

Flu vaccine for healthcare workers

Offering influenza vaccination to healthcare workers (HCWs) caring for patients aged over 60 in long-term care institutions has little benefit, this Cochrane systematic review¹ concludes. Four cluster-randomised controlled trials and one cohort study were included in the review. Vaccination of HCWs had no impact on the number of patients who developed laboratory-confirmed influenza (pooled risk difference = 0.00%; 95% confidence interval (CI) -0.03– 0.03) (low quality evidence). It had no significant impact on patients' lower respiratory tract infections (moderate evidence), admission to hospital for, or deaths from, respiratory illness (both low-quality evidence). Influenza vaccine does not prevent infection in all cases: a previous systematic review² found that vaccinated HCWs had an average influenza rate of 4.8% per season (95% CI 3.23%–7.16%), compared with 7.54% (CI 4.86%–11.70%) in non-vaccinated HCWs.

- 1 *Cochrane Database of Systematic Reviews* 2016; 6: CD005187. doi: 10.1002/14651858.CD005187.pub5. ohaw.co/2cy9i59
- <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005187.pub5/full>
- 2 *PloS One* 2011; 6(10): e26239. doi: 10.1371/journal.pone.0026239. ohaw.co/2bX34gl
- <http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0026239>

TB in healthcare workers

UK healthcare workers (HCWs) are not at increased risk of tuberculosis (TB) infection compared with non-HCWs once their country of birth is factored in, this cohort analysis of all TB cases recorded in the UK between 2009 and 2013 finds. There were 34,573 TB cases among adults aged 16–64, with occupation recorded for 87% of them. HCWs accounted for 2,320 cases (7.7% of all cases where occupation was known). The overall incidence of TB was 23.4 cases per 100,000 HCWs (CI 22.5–24.4) compared with 16.2/100,000 non-HCWs (CI 16.0–16.3); an incidence rate ratio (RR) of 1.5 (CI 1.4–1.5). However, after stratification by country of birth the incidence rate was not significantly higher among HCWs than non-HCWs for nearly all countries of birth, including for those born in the UK (RR = 1.0; CI 0.9–1.1), India (RR = 0.8; CI 0.7–0.9), Philippines (RR 1.2; CI 1.0–1.5), Pakistan (RR = 0.9; CI 0.8–1.1) and Nigeria (RR = 0.8; CI 0.7–1.0). These five countries, along with Zimbabwe (RR = 1.2; CI 1.2–1.6), account for the vast majority of UK HCW cases. There were just four confirmed cases of HCWs acquiring TB from a patient in the UK during the study period.

- *Thorax* 2016; online first: doi: 10.1136/thoraxjnl-2015-208026. ohaw.co/2c7A1kH
- <http://thorax.bmj.com/content/early/2016/02/17/thoraxjnl-2015-208026.abstract>

Violence de-escalation strategies in acute care

There is a lack of good-quality evidence on the use of violence de-escalation strategies to prevent aggressive behaviour in psychiatric patients in acute healthcare settings, this systematic review finds. It included 29 studies undertaken in acute care settings, such as emergency departments, but excluded trials in long-term psychiatric units. There is low-quality evidence that, compared with 'usual care', using risk assessment protocols can reduce both the incidence of aggressive behaviour and the use of restraints or seclusion, but there is insufficient evidence to support a range of other strategies, such as staff training and various medication protocols. Evidence quality was either low or insufficient, with a failure to control properly for potential confounding factors in the 11 controlled trials, and a high risk of bias in the 18 before-and-after intervention studies among the reasons for downgrading the evidence.

- *Comparative Effectiveness Review no. 180*. Rockville, MD, USA: Agency for Healthcare Research and Quality. ohaw.co/2bQzJy1

- <http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?productid=2256&pageaction=displayproduct>

Weight loss by diet reduces muscle strength

Diet-induced weight loss results in a significant reduction in knee extensor strength in overweight or obese adults this systematic review of 27 included papers and meta-analysis finds. In the meta-analysis, knee-extensor strength fell by 7.5% compared with baseline levels ($p < 0.001$). An observed decrease in hand-grip strength was not statistically significant. Weight training or other physical exercise should accompany weight loss by diet.

- *Obesity Reviews* (2016) 17, 647–663. doi: 10.1111/obr.12422. [ohaw.co/2clz7Dn](http://onlinelibrary.wiley.com/doi/10.1111/obr.12422/abstract)
- <http://onlinelibrary.wiley.com/doi/10.1111/obr.12422/abstract>

Mindfulness training for managers

Middle managers who took part in a mindfulness-based stress-reduction (MBSR) training course had lower perceived work-related stress, at least in the short term, according to this randomised controlled trial. All participants were middle managers, aged over 26, with no serious mental or physical health conditions, and no previous training in MBSR. In total, 156 participants, from 30 companies, were randomised either to the intervention or a wait-list control – 144 completed the trial. The intervention comprised eight weekly three-hour MBSR group sessions, one seven-hour group session and an individual follow-up session. Outcomes were measured three months later. Compared with the wait-list group, MBSR participants scored lower for perceived work-related stress, negative affectivity, intensity of somatic complaints, and sickness absence (which, for the MBSR group fell from 4.5 days in the three months prior to the intervention, to 1.4 days in the three months after the intervention) and higher for self-esteem ($p < 0.001$ for all comparisons). Study limitations include the short follow-up time and that the control group received no intervention – such as being provided with information on work-related stress – so the placebo effect cannot be ruled out.

