



PAIN RELIEF / PREVENTION

## **Pain Management of Musculoskeletal Disorders**

U.K. HEALTH AND SAFETY EXECUTIVE RELEASES NEW REPORT

Michael Devitt

The Health and Safety Executive (HSE), a division of the United Kingdom's Department of Health, has published a new report, *Improved Pain Management for Musculoskeletal Disorders*, co-authored by Alan Breen, DC, PhD, and other researchers from the Anglo-European College of Chiropractic. The report, which presents the latest evidence on the usefulness of early secondary-intervention pain management techniques that can be used to help people return to work or continue working, includes a series of "care pathways" consistent with the latest evidence and relevant to doctors of chiropractic and other providers involved in the early management of musculoskeletal disorders.



According to the HSE, musculoskeletal disorders and stress are the most commonly reported types of work-related illness in the U.K. In 2001-2002, an estimated 1.1 million people in the U.K. suffered a musculoskeletal disorder they thought was caused or made worse by their current or past employment. While the total number of musculoskeletal disorders appears to have decreased, their prevalence has not; according to the HSE, approximately three-quarters of all work-related illness are attributed to a combination of musculoskeletal disorders, stress or both.

As part of an effort to reduce the number of days lost due to workplace injuries and work-related ill health by 2009-2010, the HSE established a musculoskeletal disorders priority program. One component of that program was the development of a research agenda designed to "understand how best to develop a culture of good practice including use of collaboration and partnership working to ensure continuous improvement in tackling musculoskeletal disorders."

*Improved Pain Management for Musculoskeletal Disorders*, which was prepared for the HSE by the Institute for Musculoskeletal Research and Clinical Implementation, explores pain management from a variety of perspectives. While interested parties are encouraged to read the report in its entirety to fully appreciate the implications it holds for the role of chiropractic in the treatment of musculoskeletal disorders, the following is a brief synopsis of the report's major sections:

#### Rationale for Early Intervention

Whether early intervention produces better outcomes has been difficult to ascertain. Based on the available evidence, however, the authors of the report believe that "return to work is much less likely if longer-term absence has already occurred" and that "changes related to determinants of disability, quality of life and chronic disability can appear by 14 days" after the onset of a musculoskeletal disorder.

In the past, early intervention has been considered an appropriate measure when musculoskeletal problems occur. According to the authors, however, "there is a considerable body of expert opinion, with continuing support from recent research, that successful early intervention does not necessarily depend on treatment." Rehabilitation should no longer focus on the medical aspects of treatment, but also "the use of practical considerations and personal emotional, societal and work-related factors to promote recovery from injury."

#### The Influence of Job Culture, Ethnicity and Gender on Pain

According to the report, one of the main considerations to early pain management is the control of pain while avoiding withdrawal and inactivity. Ethnicity and gender-related cultural issues may be important factors; however, overall, job culture appears to play a larger role in this consideration than ethnicity or gender.

#### Pain Physiology

This section of the report introduces the neuromatrix theory of pain, which is based on the premise that pain is multidimensional. In the neuromatrix theory, various body systems, such as the sensory nervous system, the cognitive and affective functions of the brain, its neural modulating and inhibiting systems, and endocrine and other chemical effects, along with genetic characteristics, combine to influence recovery from painful experiences.

In relation to the management of musculoskeletal disorders, the neuromatrix theory posits that "there is a synergy between musculoskeletal pain and emotional stress that can work against recovery," which supports the rationale for the reduction of stress and anxiety as a vital component of rehabilitation. Negative neurophysiological interactions between pain and stress, therefore, promote an environment that sustains disability and absence from work, while positive interactions, along with activity and involvement, oppose such an environment.

#### Predictors of Outcome

While recent evidence has demonstrated consistent themes about the prediction of poor outcomes from work-related musculoskeletal disorders, none of these themes has been associated with

specific conditions. The majority of published studies have focused on back pain; evidence is less clear for musculoskeletal disorders related to the neck and upper limbs.

Improved early pain management should take account of the natural progression of musculoskeletal disorders and their relation to a particular job. Health care providers should also be aware of, and responsive to, psychosocial factors associated with the management of musculoskeletal disorders.

