

How to manage musculoskeletal conditions

Musculoskeletal disorders (MSDs) are the most common reason for taking time off work. According to the Office for National Statistics, in 2013 they were the main cause for working days lost, amounting to 31 million days (Office for National Statistics, 2014).

Added to this is the fact that the length of time off work has been shown to have a strong relationship to the likelihood of the employee returning to work. After six months, there is only a 50% likelihood of the employee returning. This reduces further to 25% at 12 months and practically no chance after two years' absence (British Society for Rehabilitation, 2001).

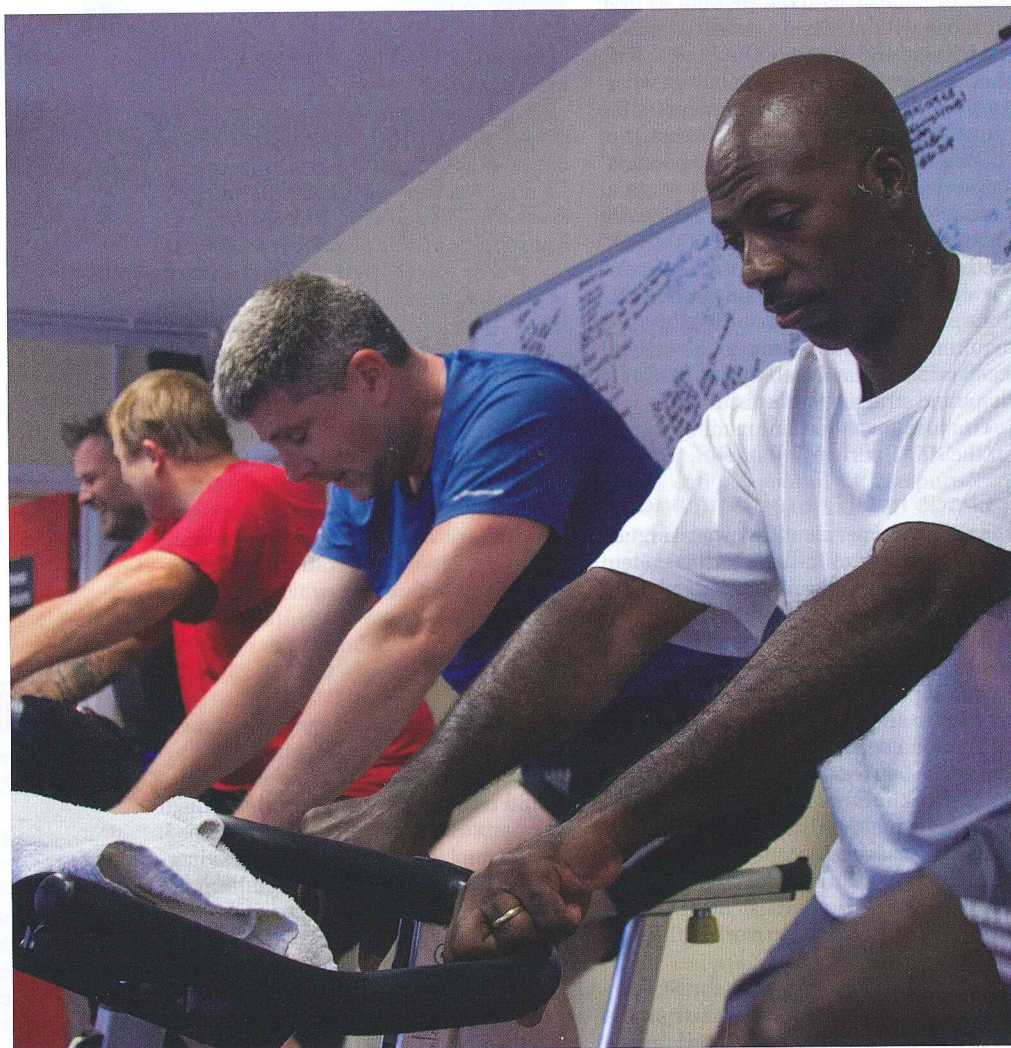
What is a functional restoration programme?

