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Chronic low-back pain, chronic disability at work, chronic management issues

Low-back pain (LBP) stands out as the leading musculoskeletal disorder because it is both highly prevalent and the disability with which people live for the greatest number of years (1, 2). Reaching a peak between the ages of 30–50 years, LBP affects a population at a time of career advancement (3, 4). Back pain is the most expensive disease in terms of indirect costs due to sickness absence and work disability. Indirect (or productivity) costs contribute 93% to total costs, illustrating the importance of the consequences of the disease for work performance (5, 6). On a personal level, low self-motivation and self-confidence make it harder to initiate the return-to-work (RTW) process, especially when problems at work are related to the reason for sick leave (7, 8). At the workplace level, colleagues take over the tasks of the worker on sick leave, work piles up, or another worker is hired to take over the tasks. Timely RTW is thus of great benefit for both injured workers and their employers.

The majority of people who experience an episode of back pain recover quickly without residual functional loss, and most of these episodes never reach the consulting room (9). Overall, it is estimated that 60–70% of patients recover within 6 weeks, and 80–90% within 12 weeks. However, recovery after 12 weeks is slow and uncertain, and fewer than half of individuals disabled >12 months return to work. After two years of absence from work, the RTW rate is close to zero (10): the longer a worker is unable to work, the greater is the probability that he/she will not return to work.

Chronic LBP is not just "the same as acute back pain lasting longer", but the result of a complex interplay of physical, psychological, social, and occupational factors. The World Health Organization's International Classification of Functioning Disability and Health (ICF) has recognized the influence of personal and workplace factors on activity and participation levels (11). If the cause of work disability is associated with workplace factors, then a return to an unchanged workplace (with or without appropriate treatment for the disorder) may be not successful and even lead to recurrent sick leave of longer duration (12, 13). Personal and workplace factors may become RTW barriers.

Management of chronic LBP thus has to take into account potential psychological and workplace RTW barriers that might hinder recovery. Key workplace factors include heavy physical demands, the inability to modify work, job stress, an unsupportive workplace, job dissatisfaction, poor expectation of RTW, and fear of re-injury (14). Key psychological factors include depressed mood, social isolation, pain catastrophizing, fear-avoidance beliefs, and low self-efficacy for managing pain (15). The recommendations for management of chronic LBP highlight the multidimensional nature of the problem. For example, the European guidelines for the management of chronic non-specific LBP recommend assessment of domains including work-related factors, psychosocial distress, and depressive mood, and point out that no single intervention is likely to be effective due to the multidimensional nature of chronic LBP (16). International guidelines therefore recommend the use of supervised active exercises, multidisciplinary approaches, cognitive-behavioral therapies, and measures of social and professional order for patients with chronic LBP (16–19).

A number of exercise intervention trials for LBP have specifically targeted affected workers with the aim of facilitating a return to usual work or improving work endurance. An extensive literature review of randomized clinical trials for work conditioning programs among injured workers concluded that these types of programs were effective in reducing sick days for workers with chronic LBP compared to usual measures only when they: (i) integrated cognitive-behavioral approaches with intensive physical training (aerobic capacity, muscle strength and endurance, coordination); (ii) were in some way work-related; and

(iii) were provided and supervised by either a physiotherapist or a multidisciplinary team (20). Although physical exercise can still be considered a beneficial and also a safe strategy for chronic LBP, the exact mechanisms are not yet clear and may be related to improved aspects of physical fitness, improved mood, fears and behavior, decreased sensitization, or combinations of these different mechanisms. Literature analysis suggests that it may be that including workplace visits or execution of the intervention at the workplace is the component that renders a physical conditioning program effective (21).

According to a French study carried out in 2010 by the epidemiological surveillance network for musculoskeletal disorders in the Pays de la Loire region [3 601 113 inhabitants in 2014], the number of employees with LBP is very high. Using the macro Calmar, developed in SAS (SAS Institute, Cary, NC, USA) by the French National Institute of Statistics and Economic Studies (INSEE), the data from this network were extrapolated to the regional population covered by the occupational medicine (excluding some special social systems not represented in the study) to determine the extent of the phenomenon at the regional level (22). Thus, we can estimate that >268 000 employees reported backache during the preceding seven days and more than half a million (316 552 men and 244 253 women) during the 12 months preceding the survey (ie, 59.3% of men and 55.0% of women). Considering that 2–7% of people with non-specific LBP are at risk of developing chronic pain and disability in due course (23), this would indicate 11 216–39 257 employees at risk of developing severe and durable work disability.

Given these statistics – and considering the recommended types of programs for chronic LBP, on the one hand, and the total amount of patient provision by multidisciplinary teams of rehabilitation centres on the other – it is obvious that we cannot meet requirements. These costly and time-consuming intensive multidisciplinary programmes can thus only be offered to a minority of the most heavily affected patients and therefore do not seem likely to respond to public health requirements (16, 18, 24).

A lighter program may be one alternative strategy to full-time hospital-based programs at the same stage of treatment, with valuable results in terms of disability and occupational outcome for patients suffering from chronic LBP (24–30). More is not always better (31). It is therefore important to define both what the determining components of management are to overcome activity restriction, including occupational status, and how to include more hospital-independent programs in our healthcare systems in order to treat a larger number of patients more effectively at a lower cost and be able to offer stratified management programs adjusted to the severity of individual situations (32).

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