Centre for Research Expertise in Occupational Disease

Research that makes a Difference

Title	**The respiratory and cutaneous effects of hard and soft wood exposure**
Year	**1988 – 1990 and 2009**
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CREOD Research Program	Occupational Skin and Respiratory Disease
Research Theme	Burden
Funder	Ontario Ministry of Labour
Product Type	Research Study
Background	Wood dust exposure has been shown to cause a variety of serious respiratory and cutaneous (skin) problems, such as nasal carcinoma, asthma, hypersensitivity pneumonitis, and irritant and allergic contact dermatitis. Better understanding of the inter-relationships between inhalation and dermal routes of exposure and between respiratory and skin responses to workplace irritants would be helpful to inform the development of appropriate prevention strategies.
Study Focus (Research Question/Goals/ Methods)	Our goal was to assess the relationships between wood dust exposure and respiratory and skin problems in softwood sawmill workers. 53 workers' exposures and effects were measured over a work-week. The controls were male workers in other industries, not exposed to significant respiratory hazards.
Key Findings	• **The wood dust-exposed workers reported more nose, eye, and skin irritation than control workers.** • None of the exposed workers had positive epicutaneous tests to pine or spruce oleoresin, and one worker had a positive friction tests. Because contact urticaria often self-diagnosed, it is possible that more people are affected but end up changing jobs to avoid exposure. • Many workers reported past employees who had to leave the mill because they developed skin problems.
Implications for Health/Labour Policy and Practice	Workers who are exposed to wood dust in the workplace would benefit from improved prevention strategies. **Education and interventions aimed at changing workplace culture could address worker self-selection (leaving the mill or moving to an area of low exposure as a result of symptoms) and improve recognition, reporting, and outcomes for affected workers.**
Publication & Presentation Information	<u>Publications</u> • Holness DL. Respiratory effects and dust exposures of softwood sawmill workers. Chest 1998;114:282S. • Holness DL. Cutaneous findings in softwood sawmill workers. Am J Contact Dermatitis 2001;12:130. • Arrandale VH, Holness DL. Prevalence of co-occurring skin and respiratory symptoms in a population of woodworkers. Derm Beruf Umwelt 2007;55:75-76. <u>Presentations</u> • Holness DL. Respiratory effects and dust exposures of softwood sawmill workers. American College of Chest Physicians Annual Meeting, Toronto, November 1998. • Holness DL. Cutaneous findings in softwood sawmill workers. American Contact Dermatitis Society Annual Meeting, Washington, February 2001. • Arrandale VH, Holness DL. Prevalence of co-occurring skin and respiratory symptoms in a population of wood workers. Second World Congress on Work-related and Environmental Allergy. Weimar, Germany, June 14, 2007.