

BACKGROUND

- Contact dermatitis is the most common occupational skin disease
- Construction workers are at high risk for occupational contact dermatitis (OCD), both irritant and allergic
- There may be varying exposures and causes of OCD in different occupations within the construction sector

OBJECTIVE

To identify the common causative agents, health care utilization and prevention activities in the construction sector from 2012 to 2022

METHODS

- The St Michael's Hospital patch test database is approved by the REB of St Michael's Hospital
- A standardized questionnaire is utilized in the patch test clinic to document the history collecting the following
 - Clinical information including past and family history of atopy, rash location, description and treatment
 - Workplace information including workplace characteristics and prevention activities
 - Lost time and workers' compensation status
 - Health care utilization
- If the patient consents, their demographic, diagnostic, patch test and questionnaire data is entered into a SPSS database
- Statistical analysis is performed using SAS

RESULTS

- Overall, **3,562 patients** consented including **138 construction workers**
- **1,505** had **work-related contact dermatitis** including **81 construction workers**, results of those with work-related contact dermatitis are presented.

Table 1. Characteristics of participants (n=1505)

	Construction workers	Non-construction workers
Age (mean in years)	41.6	43.4
Age (>40)	52%	59%
Sex (% male)*	96%	46%
Length of time with dermatitis before consultation	39 months	37 months
Hand involvement*	94%	85%
Severity of dermatitis (moderate to severe)*	48%	32%
Occupational allergic contact dermatitis*	62%	46%
Occupational irritant contact dermatitis*	62%	76%

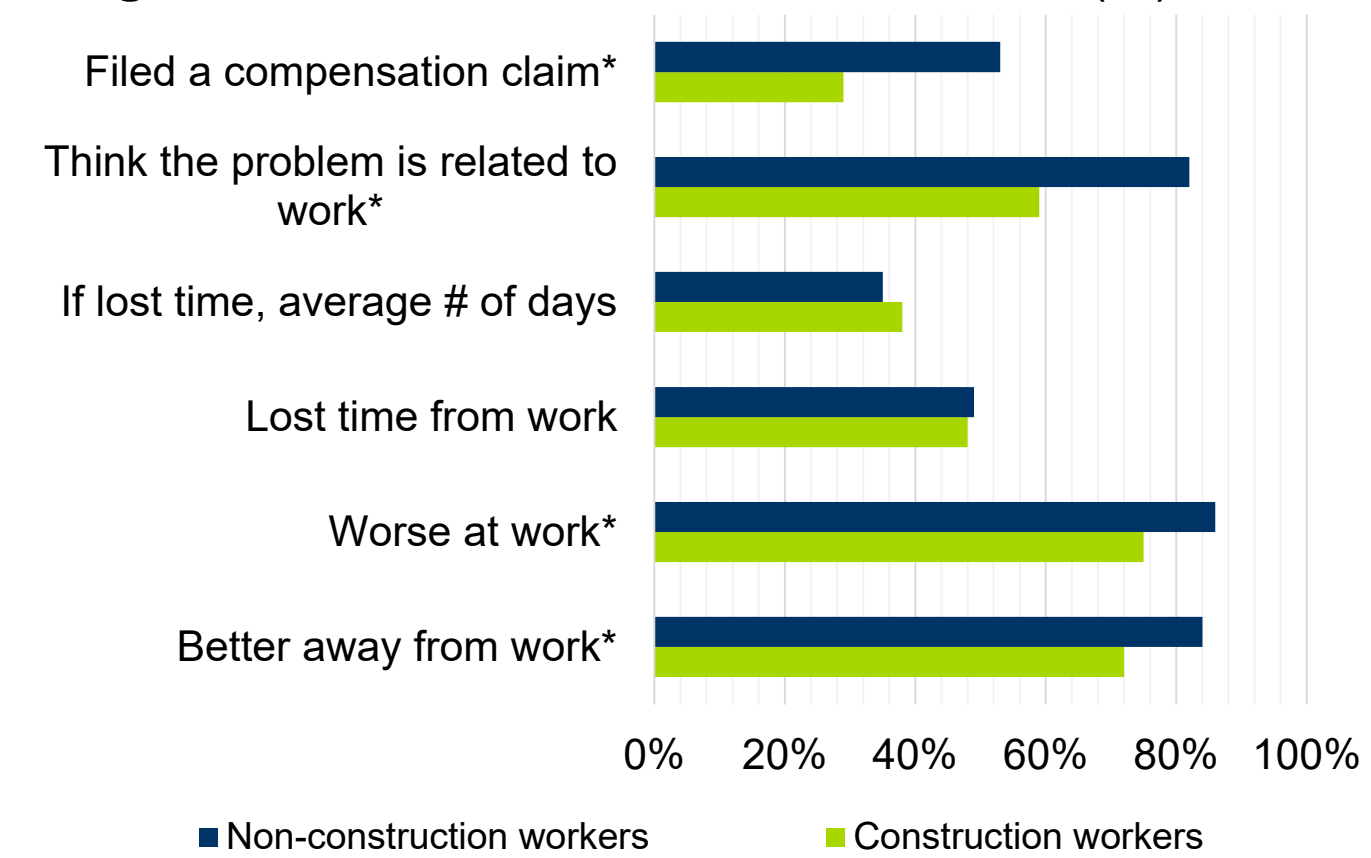
* Indicates statistical significance

Table 2. Workplace characteristics (%)

	Construction workers	Non-construction workers
Size of workplace (no. of employees)*		
<20	63	23
20-50	20	11
51-100	8	8
>100	8	58
Unionized*	38	44
Received general health and safety training*	64	81
Received WHMIS training	76	81
Received skin specific training	48	58
Wear gloves at work	97	93
Handwashing >20X per day*	4	33

* Indicates statistical significance

Figure 1. Characteristics of Skin Condition (%)



* Indicates statistical significance

Table 3. Positive patch test results – common allergens (%)

	Construction workers	Non-construction workers
Carba mix	12.4%	6.9%
Thiuram mix	12.4%	7.1%
Chromium*	17.3%	2.5%
Nickel*	8.6%	1.8%
Cobalt*	6.2%	2.1%
Epoxy resin*	19.8%	4.7%

* Indicates statistical significance

Table 4. Positive patch test results – common allergens by job (%)

Job	Carba mix	Thiuram mix	Chromium*	Nickel	Cobalt*	Epoxy*
Cement worker	16.7%	16.7%	58.3%	16.7%	33.3%	16.7%
Flooring	44.4%	44.4%	22.2%	11.1%	11.1%	44.4%
Laborers	6.3%	6.3%	12.5%	0	0	31.3%
Trades	14.3%	14.3%	0	14.3%	0	0

* Indicates statistical significance

CONCLUSIONS

- Construction workers are at risk for both irritant and allergic contact dermatitis
- The causes of allergic contact dermatitis vary with job.
- Prevention efforts can be more specifically targeted with this information.

ACKNOWLEDGEMENTS

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