Physical conditioning as part of a return to work strategy to reduce sickness absence for workers with back pain (Review)

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Physical conditioning as part of a return to work strategy to reduce sickness absence for workers with back pain

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ABSTRACT

Background

Physical conditioning as part of a return to work strategy aims to improve work status for workers on sick leave due to back pain. This is the second update of a Cochrane Review (originally titled "Work conditioning, work hardening and functional restoration for workers with back and neck pain") first published in 2003, updated in 2010, and updated again in 2013.

Objectives

To assess the effectiveness of physical conditioning as part of a return to work strategy in reducing time lost from work and improving work status for workers with back pain. Further, to assess which aspects of physical conditioning are related to a faster return to work for workers with back pain.

Search methods

We searched the following databases to March 2012: CENTRAL, MEDLINE (from 1966), EMBASE (from 1980), CINAHL (from 1982), PsycINFO (from 1967), and PEDro.

Selection criteria

Randomized controlled trials (RCTs) and cluster RCTs that studied workers with work disability related to back pain and who were included in physical conditioning programmes.

Data collection and analysis

Two review authors independently extracted data and assessed risk of bias. We used standard methodological procedures expected by The Cochrane Collaboration.
Main results

We included 41 articles reporting on 25 RCTs with 4404 participants. Risk of bias was low in 16 studies.

Three studies involved workers with acute back pain, eight studies workers with subacute back pain, and 14 studies workers with chronic back pain.

In 14 studies, physical conditioning as part of a return to work strategy was compared to usual care. The physical conditioning mostly consisted of graded activity with work-related exercises aimed at increasing back strength and flexibility, together with a set date for return to work. The programmes were divided into a light version with a maximum of five sessions, or an intense version with more than five sessions up to full time or inpatient treatment.

For acute back pain, there was low quality evidence that both light and intense physical conditioning programmes made little or no difference in sickness absence duration compared with care as usual at three to 12 months follow-up (3 studies with 340 workers).

For subacute back pain, the evidence on the effectiveness of intense physical conditioning combined with care as usual compared to usual care alone was conflicting (four studies with 395 workers). However, subgroup analysis showed low quality evidence that if the intervention was executed at the workplace, or included a workplace visit, it may have reduced sickness absence duration at 12 months follow-up (3 studies with 283 workers; SMD -0.42, 95% CI -0.65 to -0.18).

For chronic back pain, there was low quality evidence that physical conditioning as part of integrated care management in addition to usual care may have reduced sickness absence days compared to usual care at 12 months follow-up (1 study, 134 workers; SMD -4.42, 95% CI -5.06 to -3.79). What part of the integrated care management was most effective remained unclear. There was moderate quality evidence that intense physical conditioning probably reduced sickness absence duration only slightly compared with usual care at 12 months follow-up (5 studies, 1093 workers; SMD -0.23, 95% CI -0.42 to -0.03).

Physical conditioning compared to exercise therapy showed conflicting results for workers with subacute and chronic back pain. Cognitive behavioural therapy was probably not superior to physical conditioning as an alternative or in addition to physical conditioning.

Authors’ conclusions

The effectiveness of physical conditioning as part of a return to work strategy in reducing sick leave for workers with back pain, compared to usual care or exercise therapy, remains uncertain. For workers with acute back pain, physical conditioning may have no effect on sickness absence duration. There is conflicting evidence regarding the reduction of sickness absence duration with intense physical conditioning versus usual care for workers with subacute back pain. It may be that including workplace visits or execution of the intervention at the workplace is the component that renders a physical conditioning programme effective. For workers with chronic back pain physical conditioning has a small effect on reducing sick leave compared to care as usual after 12 months follow-up. To what extent physical conditioning as part of integrated care management may alter the effect on sick leave for workers with chronic back pain needs further research.

Plain Language Summary

Physical conditioning as part of a return to work strategy to reduce sickness absence for workers with back pain

Review question

We reviewed the evidence about the effect of physical conditioning as part of a return to work strategy in people with low back pain.

We found 25 studies.

Background

The main goal of physical conditioning as part of a return to work strategy, sometimes called work conditioning, work hardening or functional restoration and exercise programmes, is to return injured or disabled workers to work or improve the work status for workers performing modified duties. Such programmes may also simulate or duplicate work or functional tasks, or both, using exercises in a safe, supervised environment. These exercises or tasks are structured and progressively graded to increase psychological, physical and emotional tolerance and to improve endurance and work feasibility. In such environments, injured workers improve their general physical condition through an exercise programme aimed at increasing strength, endurance, flexibility and cardiovascular fitness. We wanted to discover whether physical conditioning was more or less effective than usual care and other types of interventions like exercise therapy.
Study characteristics

The evidence was current to March 2012. We analysed 17 comparisons of physical conditioning as part of a return to work strategy. Some trials examined physical conditioning in addition to care as usual versus care as usual only, and others compared physical conditioning to other types of interventions such as standard exercise therapy. Participants had either acute back pain (duration of symptoms less than six weeks), subacute back pain (duration of symptoms more than six but less than 12 weeks), or chronic back pain (duration of symptoms more than 12 weeks). Participants were followed for anywhere from three weeks to three years. We divided physical conditioning into light or intense, depending on its intensity and duration.

Key results

Results showed that light physical conditioning has no effect on sickness absence duration for workers with subacute or chronic back pain. We found conflicting results for intense physical conditioning for workers with subacute back pain. Intense physical conditioning probably had a small effect on reducing sick leave at 12 months follow-up compared to usual care for workers with chronic back pain. Involving the workplace, or physical conditioning being part of integrated care management may have had a positive effect on reducing sick leave, but this needs further research.

Quality of the evidence

The quality of the evidence ranged from very low to moderate. Although 16 of the included studies were well designed and had no major flaws, some studies were poorly conducted and the small number of participants in most studies lowered the overall quality of the evidence.