#### Current Guidelines, Subsequent Reviews and Research

This section summarizes guidelines, reviews and research for general musculoskeletal disorders, back pain, neck pain, upper limb disorders, knee pain, and ankle and heel disorders. Of particular interest to the chiropractic profession is the subsection on back pain, which states, in part:

"There is strong consensus in the latest evidence-based guidelines that absence from work because of non-specific back pain is likely to delay, rather than hasten recovery. However, failure to manage the episode optimally in its early stages by, if necessary, controlling pain, modifying activities, acting on worsening symptoms or inappropriately using bed rest, may inhibit recovery." The report adds, "When treatment is needed, there is also a growing level of support for multi-modal evidence-based interventions, combining the interventions recommended in current major guidelines."

#### Prospects for Improved Care

For patients who require clinical assessment and care of a musculoskeletal disorder, the conventional medical system appears to be of little use. Despite the publication of national guidelines that have focused on preventing acute back pain patients from becoming chronic back pain patients, the authors note that "inappropriate referral to secondary care for musculoskeletal disorders in general seems to persist," and that "assessment of non-medical obstacles to recovery is problematical and frustrating for health care traditionalists."

Furthermore, evidence suggests many health care providers are not confident about their ability to provide appropriate care: "GPs' confidence in their own abilities to assess patients and supply evidence-based care generally and for back pain in particular is lacking."

#### Care Pathways and Clinical Management

Four "care pathways" are listed in the report: a generic care pathway, which sets out a common sequence of events, along with individual pathways for employers, employees and health professionals. The pathways are designed to apply to any episode of musculoskeletal pain that interferes with work; lasts more than a day or two (if severe); or lasts up to a week (if not severe).

All four pathways operate in two stages in time and are intended to help prevent musculoskeletal disorders from becoming chronic or recurrent. For the generic, employer and employee pathways, stages occur within one week from when the problem began, with a follow-up within two weeks. The first stage of the health professional pathway occurs at the employee's first appointment, with the second stage occurring four weeks later. A copy of the generic care pathway is reproduced above; diagrams of all four pathways are included in the full report.

#### Early Interventions by Musculoskeletal Practitioners

While chiropractors, osteopaths and some physiotherapists offer a full array of manual therapies, there has been some confusion over terminology and the use of these therapies by different

practitioners. Typical early interventions include analgesics, X-rays, soft-tissue techniques, articular techniques (or "mobilizations"), and manipulation of the central lumbar or sacroiliac joints. The authors note, "There is some evidence that high-velocity thrust manipulation is more effective than other types when compared to exercise or other physical therapies." They add, "Perhaps the strongest recommendations in evidence-based guidelines are for acute back pain and are in terms of advice to: give adequate information and reassure the patient; do not prescribe bed rest as a treatment; advise patients to stay active and continue normal daily activities including work if possible."

### Summary Points and General Recommendations

The report concludes with recommendations for employers, employees and health professionals. Employers are asked to examine their policies regarding the early management of musculoskeletal disorders and what types of questions should be asked if a person reports a musculoskeletal disorder at work. Employees, meanwhile, are given advice on what to do if they are suffering from a musculoskeletal problem that is not resolving. Health professionals are given a list of 10 recommendations on providing optimal patient care.

---

The incidence of musculoskeletal disorders in the United Kingdom and other developed nations continues to increase at an alarming rate. As such, effective management of these conditions, especially in their early stages, is of significant importance to all parties involved. By working together, employees, businesses and health care providers can create effective methods of care and support to ensure that the pain workers suffer from is kept to a minimum, and that they can continue working or return to work as soon as possible. As the authors of the report conclude:

"Latest evidence and current thinking supports the use of biopsychosocial assessment and intervention in close proximity to work for improved early management of musculoskeletal disorders. The employer and employee have the main roles in this, and musculoskeletal practitioners (chiropractors, osteopaths and musculoskeletal physiotherapists) are the most accessible qualified health professionals to support them."

The complete draft of *Improved Pain Management for Musculoskeletal Disorders* can be accessed at [\[url=http://www.hse.gov.uk/research/rrhtm\]](http://www.hse.gov.uk/research/rrhtm)<http://www.hse.gov.uk/research/rrhtm>[\[url\]](http://www.hse.gov.uk/research/rrhtm). The report's identification number is #RR399.

APRIL 2006