

Pilot fatigue study

Poor work–life balance, older age and being an evening chronotype are among the factors that predict fatigue among commercial airline pilots. Just under one-third (29.5%) of the 502 pilots completing the study were assessed as being fatigued on the Checklist Individual Strength questionnaire. Greater fatigue was significantly associated with: being aged 31–40 years (odds ratio (OR) = 3.36; 95% confidence interval (CI) 1.32–8.53) or aged 41–50 (OR = 4.19; CI 1.40–12.47) compared with those aged 21–30; being an evening rather than morning chronotype (OR = 2.40; CI 1.38–4.16); work–life balance disturbance (OR = 1.22; CI 1.10–1.36); higher ‘need for recovery’ (OR = 1.02; CI 1.01–1.04); and moderate alcohol consumption (OR = 3.88; CI 1.21–12.43). There was no association with gender, job title or haul type (ie long versus short haul). Lower fatigue levels were associated with higher general health perception (OR = 0.31; CI 0.20–0.47) and moderate physical activity (OR = 0.77; CI 0.66–0.89).

- *International Archives of Occupational and Environmental Health* 2016; online first: doi: 10.1007/s00420-016-1170-2. ohaw.co/2eRJQ86
- <http://link.springer.com/article/10.1007/s00420-016-1170-2>

Wearable technology did not improve weight-loss regime

Wearable technology that provides feedback on physical activity did not improve weight loss when added to a standard behavioural weight-loss intervention, this US randomised clinical trial found. A total of 470 overweight or obese participants (aged 18–35 years, 77% female) were randomised either to a standard behavioural weight-loss intervention (n = 233) or a technology-enhanced programme (n = 237). All subjects were placed on a low-calorie diet with prescribed increases in physical activity and group counselling. After six months, all participants were given telephone counselling, text-message prompts, and access to online study materials. Also at six months, those in the standard intervention group started online self-monitoring of their diet and physical activity; whereas those in the enhanced intervention group were provided with a wearable device to monitor physical activity as well as online self-monitoring of diet. After two years, participants in both the standard and enhanced groups had significant improvements in body composition, fitness, physical activity, and diet, with no significant difference between groups. Mean weight change after two years was actually lower in the standard (5.9 kg) than enhanced group (3.5 kg) (p = 0.02).

- *JAMA* 2016; 316(11): 1161–1171. doi: 10.1001/jama.2016.12858. ohaw.co/2fUXE69
- <http://jamanetwork.com/journals/jama/article-abstract/2553448>

Benefits of peer support following occupational trauma

Peer support from trained colleagues was beneficial in reducing sickness absence following occupational traumatic events (TEs), analysis of 259 cases recorded in Germany over 10 years has revealed. Germany’s statutory social accident insurers recommend ‘psychological first aid’ (PFA) for public transportation employees after they experience a TE. It comprises emotional support and reassurance given by colleagues in the hours after the incident. The study compared outcomes where an employee had either received PFA from trained colleagues (n = 95), PFA from trained superiors (n = 84), or had opted out of PFA (‘no intervention’, n = 80). All employees were obliged to contact occupational health after a TE. Compared with those receiving PFA from a colleague, sickness absence duration was significantly longer with increased TE severity (eg serious injury or fatality), older age and receiving PFA from a superior. The association between supervisor-provided PFA and absence duration was only apparent for less severe TEs; there was no association with more serious incidents. There was no significant difference between peer-support PFA and ‘no intervention’, though PFA was voluntary so there may have been some self-selection bias.

- *Occupational Medicine* 2016; online first: doi: 10.1093/occmed/kqw141. ohaw.co/2ezYfET
- <http://occmed.oxfordjournals.org/content/early/2016/10/24/occmed.kqw141.abstract>

Impact of atopic dermatitis on skin absorption

People with atopic dermatitis (with or without lesions) experience at least twice the absorption of chemicals through their skin, compared with healthy controls, this systematic review found. It included 40 studies, assessing dermal absorption of drugs (such as topical corticosteroids), dyes and chemicals found in personal care products, cosmetics and cleaning agents. The findings have implications both for the correct dosing of topical treatments for skin complaints and for risk assessments associated with environmental and occupational exposure to chemicals, for example in hairdressing, metalworking and healthcare.

- *British Journal of Dermatology* 2016; online first: doi: 10.1111/bjd.15065. ohaw.co/2eAzpFe
- <http://onlinelibrary.wiley.com/doi/10.1111/bjd.15065/abstract>

Bullied nurses react poorly to stress

Nurses exposed to bullying at work respond more negatively to stressful events than do non-bullied nurses, this Norwegian cohort study found. A total of 2,059 nurses participated; 1,582 completed the one-year follow-up. Exposure to bullying was estimated using the Negative Acts Questionnaire, anxiety symptoms were measured on the Hospital Anxiety and Depression Scale, while the Utrecht Coping List was used to assess coping style and generate a coping score. Participants were also asked how often they had been exposed to bullying. Victims of bullying had lower mean coping scores – ie they tended to use passive and avoidance behaviours rather than active coping strategies (eg problem solving) – and higher anxiety symptom scores. Higher coping scores reduced subsequent anxiety symptoms, but this was the case only at relatively low or zero levels of bullying. In other words, intensive bullying is detrimental to the victim's health regardless of how well they generally cope with stressful events.

