



## Australians with osteoarthritis; the use of and beliefs about complementary and alternative medicines



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### A B S T R A C T

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**Objectives:** To investigate complementary and alternative medicine (CAM) use amongst a cohort of osteoarthritis (OA) sufferers and to explore reasons for use.

**Methods:** A self-administered questionnaire was used to assess CAM use and its relationship with self-rated health status, patient knowledge of OA and attitudes towards OA management.

**Results:** Sixty-nine percent of respondents (95% CI, 64%–73%) reported that they had tried CAM, with little difference between age groups and genders. Patients who had a better knowledge of their condition and excellent self-rated health were more likely to use CAM. An aversion to the side effects of conventional medicine, failure to engage in exercise, and a belief in the efficacy of CAM were the principal factors underlying use.

**Conclusion:** As CAM use is a key component of the self-management strategies for a substantial proportion of Australians with OA, users need to be more fully informed about evidence of efficacy.

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### 1. Introduction

Osteoarthritis (OA) is the most common musculoskeletal disorder and a major cause of pain and disability for nearly 1.9 million Australians [1], with nearly 11% of the population predicted to have the condition by 2050 [2]. As there is no proven cure, the goals of treatment are to reduce pain, improve function and prevent disability [3].

Although there are Australian clinical practice guidelines for OA, general practitioners (GPs) and many patients do not adhere to their recommendations [4–6]. Furthermore, the treatments available may not control symptoms for some patients, and several of the drugs commonly used may have serious adverse effects [7,8]. Given this, it is not surprising that many patients seek relief from

their symptoms through complementary and alternative medicines (CAMs), defined here as those therapeutic products not usually considered to be part of conventional mainstream healthcare [9].

Earlier Australian studies have identified that at least 40% of OA patients report using CAMs, often expending considerable amounts on products for which there is no evidence of benefit, and often instead of conventional analgesics and anti-inflammatory agents [10]. More recent Australian studies suggest that as many as 72% of Australian adults use CAM for a variety of health conditions, including OA [11]. As Table 1 highlights, however, there is variability in the definitions of CAM and so caution should be exercised when interpreting published rates of CAM use.

Factors underlying the high rates of CAM use are unknown and little researched [12]. One factor may be a widespread but unfounded belief that CAM are both efficacious and safe [13]. Many consumers are unaware of the lack of a scientific evidence base for most CAM, and consider their own experiences, often of self-remitting or fluctuating conditions, as “evidence” of effectiveness [14].

This study investigated CAM use in a sample designed to be representative of Australians with OA. A questionnaire was

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**Table 1**  
Studies on the use of complementary and alternative medicine in Australia, 2004 to 2012.

