty Death Report. By Eisenberg J, Wilkinson A, Barger A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-06.
NIOSHTIC-2: 20071031 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies from crush injuries during sand trailer operations—Florida**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-07rs.
NIOSHTIC-2: 20071007 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies from crush injuries during sand trailer operations—Florida**. Line of Duty Death Report. By Schaeffer TL. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-07.
NIOSHTIC-2: 20071006 | NORA: Public Safety

NIOSH [2025]. **Lieutenant dies from a floor collapse in residential structure fire with unpermitted renovations—Illinois**. Line of Duty Death Report. By Loflin ME, Attwood WR, Austin E. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-09.
NIOSHTIC-2: 20071014 | NORA: Public Safety

NIOSH [2025]. **Lieutenant dies from a floor collapse in residential structure fire with unpermitted renovations—Illinois**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-09rs.
NIOSHTIC-2: 20071015 | NORA: Public Safety

NIOSH [2025]. **Two volunteer firefighters die while conducting fire attack at a single-family residence—Pennsylvania**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-10rs.
NIOSHTIC-2: 20071033 | NORA: Public Safety

NIOSH [2025]. Two volunteer firefighters die while conducting fire attack at a single-family residence—Pennsylvania. Line of Duty Death Report. By Richardson M, Attwood WR, Funke J, Schaeffer TL. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2022-10.
NIOSHTIC-2: 20071018 | NORA: Public Safety

NIOSH [2025]. **46-Year-old motor pump operator collapses during residential fire response and dies—Connecticut**. Line of Duty Death Report. By Eisenberg J, Saunders R, Wilkinson A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-04.
NIOSHTIC-2: 20071032 | NORA: Public Safety

NIOSH [2025]. **Firefighter dies after becoming lost in the attic at a residential structure fire—Illinois**. Line of Duty Death Report. By Loflin ME, Barger A, Attwood WR, Montague P, Saunders R. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-05.
NIOSHTIC-2: 20070991 | NORA: Public Safety / Services

NIOSH [2025]. **Firefighter dies after becoming lost in the attic at a residential structure fire—Illinois**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-05rs.
NIOSHTIC-2: 20070992 | NORA: Public Safety

NIOSH [2025]. **55-Year-old lieutenant dies from heart attack while responding to high-rise fire—Illinois**. Line of Duty Death Report. By Eisenberg J, Wilkinson A, Barger A. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-06.
NIOSHTIC-2: 20070994 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies in collapse involving lightweight construction with two separate Maydays—South Carolina**. Line of Duty Death Report. By Montague PR, Attwood WR, Richardson M. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-07.
NIOSHTIC-2: 20070980 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies in collapse involving lightweight construction with two separate Maydays—South Carolina**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-07rs.
NIOSHTIC-2: 20070981 | NORA: Public Safety

NIOSH [2025]. **Two career land-based firefighters die after becoming lost and running out of air during a marine vessel fire in port—New Jersey**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-10rs.
NIOSHTIC-2: 20070990 | NORA: Public Safety

NIOSH [2025]. **Two career land-based firefighters die after becoming lost and running out of air during a marine vessel fire in port—New Jersey**. Line of Duty Death Report. By Richardson M, Attwood WR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-10.
NIOSHTIC-2: 20070989 | NORA: Public Safety

NIOSH [2025]. **Lieutenant and probationary firefighter die after experiencing thermal degradation of self-contained breathing apparatus facepiece lenses—Maryland**. Line of Duty Death Report. By Montague PR, Attwood WR, Schaeffer TL. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-11.
NIOSHTIC-2: 20070930 | NORA: Public Safety

NIOSH [2025]. **Lieutenant and probationary firefighter die after experiencing thermal degradation of self-contained breathing apparatus facepiece lenses—Maryland**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-11rs.
NIOSHTIC-2: 20070931 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies after falling into a light/air shaft during a fire in a four-story mixed occupancy structure—Illinois**. Line of Duty Death Report. By Lago LR, Attwood WR, Montague PR, Funke JR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-12.
NIOSHTIC-2: 20070926

NIOSH [2025]. **Career firefighter dies after falling into a light/air shaft during a fire in a four-story mixed occupancy structure—Illinois**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2023-12rs.
NIOSHTIC-2: 20070927 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies when propane from an underground tank leaked into a residential home causing a catastrophic explosion—Virginia**. Line of Duty Death Report. By Lago LR, Attwood WR, Schaeffer TL. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-01.
NIOSHTIC-2: 20070982 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies when propane from an underground tank leaked into a residential home causing a catastrophic explosion—Virginia**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-01rs.
NIOSHTIC-2: 20070983 | NORA: Public Safety

