

## Whole-body vibration

There is an increased risk of both low back pain (LBP) and sciatica from occupational exposure to whole-body vibration (WBV), according to this systematic review of 27 studies (11 of high quality) and meta-analysis (of 20 studies). Exposure to WBV doubled the risk of LBP compared to those with no exposure (odds ratio (OR) = 2.2; 95% confidence interval (CI) 1.6–2.9) and sciatica (OR = 1.9; CI 1.4–2.7). Risk of LBP was increased by 50% when comparing 'high' as against 'low' exposure to WBV (OR = 1.5; CI 1.3–1.7), with similar results for sciatica (OR = 1.5; CI 1.2–1.8), indicating a possible dose–response relationship. However, exposure level is not defined and, as the authors note, what was considered as 'high' or 'low' exposure probably differed from one study to the next.

- *International Archives of Occupational and Environmental Health* 2014; online first: doi: 10.1007/s00420-014-0971-4.
- <http://link.springer.com/article/10.1007%2Fs00420-014-0971-4>

## Recovery expectations and return to work: systematic review

Patients with lower expectations of recovery are less likely to return to work (RTW) than those with high expectations, this systematic review finds. Forty-six studies published to June 2014 met inclusion criteria, but 27 of these were rated as having low methodological quality, and just two were randomised controlled trials. The majority studied people with back pain (17 studies) or other musculoskeletal disorders (16 papers). All but two papers found an association between expectations and recovery. There was no validated 'gold standard' method of assessing expectations of recovery, with the various measures – such as the Expectations of Recovery Scale, Work-related Recovery Expectations questionnaire, or stand-alone questions about RTW likelihood – not rigorously tested.

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## Recovery expectations and return to work: cohort study

A prospective cohort study of people undergoing physiotherapy for work-related musculoskeletal disorders of the back or neck (published after the above systematic review) found that lower expectations of recovery not only lowered the probability of a return to work (RTW) but also mediated the relationship between depressive symptoms and RTW. It followed 140 consecutive patients referred to six physiotherapy clinics with a primary diagnosis of 'lumbar or cervical sprain' and who were receiving sickness benefits. Each was given three physiotherapy sessions a week for up to seven weeks, or until they returned to work, if earlier. Depressive symptoms, pain severity and personal factors were assessed using a self-report questionnaire at the start of the study. Participants were also asked to rate as a percentage their likelihood of returning to some form of employment within the next month. RTW at 12 and 24 months was established by telephone contact (109 patients were successfully followed up). High scores for depressive symptoms (at least 14 on the Beck Depression Inventory) and poor recovery expectations (self-rated less than 62.5%) were both associated with low RTW rates ( $p = 0.01$  and  $< 0.001$ , respectively). Recovery expectations remained predictive of RTW status in the regression analysis, after controlling for personal and demographic factors ( $p < 0.001$ ). However, after controlling for expectations, depressive symptoms were no longer predictive ( $p = 0.09$ ).

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- <http://link.springer.com/article/10.1007%2Fs10926-014-9543-4>

## Ageing workers

There is a shortage of evidence to support the use of work-related interventions to promote sustainable employability of older workers, this systematic review concludes. The inclusion criteria were studies investigating workers aged over 40 years, and which examined positive measures of workforce participation. Just four papers met these criteria; three of high and one of low methodological quality. There is inconsistent evidence for a positive impact of interventions, either on older workers' work ability or their productivity. However, there is limited evidence from two studies that interventions can reduce early retirement. One of these comprised OH consultations, the devising of an action plan with recommendations for adjustments and, where necessary, specialist referral; and the other examined financial support for rehabilitation and workplace adjustments.

