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## **Tertiary return to work interventions for chronic pain: a systematic literature review.**

**Category: Interventional Pain Management**

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### **Background**

Pain is defined as chronic when it persists over 3 months or beyond expected healing time. UK figures show that approximately 28 million adults suffer with CP. Musculoskeletal disorders (often used as a proxy for CP) remain the second biggest reason for being off work, leading to 30.8 million workdays lost in 2016.

The social and economic implications of CP are incredibly broad and represent significant challenges for stakeholders, including workers, employers, the government, and the healthcare providers. The costs linked to CP sickness absence exceed those associated with cardiovascular and oncological problems.

Return to work (RTW) with CP can be a complex process in which physical and psychosocial elements interplay. Tertiary, individual RTW interventions are reactive and aimed at employees who experience an event of sickness absence. However, the effectiveness of RTW interventions for workers with CP is unclear.

### **Aims**

Our review aim was to summarise the available evidence to determine which tertiary interventions are successful in promoting RTW in workers suffering with CP. We aimed to investigate any type of individual RTW interventions, including those with credible psychological components, but which do not target any specific concept or trait.

### **Method**

In October 2016, we systematically searched PsycINFO, EMBASE, MEDLINE, PubMed, Science Direct, Cochrane Library of Clinical Trials, Google Scholar, and Open Grey databases for randomised controlled trials (RCTs) of individual interventions for workers with CP. Search terms were based on the Boolean method and databases were searched from inception. We manually checked the reference lists of all included articles. Only full-text articles, published in English in peer-reviewed journals were considered. We excluded studies where participants were under the age of 18.

The primary outcome was RTW. We also extracted secondary outcomes including pain disability and employee psychosocial/affective factors. Study appraisal was based on the Cochrane Risk of Bias Tool and methodological quality assessment, and we assessed the inter-rater reliability. The findings from included trials were synthesised in a narrative format due to the heterogeneity of retrieved data.

### **Results**

The initial search identified 1682 studies. We deemed 14 RCTs and follow-up (FU) studies, published from 1994 to 2016, of sufficient quality to be included in the current review. Study randomised population sizes ranged from 103 to 654 workers and included both men and women. Type of CP, occupation, and the length of sickness absence varied across the trials.

RTW definitions varied greatly. Seven papers reported statistically significant results and effect sizes to suggest that examined interventions promote RTW among CP patients. Multidisciplinary treatments comprising psychological therapy, physical training and workplace elements seem most effective, whereas some interventions led to delayed RTW, particularly when used on their own (e.g. exercise or CBT). Workers with different risk profiles respond better to treatments of varying intensity which address the risk of non-RTW. Although not all CP patients returned to work post-intervention, in most cases the secondary outcomes (e.g. quality of life) improved.

### **Conclusion**

There is no conclusive evidence to fully support any specific RTW intervention for CP patients. However, multidisciplinary approaches appear to be most successful for this population group, and future productivity gains and compensation cost savings may justify implementation of multidisciplinary interventions even at a higher initial delivery cost. Stratifying interventions for CP patients could help improve overall effectiveness of RTW efforts. Future research could also optimise operationalisation of RTW outcome, although varying compensation systems make this idea challenging. Varying results regarding RTW, together with evidence from previous research suggest that compensation policy is an important area to consider.