NIOSH [2025]. **Career engine company officer dies in abandoned, single-family structure fire—North Carolina**. Line of Duty Death Report. By Montague PR, Lago LR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-02.
NIOSHTIC-2: 20070928 | NORA: Public Safety

NIOSH [2025]. **Career engine company officer dies in abandoned, single-family structure fire—North Carolina**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-02rs.
NIOSHTIC-2: 20070929 | NORA: Public Safety

NIOSH [2025]. **Career firefighter seriously injured during search operations in a residential structure fire—Oregon**. Line of Duty Death Report. By Lago LR, Attwood WR, Stakes K, Montague PR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-03.
NIOSHTIC-2: 20070984 | NORA: Public Safety

NIOSH [2025]. **Career firefighter seriously injured during search operations in a residential structure fire—Oregon**. Serious Injury—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-03rs.
NIOSHTIC-2: 20070985 | NORA: Public Safety

NIOSH [2025]. **27-Year-old firefighter has seizure then dies of cardiac arrest while responding to residential fire—Kansas**. Line of Duty Death Report. By Eisenberg J, Saunders R, Schaeffer T. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-04.
NIOSHTIC-2: 20070764 | NORA: Public Safety

NIOSH [2025]. **Career battalion chief dies from explosion while fighting tractor trailer fire—Georgia**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-05rs.
NIOSHTIC-2: 20070760 | NORA: Public Safety

NIOSH [2025]. **Career battalion chief dies from explosion while fighting tractor trailer fire—Georgia**. Line of Duty Death Report. By Ringer SJ, Lago LR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-05.
NIOSHTIC-2: 20070759 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies and another injured while performing rapid intervention team tasks at vacant warehouse fire—Texas**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-06rs.
NIOSHTIC-2: 20070988 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies and another injured while performing rapid intervention team tasks at vacant warehouse fire—Texas**. Line of Duty Death Report. By Ringer SJ, Attwood WR, Lago LR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2024-06.
NIOSHTIC-2: 20070987 | NORA: Public Safety

NIOSH [2025]. **One firefighter dies during unprotected search in nine-apartment building that was originally constructed to be a single-family house—Hawaii**. Line of Duty Death Report. By Attwood WR, Montague PR, Johnson J. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-02.
NIOSHTIC-2: 20071005 | NORA: Public Safety

NIOSH [2025]. **Career firefighter dies after being trapped by collapse of two vacant commercial buildings—New York**. Line of Duty Death Report. By Attwood WR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-03.
NIOSHTIC-2: 20070979 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies and second injured in privately owned vehicle crash—Louisiana**. Line of Duty Death Report. By Lago LR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-07.
NIOSHTIC-2: 20071012 | NORA: Public Safety

NIOSH [2025]. **Volunteer firefighter dies and second injured in privately owned vehicle crash—Louisiana**. Line of Duty Death—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-07rs.
NIOSHTIC-2: 20071034 | NORA: Public Safety

NIOSH [2025]. **Nine career firefighters injured at residential structure fire—Texas**. Line of Duty Death Report. By Lago LR, Attwood WR. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-08.
NIOSHTIC-2: 20071039 | NORA: Public Safety

NIOSH [2025]. **Nine career firefighters injured at residential structure fire—Texas**. Serious Injury—Report Slides. Morgantown, WV: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Fire Fighter Fatality Investigation and Prevention Report No. FACE-F2025-08rs.
NIOSHTIC-2: 20071040 | NORA: Public Safety

Health Hazard Evaluation Reports

NIOSH Health Hazard Evaluation Reports examine possible workplace health hazards at the request of employers, workers, or their representatives. NIOSH examines possible workplace health hazards at the request of employers, workers, or their representatives. Health Hazard Evaluation Reports describe what NIOSH found during the evaluation.

NIOSH [2025]. **Evaluation of potential hazards during growing and manufacture of cannabis products at an indoor cultivation and retail facility**. By Burton NC, Tomasi S, Green BJ, Lemons AR. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Report No. HHE-2019-0107-3412.
NIOSHTIC-2: 20070975 | NORA: Services

NIOSH [2025]. **Evaluation of cutoff saw operators' noise exposures at an unleaded brass foundry**. By Brueck SE, Zechmann EL, Ehlers J, Speaks H. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Report No. HHE-2019-0208-3408.
NIOSHTIC-2: 20070995 | NORA: Construction / Services

NIOSH [2025]. **Evaluation of a cluster of unexplained illnesses among employees in an office building following overnight building renovation**. By Burton NC, Alexander-Scott M, Hatcher SM. Cincinnati, OH: U.S. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Report No. HHE-2019-0240-3410.
NIOSHTIC-2: 20070958 | NORA: Services

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