vibration exposure was not above the Swedish threshold limit of 5 m/s², nearly 37% of those surveyed showed signs of carpal tunnel syndrome (CTS). Analysis of the biological markers in the blood samples will be performed soon.

**Conclusion** This study shows that health effects from exposure to hand-arm vibration are common in the study group even if the vibration exposure is below the Swedish occupational threshold limit of 5 m/s².

### 1352 OCCUPATIONAL DISEASES IN SELF-EMPLOYED WORKERS

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**Introduction** Even in countries with a well-developed occupational health legislation and infrastructure, self-employed workers generally fall outside the scope of the legislation and services that are intended to prevent accidents and disease at work. In curative medicine, little attention is paid to possible occupational causes of medical conditions.

Yet, self-employed people also run occupational health risks in agriculture, crafts, or service professions. The burden of occupational disease among self-employed workers is not known.

**Methods** A retrospective study was conducted on records of all currently self-employed workers who were referred to the outpatient clinic dedicated to occupational and environmental health within the division of pneumology of the University Hospitals of Leuven during the period 2000–2014. Their main demographic, occupational and medical characteristics were compared to those of salaried employees seen during the same period.

**Results** 150 self-employed workers were identified. They represent 5% of all consultations during this period. 80% were men. 91% had active working age. 70% worked as self-employed throughout their careers, 30% also worked as salaried worker in the past. The main sectors were construction (31%), food (12%), agriculture (11%) and beauty care (11%). 73% had respiratory disease with asthma as the most common diagnosis (n=49). The suspected causative agents were synthetic chemicals (n=52), biological agents (n=42) and mineral substances (n=33). Subpopulations of bakers, painters and hairdressers had non-significant different characteristics compared to their salaried colleagues, except for age in hairdressers.

**Conclusion** Self-employed workers may suffer from occupational respiratory and non-respiratory diseases. Although the evidence is largely anecdotal, it appears that the severity at clinical presentation is higher in self-employed persons than in salaried employees. Although the socio-economic consequences of occupational disease are often dramatic for most workers, it appears that this is even more the case for self-employed persons.

### 1312 THE RELATIONSHIP BETWEEN THE POST-TRAUMATIC STRESS SYNDROME AND THE OCCUPATIONAL STRESS AMONG THE FIREFIGHTERS IN KOREA

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**Introduction** Traumatic stress like experience in witnessing a suicide or accidents can cause post-traumatic stress disorder (PTSD). Firefighters are exposed to traumatic stresses due to their professional nature. It is known that dealing with extra stress after the event can be a risk factor in development of the disease. Thus, we aim to study to see whether occupational stress can act as a risk factor in development of PTSD.

**Methods** 310 among total 315 professional firefighters were given written informed consents and answered self-reported questionnaires. Impact of Event Scale-Revision (IES-R), Life Event Checklist (LEC) and Korean Occupational Stress Scale (KOSS) questionnaires were used to assess the PTSD and determine the level of occupational stress. SPSS 21.0 was used for all statistical analysis.

**Results** According to the IES-R questionnaire, 75 out of 310 subjects (24.2%) were in risk of developing PTSD. The LEC score which is designed to screen one’s experience of potentially traumatic events was significantly high in the PTSD risk group compared to no risk group (p=0.008). Total KOSS score of PTSD risk group (49.21±10.90) was also significantly higher than that of no risk group (43.17±10.86) (p=0.005).

**Conclusion** The prevalence of PTSD was significantly higher in firefighters than general population in several studies, and result of our study also corresponds well. Furthermore we could confirm that the more impact traumatic stress one has experienced in life, the more likely it is to develop PTSD and occupational stress is playing as a risk factor in the development of the disease. By identifying the level of occupational stress and the impact of traumatic event using simple self-reported questionnaires, it would be easier to detect the people who are in risk of developing PTSD and take early medical intervention to prevent the progression of PTSD.

### 1199 HOW DO OCCUPATIONAL HEALTH PHYSICIANS IN A BELGIAN OCCUPATIONAL HEALTH SERVICE PERCEIVE THEIR CURRENT AND FUTURE ROLE IN RE-INTEGRATION?

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**Introduction** Recently a new legislation on re-integration of employees on long-term sick leave was introduced in Belgium. The purpose is to facilitate return to work of disabled
employees with adapted or other work. The more prominent social importance and government demand could change the role of the occupational health physician (OHP).

The question could be asked how OHP's perceive their changing role in the re-integration process? 

**Methods** 61 OHP’s (93.8% response) working in a Belgian occupational health service participated in a survey. Five function roles were defined:

1. ‘healthcare provider’: helping the employee (trust relationship);
2. ‘coach’: coaching and motivating the employee;
3. ‘service provider’: focus on employer’s situation;
4. ‘expert’: focus on evidence based medical evaluation;
5. ‘controller’: employees who are able to work, obligate to do so.

The frequency of each role was asked for three different situations: occupational medical examination (OME), current attitude in re-integration examination (CARE), best possible attitude to assume in re-integration examination (BARE). Mean scores (0–10) were calculated per function role, a higher score was concordant with a higher frequency.

**Results** In all 3 situations the roles of healthcare (7.3–7.7) and service provider (5.8–6.2) scored similarly. The coach role was highest in the BARE (8.2), followed by the OME (7.7) and the CARE (7.0). The expert role was predominantly in the BARE (8.2) compared to the OME (6.7) and the CARE (6.6). The score for controller increased gradually from 2.9 (OME), over 3.5 (CARE) to 4.8 (BARE).

**Discussion** The OHP is a healthcare and service provider in all circumstances. In the BARE the most important roles were those of expert and coach, followed by healthcare and service provider. Although the role of controller had the highest score in this situation, it still remained the less important of the five roles.

1221 CHANGES IN BODY MASS INDEX BEFORE AND AFTER LONG-TERM SICK LEAVE DUE TO CANCER AMONG WORKERS: J-ECHO STUDY

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**Introduction** To establish effective supporting system for workers returning from sick leave due to cancer is an emerging global issue. Better understanding of their physical conditions would provide important information to address this issue.

However, even simple information, for example, weight reduction by cancer type, is scarce in occupational settings. Here, we report body mass index (BMI) trajectories before and after long-term sick leave due to cancer among workers in Japan.

**Methods** This is a cohort study among workers in Japan who took sick leave (consecutive 30 days or more) due to cancer between April 2012 and March 2013 and returned to work until March 2014 using data from Japan Epidemiology Collaboration on Occupational Health Study. Follow-up was conducted using annual health examination data until March 2016. Longitudual data on BMI was extracted from the annual health examination database. BMI trend change before and after sick leave and effect modification by cancer type on the change was estimated using multivariable mixed models.

**Results** Over 90 000 workers belonged to the participating companies in 2012. One-hundred one workers newly took sick leave due to cancer in 2012. Data on BMI at least two time-points before and after sick leave each were available in 49 workers. Overall, weight reduction occurred after returning from sick leave from cancer (p<0.001). The tendency of weight reduction after returning from sick leave was significantly different by cancer type (p<0.001). Greater weight reduction was observed in esophageal and stomach cancer (n=10).

**Discussion** We found heterogeneity in weight reduction by cancer type after returning from sick leave due to cancer. The data suggest that occupational health professionals should pay more attention in weight reduction for workers who returned from long-term sick leave due to esophageal and stomach cancer.