- *International Archives of Occupational and Environmental Health* 2014; online first: doi: 10.1007/s00420-014-0969-y.
- <http://link.springer.com/article/10.1007/s00420-014-0969-y>

## Psychological work factors increase MSD risk in nursing care staff

Psychological work factors are predictive of upper limb and neck musculoskeletal disorders (MSDs) among female staff working in elderly care nursing homes, according to this large-scale cross-sectional study of 2,328 housekeepers, nursing assistants and nurses in 105 nursing homes in France. All the employees had worked in their current job for at least 12 months and were given a questionnaire (98% participation) administered by 72 occupational physicians, covering personal, health and work-related characteristics. MSDs during the previous 12 months were assessed using the 'Nordic' upper limb and neck discomfort questionnaire. Psychosocial exposure was estimated using the Siegrist effort–reward imbalance (ERI) questionnaire. One-year prevalence rates were as follows: disorders affecting the neck – 50%; shoulder – 38%; wrist – 22%; and elbow – 10%. ERI was reported by 9% and over-commitment (an excessive striving and inability to withdraw from work obligations) by 42% of participants. After adjusting for individual and occupational factors, experiencing ERI was significantly predictive ( $p < 0.001$ ) of MSDs of the neck (prevalence ratio (PR) = 1.30; CI 1.16–1.45), shoulder (PR = 1.30; CI 1.13–1.48), elbow (PR = 1.69; CI 1.20–2.37) and wrist (PR = 1.49; CI 1.22–1.82). Similarly, over-commitment was predictive of MSDs in each of the four locations. Age was associated with higher rates of shoulder, neck and wrist complaints. The study did not distinguish between new and recurrent MSDs, however.

- *Industrial Health* 2014; 52: 334–46. [ohaw.co/1tqOptq](http://ohaw.co/1tqOptq).
- [https://www.istage.ist.go.jp/article/indhealth/52/4/52\\_2013-0223/pdf](https://www.istage.ist.go.jp/article/indhealth/52/4/52_2013-0223/pdf)

## Lifestyle counselling for overweight male workers

A randomised controlled trial in Finland demonstrated significant and sustained improvements in body weight and cardio-metabolic risk factors for overweight long-distance lorry and bus drivers who participated in a structured programme of monthly lifestyle counselling. Fifty-five men with waist circumferences greater than 100 cm (39.4 inches) were randomised into the 12-month lifestyle-counselling group, which comprised monthly counselling on diet, physical activity and sleep hygiene. Fifty-five were randomised to a waiting-list reference group, who followed their previous lifestyle but were given lifestyle counselling after one year. After 12 months, mean body weight had decreased by 3.4 kg in the intervention group ( $p = 0.001$ ) but had increased by 0.7 kg in the control group (not statistically significant) – net difference (ND) = -4.0 kg (CI -1.9–6.2). There were significant reductions in waist circumference (ND = -4.7 cm; CI -6.6–2.7), fat mass (ND = -3.1 kg; CI -4.9–1.4) and metabolic risk 'z' score (ND = -1.2 points; CI -0.6–2.0), but not in mean systolic blood pressure, glucose, total cholesterol, low- and high-density cholesterol, and triglyceride concentrations. The improvements were sustained after 24 months. After counselling,

the reference group showed similar improvements so that the differences between the groups were no longer significant at 24 months.

- *Scandinavian Journal of Work Environment and Health* 2014; online first: doi: 10.5271/sjweh.3463.
- [http://www.sjweh.fi/show\\_abstract.php?abstract\\_id=3463](http://www.sjweh.fi/show_abstract.php?abstract_id=3463)

### Workplace adjustments

There is moderate-quality evidence that specific types of workplace adjustments (called 'accommodations' in this Finnish paper) can be effective and cost-effective in promoting employment among people with physical disabilities, this systematic review of 11 included studies finds. There is moderate-quality evidence that specific adjustments – vocational counselling, education and self-advocacy, help of others, changing work schedules, work organisation and special transportation – help maintain employment, as well as reduce costs. There is low-quality evidence, from one non-randomised study, that adjustments coordinated by a vocational rehabilitation case manager increase return-to-work rates for people recovering from a traumatic brain injury and are cost-effective. Facilitators and barriers to employment include: self-advocacy; employer and community support; the amount of training and counselling received by the disabled person; and flexibility with respect to work schedules and organisation.

