

Hepatitis C treatment

A systematic review (90 papers) finds that first-time-treatment patients receiving triple antiviral therapy for hepatitis C infection are more likely to achieve sustained virological responses (SVR – absence of detectable virus) compared with dual therapy. Triple therapy regimens were based on pegylated interferon, ribavirin, and either boceprevir or telaprevir; dual therapy comprised pegylated interferon plus ribavirin. Triple therapy resulted in SVRs of up to 80% for genotype 1 patients (the most common in the UK) and these patients were significantly more likely (by 22–31 percentage points) to achieve SVR than those on dual therapy. Adverse haematological events, such as rash and anaemia, were more likely with triple therapy, however. Individuals on dual therapy with interferon alpha-2b were slightly but significantly less likely to achieve SVR than those on dual therapy with interferon alpha-2a. For genotypes 2 and 3 patients, dual therapy for 24 weeks was superior to shorter regimens of 12–16 weeks. No studies looked at long-term clinical outcomes.

- *Treatment for hepatitis C virus infection in adults. Comparative Effectiveness Review no. 76. AHRQ Publication No. 12(13)-EHC113-EF. Rockville, MD: Agency for Healthcare Research and Quality, 2012*
- <http://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=1299>

Active interventions to reduce sickness absence

Previous systematic reviews of workplace health interventions have tended to examine only health outcomes; this Norwegian review focused specifically on sickness absence and was also restricted to 'active' interventions (requiring the subject to be active) aimed at changing worker behaviour or beliefs; 17 studies from 2,036 retrieved articles met inclusion criteria. The Cochrane Collaboration Back Review Group's 2003 criteria for deciding quality of evidence was used to determine the overall standard of evidence for each intervention type in the synthesis. The interventions that reduced absence were: graded activity (moderate evidence); cognitive behavioural therapy (limited evidence); and the Sheerbrooke model, a multi-disciplinary comprehensive intervention including both workplace adjustment and a clinical component (limited evidence). There is moderate evidence that workplace physical exercise programmes do not reduce absence. Current evidence does not support the use of active workplace interventions as tools simply to reduce sickness absence, though they may have other benefits.

- *Occupational Medicine 2013; 63(1): 7–16*
- <http://occm.oxfordjournals.org/content/63/1/7.abstract>

Return to work after angioplasty

Self-rated health is a better predictor of return to work following percutaneous coronary intervention (coronary angioplasty) than clinical measures, such as left ventricular ejection fraction (LVEF), according to this Danish population-based study. A total of 1,323 first-time patients completed a questionnaire one month after the intervention. Self-rated general, mental and physical health at four weeks, were each strongly associated with return to work at 12-week and one-year follow-up, with strong dose–response effects. LVEF was also predictive of return to work, but not as powerful a predictor as self-rated health. Age, gender and whether the intervention was elective or acute were not important predictors.

- *PloS One 2012; 7(11): e49268*
- <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0049268;jsessionid=4E6ABB5832F2F075F043CC7F7386365>

Miscarriage systematic review

A systematic review and meta-analysis finds only small or non-significant increased risks of miscarriage associated with physical working conditions (30 included papers). Pooled risk estimates for miscarriage were significantly higher for those working fixed nightshifts (relative risk 1.51; 95% confidence interval (CI) 1.27–1.78) but not for those working three-rotating shifts. After excluding low-quality studies, there was no increased risk associated with prolonged standing (at least six hours a day) or long working hours. Two prospective studies showed a marginally raised risk of miscarriage with higher physical workload, but it was not feasible to pool the risk estimates owing to differences in study designs. The authors say there is no current case to impose mandatory restrictions in the studied risk areas, but it may be sensible to advise women against work that entails high-level exposures.

- *Scandinavian Journal of Work Environment and Health* 2012; online first: doi: 10.5271/sjweh.3337
- http://www.sjweh.fi/show_abstract.php?abstract_id=3337

Lifting risks during pregnancy

A nationwide population-based cohort study in Denmark found an exposure–response relationship between occupational lifting and miscarriage. (The study was not included in the miscarriage systematic review reported above.) It included 71,500 pregnancies of women who had been working at least 15 hours a week at the time of, or within three months before an interview carried out at gestational weeks 12–16. The majority of foetal losses (n = 2,032) happened before the scheduled interview, and exposure data were collected retrospectively. Participants were asked about the frequency and scale of any daily lifting. Pregnancy outcomes were obtained from national registry data. The risk of early miscarriage increased significantly with increased total daily load lifted ($p < 0.0001$) – with women who lifted cumulatively more than 1,000kg a day at double the risk of early miscarriage compared with those who did not lift at work (hazard ratio 2.02; CI 1.23–3.33). The risk of late miscarriage was higher in women lifting more than 200kg a day (HR 1.42; CI 1.15–1.76). Results were similar when only first-time pregnancies of singleton births were included. Lifting was not associated with stillbirth. One quarter of women who reported lifting at work were involved in handling people.

- *Scandinavian Journal of Work Environment and Health* 2012; online first: doi: 10.5271/sjweh.3335
- http://www.sjweh.fi/show_abstract.php?abstract_id=3335

No benefit from general health checks

This Cochrane systematic review^{1,2} (16 randomised controlled trials met inclusion criteria) and meta-analysis finds no evidence to support the use of routine health checks in adults. Fourteen of the trials, with a total patient population of 182,800, were included in the meta-analysis. Health screening did not reduce mortality either generally (risk ratio = 0.99; CI 0.95–1.03) or for cardiovascular disease (RR = 1.03; CI 0.91–1.17) or cancer (RR = 1.01; CI 0.92–1.12). It had no impact on morbidity, admissions to hospital, disability, worry, additional visits to the general practitioner, or absence from work. There was some evidence (from one trial) that health screening resulted in greater numbers of new diagnoses, and (from two trials) that it increased the numbers of people on antihypertensive medication. Evidence from two trials that screening slightly improved self-reported health was not considered robust. The findings do not imply that physicians should stop clinically motivated testing and preventive activities, as these may be important reasons why systematic health checks showed no effect. Also, the results do not imply that all individual components of the health checks are ineffective, since effects of harmful components may have

balanced out effects of beneficial ones.

