ACM exposure and ARD were estimated using Poisson regression.

Results Overall 26,401(79%) AWR registrants were linked to health data; 97% were male. The mean age at cohort entry was 36 years. The most common industries represented were construction (61%), manufacturing (20%) and education (10%). Among men and women rates were markedly increased for mesothelioma [M:SIR 6.55(95% CI=5.34–7.96); W:SIR 19.3 (3.87–56.3)] and pulmonary fibrosis [M:SIR 13.8(11.9–15.9); W:SIR 9.15(2.46–23.4)]. The risk of asbestosis was also elevated, but did not reach statistical significance among women [M:SIR 11.1(9.46–12.9); W:SIR 1.21(0.02–6.75)]. Among men and women, rates of COPD and lung cancer were elevated, but few cases were observed among women. Compared to workers with 238 hours had increased rates of lung cancer [RR 1.3(1.07–1.57)], mesothelioma [RR 3.13(1.94–5.06)], asbestosis [RR 3.31(2.33–4.71)], COPD [RR 1.34 (1.22–1.48)], and pulmonary fibrosis [RR 1.86(1.34–2.58)].

Conclusion Exposure to asbestos in construction and building maintenance continues to contribute to ARD incidence. Though a Canadian ban on asbestos use in new products is encouraging, it is likely to have minimal impact on ARD resulting from construction activities, where exposure to existing ACM will persist.

RF-274 CARDIORESPIRATORY FITNESS OF POLICE RECRUITS: NORM-REFERENCED VALUES AND 14-YEAR TEMPORAL TREND.

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Introduction Many have highlighted the increased risk of cardiovascular diseases (CVD) among police officers. Because a low cardiorespiratory fitness (CRF) in young adulthood is associated with a higher risk of CVD incidence, the identification of police officers exhibiting low CRF upon entry in the profession could allow the implementation of targeted strategies for the primary prevention of CVD. Unfortunately, reference values for the CRF of Canadian police recruits are not yet available.

Objectives This research aimed to provide reference standards for the CRF of police recruits in Québec (Canada) and to evaluate the trend in the CRF of recruits over a 14-year period.

Methods This cross-sectional study was divided into two research phases. First, fifty-one police cadets performed both an indirect calorimetry assessment of their maximal oxygen consumption ($\dot{V}O_{2max}$) and the Physical Abilities Test (PAT) used for the recruitment of police officers in the province of Québec. Using results from both tests, a model was developed to estimate $\dot{V}O_{2max}$ based on PAT results. The CRF of police recruits who completed the PAT from 2004 to 2017 was then retrospectively assessed using the previously developed model.

Results Based on the analysis of 7234 PAT results, the average $\dot{V}O_{2max}$ was $53.33 \pm 2.90 \text{ ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ for male recruits and $43.78 \pm 2.89 \text{ ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ for female recruits. Furthermore, bivariate correlation analyses suggested small but significant increases in the $\dot{V}O_{2max}$ of both male ($r_s = .105$, $p < .001$) and female recruits ($r_s = .125$, $p < .001$) over the 14-year period studied.

Conclusion Our results suggest that the CRF of police recruits in Québec is considerably higher than their North American peers. Furthermore, although clear conclusions cannot be drawn from our temporal trend analyses, our data suggest that the CRF of police officers from this population did not decline over the last decades as previously suggested by others.

RF-408 WORK-RELATED RESPIRATORY SYMPTOMS AND ECZEMA AMONG SWEDISH EYELASH STYLISTS

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Introduction Eyelash extension is a beauty treatment established in recent years. The eyelash stylists apply eyelash extensions on natural lashes, using adhesives based on cyanoacrylates. Exposure to cyanoacrylates may cause asthma and eczema.

Objectives The main objective was to survey work-related respiratory symptoms and eczema among eyelash stylists in Sweden. Occupational exposure and use of personal protective equipment were also studied.

Methods Questionnaires with focus on work-related respiratory symptoms, eczema and occupational exposure conditions were sent to 656 eyelash stylists in the four largest cities of Sweden (Stockholm, Göteborg, Malmö and Uppsala). The participants were identified by an internet reservation site for eyelash extensions and by social media. The participation rate was 26% (169 respondents).

Results The main part of the respondents (74%) had been working as eyelash stylists for more than 2 years. 59% of them reported that they had respiratory symptoms and 15% that they had eczema (12-month prevalence). One third of the respondents had a colleague who had changed occupations due to respiratory symptoms or eczema. Almost 20% reported that they had customers who had had respiratory symptoms in association with lash extension and almost 10% stated that customers got eczema. Approximately 85% of the respondents reported that they used personal protective equipment, but more than 50% only used surgical masks that do not protect against acrylates. About 20% reported that they were using protective gloves at work.

Conclusion The survey shows that many eyelash stylists have respiratory symptoms and that some of them have eczema. The surgical masks most commonly used do not provide sufficient protection against acrylates present in the work environment of the eyelash stylists. In addition, the survey indicates that far too few eyelash stylists use protective gloves at work.

RF-417 OCCUPATIONAL RHINITIS AND ASTHMA CAUSED BY ISOCYANATES

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Introduction Isocyanates are strong respiratory sensitizers. Repeated and prolonged occupational exposure to these

molecules is currently one of the leading causes of allergic asthma and rhinitis in the workplace.

