DOES MANUFACTURING POPCORN CAUSE HEALTH PROBLEMS FOR FACTORY WORKERS?
RESEARCH PUBLISHED BY SAGE IN A SPECIAL ISSUE OF TOXICOLOGIC PATHOLOGY

Los Angeles, London, New Delhi, and Singapore (April 29, 2008) Buttery popcorn is delicious. That's why it's so popular. However, does manufacturing it cause health problems for the factory workers? Because of an unusually high amount of lung disease found in workers at popcorn factories, recent studies have focused on diacetyl, the ingredient which is largely responsible for the odor and flavor of the butter in popcorn. Information from one study was published by SAGE in the current issue of Toxicologic Pathology.

The study, led by head researcher, Ann F. Hubbs of the Pathology and Physiology Research Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, (NIOSH), Centers for Disease Control and Prevention in Morgantown, WV., examined diacetyl and its health consequences. Diacetyl is easily vaporized at temperatures used in microwave popcorn production, which results in high concentrations in the workplace.

The NIOSH research examined the acute toxicity of inhaled diacetyl in rats, and compared different exposure patterns. It was one of the very first studies to evaluate the respiratory toxicity of the chemical flavoring agent at levels relevant to human health. The researchers found that diacetyl – including just its vapors – can injure lungs.

"Workers making microwave popcorn and flavoring chemicals are at increased risk for developing lung disease," commented lead researcher, Ann Hubbs. "This research, in conjunction with other recent studies, supports the conclusion that diacetyl is an inhalation hazard and further studies are needed to also investigate other agents in butter flavoring so we have the information needed to protect workers."

The article, “Respiratory Toxicologic Pathology of Inhaled Diacetyl in Sprague-Dawley Rats,” by Ann F. Hubbs, William T. Goldsmith, Michael L. Kashon, David Frazer, Robert R. Mercer, Lori A. Battelli, Gregory J. Kullman, Diane Schwegler-Berry, Sherri Friend, and Vincent Castranova, of the Pathology and Physiology Research Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV., has been made available by SAGE free of charge for a limited time at http://tpx.sagepub.com/cgi/rapidpdf/0192623307312694v1.

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