



# Education about joint protection strategies: hand osteoarthritis

## Intervention

Education about joint protection strategies (i.e. techniques for doing everyday activities in ways that minimise strain on joints).

## Indication

Osteoarthritis is the leading cause of disability in older adults.

Pain from hand osteoarthritis (OA). The aim of the intervention is to lessen pain and improve functioning for people with hand OA.

Symptomatic hand OA affects approximately 20% of people over 55 years of age. It has an impact on quality of life by causing variable levels of pain, loss of function, and stiffness; it may also result in aesthetic changes.

In the trial, participants applying joint protection strategies were more likely to be classed as responding to treatment at six months compared with no joint protection strategies.

## Availability

Joint protection is a part of osteoarthritis self-management.

Education about joint protection can be delivered within the general practice setting.

Patients can also be referred to an occupational therapist (OT) for detailed advice, individual problem-solving techniques and assistance with incorporating the strategies into daily activities.

## Description

In the trial, patients received four 1-hour sessions (once weekly), and were taught joint protection strategies. These strategies were:

- to distribute the weight of lifted objects over several joints (e.g. spread the load over two hands)
- to avoid repetitive thumb movements and putting strain on the thumb
- to avoid a prolonged grip in one position
- to use as large a grip as possible
- to reduce the effort needed to do a task (e.g. use labour-saving gadgets, avoid lifting heavy objects, and reduce the weight of what is lifted)
- to conserve energy by planning activities (e.g. organising tasks more efficiently) and pacing (e.g. taking regular short breaks).

These strategies were applied to daily tasks such as opening jars, carrying objects and filling a kettle (see Figure 1 and the workbook listed in Consumer resources).



## Description Cont'd

### Filling a kettle



**BETTER:** Hold kettle with 2 hands as you fill, one on handle, one underneath.



**BEST:** Rest the kettle on the sink bottom or edge as it fills – don't take the weight on your hands. (If left inside the sink – this works best if you have a mesh basket. Make sure water can't get in the electric connection.)



**BEST:** Use a lightweight plastic jug to fill the kettle – leaving your kettle by the plug. Use only the amount of water you need.

Source: Dziedzic K, Hammond A et al. Looking after your joints: joint protection for hand osteoarthritis and hand pain – workbook. Keele University and Salford University, 2008, p.29.

### Information and workbooks for patients

In addition to the joint protection strategies, patients were given standardised written information (from Arthritis Research UK) about hand OA and its management – managing pain during everyday activities, how to change habits, long-term and short-term goal setting, weekly home programs to practise skills taught, and weekly review of home programs.

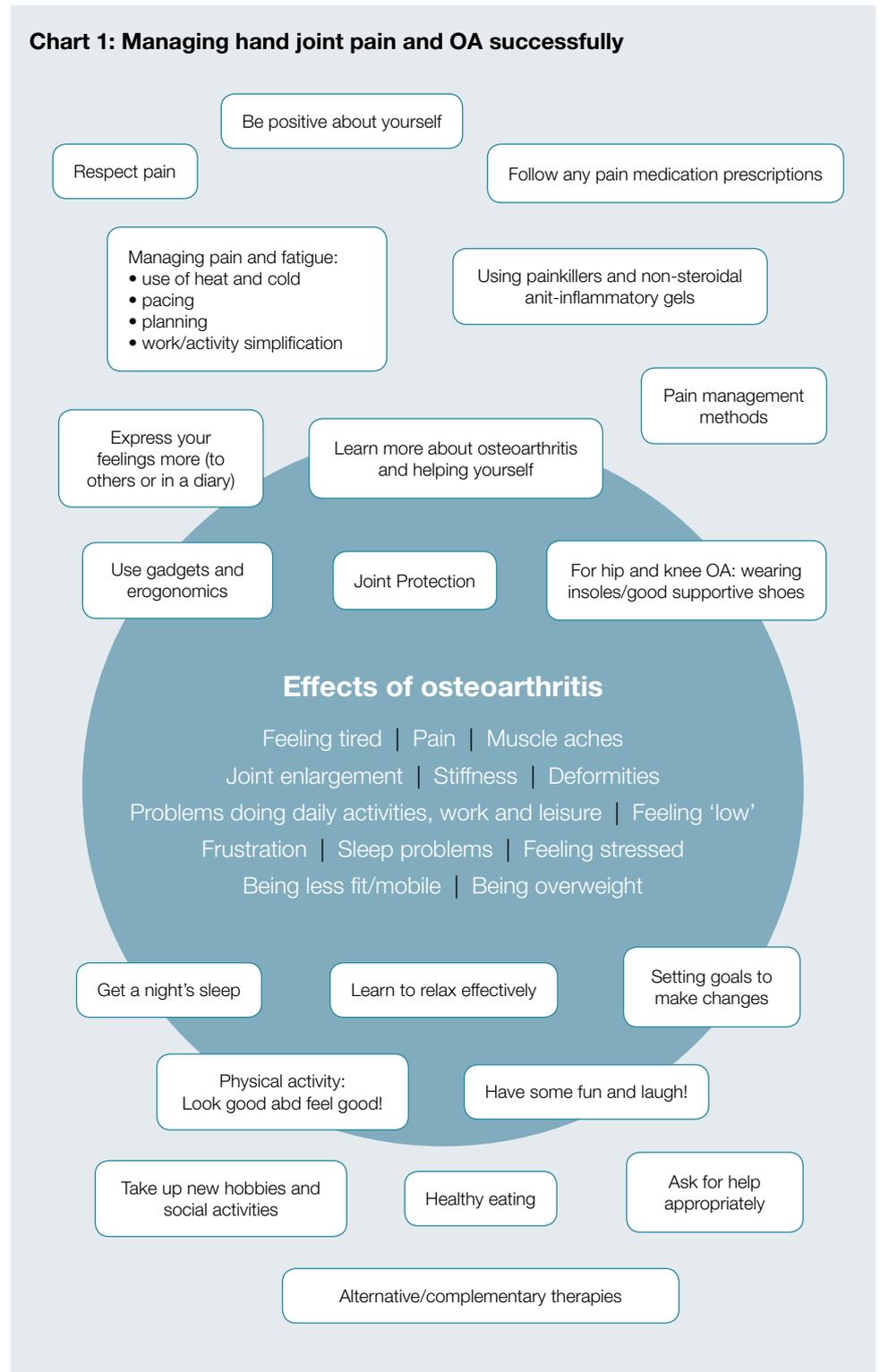
They were given a workbook which contained key points from each session, photographs demonstrating how to use the joint protection principles while doing daily activities, and weekly activity diaries (see Consumer resources).