- *Journal of Occupational Rehabilitation* 2014; online first: doi: 10.1007/s10926-014-9548-z.
- <http://link.springer.com/article/10.1007/s10926-014-9548-z>

### Psychotherapy for PTSD

Various specific and non-specific psychological interventions are effective in reducing symptoms of post-traumatic stress disorder (PTSD) in adults, according to this systematic review and meta-analysis, with no single therapy standing out as superior. The review included 66 randomised trials where trauma-focused interventions were compared either with each other, with a non-specific therapy, or a waiting-list control. The five studied interventions were: cognitive behavioural therapy (CBT – 31 trials, five of large scale), exposure-based therapies (23 trials, three large scale), eye movement desensitisation and reprocessing (EMDR – 20 trials, none large scale), other psychological interventions (14 trials, one large scale) and cognitive therapy (six trials, none large scale). The non-specific interventions were stress management (SM) or supportive therapies (ST). Effect sizes (ESs) were calculated from the meta-analysis – those of -0.2%, -0.5% and -0.8% represent small, moderate and large differences between interventions, respectively. All five interventions produced large ESs of -1.10 to -1.37, compared with -0.58 and -0.62 for SM and ST, but only EMDR produced a significant improvement over ST. Between-trial heterogeneity was generally high, but lower in those studies with adequate concealment when allocating individuals to the interventions, while the smaller studies had greater bias (causing overestimation of ESs). EMDR is 'promising' but lacks evidence from large, high-quality trials; current evidence is more robust for CBT and exposure-based therapies.

- *Psychological Medicine* 2014; 44: 3151–3164.
- <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9361530&fileId=S0033291714000853>

### Internet-based CBT reduces absence rates

Analysis of aggregated data from five previously published randomised controlled trials of internet-delivered cognitive behavioural therapy (iCBT) found a significant reduction in sickness absence taken by employed individuals with common mental health problems. It included 306 participants,

70% women and mean age 43 years. The iCBT courses – two involving workers with depression, two with generalised anxiety disorder, and one with social phobia – consisted of six online sessions, homework, work assignments and other resources. Mean baseline absence in the previous week was 0.64 days (standard error (SE) 0.09) for the intervention groups and 0.83 days for the control groups (SE 0.13). After the intervention, absence fell to 0.35 days (SE 0.09) for the intervention groups, but rose marginally to 0.93 days (SE 0.12) among the controls ( $p = 0.03$ ). There were no significant differences within the three disorder groups.

- *Medical Journal of Australia* 2014; 201: 417–419.
- <https://www.mja.com.au/journal/2014/201/7/occupational-impact-internet-delivered-cognitive-behaviour-therapy-depression-and>

### **Physical activity reduces depression risk in adults**

Analysis of the 1958 British Birth Cohort – a population sample of 18,558 people born in a single week in March 1958 – indicates a link between physical activity in adult life and depressive symptoms. Depressive symptoms were assessed at ages 23, 33, 42 and 50 years using a subscale of the Malaise Inventory. Mean leisure-time physical activity for men varied from 1.37 times a week at age 23, to 2.65 times a week at age 50, and 0.63 to 2.85 times a week for women over the same period. Increased physical activity was associated with fewer depressive symptoms, irrespective of age. The mean number of symptoms was lower by 0.13 for every additional unit of physical activity per week at age 23 (CI -0.16–0.11) and by 0.06 at age 50 (CI -0.09–0.04). Increasing physical activity from zero to three times a week five years later reduced the probability of having depression by 19% (odds ratio = 0.81; CI 0.76–0.87). Having more depressive symptoms was also predictive of taking less physical activity in younger age groups, with the association weakening with age.

- *JAMA Psychiatry* 2014; online first: doi: 10.1001/jamapsychiatry. 2014.
- <http://archpsyc.jamanetwork.com/article.aspx?articleid=1916903>