adjusted risk of low work unit social capital increased by OR=1.72, CI 95% 1.65–1.79.

Conclusion Managers’ perception of job strain was strongly associated with independently measured workplace social capital. The direction of the causal pathway, if any, may be either way which points to a need for prospective studies and analyses of mediating and/or moderating factors.

Poster Presentation
Musculoskeletal

**0357** MULTI-SITE MUSCULOSKELETAL PAIN IN SWEDISH POLICE AND ITS ASSOCIATION WITH USE OF MANDATORY EQUIPMENT

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**Background** Musculoskeletal disorders are a common problem among uniformed police with lower back pain being most frequently reported (Gyi and Porter, 1998). Wearing mandatory equipment (duty belt and body armour) and sitting for long periods of time in fleet vehicles are characteristic workload factors linked to musculoskeletal disorders in police (Filtness et al., 2014, Holmes et al., 2013).

**Aim** The aim of this study was to determine the prevalence of multi-site musculoskeletal pain among Swedish police and to explore the possible association to physical workload factors with a special focus on mandatory equipment.

**Method** A cross-sectional study was carried out with responses from 4185 uniformed police. Data was collected through a self-administered online survey including questions about working tasks, airways symptoms, and smoking habits.

**Result** The prevalence of multi-site musculoskeletal pain at least one day per week within the previous three months was 41.3%. A statistically significant association was found between multi-site musculoskeletal pain and mandatory equipment whereas sitting for long periods in fleet vehicles was not found to be significantly associated with multi-site musculoskeletal pain.

**Conclusion** Multi-site musculoskeletal pain is a considerable problem among Swedish police and the association to mandatory equipment should therefore be further investigated including psychosocial factors.

**Poster Presentation**

**Exposure Assessment**

**0358** RHINITIS SYMPTOMS AND IMMUNOLOGICAL RESPONSE AFTER OCCUPATIONAL EXPOSURE TO SHRIMP SHELL POWDER

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Occupational bioaerosol exposure may cause a range of temporary or permanent health effects, depending on host factors and the type and duration of exposure.

In the present study, we investigated rhinitis and immunological markers in all employees in a shrimp shell powder production factory, before and after exposure to shrimp shell powder.

**Material and methods** The study population comprised 11 employees. Personal exposure to inhalable dust (fullshift) was measured in the breathing zone of the employees during production of shrimp shell powder. All employees answered a self-administered questionnaire before and after exposure, about working tasks, airways symptoms, and smoking habits.

**Results** Shirmp shell powder workers were exposed to 12 mg/m³ inhalable dust (mean 11.8 mg/m³, median 8.2 mg/m³, n=16), the exposure level for unexposed group was less than 1 mg/m³ inhalable dust (mean 0.4 mg/m³, median 0.4 mg/m³, n=10).

Employees working with shrimp shell powder had more rhinitis symptoms (stuffy nose and runny nose) than employees working with fish.

Although not statistically significant, the peripheral levels of tryptase, leucocytes and neutrophils in peripheral blood appeared to be highest among exposed workers, increasing after exposure.

**Conclusions** Shrimp shell powder workers are exposed to high levels of inhalable dust compared to the occupational exposure limit of organic dust (5 mg/m³).

Exposure was related to more rhinitis symptoms and indicated (non-significantly) higher immunological parameters.

Follow-up of this industry and more study is needed.

**Oral Presentation**

**Other**

**0359** SYSTEMATIC REVIEW OF OCCUPATIONAL CHEMICAL EXPOSURES AND CARDIOVASCULAR DISEASES

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A systematic review was conducted to assess the association of occupational chemical exposures and cardiovascular diseases.

**Conclusions** The review suggests that occupational chemical exposures may contribute to cardiovascular disease risk. Further research is needed to confirm these findings.