- *Industrial Health* 2016; 54: 421–432. doi: 10.2486/indhealth.2015-0196. ohaw.co/2fBvnNB
- http://www.jniosh.go.jp/en/indu_hel/doc/IH_54_5_421.pdf

Low-back pain sickness absence

Various work and non-work factors significantly predict duration of sickness absence after six weeks off work with low-back pain (LBP), this systematic review of 22 papers found. Previous reviews have identified factors that predict sick leave during the 'acute' phase of LBP absence (0–6 weeks' absence) – such as recovery expectations, pain, disability, workplace physical factors, modified duties and workplace psychosocial factors. This review examined the 'sub-acute' (6–12 weeks' absence) and 'chronic' phases (more than 12 weeks' absence). Delayed return to work (RTW) was associated with: older age in both the sub-acute and chronic phases (moderate evidence); pain intensity in the chronic phase (moderate), but not in the sub-acute phase (strong evidence); and delayed referral for intervention in the chronic phase (strong). Quicker RTW was associated with healthcare interventions in the chronic and sub-acute phases (moderate); recovery expectations in the sub-acute phase (moderate) with insufficient evidence in the chronic phase; and lower physical work demands in the chronic phase (moderate) with insufficient evidence in the sub-acute phase. There was insufficient evidence on the impact of modified duties on RTW in the chronic phase and no published evidence for their impact in the sub-acute phase. There was a lack of research evidence on psychosocial work environment factors, such as social/co-worker support and job satisfaction, in both phases.

- *Journal of Occupational Rehabilitation* 2016; online first: doi: 10.1007/s10926-016-9666-x. ohaw.co/2fxKo48
- <http://link.springer.com/article/10.1007/s10926-016-9666-x>

Rotator cuff tendinopathy – treatment and return to work

There is low to moderate quality evidence that therapeutic exercises in clinical settings are effective in treating workers with rotator cuff tendinopathy and in promoting return to work (RTW), this systematic review of 10 studies found. There was moderate evidence that exercises were superior to placebo or no intervention in reducing pain and promoting RTW, and low-quality evidence that a work-based exercise programme was superior to one delivered in a clinical setting. There was low- to moderate-quality evidence that exercises and surgery were equally effective in pain relief, function and RTW. More high-quality studies are needed.

- *Journal of Occupational health* 2016; 58: 389–403. ohaw.co/2fRZyFd
- https://www.jstage.jst.go.jp/article/joh/58/5/58_15-0103-RA/_pdf

Fire fighters' cancer risk

Male professional fire fighters have a raised incidence of cancer compared with the general population, this Australian cohort study found. Eight of the 10 Australian state/territory fire agencies submitted records of all male paid fire fighters (17,394 full-time; 12,663 part-time). These were linked to the Australian Cancer Database and the National Death Index. Standardised incidence ratios (SIRs) compared with the general population were as follows: overall cancer risk for all paid fire fighters SIR = 1.09 (CI 1.03–1.14); prostate cancer in full-time fire fighters, SIR = 1.23 (CI 1.10–1.37) and in part-timers SIR = 1.51 (1.28–1.77); melanoma in full-timers SIR = 1.45 (CI 1.26–1.66) and part-timers SIR = 1.43 (CI 1.15–1.76). Prostate cancer and melanoma incidence increased with duration of employment and increasing number of fire and rescue incidents attended, suggestive of employment relatedness. Fire fighters' overall mortality risk was lower than the general population.

- *Occupational & Environmental Medicine* 2016; 73: 761–771. doi: 10.1136/oemed-2015-103467. ohaw.co/2eCY4c4
- <http://oem.bmj.com/content/73/11/761.short?rss=1>

Cleaners' lung cancer risk

Female cleaners working many years in domestic service had double the risk of lung cancer compared to women in the general population, this French case–control study revealed. There were 619 female cases (mean age 57) and 760 matched controls (mean age 60). Lung cancer risk was not significantly higher in women who had ever worked as a cleaner (OR = 1.07; CI 0.79–1.44), though it was approaching significance in those employed for more than seven years (OR = 1.42; CI 0.97–2.06). Professional cleaners had more than double the risk of lung cancer if they worked in domestic service for more than seven years (OR = 2.06; CI 1.15–3.66), with the risk confirmed for those who had worked exclusively in the sector (OR = 2.32; CI 1.17–4.60). Working as a cleaner in health and social work, hotels and restaurants, or other industries was not associated with raised risk, though it was close to significance for those working more than seven years in the education sector (OR = 3.39; CI 0.88–13.10). Domestic cleaners may have higher exposure to respiratory sensitisers and irritants and may be less likely to receive training than those working in industry.

- *Journal of Occupational & Environmental Medicine* 2016; 58(6): 610–616. doi: 10.1097/JOM.0000000000000722. ohaw.co/2ff2jyx

- http://journals.lww.com/joem/Abstract/2016/06000/Professional_Cleaning_Activities_and_Lung_Cancer.11.aspx