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Centro de Investigación  
en Salud Laboral

## Acceso directo a los sumarios

[American Journal of Industrial Medicine.](#)  
[Archivos de Prevención de Riesgos Laborales.](#)  
[Internacional Journal of Higiene and Environmental Health.](#)  
[Journal of Occupational and Environmental Medicine.](#)  
[Journal of Occupational Health Psychology.](#)  
[Journal of Occupational Medicine and Toxicology.](#)  
[Occupational and Environmental Medicine.](#)  
[Safety Science.](#)  
[Scandinavian Journal of Work and Environmental Health.](#)  
[Work & Stress.](#)

## ARTÍCULOS DESTACADOS

[Harris-Roberts J, Robinson E, Waterhouse J, Billings CG, Proctor AR, Stocks-Greves M, et al. Sensitization to wheat flour and enzymes and associated respiratory symptoms in British bakers. Am J Ind Med. 2009; 52\(2\):133-140.](#)

**RATIONALE:** Current literature suggests that flour exposed workers continue to be at risk of allergic sensitization to flour dust and respiratory ill health.

**METHODS:** A cross-sectional study of 225 workers currently potentially exposed to flour dust in British bakeries was performed to identify predictors of sensitization to wheat flour and enzymes.

**RESULTS:** Work-related nasal irritation was the most commonly reported symptom (28.9%) followed by eye irritation (13.3%) and work-related cough or chest tightness (both 10.2%). Work-related chest tightness was significantly associated (OR 7.9, 1.3-46.0) with co-sensitization to wheat flour and any added enzyme. Working at a bakery with inadequate control measures was not a risk factor for reporting work-related respiratory symptoms (OR 1.3, 0.4-3.7). Fifty-one workers were atopic and 23 (14%) were sensitized to workplace allergens. Atopy was the strongest predictive factor (OR 18.4, 5.3-64.3) determining sensitization. Current versus never smoking (OR 4.7, 1.1-20.8) was a significant risk factor for sensitization to wheat flour or enzymes in atopic workers only, corrected for current level and duration of exposure. This effect was not seen in non-atopic workers (OR 1.9, 0.2-17.9). Evidence of sensitization to less commonly encountered allergens was also seen to *Aspergillus niger* derived cellulase, hemicellulase and xylanase mix, in addition to glucose oxidase and amyloglucosidase mix.

**CONCLUSION:** The combination of health surveillance and exposure control in this population has been insufficient to prevent clinically significant workplace sensitization. Smoking may pose an additional risk factor for sensitization in atopic workers.

[Munch-Hansen T, Wieclaw J, Agerbo E, Westergaard-Nielsen N, Rosenkilde M, Bonde JP. Sickness absence and workplace levels of satisfaction with psychosocial work conditions at public service workplaces. Am J Ind Med. 2009; 52\(2\):153-161](#)

**BACKGROUND:** The objective of this study was to examine the impact of psychosocial work conditions on sickness absence while addressing methodological weaknesses in earlier studies.

**METHODS:** The participants were 13,437 employees from 698 public service workplace units in Aarhus County, Denmark. Satisfaction with psychosocial work conditions was rated on a scale from 0 (low) to 10 (high). Individual ratings were aggregated to workplace scores. Analysis of variance was used to compare the average number of days of yearly sickness absence in three groups with different levels of satisfaction with psychosocial work conditions.

**RESULTS:** Sickness absence was 30.8% lower in the most satisfied group (11.7 days/year (CI 95%: 10.2; 13.1)) than in the least satisfied group (16.9 days/year (CI 95%: 15.3; 18.6)) adjusted for the covariates included.

**CONCLUSION:** Satisfaction with psychosocial work conditions has a strong and independent impact on sickness absence.

[Alamgir H, Yu S, Gorman E, Ngan K, Guzman J. Near miss and minor occupational injury: Does it share a common causal pathway with major injury?. Am J Ind Med. 2009; 52\(1\):69-75.](#)

**BACKGROUND:** An essential assumption of injury prevention programs is the common cause hypothesis that the causal pathways of near misses and minor injuries are similar to those of major injuries.

