

BULLETIN

## Study finds radiographers at risk

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by RACHEL NOTLEY

Medical radiation technologists tend to experience symptoms of respiratory illness at a higher rate than do physiotherapists. That's the conclusion of a recent comparative study by researchers at UBC.

The authors of the study, Helen Ward and Michelle Wymer, describe symptoms which include bronchial hyper-responsiveness, wheezing, shortness of breath, asthma-like symptoms and somatic symptoms including a chemical/metallic taste in the mouth, dizziness, dry skin, headache, and sore throat. In addition, they found that the occurrence of symptoms was greater when the medical radiation technologist was performing specific tasks associated with her job.

In 1998, 66 per cent of HSA radiation technologists and physiotherapists responded to a survey asking members in these fields to indicate the degree to which they had experienced certain respiratory symptoms. The survey also looked into whether there were any elements to their work that caused them any health concerns, and the degree to which they performed certain tasks that were thought possibly to pose a higher risk to workers health.

Upon analysing the results of the survey, the UBC researchers concluded that certain symptoms occurred twice as often amongst radiation technologists when compared to physiotherapists. These symptoms included being woken from sleep by shortness of breath, shortness of breath during the day, experiencing sore, itchy or runny eyes and experiencing a sore throat.

In addition, medical radiation therapists who performed certain activities in the course of their work were more likely to experience a range of symptoms. In particular, a worker was more likely to experience respiratory symptoms where she perceived that there was inadequate ventilation, or where he perceived the odour of x-ray processing chemicals. In addition, those who indicated that they had cleaned a processor spill in the previous 12 months, had been obliged to mix liquid concentrate more than a few times per month, or were required to process more than 50 films per day, were more likely to report asthma-like symptoms (wheezing, chest tightness, or shortness of breath).

The reports authors also conducted lung function tests, skin prick tests (for dermatological sensitivity for exposure to chemical sensitizers such as glutaraldehyde, which is used in developing x-ray film), and methacholine challenges, on 67 radiation technologists and 34 physiotherapists. There were no significant differences found in the results between the two professions. However, they noted a trend towards increased bronchial hyper-responsiveness amongst radiation technologists (20 per cent) versus physiotherapists ( seven per cent). The authors note, however, that their sample size was too small to be statistically significant.

Another recent study conducted jointly by UBC and the WCB found that, generally, exposures to x-ray processing chemicals in BC health care facilities have been shown to be well below the levels permitted by the WCB regulations. Nonetheless, the results of the health effects study support the notion that exposure levels are simply not low enough, as there is evidence of respiratory injury occurring on a broad basis

notwithstanding compliance with current regulatory standards.

Thus, more must be done to lower the level of exposure to hazardous x-ray processing chemicals - particularly in the areas identified by this study. The recommendations flowing from the report reiterate recommendations from previous studies. Employers should endeavour to improve general ventilation standards, implement more effective chemical spill control measures, develop more effective exposure control mechanisms for chemical mixing operations, and finally, substitute wet chemical methods of film processing with digital imaging.

*Rachel Notley is HSAs Occupational Health and Safety Officer. For more information on this study, or if you have concerns about chemical exposure in your workplace, contact her at 1.800.663.2017 or 439.0994 (Lower Mainland).*

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