Objectives Describe the socio-professional, clinical, functional and allergological characteristics of cases of asthma allergic to isocyanates, and assess their impact on medical fitness for work.

Methods Retrospective study covering all cases of occupational allergic asthma and rhinitis to isocyanates collected from the Department of Occupational Medicine of La Rabta hospital during the period from January 2000 to July 2020.

Result: This is a series of 26 patients with a mean age of 42.62 ± 9.01 years, including 19 women and 7 men. The majority belonged to the automotive sector (19 cases). They were mainly workers responsible for gluing and sheathing the steering wheels (16 cases). The average seniority in the post was 12.88 ± 6.01 years. The lack of personal respiratory protection was reported by the majority of patients (24 cases). The first functional manifestations appeared on average 8.15 ± 5.13 years after exposure, dominated by nasal pruritus and rhinorrhea (16 cases) and wheezing dyspnea (5 cases). Rhythmicity with work was reported by all patients. The physical examination revealed a congestive mucosa (3 cases) with severe obstruction (1 case). Reversible obstructive or airway hyper reactivity was confirmed in 11 cases. Finally, we identified 15 cases of allergic rhinitis, 7 cases of allergic asthma and 4 cases of rhinitis associated with asthma. This morbidity justified an adaptation of the workstation in 12 patients and a mutation of the post in 12 cases. the majority of patients (23 cases) benefited from a declaration of this morbidity as occupational disease.

Conclusion Occupational exposure to isocyanates represents a significant allergic risk. This risk remains avoidable by putting in place appropriate individual and collective preventive measures.

RF-441 RESPIRATORY AND ALLERGIC SYMPTOMS IN CANNABIS CULTIVATION WORKERS, CALIFORNIA, USA.

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Introduction Cannabis (*Cannabis sativa*, marijuana) is the largest cash crop in California. While it is difficult to characterize the size of the industry, total production is estimated at 15 to 16 million pounds per year with total revenues exceeding \$10 billion per year. There are approximately 40,000 full-time equivalent cannabis jobs in the state. Despite the huge size and rapid growth of the industry, there has been little research on the health and safety of cannabis workers.

Objectives The goal of this pilot study was to explore the feasibility of collecting cannabis worker health data with a self-administered survey and to analyze the first systematically collected data on occupational respiratory and allergic symptoms among California cannabis cultivation workers.

Methods We performed a cross-sectional survey of 29 workers at two cannabis farms in the Davis/Sacramento, California area. The questionnaire elicited information about the participants' personal and job characteristics and nasal, respiratory, dermal, and eye symptoms.

Results All eligible workers chose to participate. Most participants were men age ≤ 30 years, with 48% of participants self-identifying as non-Hispanic white and 58% reporting at least some college education. The median tenure of all work in the cannabis industry was 26 months (IQR: 9, 78). All participants were current or past cannabis users. Five (17%) workers reported physician-diagnosed asthma; however, 11 workers (38%) reported symptoms suggestive of asthma. Work-related symptoms of any type were reported by 11 (38%) participants.

Conclusion The survey was a satisfactory data collection method. The participants had a demographic makeup distinct from traditional California agricultural workers, who are predominantly Latino, speak Spanish, and have less formal education. The high proportion of respondents with symptoms suggestive of asthma raises concern; sensitization to the cannabis plant has been reported among cannabis users and there are many well-documented agricultural exposures causing asthma and asthma-like syndrome.

RF-14 THE ASSOCIATION BETWEEN SHIFT WORK, MENTAL HEALTH AND CARDIOMETABOLIC HEALTH IN THE ATLANTIC PATH COHORT

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Introduction Contemporary work environments increasingly rely upon a 24-hour work cycle resulting in more employees exposed to shift work. Thirty percent of working age Canadians work evening, night and rotating shifts. Compared to regular daytime work, shift work has the potential for disturbing sleep patterns and disrupting circadian rhythms with adverse health effects.

Methods A population health study was conducted with 4,155 shift workers and 8,258 non-shift workers from the Atlantic PATH cohort. Linear and logistic regression models were used to assess the differences in i) self-reported mental health measures between shift workers and non-shift workers and ii) anthropometric measures (body adiposity) and self-reported cardiometabolic disease outcomes (obesity, diabetes, and cardiovascular disease).

Results Shift workers reported higher levels of each of the mental health domains. There was a significant increased risk of depression (OR=1.13, 95% CI, 1.00–1.27) and poor self-rated health (OR=1.13, 95% CI, 1.14–1.55) among shift workers compared to non-shift workers. There was a significant increased risk of cardiovascular disease, obesity, and diabetes among shift workers despite higher levels of physical activity and lower levels of sedentary behaviour compared to matched controls. Shift workers were 17% more likely to be obese (95% CI 7–27) and 27% more likely to have diabetes (95% CI 8–51).

Conclusions Shift work is associated with cardiometabolic health and mental health, as well as depression. The association between shift work and cardiometabolic health was independent of body mass index for cardiovascular disease and diabetes, and independent of fat mass index for diabetes. Subsequently, shift workers have an increased risk of developing other chronic disease.