

Occupational asthma interventions

A Cochrane systematic review of workplace interventions to treat occupational asthma finds that both exposure reduction and elimination can reduce symptoms, but only exposure removal improves lung function. Twenty-one before-and-after studies met inclusion criteria; however, research quality was generally low. Removal from exposure, as measured in 15 studies, significantly reduced the chances of reporting no asthma symptoms (risk ratio 21.4) and improved forced expiratory volume (FEV). Exposure reduction, as assessed in six studies, also increased the likelihood of reporting no symptoms (RR 5.3) but had no impact on FEV. Two of the studies found that workers who had been removed from exposure were significantly more likely to be unemployed; exposure reduction did not increase the risk of job loss.

- *Cochrane Database of Systematic Reviews 2011; 5: CD006308: doi: 10.1002/14651858.CD006308.pub3*
- <http://www2.cochrane.org/reviews/en/ab006308.html>

Differentiating occupational asthma

Rest–work differences in peak expiratory flow (PEF) measurement is the best indicator to separate workers with occupational asthma (OA) from non-occupational asthma or irritant-exposed healthy workers. This UK study followed three groups of workers: those with confirmed OA; those with non-occupational asthma; and healthy workers exposed to high levels of a respiratory irritant (grain dust). A 16 litres/minute difference (3%–4%) in PEF between work and rest days was found to separate OA patients from the other groups, with 70% diagnostic sensitivity; however, a change in diurnal variation in PEF between work and rest days was unhelpful.

- *Occupational Medicine 2011; 61: 190–195*
- <http://occmmed.oxfordjournals.org/content/61/3/190.abstract>

Carpal tunnel syndrome

A systematic review and meta-analysis finds that ‘minimally invasive surgery’ results in faster return to work (RTW) than open carpal tunnel release, with a mean difference of seven days. Fifteen randomised controlled trials were included, covering 1,512 patients; however, the meta-analysis is only based on four of the studies owing to insufficient data in the others. An inconsistency in the way RTW is measured is noted.

- *Journal of Occupational Rehabilitation 2011; online first: doi: 10.1007/s10926-011-9310-8*
- www.springerlink.com/content/1053-0487/

Shift work and body weight

This systematic review of longitudinal studies finds strong evidence for a crude association between shiftwork and increased body weight. Eight studies met inclusion criteria, five of high quality. A potential mediating factor is physical activity during leisure time – shift workers may be less physically active – but none of the studies analysed this possibility. Future studies should include detailed analysis and more precise measurement of confounding and mediating factors, such as physical activity, health habits, age, and body weight at baseline.

- *Scandinavian Journal of Work Environment & Health 2011; 37(4): 263–275*
- www.sjweh.fi/show_abstract.php?abstract_id=3143

Work stress and CVD

A systematic review provides further, moderate, evidence that psychosocial factors at work are associated with cardiovascular disease (CVD). However, none of the commonly used models to explain occupational stress – eg ‘demand–control’ (job strain) and ‘effort–reward imbalance’ models – are able to explain fully the relationship between stress and CVD outcomes. There were significant associations between stress and CVD in 14 of the 26 studies, with all but one showing increased disease risk at higher stress exposure. Most of the significant results came from studies that only looked at men and there is no clear evidence from the included studies to support an occupational stress–disease relationship in women. It remains unclear whether individual factors, such as coping and over-commitment, contribute more or less to CVD than job factors, such as time pressure and work organisation.

- *International Archives of Occupational & Environmental Health* 2011; online first: doi: 10.1007/s00420-011-0643-6
- www.springerlink.com/content/40816j8072164447/

No link to low back pain

There is no evidence from eight systematic reviews, covering 99 studies, that occupational physical activity causes low back pain (LBP), although individual workers may attribute it to their work. There is no strong causal relationship between occupational physical activity and LBP, and there is conflicting evidence of an association (not causal) between LBP and bending, twisting, lifting, and pushing and pulling. There is strong evidence that assisting patients, manual handling, carrying, awkward postures, sitting, standing and walking does not cause LBP. Methodological weaknesses are common and need to be addressed in future research.

- *Occupational Medicine* 2011; online first: doi:10.1093/occmed/kqr092
- <http://occmed.oxfordjournals.org/content/early/2011/07/04/occmed.kqr092.abstract>

e-CBT for chronic back pain

A 12-week internet-based cognitive behavioural therapy intervention showed significant but limited benefits for patients with chronic back pain. Fifty-four people took part in the study, 26 were randomised to a self-help, CBT-based management programme, and 28 to a control group. Outcome measures included coping strategies, pain beliefs, hospital anxiety and depression and quality-of-life scales, but only two significant effects were observed: catastrophising and quality-of-life scores.

- *Journal of Rehabilitation Medicine* 2011; 43: 500–505
- www.medicaljournals.se/jrm/content/?doi=10.2340/16501977-0805

Work-focused back pain counselling

Two work-focused counselling sessions conducted by an occupational physician aimed to address workplace barriers and improve physical activity in workers with low back pain (LBP). The randomised controlled trial involved 300 LBP patients who, independently of sickness absence, were concerned about their ability to remain in their current job. None were being referred for surgery. It resulted in significant improvements in physical functioning, pain score and reduced LBP-related sick leave after three months' follow-up.

- *Occupational & Environmental Medicine* 2011; online first: doi:10.1136/oem.2010.064055
- <http://oem.bmj.com/content/early/2011/05/19/oem.2010.064055.abstract>

Bright light can help shift workers

Short-term bright light exposure improved dayshift performance and decreased daytime sleepiness in nurses working rotating shifts. The randomised crossover study involved two groups of hospital nurses working rapidly rotating day and night shifts. Subjects were exposed to bright light for 10 minutes before the morning shift. Thirty-one of the 61 participants received the intervention for the first month and the remaining 30 did the same for the second month. There were significant improvements in self-assessed sleepiness at 10.00 am (but not at 2.00 pm), sleep satisfaction and fatigue in those workers exposed to bright light. Subjects also showed significant improvements on the psychomotor vigilance task test.

- *Journal of Occupational Health* 2011; online first: doi:10.1539/joh.L10118
- www.jstage.jst.go.jp/article/joh/advpub/0/advpub_1105160187/_article

Anxiety disorders

A meta-analysis of 15 randomised or quasi-randomised trials of cognitive behavioural interventions for anxiety disorders, found significant improvements in anxiety, depression and disorder-specific symptoms, although the effects diminished after six and 12 months. Effect sizes were small to moderate.

- *Journal of Anxiety Disorders* 2011; 25: 749–760
- www.sciencedirect.com/science/article/pii/S0887618511000302