Year	Study title	Study description	CAM definition	CAM use (%)
2012	A national census of medicine use: a 24-hour snapshot of Australians aged 50 years and older [12]	Survey, 4500 Australians aged $\geq 50$ years	Includes vitamins, minerals, nutritional supplements and herbal, aromatherapy and homeopathic products	46
2011	Australian adults use of complementary and alternative medicine in the treatment of chronic illness: a national study [13]	Analysis of interviews of 7805 adults aged $\geq 20$ years from the 2004–05 Australian National Health Survey (Australian Bureau of Statistics)	Vitamin/mineral supplements or natural/herbal treatments either prescribed or over-the-counter	40 <sup>a</sup>
2010	Perceptions, use and attitudes of pharmacy customers on complementary medicines and pharmacy practice [11]	Survey, 1121 pharmacy customers, metropolitan and regional Australia	Herbal medicines, nutritional and dietary supplements	72
2009	Complementary medicine use among attendees at a rural health screening clinic [14]	Survey, 102 rural Australians	Medicines and therapies that typically lie outside the dominant health care system. Includes whole medical systems (e.g. traditional Chinese medicine, naturopathic medicine), biological and energy based medicines/therapies, mind-body therapies and tactile or manipulative therapies (e.g. remedial massage)	78
2007	Complementary and alternative medicine use in Australia: a national population-based survey [9]	Telephone interviews of 1067 Australians aged $\geq 18$ years from all States and Territories	Substance-based therapies, manipulation therapies, nutrition therapies, exercise-based therapies, and so-called mind-body therapies	69
2007	Complementary and alternative medicine use by older Australians [15]	Telephone interviews of 178 Australians aged $\geq 65$ years from all States and Territories	Substance-based therapies, manipulation therapies, nutrition therapies, exercise-based therapies, and so-called mind-body therapies	58
2006	The continuing use of complementary and alternative medicine in South Australia: costs and beliefs in 2004 [16]	Survey, 3015 South Australians aged $\geq 15$ years	Herbal medicines, vitamins, mineral supplements, Chinese medicines, soy products, aromatherapy oils, or other. Calcium, iron or vitamins prescribed by a medical practitioner were excluded	52
2005	Complementary medicines use by Australian veterans [17]	Survey, 1082 war veterans or war widow(er)s from five Australian States.	Vitamins and minerals (e.g. multivitamins, calcium), supplements (e.g. fish oil, shark cartilage, acidophilus), herbs (e.g. evening primrose oil, echinacea)	37
2004	Use of complementary medicines for osteoarthritis—a prospective study [10]	Survey, 341 patients from central and northern Sydney, Australia, with OA of hip or knee. Information on CAM use obtained from prospective three monthly diaries	Medicinal preparations, either oral or topical, which can be purchased over-the-counter without medical prescription, and do not have general medical acceptance for use	40

<sup>a</sup> Aged  $\geq 60$  years with arthritis.

developed to determine whether patient demographics, quality of life and knowledge of their condition are associated with CAM use; it was also designed to explore the reasons cited by patients for their use of CAM.

## 2. Methods

### 2.1. Recruitment

The target population comprised 560 participants (267 in South Australia, 293 in New South Wales) made up of those who self-identified as having OA in the CareTrack Australia (CTA) study, which has been described elsewhere [18]; CTA is a study of compliance with indicators for appropriateness of care (care in line with evidence or consensus-based recommendations) for 22 common conditions in a population based sample.

### 2.2. Survey instrument

A 19 page, three part self-administered questionnaire was developed. The first section was based on Stanford University's *Health Assessment Questionnaire*, a widely used instrument for self-reported patient oriented outcome measures that has been validated in diverse populations, including patients with OA [19]. This section included questions on activities of daily living (ADL) and an assessment of pain and health status; an algorithm was used to calculate an ADL score out of 100 (where 100 represented the lowest functional ability). The second section was based on the

*Patient Knowledge Questionnaire for Osteoarthritis* (PKQ-OA) a valid and reliable survey tool which comprised 16 multiple choice questions with 30 correct answers [20]. This section included questions related to joint protection and the use of CAM, the disease process, drug therapy, the effects of commonly used OA medications, and suitable methods for exercise and rest. The final and largest section, "About your care", explored the participants' attitudes towards OA and its management and included fields for free text responses. Individuals were asked about their use of CAM and the helpfulness of various treatment modalities – pharmacological and non-pharmacological.

The third part of the draft questionnaire was sent to three experts in the field of OA, who were asked to judge each question for validity. They were also asked to determine whether any of the items were redundant or if any area of interest had been overlooked. As a result, some changes were made. A convenience sample of eleven people with OA completed the questionnaire, on average, two weeks apart. Most questions had either high or perfect reliability as measured by the inter-rater reliability co-efficient for Likert type questions and Kappa for dichotomous questions. There were only two items with a reliability coefficient  $< 0.5$ , however, since these were both  $> 0.41$ , they were considered satisfactory.

The questionnaire was pilot tested for useability with 5 eligible participants (face-to-face, average completion time 25–30 min) after which some further modifications were made. The questionnaire was then mailed to study participants with a personalized covering letter and a pre-addressed postage-paid envelope for return of the completed questionnaires.

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