

**DARKROOM DISEASE SYMPTOMS AND ASSOCIATIONS IN MEDICAL  
RADIATION TECHNOLOGISTS COMPARED WITH PHYSIOTHERAPISTS**

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Background: Medical radiation technologists (MRTs) have reported unexplained work-related symptoms which they attribute to “Darkroom Disease” (DRD). This study determines whether MRTs have an excess of a symptom complex consistent with that previously reported with DRD, and assesses associated factors.

Methods: Questionnaires were sent to Ontario MRTs (N=2746) and as a control group, physiotherapists (PTs, N=2970) as part of a larger study. DRD was defined as 3+ symptoms of: a) eye, b) nose, c) throat, irritant symptoms, or d) headache: (these symptoms worse at work, 15+ days in the past year) and/or e) abnormal fatigue. Results: 64% MRTs (1840) and 63% PTs (1714) responded. 231 MRTs and 295 PTs with physician-diagnosed asthma were excluded from analyses. Each DRD symptom was more frequent in MRTs ( $p < 0.0001$ ). DRD definition was met by 7.8% MRTs and 1.8% PTs (OR 4.8, CI 3.1-7.5). DRD in MRTs was associated with work-related asthma symptoms (e.g. wheeze, OR 4.0, CI 2.5-6.3), self-reporting of tasks reflecting increased work chemical exposures (e.g. cleaning a processor spill OR 2.7, CI 1.9-3.8) and factors reflecting greater workplace psychosocial stress (e.g. conflict demands from others OR 2.8, CI 2.0-4.1). Findings were unchanged when adjusted for smoking, age group and gender.

Conclusion: MRTs have an increased prevalence of symptoms consistent with DRD. These symptoms are associated with lower respiratory symptoms similar to asthma. Self-reported chemical exposures and psychosocial work stressors were found to be associated with this syndrome although reporting bias could account for these cross-sectional findings.

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