- *Occupational Medicine* 2016; online first: doi: 10.1093/occmed/kqw091. [ohaw.co/2cAFBxs](http://occmed.oxfordjournals.org/content/early/2016/07/20/occmed.kqw091.abstract)
- <http://occmed.oxfordjournals.org/content/early/2016/07/20/occmed.kqw091.abstract>

Alleviating shift workers' sleep problems

It is not possible, from current evidence, to determine if any of a range of non-pharmaceutical interventions – such as bright light exposure, naps, physical exercise or sleep education – can benefit people suffering sleep-related problems associated with shift work, this Cochrane systematic review of 17 randomised controlled studies finds. Ten studies tested the effect of exposure to bright light during shifts. Design flaws meant it was impossible to determine if any of the observed effects were due to the bright light or to other factors. Four trials studied napping and three looked at other interventions (eg sleep education and physical exercise) but they all reported insufficient information for useful conclusions to be drawn. Larger, better-designed studies are needed, with consideration also given to workers' chronotypes (whether they are morning or evening types).

- *Cochrane Database of Systematic Reviews* 2016; 8: CD010641. doi: 10.1002/14651858.CD010641.pub2. [ohaw.co/2colnqs](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010641.pub2/full)
- <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010641.pub2/full>

Occupational hearing loss in railway workers

Railway employees are generally not at increased risk of occupational noise-induced hearing loss (NIHL), according to this longitudinal study. All 9,640 participants were employees of the Norwegian State Railway and were examined regularly as part of their mandatory medicals. They were observed for an average of 10 years between 1991 and 2014. Only those workers with two complete audiograms were included. The data were adjusted for duration of follow-up, age, sex and occupation and assessed according to occupational group (train drivers, conductors, bus drivers, traffic controllers, train maintenance, track maintenance and others). Older age was a significant predictor of permanent threshold shifts (PTS) in both the 3–6 kHz and 0.5–4 kHz ranges; male gender was associated with PTS in the 3–6 kHz range. Occupation had only a small effect on PTS: 2.4–3.2 dB shift in the 0.5–4 kHz range and 6.3–7.0 dB in the 3–6 kHz range for all occupational groups and was only significantly predictive for track maintenance workers (PTS = 3.2 dB at 0.5–4 kHz, $p < 0.05$; and 7.6 dB at 3–6 kHz, $p < 0.01$). Railway workers' hearing losses were similar to non-noise exposed references (taken from the ISO 1999 standard on the estimation of NIHL).

- *BMJ Open* 2016; 6:e011923. doi: 10.1136/bmjopen-2016-011923. ohaw.co/2ctklnx
- <http://bmjopen.bmj.com/content/6/9/e011923.abstract>

Impact of mid-life physical limitations on later life

Individuals reporting physical limitations in mid life are more likely to retire for negative reasons – eg poor health, partner's health, becoming a carer, bereavement, redundancy, unhappy at work or work problems – both before and after state pension age (SPA) and less likely to undertake bridge employment (paid work after retiring from main occupation), this British study reveals. A cohort of 5,262 people born during one week in 1947 was followed up at ages 26, 36, 43, 53, 60–64 and 68 years. Difficulties with various physical tasks (such as walking up and down stairs or removing a tight lid) owing to health problems were reported at age 53. Cognitive and physical performance capabilities were also assessed. After adjustment for confounders, those with three to four physical limitations at age 53 were 3.15 times as likely to retire at or before SPA for a negative reason (CI 1.07–9.26) and 3.98 times as likely to retire after SPA for a negative reason (CI 1.34–11.88) compared with those with no limitations. Individuals with high scores for physical or cognitive performance at the age of 53 were more likely than those with low scores to participate in bridge or voluntary work later in life.

- *Scandinavian Journal of Work, Environment and Health* 2016; online first: doi: 10.5271/sjweh.3589. ohaw.co/2cdXYtN
- http://www.sjweh.fi/show_abstract.php?abstract_id=3589

Workaholics suffer sleep problems

Working excessively and compulsively is associated with poor sleep and having a raised risk of cardiovascular disease, this study of 537 employees in five Spanish hospitals found. The Dutch Work Addiction Scale was used to classify participants as either: positive (low score for working excessively and low score for working compulsively; $n = 219$); compulsive (high compulsive, low excessive; $n = 96$); hard working (high excessive, low compulsive; $n = 60$); or workaholic (high scores for both; $n = 162$). Hard workers and workaholics had higher scores than the other two groups for morning tiredness and sleeping while driving ($p < 0.05$). Workaholics slept fewer hours during the week ($p < 0.01$) and at weekends ($p < 0.05$) and had poorer sleep quality compared with the other groups ($p < 0.05$). They also had higher scores on the Framingham Index, which estimates the risk of having a cardiovascular event over the next 10 years ($p < 0.05$). Other risk factors, including hypertension, being overweight, obesity and tobacco consumption, did not differ between the groups.

- *Work & Stress* 2016; 30(3): 228–242. doi: 10.1080/02678373.2016.1203373. ohaw.co/2ce1Knd
- <http://www.tandfonline.com/doi/full/10.1080/02678373.2016.1203373>