COPD in construction workers

One-third of chronic obstructive pulmonary disease (COPD) in non-smoker construction workers is attributable to occupational exposures, according to this US case–control study. Data were drawn from a national medical screening programme of building trade workers and included 834 COPD cases and 1,243 controls. Occupational exposure was estimated from participants' job histories and frequencies of tasks known to generate vapours, gases, dusts and fumes (VGDF). COPD was significantly associated with most VGDF exposures, including silica, cement dust, engine exhausts, welding, metal cutting/grinding, isocyanates, organic solvents and wood dust. Only man-made mineral fibres and paint-related aerosols were not associated with COPD. The risk odds ratios for combined VGDF exposure ranged from 1.19 (95% confidence interval (CI) 1.09–1.30) at low-level exposures, to 2.03 (CI 1.43–2.87) at the highest exposures. The population attributable fraction of COPD due to occupational VGDF exposure was 18% for all building workers (CI 2%–24%) and 32% among those who had never smoked (CI 6%–42%).

- *American Journal of Industrial Medicine 2015; 58: 1083–1097. doi: 10.1002/ajim.22495*
- *http://onlinelibrary.wiley.com/doi/10.1002/ajim.22495/abstract*

Workplace interventions reduce chronic-disease sickness absence

There is very high quality evidence that workplace interventions can reduce total sickness absence in workers with chronic illness, compared with 'usual care', according to this Cochrane systematic review of 14 randomised controlled trials and meta-analysis. The interventions variously included altering the working conditions, equipment, design and environment, and, in 12 of the studies, case management involving the worker, manager and an OH professional. Impact on sickness absence was assessed after 12 months in 13 of the studies and after three and 10 years in the remaining one (which was excluded from the meta-analysis). Mean cumulative absence after 12 months was 166 days for the usual-care groups; this was reduced by 33 days in the intervention groups (CI 17–50). Interventions specifically for musculoskeletal disorders reduced total absence as well as the time to the first return to work and the time to a lasting return (moderate quality evidence). Interventions addressing mental health problems produced no significant improvement in sickness absence or time to a lasting return, but did reduce time to the first return (low quality).

- *Cochrane Database of Systematic Reviews 2015; 10: CD006955. doi: 10.1002/14651858.CD006955.pub3*
- *http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006955.pub3/abstract*

Improving return to work in cancer patients

There is moderate quality evidence that multidisciplinary interventions combining physical training and/or vocational counselling, with patient education and/or counselling can improve return-to-work (RTW) rates in cancer patients, this Cochrane systematic review finds. Fifteen randomised controlled trials involving 1,835 cancer patients in paid employment were included. There is low quality evidence from two studies that psycho-educational interventions alone did not improve RTW rates. No studies examined the effectiveness of vocational interventions.

- *Cochrane Database of Systematic Reviews 2015; 9: CD007569. doi: 10.1002/14651858.CD007569.pub3*
- *http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007569.pub3/abstract*

Does excessive sitting increase risk of death?

Sitting time does not increase the risk of mortality independently of time spent doing moderate to vigorous-intensity physical exercise (MVPA), results from the Whitehall II study of London-based

civil servants reveals. The analysis included 5,132 individuals (72% male) for whom health and activity data were available. Participants reported their weekly hours of sitting time at work and at home, giving estimates for the following five categories: work sitting (including commuting); sitting while watching television; leisure-time sitting not watching television; total leisure-time sitting; and total sitting time. There were 450 deaths during the 16-year study period (81,373 person-years). None of the five sitting categories was associated with all-cause mortality after controlling for age, gender, employment grade and ethnicity, or after further adjustment for smoking status, alcohol consumption, fruit and vegetable consumption, body mass index, physical functioning, daily walking time and MVPA. These results are inconsistent with previous findings linking sitting time to all-cause mortality; the relatively high degree of MVPA among London-based civil servants compared with the general population may be one reason for this disparity. Policy-makers should prioritise the need to increase daily physical activity rather than simply advocating less sitting time.

- *International Journal of Epidemiology, 2015; online first: doi: 10.1093/ije/dyv191*
- *http://ije.oxfordjournals.org/content/early/2015/10/09/ije.dyv191.abstract*

Intensive leisure-time physical activity improves work ability

Intensive leisure-time physical activity is associated with higher work ability among workers doing physically demanding work, analysis of the Danish Work Environment Cohort Study reveals. Work ability is a measure of a worker's physical and mental capacity in relation to the demands of their job, with poor work ability associated with long-term sickness absence, exit from the labour market and incapacity. The study investigated 2,952 workers who did a physically demanding job – defined as either performing standing or walking work with lifting tasks, or doing heavy and fast strenuous work. Work ability was self-assessed on a scale from 0 (poor) to 100 (excellent). Leisure activity was classified into three groups: (a) walking, cycling or other low-intensity exercise (no sweating or shortness of breath); (b) exercise training, heavy gardening or higher-intensity walking/cycling (sweating plus shortness of breath); and (c) strenuous exercise training or competitive sports. After adjusting for gender, age, lifestyle, work-related factors and chronic disease (eg asthma, depression), those doing at least five hours a week of high-intensity physical activity (categories b or c) scored eight points higher on the work ability scale, with a significant dose–response effect ($p < 0.0001$). Low-intensity leisure activity was not associated with work ability.