By definition, a functional restoration programme (FRP) (sometimes called a work hardening programme (WHP)) is a structured schedule of graded physical conditioning or strengthening exercises and functional tasks that mimic job-specific activities (eg lifting, carrying, crawling and ladder work).

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. An FRP consists of goals that are designed to:

- facilitate a return to full functional duties;
- maintain high levels of functional capability;
- improve attendance and productivity at work;
- demonstrate a cost benefit relating to those on light duties or on sickness absence due to musculoskeletal problems;

A functional restoration (or work hardening) programme to tackle musculoskeletal conditions at the London Fire Brigade has achieved results in returning firefighters to work. **Miles Atkinson** explains.



- reduce the number of staff on light duties; and
- reduce the number of staff on long-term sickness absence.

What does an FRP entail?

An FRP uses a biopsychosocial approach to deal with a multi-factorial problem. It is best delivered using a multidisciplinary approach and as part of a structured and tiered OH service provision.

The delivery of an FRP can vary and will be dependant on the specific constraints and demands placed on the organisation and the individual. An FRP includes the following key components:

- weekly cognitive behavioural educational sessions;
- functional exercises designed to simulate common activities undertaken by the employee;
- exercise to improve aerobic fitness;
- exercise to develop muscle strength and endurance; and
- enhancing coordination and work conditioning.

What does research say about FRPs?

Research has suggested that WHPs are the most effective route to a cure for chronic musculoskeletal disorders. It also supports the inclusion of WHPs as part of an OH programme. There have been a number of studies into the effectiveness of general strengthening, exercise and work hardening programmes on the rehabilitation of an injured person.

The majority of this research has concentrated on low back pain, which accounts for 35% of an OH caseload worldwide and a similarly high proportion of the associated costs.

Lindstrom et al (1992) found that, when comparing those that did and did not receive work hardening, 22% more people returned to work after undertaking a WHP. This is corroborated by Mayer et al (1987) and Hazard et al (1989) who found that 52% more people returned to work.

Lindstrom et al also found that those who received work conditioning had significantly less sick leave due to lower back pain one year after the programme.

Furthermore, it has been noted that on receiving work hardening individuals had a lower rate of further healthcare visits than those who did not receive work hardening. This lower rate of subsequent healthcare visits or treatment was also noted by Catchlove and Cohen (1982).

More recent reviews of research into the effectiveness of work hardening and work conditioning programmes have been carried out with favourable findings. This includes that of Lechner (1994), who found evidence to show that WHPs accomplished their stated goals, produced a higher percentage of returns to work and earlier returns to work. The Cochrane review carried out by Schonstein et al (2003) found work conditioning/hardening to be beneficial in reducing the number of sick days in individuals with chronic back pain.

RESOURCES FOR MUSCULOSKELETAL CONDITIONS

Örebro Musculoskeletal Pain Questionnaire

This questionnaire is designed for people with regional pain problems that are affecting their performance at work, causing them to take short spells of absence, or for those who are currently off work and have been so for up to 12 weeks. The 21 questions concern: attitudes and beliefs; behaviour in response to pain; perception of work; and activities of daily living.

►Reference: Linton SJ and Boersma KMA (2003). "Early identification of patients at risk of developing a persistent back problem: the predictive validity of the Örebro Musculoskeletal Pain Questionnaire". *Clin J Pain*, pp.80-86.

