

## **Persistent musculoskeletal pain and productive employment: A systematic review of interventions**

### **Researchers**

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### **Background**

The aim of this project was to systematically search the literature for evidence of effective workplace interventions that support employees with persistent musculoskeletal pain to maintain productive employment.

Persistent musculoskeletal pain is pain that arises from the muscles, bones, joints and nerves that has lasted more than 3-6 months. It is also called chronic musculoskeletal pain. Common conditions associated with persistent musculoskeletal pain include: osteoarthritis, rheumatoid arthritis, back pain and fibromyalgia. Approximately 6.1 million Australians are affected by these conditions<sup>1</sup>.

Workplace interventions are aimed at supporting employees to stay at work and remain productive. There are many different types of interventions. They may be focused on the person and include things like exercises and education, or they may be multilevel interventions which include changes to work schedules and modifications to how the job is done or the physical environment.

The experience of people working with persistent musculoskeletal pain is shaped by the policy and cultural contexts in which they work. In Australia, workers' compensation schemes provide support only for those with work-related conditions. Those with non-work related conditions are not specifically covered by a particular scheme. In contrast, other countries have systems that do not distinguish between work- and non-work related conditions; in those countries all workers have access to the same workplace accommodations or interventions. The effectiveness of workplace interventions for people with non work-related musculoskeletal pain was the key focus of this study. If we can improve our understanding of which interventions are most effective to assist people with persistent musculoskeletal pain and help them to stay at work, this is beneficial for employers and employees.

### **The project**

Researchers conducted a systematic review of all studies on workplace interventions for people with persistent musculoskeletal pain published in peer-reviewed journals between January 2000 and March 2014. Articles published in peer review journals have been written by an expert and then reviewed by several other experts in the same field. This rigorous review process means studies are published only if they meet the required quality standard.

Researchers limited the search to studies that specifically included employed people with non-work related persistent musculoskeletal pain. Employees with non-work related pain often have very different access to workplace supports compared to those with work-related pain. The review considered only studies that included employees with non-work related musculoskeletal pain (including rheumatoid arthritis, fibromyalgia and osteoarthritis, back pain), as their experience of workplace interventions may be different from those with work-related pain.

### **What is a randomised control trial (RCT)?**

There are many types of studies. Researchers were interested in looking at two particular types of studies:

- **randomised control trials** – a randomly selected group of participants are involved in the intervention and are compared to another group of randomly selected participants who are not involved in the intervention, or are involved in a different intervention;
- **pre/post measure interventions** – a selected group of participants are measured before and after being involved in an intervention.

## Findings

Fourteen studies were found after our search of peer-reviewed journals. They represented 11 countries with a range of workplace support systems. Included in the review were 12 RCTs and two pre/post intervention measure studies. The studies examined the effect of workplace interventions on productivity (performance at work), job loss, sick leave and pain and if they were cost effective. Some studies included interventions focused on the individual, and other studies included interventions focused on the individual and the workplace. Examples of interventions included workstation assessments, education pamphlets, consultation with occupational therapists/ergonomists, vocational counselling, exercise programs and liaison with supervisor or employer representatives.

Each study was assessed for the quality of evidence using the Grades of Recommendation, Assessment, Development and Evaluation approach, known as GRADE. This method involved researchers assessing each study using a range of criteria to determine the overall quality of evidence with regard to the effectiveness of workplace interventions.

Workplace interventions are complex, challenging to implement and difficult to measure accurately. As a result, only a small number of studies were found and included in the review. Following assessment, the overall quality of evidence was relatively low, in part due to the small number of studies. As a result, definitive recommendations are difficult to make. The following findings should provide guidance for those who need to consider the management of employees with persistent musculoskeletal pain:

- 1) individually focused interventions (compared to other interventions) will probably decrease job loss in people with persistent musculoskeletal pain conditions;
- 2) multilevel interventions may result in a slight reduction in sick leave and will probably provide a positive cost benefit.

Development of interventions that focus on the individual and the employer/workplace, that is multilevel, to ensure the worker has a good 'fit' with their job role are likely to be effective.

## Find out more

You can access the [full report here](#).

## Find out how Arthritis and Osteoporosis Victoria can help

Access our range of services and programs for people with arthritis and musculoskeletal conditions:

- Talk with one of our nurses. They can help you if you have a musculoskeletal condition and would like to find out more about it; if you need assistance navigating the complex health, disability and social services systems; or if you need information on community resources in your area. Call 1800 263 265 weekdays, or email [msk@arthritisvic.org.au](mailto:msk@arthritisvic.org.au).
- Join a peer support group and meet with people who understand what you are going through. Go to the Arthritis Map - <http://www.arthritismap.com.au> - to find the details of groups in Victoria.
- Visit our website and keep up to date on issues important to people with musculoskeletal conditions: [www.arthritisvic.org.au](http://www.arthritisvic.org.au).
- Enrol in one of our courses and seminars to learn practical ways to live with a musculoskeletal condition. We run seminars throughout Victoria, including regional areas. Visit our website for more information about upcoming events: <http://www.arthritisvic.org.au/Courses-and-Events>.
- Check out our library. We have resources to help you live well with a musculoskeletal condition – including information on pain management, exercise, getting a good night sleep and nutrition. Access the library catalogue to see what the library has available - <http://www.arthritisvic.org.au/Useful-Information/Our-Services/Library> - or contact the librarian on 03 8531 8031 (toll free for country callers on 1800 011 041). The library has a postal borrowing service for people who are unable to visit in person.

## References

1. A&OV. A problem worth solving. The rising cost of musculoskeletal conditions in Australia. Melbourne: Arthritis and Osteoporosis Australia with Deloitte Access Economics; 2013.

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