



## Non-pharmacologic supplementation as an adjunct treatment for osteoarthritis

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Osteoarthritis (OA) is a degenerative joint disorder characterized by inflammation and structural changes at joints<sup>1</sup> with higher prevalence among females,<sup>2-4</sup> advanced age,<sup>3,4</sup> and individuals who are overweight/obese<sup>2</sup> or have a history of previous knee injury.<sup>2</sup> Knees and Hips are two of the commonly reported involved joints.<sup>1,3</sup> Joint pain, stiffness, limitation in range of motion and inactivity associated muscle weakness further limit the functions and activities of daily living, thereby contributing to increased years-lived with disability (YLDs).<sup>1</sup> Not only being a known cause of disability, recent studies reported that OA increases the risks of developing other conditions such as depressive symptoms<sup>5</sup> and myocardial infarction.<sup>6</sup> Due to its potential impact on influencing overall health,<sup>7</sup> OA may substantially increase both direct and indirect medical and rehabilitation costs. Recently, increasing number of studies examined the effect of potential adjunct supplementation used in musculoskeletal conditions such as improving muscle strength in frail elderly,<sup>8</sup> and reducing joint

pain in people with osteoarthritis.<sup>9</sup> In this issue of Hong Kong Physiotherapy Journal, two studies investigated the effectiveness of non-pharmacologic supplementation for managing symptoms of osteoarthritic knee<sup>10</sup> and hip.<sup>11</sup> Oninbinde *et al.*<sup>10</sup> compared the effect of topical administration of glucosamine sulphate via 3 methods, i.e. (1) iontophoresis (IoT), (2) cross-friction massage (CFM) and (3) combined therapy of IoT and CFM (CoT) on pain intensity, joint space width, range of motion and physical function in people with osteoarthritic knee. Favourable post-treatment findings were reported. In the other study, Ikeda *et al.*<sup>11</sup> examined the effects of branched-chain amino acid (BCAA) supplementation in combination of exercise program on muscle strengthening in female patients with osteoarthritic hips who were awaiting for total hip arthroplasty. Individuals in experimental group who had oral intake of BCAA on top of exercise program (i.e. hip abductors strengthening program) showed a significant effect on 10-meter timed gait time and improvement rate of

muscle strength of the contralateral hip abductor when compared with control group.<sup>11</sup> While these studies have several limitations, the current findings provide support for conducting larger randomized controlled trials to investigate the potential effect of adjunct supplementation for managing osteoarthritis.

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