Visual Analogue Scale

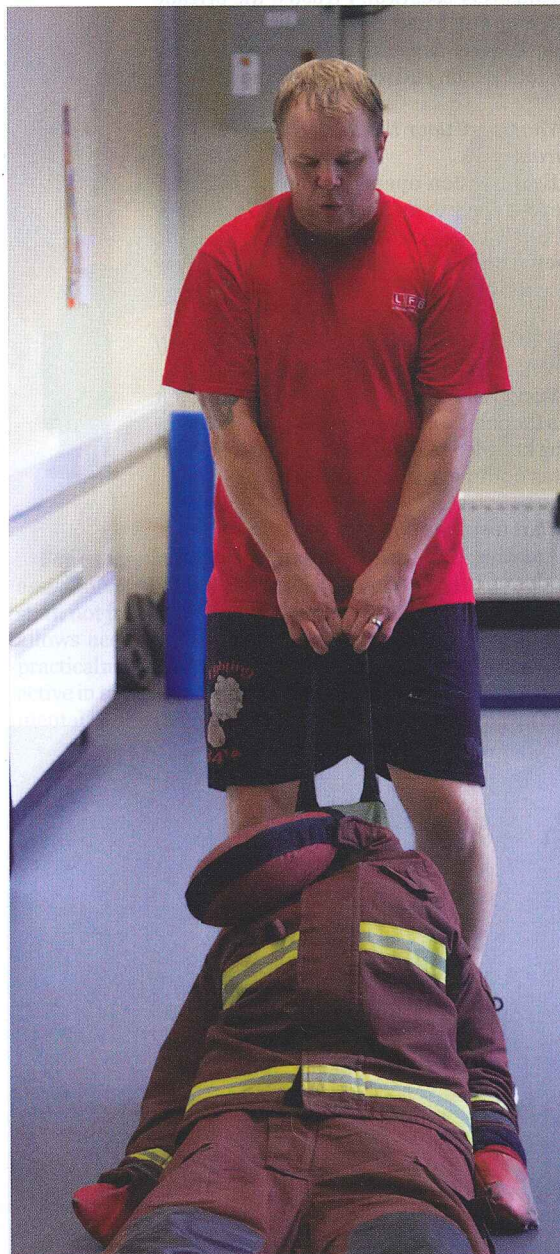
The Visual Analogue Scale can be used as a way to quantify a patient's perception of pain. The patient is asked to score their pain on a scale of 0 to 10. This test can then be used at repeated intervals to monitor change.

►Reference: Carlsson AM (1983). "Assessment of chronic pain. I. Aspects of the reliability and validity of the visual analogue scale". *Pain*; 16, pp.87-101.

EQ-5D-5L

This is a standardised measure of health status often referred to as a "quality of life" questionnaire. It is normally measured at the start and end of treatment and comprises an assessment of five main areas: mobility; ability to self-care; ability to undertake usual activities; pain and discomfort; anxiety and depression. These categories are rated on a five-scale system ranging from no problem/pain or anxiety to unable to perform/extreme anxiety/extreme pain.

►Reference for further information: "EQ-5D-5L - Measuring change in musculoskeletal physiotherapy outpatient services", available at: www.csp.org.uk/documents/eq-5d-5l-measuring-change-musculoskeletal-physiotherapy-outpatient-services



FIT FOR WORK... implementing a targeted response to MSDs.

Finally, although there is no clear evidence on the exact content of a WHP, as would be expected with the wide range of conditions and settings that it is used for, there is consistent evidence to support that such interventions are more effective in an occupational setting. There is a range of thought as to why this is the case, but by engaging an injured person in their actual work environment, they also benefit from increased social interaction with work colleagues, get re-accustomed to the routine of work, and have increased motivation to return to work.

London Fire Brigade: case study

London Fire Brigade (LFB) has been experiencing a relatively high prevalence of long-term absence with employees suffering from chronic musculoskeletal problems. While there is an effective acute physiotherapy service provided as part of the OH programme, the chronic nature of some of these conditions required a more targeted and intensive intervention.

Crystal Palace Physio Group (CPPG) are the current providers of onsite OH physiotherapy services to the LFB. But in November 2013, a targeted FRP was implemented in partnership with OH provider Health Management and CPPG – with the aim of assisting and facilitating employees suffering from long-term sickness and recurrent musculoskeletal disorders to get back into the workplace.

The FRP is delivered by an experienced OH physiotherapist, supported by two fitness advisers. It is a rolling six-week programme and suitable participants are selected from "long-term sick" and "light duty" lists (employees at work, but not performing substantive operational duties) and invited to join the programme.

Five FRPs were delivered in the eight months between November 2013 and June 2014, which enables a comparison to be drawn between six months pre- and post-FRP absence rates.

