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Can people with osteoarthritis derive clinical benefit from dietary and lifestyle changes? A pilot study

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Osteoarthritis is a leading cause of pain and disability in the western world⁽¹⁾. Patient education is the cornerstone of successful management, and patients should ideally receive written information to support their self-care⁽²⁾. The quality of the written information is of paramount importance, but is often inadequate⁽³⁾. Booklets typically provide very little nutritional information. This pilot study explored, whether an evidence-based, nutritional booklet could encourage dietary and lifestyle changes and improve symptoms in people with osteoarthritis of the hip and/or knee. Evidence-based approaches were identified from the textbook, *Nutrition & Arthritis*⁽⁴⁾ and from a search of the published literature. The information was incorporated into a coloured, illustrated 40-page lay booklet entitled *Nutrition and Osteoarthritis*. Thirty-one men and women with self-reported hip and/or knee osteoarthritis completed a Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) questionnaire at base-line, and 12 weeks after receiving the booklet. A 20% relative reduction in symptom scores is considered a clinically important change⁽⁵⁾. Analysis of paired data from 21 participants who returned both questionnaires showed mean relative reductions in WOMAC symptom scores of 21.95% for pain (95% CI±1.32; $P = 0.026$), 21.26% for stiffness (95% CI±0.67; $P = 0.028$), 22.47% for physical function (95% CI±4.38; $P = 0.012$) and 22.25% for global score (95% CI±5.92; $P = 0.10$). Effect sizes were moderate to large (Cohen's d between 0.42 and 0.52). This pilot study suggests that an evidence-based booklet that encourages dietary and lifestyle changes can provide clinically meaningful benefit for people with osteoarthritis of the hip and/or knee.

1. World Health Organisation (2003) The burden of musculoskeletal conditions at the start of the new millennium: report of a WHO Scientific Group. *WHO Technical Report Series* No. 919. Geneva: WHO.
2. Leslie M (2000) Knee osteoarthritis management therapies. *Pain Manag Nurs* 1, 51–57.
3. Grime JG & Ong BN (2007) Constructing osteoarthritis through discourse – a qualitative analysis of six patient information leaflets on osteoarthritis. *BMC Musculoskelet Disord* 8, 34.
4. Rayman MP & Callaghan A (2006) *Nutrition and Arthritis*. Oxford: Blackwell Publishing Ltd.
5. Tubach F, Ravaud P, Beaton D *et al.* (2007) Minimal clinically important improvement and patient acceptable symptom state for subjective outcome measures in rheumatic disorders. *J Rheumatol* 34, 1188–93.