- *Scandinavian Journal of Public Health 2015; online first: doi: 10.1177/1403494815600312*
- *http://sjp.sagepub.com/content/early/2015/08/14/1403494815600312.abstract*

Return to work for those with chronic disease

A systematic review of studies of workers with chronic disease supports the hypothesis that work retention and return to work are influenced by factors other than those specific to the illness. The researchers classified various factors affecting work retention or return to work using the World Health Organization International Classification of Functioning, Disability and Health (ICF). Six studies met the inclusion criteria – five covering work retention but only one on return to work. A number of personal factors were negatively associated with work retention. These included: female gender (OR = 0.78; CI 0.74–0.81); older age – 55–59 years (OR = 0.87; CI 0.82–0.93) and 60–64 years (OR = 0.89; CI 0.82–0.97); and younger age – 20–24 years (OR = 0.85; CI 0.75–0.97). However, a higher socioeconomic status and being aged 25–44 years were positively associated with work retention. Among the other ICF factors, use of medication, night-time toilet use, motor control problems, comorbidity, workplace environment and financial considerations were also negatively associated with work retention. Younger individuals and those who predicted that they would return to work were more likely to come back to work.

- *International Archives of Occupational & Environmental Health 2015; 88(8) 1015–1029. doi: 10.1007/s00420-015-1025-2*
- *http://link.springer.com/article/10.1007%2Fs00420-015-1025-2*

HCV prevalence in healthcare workers

Healthcare workers (HCWs) have a statistically significant raised risk of hepatitis C virus (HCV) infection compared with population-based controls (mostly blood donors), according to this systematic review of 55 studies (27 from Europe). A meta-analysis of 44 studies showed a 50% raised risk of HCV infection in HCWs compared with controls (OR = 1.5; CI 1.15–2.06). Restricting the analysis to high- and moderate-quality studies yielded a similar raised risk (OR = 1.6; CI 1.03–2.42). A meta-analysis of studies only from countries with low HCV prevalence (Belgium, France, Denmark, Sweden, Scotland and USA) showed a greater raised risk (OR = 2.1; CI 1.31–3.42). The analysis also revealed a significant raised risk among medical staff and those at high risk of contacting blood, compared with population controls. Nursing staff were not found to be at raised risk; however, it was not possible to further differentiate the data according to whether or not the nurses were likely to be occupationally exposed to blood.

- *Occupational & Environmental Medicine 2015; online first: doi: 10.1136/oemed-2015-102879*
- *http://oem.bmj.com/content/early/2015/10/05/oemed-2015-102879.abstract*

Needlestick injuries and psychosocial factors

Psychosocial work characteristics among hospital nurses are not associated with the risk of sustaining a sharps or needlestick injury (NSI), according to a prospective study involving 1,791 female nurses across 12 hospitals in China. Fourteen psychosocial work characteristics – including physical and emotional demands, influence over work, freedom on when to take breaks, commitment to the workplace, job satisfaction, leadership and social support – were assessed using the Copenhagen Psychosocial Questionnaire. A follow-up questionnaire additionally asked respondents if they had experienced an NSI in the 12 months between the two surveys – 53% of nurses reported having experienced at least one NSI. Of the 14 psychosocial characteristics only quantitative work demands (‘do you have to work very fast?’) was marginally associated with increased self-reported NSI risk (relative risk = 1.13; CI 1.01–1.26). However, sustaining a NSI was associated with poorer scores for various psychosocial characteristics measured at follow-up. These included lower scores for perceived influence over work, commitment to the workplace, quality of leadership, social support and social community at work.

- *International Archives of Occupational & Environmental Health 2015; 88: 925–932. doi: 10.1007/s00420-015-1021-6*
- *http://link.springer.com/article/10.1007/s00420-015-1021-6*

Work-focused CBT with IPS job support

An ‘at work and coping’ (AWaC) intervention combining work-focused cognitive behavioural therapy (CBT) with supported employment – based on the ‘individual placement and support’ (IPS) model – helped improve work participation in workers struggling with mental health problems, particularly those who had been on long-term benefits. This Norwegian randomised controlled trial included 1,193 workers aged 18–60 who were either at risk of sick leave, on sick leave or on long-term benefits owing to a common mental health disorder. Participants in the AWaC group were offered up to 15 sessions of CBT and, where necessary, IPS. Individuals in the control group received ‘standard’ treatment from their GP along with a letter providing information and encouraging the use of self-help resources. Work participation was classified as: in regular work; a combination of being in work and receiving health- or work-related benefits; or out of work.

Participants in the AWaC group were significantly more likely than controls to have maintained or increased work participation at 12 months (44% of AWaC participants compared with 37% of controls; p = 0.015), with the difference remaining significant at 18 months. The difference was largest among participants on long-term benefits at the start of the study – 24% of such individuals in the AWaC group had increased work participation at 12 months, compared with 12% of those in the control group (p = 0.007). The figures were 30% and 11%, respectively, at 18 months. Those who had been on long-term benefits were also more likely than other participants to have received IPS.

- *Occupational & Environmental Medicine 2015; 72: 745–752. doi: 10.1136/oemed-2014-102700*
- *http://oem.bmj.com/content/72/10/745.abstract*