

Reach & Impact: Promising strategies for primary prevention

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Findings of a project supported with funds from WorkSafeBC through the Innovation at Work research program.









- Why did we do the project?
 - burden of occupational disease is large
 - primary prevention: challenging but essential
- What was our objective?
 - identify prevention strategies: 4 occupational diseases
- What did we do?
 - scoping review
 - key informant interviews





How we collected our data

Centre for Occupational Health & Safety Research

SafetyNet









What we found

Breakdown by disease



Occupational cancer by carcinogen



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A model of primary prevention









Reporting the findings

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Noise-induced hearing loss



Prevention Approach	Main Findings
Legislation & regulations	Mixed findings
Surveillance	Reduced noise levelsChanged behaviour
Exposure controls	Reduced noise levelsPPE: ineffective
Education & training	Increased awarenessChanged behaviour
Multi-faceted	HCP: mixed findingsOther: changed behaviour





Occupational contact dermatitis



Prevention Approach	Main Findings
Legislation & regulations	• Generally, positive impact
Surveillance	• Mixed findings about effect of health screening
Exposure controls	• Positive health outcomes and improved use of PPE
Education & training	 Increased knowledge, improved work habits, improved health outcomes
Multi-faceted	 Decreased symptoms, positive behavior change





Occupational cancer: asbestos



Prevention Approach	Main Findings
Legislation & regulations	Decreased incidence
Surveillance	• Useful for identifying cases, informing prevention
Exposure controls	
Education & training	Increased awareness
Multi-faceted	Reduced exposure, decreased incidence





Occupational cancer: diesel exhaust



Prevention Approach	Main Findings
Legislation & regulations	• Decreased cancer risk
Surveillance	Effectively controlled DEE
Exposure controls	Reduced exposure levels
Education & training	
Multi-faceted	Reductions in exposureDecreased risk of cancer





Occupational cancer: silica



Prevention Approach	Main Findings
Legislation & regulations	Decreased silica levels
Surveillance	
Exposure controls	Reduced exposure
Education & training	 Increased knowledge, readiness to use controls
Multi-faceted	Reduced exposure







Occupational cancer: shiftwork



Prevention Approach	Main Findings
Legislation & regulations	
Surveillance	
Exposure controls	 Improved exposure, reduced health impacts
Education & training	Improved health outcomes
Multi-faceted	Improved health outcomes







Occupational asthma



Prevention Approach	Main Findings
Legislation & regulations	Decrease in number of cases; reduced exposures
Surveillance	• Early case identification, exposure remediation
Exposure controls	Reduce exposure
Education & training	 Increased awareness, improved long-term retention
Multi-faceted	• Reduced disease burden, exposure, number of claims





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Pulling it all together...

	NIHL	Contact Dermatitis	Occupational Cancer (carcinogens)				Asthma
			Asbestos	Diesel Exhaust	Silica	Shiftwork	Astima
Legislation & regulations	(√)	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark
Surveillance	\checkmark	\checkmark		\checkmark			\checkmark
Exposure control	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark
Education & training	(√)	\checkmark	\checkmark		\checkmark	\checkmark	
Multi-faceted approaches	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark





What can we conclude?

- Each approach plays important role
 - each insufficient on its own
- Multi-faceted approaches more effective
- Outcomes influenced by a constellation of factors
 - regulatory frameworks
 - organization size, management structures/culture
 - worker engagement & empowerment







Project Team

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