- 1 *BMJ* 2012; 345: e7191
- <http://www.bmj.com/content/345/bmj.e7191>
- 2 *Cochrane Database of Systematic Reviews* 2012; 10; Article no: CD009009. DOI: 10.1002/14651858.CD009009.pub2
- <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009009.pub2/abstract>

Acupuncture for chronic pain

A systematic review of randomised-controlled trials and meta-analysis finds that acupuncture results in significant improvement in four types of chronic pain (back and neck pain, osteoarthritis, chronic headache, and shoulder pain) when compared with 'sham acupuncture' (where the patient is led to believe they are getting acupuncture but, for example, the needles either don't penetrate the skin or are not inserted into traditional acupuncture sites) and non-acupuncture controls. However, while 'true' acupuncture is significantly better than 'sham', and thus more than just placebo, the clinical difference is small. The authors suggest that it is the 'total effects of acupuncture, as experienced by the patient' – including psychological and non-specific physiological effects – rather than just the correct needle placement that are important. Thirty-one randomised-controlled trials were included in the review, and 29 in the meta-analysis.

- *Archives of Internal Medicine* 2012; 172(19): 1444–1453
- <http://archinte.jamanetwork.com/article.aspx?articleid=1357513#Abstract>

Bullying meta-analyses

Exposure to workplace bullying has significant detrimental effects on job-related and health-related outcomes, but there is only a weak association with sickness absence. The first of two meta-analyses included 54 cross-sectional studies (covering 77,721 individuals). Persistent workplace bullying was strongly linked to various health outcomes, including post-traumatic stress symptoms, depression, anxiety, somatisation and burnout, but had no effect on sleep. Bullying was also linked to job-related outcomes, including intention to leave the job, low job satisfaction and low organisational commitment; it was weakly associated with increased absence, but not to performance. The second meta-analysis (13 studies, 62,916 individuals) looked at longitudinal studies, mostly with one- to two-year follow-up, and found that the impact of bullying persists over time. Bullying was significantly associated with mental health problems and weakly associated with absence at follow-up. Bullying at baseline was also significantly associated with increased reported exposure to bullying at follow-up – which the authors describe as a 'vicious circle'.

- *Work & Stress* 2012; 26(4): 309–333
- <http://www.tandfonline.com/doi/abs/10.1080/02678373.2012.734709>

Knee pain therapy

Osteoarthritis of the knee affects 28% of males aged over 45 in the US, rising to 37% by age 65, and is a major cause of disability. This systematic review (84 randomised controlled trials) evaluated 12 physiotherapy interventions for their impact on pain, disability and physical function. Follow-up was generally limited to three months after treatment – longer-term studies were rare – and evidence quality was low. There were few statistically significant treatment effects, but there was low-quality evidence that core-strengthening exercises (aerobic and aquatic) improved disability scores; aerobic and strengthening exercises improved function and reduced pain; and

ultrasound reduced pain and improved function. No single intervention improved all outcome measures. There was low-quality evidence that tai chi improved function at three, but not at six months, and it had no impact on pain or disability. Education programmes, diathermy (microwave or radio wave heat treatment), orthotics and magnetic stimulation failed to improve any of the outcome measures.

- *Physical therapy interventions for knee pain secondary to osteoarthritis. Comparative Effectiveness Review no. 77. AHRQ Publication no. 12(13)-EHC115-EF. Rockville, MD: Agency for Healthcare Research and Quality, 2012*
- <http://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=1286>

Adjustment disorders

Adjustment disorders (AD) – characterised by distress symptoms and emotional disturbance as a reaction to a significant life change or stressful life event – are a frequent cause of sickness absence. This Cochrane systematic review of psychological therapies for AD patients (nine included studies, covering over 1,500 participants) found moderate evidence that problem-solving therapy significantly reduced time to partial return to work (RTW) (mean difference = -17.0 days; CI -26.5 to -7.5) but not full RTW at one-year follow-up. Cognitive behavioural therapy neither hastens partial (moderate evidence) nor full RTW (low quality evidence).

- *Cochrane Database of Systematic Reviews 2012, Issue 12. Art. No.: CD006389. DOI: 10.1002/14651858.CD006389.pub2*
- <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006389.pub2/abstract>

Can training improve psychosocial work factors?

A workplace strength-training programme did not improve self-reported psychosocial work factors or job satisfaction in a large randomised control trial among Danish laboratory technicians (427 participants, 83% female). Participants in the intervention group (n = 199) undertook three 20-minute sessions of high-intensity strength training per week in working hours. The sessions were located as close as possible to the worksites. Those in the control group (n = 228) received advice to stay physically active and were consulted once a week by a supervisor. There were no statistically significant differences from baseline to follow-up in any of the tested psychosocial work factors in the intervention group – influence at work; sense of community; time pressure – or in job satisfaction.

- *International Archives of Occupational and Environmental Health 2012; online first: doi: 10.1007/s00420-012-0823-z*
- <http://link.springer.com/article/10.1007%2Fs00420-012-0823-z>