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Meeting Information

When:

November 15 - 19, 2014

Where:

New Orleans, LA

303954 Cleaning-chemical exposures and respiratory, dermatological and musculoskeletal symptoms among custodians using traditional and green cleaners



Monday, November 17, 2014 : 12:33 PM - 12:36 PM

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[Audio \(mp3\) recording](#)

[Recorded Presentation \(mp4\)](#)

Objectives: We sought to investigate the relationships between cleaning chemicals and respiratory, dermatological and musculoskeletal symptoms among custodians transitioning from traditional to green cleaners.

Methods: University-employed custodians completed a questionnaire to assess cleaning chemical use and health symptoms. An exposure index was developed to quantify custodians' relative intensity of exposure to cleaning chemicals in total, and to traditional or environmentally preferable or 'green' chemicals. Associations between health outcomes and total, traditional, and green-cleaning chemical intensity were investigated in separate models using logistic regression controlling for age, gender, and smoking status.

Results: A total of 329 custodians from three universities and one university health center completed questionnaires. Health symptoms within the last month included dermatitis (26% of respondents), lower respiratory complaints (30%), upper respiratory complaints (43%), pain or discomfort in back (32%) and pain or discomfort in neck, shoulders or arms (44%). Increased total exposure was associated with increased odds of pain or discomfort in the neck, shoulder, arms, or hands ($p=0.03$). Increased traditional-chemical exposure was associated with increased odds of upper respiratory symptoms ($p=0.03$) and neck, shoulder, arms, or hand pain ($p<0.01$). There was no association between increasing green-cleaning chemical exposure and health symptoms.

Conclusion: Custodian musculoskeletal symptoms follow a dose-related pattern with increasing risk for symptoms related to increased total cleaning-chemical exposure. Custodian upper respiratory symptoms were associated with traditional cleaning chemical use only.

Learning Areas:

Epidemiology
Occupational health and safety

Learning Objectives:

Describe respiratory, dermatological and musculoskeletal symptoms in a group of custodians using traditional and green cleaners Describe the use of an index to assess relationships between cleaning chemical use and health outcomes Explain the health outcomes associated with a higher cleaning chemical index

Keyword(s): Chemical Exposures & Prevention, Occupational Health and Safety

Presenting author's disclosure statement:

Qualified on the content I am responsible for because: I am a co-investigator on the project being presented. I have been involved in the conception of this presentation, the data analysis, and will help to prepare the presentation.

Any relevant financial relationships? No

I agree to comply with the American Public Health Association Conflict of Interest and Commercial Support Guidelines, and to disclose to the participants any off-label or experimental uses of a commercial product or service discussed in my presentation.

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