In order to measure the effectiveness of the programme, a number of validated outcome measures needed to be applied. Some of these included:

- the Visual Analogue Scale: to assess an individual's level of pain;
- the Orebro MSK Pain Questionnaire: to assess an individual's beliefs about pain and influence on daily living; and
- the EQ-5D-5L: to measure the change in quality in life.

Benefits to the LFB

Almost 100 LFB staff have been through the programme. The results so far have been overwhelmingly positive, with impressive improvements in objective outcome measures. Coupled with this, there has been a significant reduction in the time taken off work after the programme versus before it. In fact, there has been an 85% reduction in the time taken off work pre- and post-entry into the FRP.

When carrying out a return-on-investment calculation based on these figures, the results are striking. On the preliminary result, the estimated return on investment equates to £27 saved for each £1 spent.

An employee's story

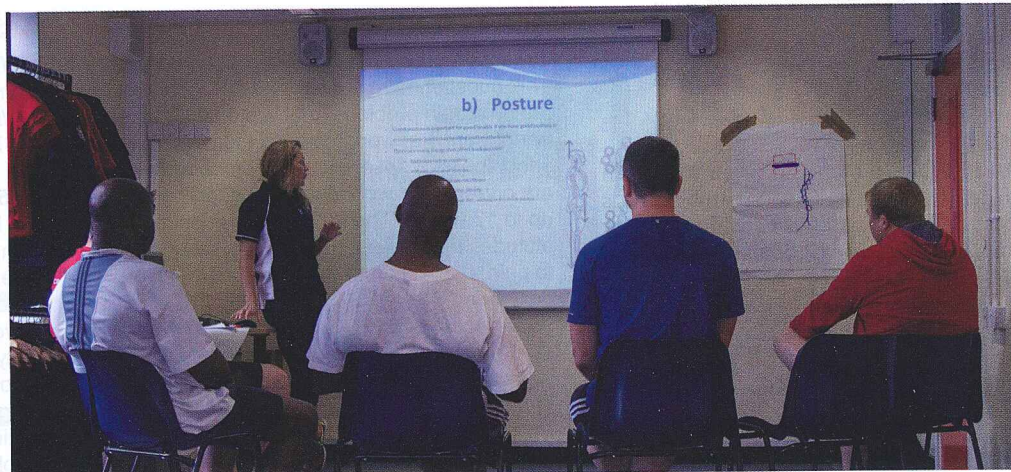
Mr Paul Manley was referred into the programme following a high-speed car accident in June 2014. He sustained multiple injuries including rib fractures. He was seen by the OH physiotherapy service for an assessment and it was soon recognised that he would need further assistance. He was then referred into the FRP at the LFB.

A brief background of his condition

"I had an RTC [road traffic collision] while stationary and got hit from behind at approximately 80mph causing back and neck problems and a few fractured ribs."

How was your condition affecting your lifestyle both at home and work before the programme?

"Terrible, I was unable to do anything, between the neck and back pain and painful ribs. Frustrated and in pain does not describe things."



How did you become aware of the programme?

"I was made aware after seeing the fire brigade physio for a check-up."

What were your thoughts before joining?

"I was very sceptical. I trusted the brigade physio but I had been receiving private physio and was getting nowhere fast and still in lots of pain and restricted in movement."

What were your thoughts during the programme?

"Each session opened my mind with different ways to approach things, exercises I was shown and the lectures giving me better knowledge and understanding of my condition."

How did you find the programme itself (content, structure, group interaction)?

"Very well thought out and each week felt as though I was making progress and gaining knowledge. I had some setbacks but that was nothing to do with the course."

What were the outcomes?

"Amazing, could not thank Jenny [the physiotherapist] enough for all her time and effort in providing such a professional service and allowing me to get back to work so much quicker than my private physios and doctors were saying."

What did it mean to you?

"Everything; I am very active and it was killing me and I was angry and frustrated with my progress."

"Jenny gave me every bit of support and skills to progress my recovery quickly and safely and has given me some great exercises to continue aiding my recovery, along with knowledge. If it was not for this course, I may not even be back at work now so this course meant everything to me and the brigade has gained from allowing this to run."

■ Miles Atkinson is head of OH services at Crystal Palace Physio Group.

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