

# Hands On

Practical advice on management of rheumatic disease



## AN EXERCISE IN KNEE PAIN SELF-MANAGEMENT

Mike Hurley, PhD, MCSP

Reader in Physiotherapy and arc Research Fellow

King's College London

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Throughout our lives our knee joints put up with a lot of (ab)use. About 25% of people over the age of 55 years complain of chronic knee pain – usually diagnosed as osteoarthritis (OA)<sup>1</sup> – and for 10% the pain is disabling.<sup>2</sup>

Most healthcare professionals and the lay public regard chronic knee pain as an inevitable, incurable consequence of ageing. As a result, management of knee pain focuses on symptomatic relief through prolonged use of painkillers, until after years of increasing pain and disability the joint may be surgically replaced – assuming people want surgery and do not have common co-morbidities that preclude surgery. Few people are advised to exercise and increase their physical activity, despite this being recommended in guidelines for the management of knee OA<sup>3,4</sup> that are based on evidence from research showing that exercise reduces knee pain.<sup>5,6</sup>

This article briefly explains the rationale behind physical activity/exercise in managing knee pain and provides simple advice and a few exercises that can be passed on to patients to encourage them to begin exercising and increase their level of physical activity. As healthcare professionals it is our duty to convey this information to people with knee pain; not to do so is **professional negligence**.

Intuitively people appreciate movement is good for joints – it's what they were made to do. What concerns and confuses people is their experience that physical activity brings on joint pain, while rest eases it. In the absence of adequate education and advice, people interpret this as movement wearing out the joint and surmise that reducing activity will prolong the life of their joints. In fact, inactivity is bad for joints, causing muscle weakness, osteoporosis and joint stiffness. Weak muscles tire easily, producing a clumsy, uneven, jarring gait that over time may initiate knee pain and damage and reduce function and independence.<sup>7</sup> Therefore, maintaining strong, well-conditioned thigh muscles is vital for healthy knee joints: strong muscles are a necessity, not a luxury.

This is good news because of all the tissues affected by arthritis – bones, cartilage, muscles and ligaments – muscles are the easiest to alter. Regular physical activity and exercise maintain muscle condition, reduce pain and disability, improve function and protect against further joint damage.<sup>7</sup> In addition, physical activity produces many other physiological, psychological and social health benefits, such as improved cardiovascular function, self-confidence, self-esteem and social interaction.<sup>8</sup> And there's even better news – achieving these health benefits:

- **does not require joining a gym** – exercise is equally effective whether performed in supervised exercise classes or at home alone, so people can choose where they exercise.
- **does not require expensive equipment** – *walking* is an excellent form of exercise that can involve walks in the park, shopping, enjoyable day trips; *gardening* is a great form of physical activity that can be adapted so that less strain is placed on the knees; *swimming* is particularly helpful for joint pain, popular, and now more widely available through community-run classes designed for the over-50s. The important thing is that the activities should be enjoyable, cheap and easily available or they will soon be abandoned.
- **does not require long bouts of exhausting, strenuous exercise**, so there is no need to 'go for the burn'. Thirty minutes of physical activity *accumulated through the day* (e.g. one 30-minute brisk walk or three 10-minute brisk walks) brings health benefits. However, the benefits from physical activity are 'dose-related', so doing some physical activity regularly is better than doing none at all and, within reason, the more one does the better.

There is no escaping the fact that acquiring tangible health benefits from exercise requires effort, will-power and determination, and retaining these benefits requires continued effort. Nevertheless, by increasing physical activity people can help themselves to significantly reduce their knee pain and the disability this causes.

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## COMMENT

**Mike Doherty, MA, MD, FRCP**

Professor of Rheumatology, University of Nottingham

*Joints and muscles are designed to move and each component of our joints (cartilage, bone, muscles, tendons, ligaments) requires regular daily movement to stay healthy. When a joint is painful or has osteoarthritis (joint damage) it is even more important that the joint keeps moving.*

*Two types of exercise can reduce pain and improve disability due to knee pain, whether or not the pain relates to knee osteoarthritis. Firstly, specific exercises that strengthen the thigh muscles. These not only help reduce pain but also improve balance, reduce the tendency to fall over, and improve performance in daily activities such as walking and getting on and off a chair. Secondly, activity such as fast walking, arm swinging or movement to music that is sufficient to increase the pulse rate and make you slightly breathless and sweaty –*

*so-called ‘aerobic’ activity. This has many health benefits but is very good at reducing knee pain, improving sleep and helping overweight people on a diet to lose weight.*

*Both types of exercise are extremely safe and can be done at home without special equipment. They are advised for everyone with knee pain or knee osteoarthritis. Other lifestyle factors that reduce knee pain and improve the way our legs work include: (1) weight loss, if overweight or obese; (2) sensible shoes with thick soft soles and no raised heel; and (3) ‘pacing’ of activities through the day (breaking a long task into smaller parts with regular breaks in between). Such lifestyle changes are completely within our own control and do much more to improve the long-term outcome of knee pain and arthritis than any type of tablet or medicine.*

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