**METHODS:** The rates of near miss, minor injury and major injury of all reported incidents and musculoskeletal incidents (MSIs) were calculated for three health regions using information from a surveillance database and productive hours from payroll data. The relative distribution of individual causes and activities involved in near miss, minor injury and major injury were then compared.

**RESULTS:** For all reported incidents, there were significant differences in the relative distribution of causes for near miss, minor, and major injury. However, the relative distribution of causes and activities involved in minor and major MSIs were similar. The top causes and activities involved were the same across near miss, minor, and major injury.

**CONCLUSION:** Finding from this study support the use of near miss and minor injury data as potential outcome measures for injury prevention programs.

[Ott MG, Oberlinner C, Lan S, Hoffmann G, Nasterlack M, Pluto RP, et al. Health and safety protection for chemical industry employees in a rotating shift system: program design and acute injury and illness experience at work. J Occup Environ Med. 2009;51\(52\):221-231.](#)

**OBJECTIVES:** To describe a comprehensive health protection program for rotating shift employees and evaluate the program effectiveness in injury and illness prevention.

**METHODS:** For 14,128 shift and 17,218 day wage employees, occupational medical records were linked to job assignment records and studied over an 11-year period.

**RESULTS:** Between 1995 and 2005, initiatives directed to shift employees contributed to their 59% and 100% greater participation in medical examinations and health seminar days, respectively, compared to day wage employees. Injury rates declined over time and with increasing employee age and were not elevated among rotating shift compared to day wage employees. Clinic visit rates for acute illnesses were generally higher for day than shift work employees.

**CONCLUSION:** Coupling of active medical monitoring with additional health and safety initiatives appears to mitigate the expected adverse physiological and psychosocial stresses of shift work.

[Sobus JR, Waidyanatha S, McClean MD, Herrick RF, Smith TJ, Garshick E, et al. Urinary naphthalene and phenanthrene as biomarkers of occupational exposure to polycyclic aromatic hydrocarbons. Occup Environ Med. 2009; 66\(2\):99-104.](#)

**OBJECTIVES:** The study investigated the utility of unmetabolised naphthalene (Nap) and phenanthrene (Phe) in urine as surrogates for exposures to mixtures of polycyclic aromatic hydrocarbons (PAHs).

**METHODS** The report included workers exposed to diesel exhausts (low PAH exposure level, n = 39) as well as those exposed to emissions from asphalt (medium PAH exposure level, n = 26) and coke ovens (high PAH exposure level, n = 28). Levels of Nap and Phe were measured in urine from each subject using head space-solid phase microextraction and gas chromatography-mass spectrometry. Published levels of airborne Nap, Phe and other PAHs in the coke-producing and aluminium industries were also investigated.

**RESULTS:** In post-shift urine, the highest estimated geometric mean concentrations of Nap and Phe were observed in coke-oven workers (Nap: 2490 ng/l; Phe: 975 ng/l), followed by asphalt workers (Nap: 71.5 ng/l; Phe: 54.3 ng/l), and by diesel-exposed workers (Nap: 17.7 ng/l; Phe: 3.60 ng/l). After subtracting logged background levels of Nap and Phe from the logged post-shift levels of these PAHs in urine, the resulting values (referred to as  $\ln(\text{adjNap})$  and  $\ln(\text{adjPhe})$ , respectively) were significantly correlated in each group of workers (0.71  $\leq$  Pearson  $r \leq$  0.89), suggesting a common exposure source in each case. Surprisingly, multiple linear regression analysis of  $\ln(\text{adjNap})$  on  $\ln(\text{adjPhe})$  showed no significant effect of the source of exposure (coke ovens, asphalt and diesel exhaust) and further suggested that the ratio of urinary Nap/Phe (in natural scale) decreased with increasing exposure levels. These results were corroborated with published data for airborne Nap and Phe in the coke-producing and aluminium industries. The published air measurements also indicated that Nap and Phe levels were proportional to the levels of all combined PAHs in those industries.

**CONCLUSION:** Levels of Nap and Phe in urine reflect airborne exposures to these compounds and are promising surrogates for occupational exposures to PAH mixtures.