Patients were also informed about how joint protection fits into broader management of hand OA and joint pain.



**Description  
Cont'd**

**Chart 1: Managing hand joint pain and OA successfully**



Source: Dziedzic K, Hammond A et al. Looking after your joints: joint protection for hand osteoarthritis and hand pain – workbook. Keele University and Salford University, 2008, p.11.



## Tips and challenges

Incorporation of strategies into a patient's daily routine may be improved by encouraging the patient to come up with solutions to their individual problems, using the joint protection strategies.

To improve adherence to self-management strategies, patients should be encouraged to only take on one or two strategies at a time, and develop habits and routines gradually. Once strategies become habitual, further self-management strategies can be adopted.

Alternative interventions may be needed to manage pain in the longer term. In the trial, benefits in pain and function were not maintained at 12 months.

## Grading

NHMRC Level 2 evidence.

## Training

Materials used to train the occupational therapists who delivered the intervention in the trial have been made available.

Dziedzic K, Hammond A et al. Looking after your joints: joint protection for hand osteoarthritis and hand pain – leader's manual. Keele University and Salford University, 2008. **Refer to downloads.**

## References

Dziedzic K, Nicholls E, Hill S et al. Self-management approaches for osteoarthritis in the hand: a 2x2 factorial randomised trial. *Ann Rheum Dis* 2013. doi:10.1136/annrheumdis-2013-203938.

## Consumer resources

### Arthritis Research UK resources used in the trial

Downloadable patient information:

- Looking after your joints when you have arthritis [www.arthritisresearchuk.org/arthritis-information/arthritis-and-daily-life/looking-after-your-joints.aspx](http://www.arthritisresearchuk.org/arthritis-information/arthritis-and-daily-life/looking-after-your-joints.aspx)
- Booklet about osteoarthritis [www.arthritisresearchuk.org/shop/products/publications/patient-information/conditions/osteoarthritis.aspx](http://www.arthritisresearchuk.org/shop/products/publications/patient-information/conditions/osteoarthritis.aspx)
- Joint projection workbook – **Refer to downloads.**

### Australian resources

- Occupational Therapy Australia lists hand therapists in its 'Find an OT' section. [www.otaus.com.au](http://www.otaus.com.au)
- Arthritis Australia has a factsheet about hands and arthritis. [www.arthritisaustralia.com.au/images/stories/documents/info\\_sheets/2014/Body/Handsandarthritis.pdf](http://www.arthritisaustralia.com.au/images/stories/documents/info_sheets/2014/Body/Handsandarthritis.pdf)
- Independent Living Centres Australia has labour-saving gadgets that can be useful. [www.ilcaustralia.org.au/](http://www.ilcaustralia.org.au/)

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## Downloads

- Joint Projection workbook for patients
- Joint Projection leaders manual

[www.racgp.org.au/your-practice/guidelines/handi/interventions/musculoskeletal/joint-protection-strategies-for-hand-osteoarthritis/#downloads](http://www.racgp.org.au/your-practice/guidelines/handi/interventions/musculoskeletal/joint-protection-strategies-for-hand-osteoarthritis/#downloads)

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