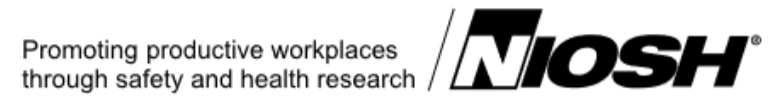




The Wayback Machine - <https://www.cdc.gov/niosh/awards/hamilton/aliceabs09.html>

The National Institute for Occupational Safety and Health (NIOSH)



Alice B. Hamilton Awards 2009

Educational Materials Category

Winner:

- **Title:** Age Awareness Training for Miners
- **Authors:** Porter WL, Mallett LG, Schwerha DJ, Gallagher S, Torma-Krajewski J, Steiner LJ
- **Source:** U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2008-133, Information Technology 9505, 2008
- **Description:** This document takes a comprehensive approach to health and safety training on the issues of aging workers with a focus on the mining industry, and informs instructors on how to provide the age awareness training to all workers. The supplied presentation and other materials are easy to follow and understand. This Information Circular contains just about everything that is needed for these trainings to occur, including easy-to-understand presentations and handouts on topics such as hearing, work capacity and endurance, and slips/trips/falls. Because this product addresses all workers, not just aging workers, the impact within a workplace could be great. Not only will older workers have the ability to help ensure their own safety as they age, so will younger workers. Also, younger workers will have knowledge of the issues their aging co-workers might be experiencing, which will allow them to assist in finding solutions.



[Link to full publication](#)

Honorable Mention:

- **Title:** NIOSH Hearing Loss Simulator: Instruction and Training Guide
- **Authors:** Randolph RF, Reinke DC, Unger RL
- **Source:** U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2008-119, 2008
- **Description:** This Guide includes innovative software that allows a user (individual or educator) to simulate the experience of noise-induced hearing loss. Various "real-worker" training scenarios are available including, targets to older workers, mid-career workers, and individualized training. The material and downloadable software are both user-friendly and could have a high potential impact on worker behavior. This Guide helps individuals use the simulator, and will assist in advancing the identification and discussion of hearing loss to workers in the workplace.

[Link to full publication](#)

Biological Sciences Category

Winner:

- **Title:** Inhalation vs. Aspiration of Single-Walled Carbon Nanotubes in C57BL/6 Mice: Inflammation, Fibrosis, Oxidative Stress, and Mutagenesis
- **Authors:** Shvedova AA, Kisin E, Murray AR, Johnson VJ, Gorelik O, Arepalli S, Hubbs AF, Mercer RR, Keohavong P, Sussman N, Jin J, Yin J, Stone S, Chen BT, Deye G, Maynard A, Castranova V, Baron PA, Kagan VE
- **Source:** American Journal of Physiology – Lung Cellular and Molecular Physiology 295: L552-L565, 2008
- **Description:** The work presented in this manuscript employed a laboratory animal model to evaluate the potential for inhalation of carbon nanotubes to produce pulmonary inflammation and fibrosis. Although the authors had previously looked at aspiration pulmonary toxicity, this study looked at true inhalation toxicity, being very careful to characterize the nanotube compositions that were actually inhaled. A careful and multidisciplinary approach was used to evaluate the immune/inflammation response, as well as the subsequent fibrosis response to determine damage to the pulmonary system. The article is of particular importance given the high relevance of the topic. Furthermore, the authors identified clear differences between inhaled and aspirated nanotubes and solved a number of technical issues to get a reliable dispersal.

[Link to abstract in NIOSHTIC-2](#)

Engineering and Physical Sciences Category

Winner:

- **Title:** Comparison of Methods: Dynamic Versus Hydrostatic Testing of Mine Ventilation Seals
- **Authors:** Sapko MJ, Harteis SP, Weiss ES
- **Source:** Mining Engineering 60(9): 147-153, 2008
- **Description:** This article describes the authors' proposal for a mine seal-strength evaluation method based on hydrostatic pressure loading as an alternative to full-scale explosion testing. Due to past mining accidents, such as Sago Mine in West Virginia and Darby Mine in Kentucky, research on the development of high quality mine seals to protect miners from blast effects and toxic gases is of particular importance. The researchers suggest pressure loading a seal using water to twice the expected dynamic design load. The hydrostatic chamber test offers a means of validating seal designs, establishing appropriate resistance functions, and determining the ultimate strength of seals through testing to failure. These studies demonstrate that hydrostatic testing of mine seals is a reasonable alternative or adjunct to full-scale explosion testing.

[Link to abstract in NIOSHTIC-2](#)

Honorable Mention:

- **Title:** Unrestrained Acoustic Plethysmograph for Measuring Specific Airway Resistance in Mice
- **Authors:** Reynolds JS, Johnson VJ, Frazer DG



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pulmonary disease in mouse models.

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Human Studies Category

Winner:

- **Title:** Cutting Off the Nose to Save the Penis
- **Authors:** Schrader SM, Breitenstein MJ, Lowe BD
- **Source:** Journal of Sexual Medicine 5(8): 1932-1940, 2008
- **Description:** Traditional (nosed) saddles have been associated with urogenital paresthesia and sexual dysfunction in bicycle police officers. This article presents the authors' evaluation of no-nose bicycle saddles under "real-world" conditions in bicycling police officers. No-nose saddles were provided to bicycle officers from five metropolitan areas to use over the course of six months. The investigators measured perineal pressure, urogenital numbness, penile vibrotactile sensitivity threshold, and erectile function. Results showed a 66% reduction in saddle contact pressure, as well as significant improvements in penis tactile sensation and erectile function. The percentage of men who reported not experiencing urogenital paresthesia while using the no-nose saddle for six months rose from 27% to 82%. Of 90 officers assessed, only 3 returned to a traditional saddle. One police department from the study has submitted a purchase order for 400 no-nose saddles. The results of this research are having a demonstrable impact on 40,000 bicycling police officers and an indirect impact on the 5 million recreational bicyclists in the U.S. as seen in many discussions on internet blogs.

[Link to abstract in NIOSHTIC-2](#)

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