Eggshell membrane in the treatment of pain and stiffness associated with joint and connective tissue disorders. Results from a clinical pilot study in humans.

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Musculoskeletal joint and/or connective tissue disorders are common among athletes and sedentary adults due to acute or chronic joint damage scenarios. Eggshell membrane food supplement contains naturally occurring protein and glycosaminoglycans essential for cartilage and joint function. Due to its potential anti-inflammatory effects, there is nowadays a growing interest in the eggshell membrane as a dietary supplement in the treatment of joint and/or tendon pain and stiffness symptoms caused by overuse damage of those structures. The aim of this pilot study was to examine the effects of the eggshell membrane supplement in the perception of joint pain, stiffness and functionality in symptomatic runners, CrossFit practitioners (CrossFitters) and sedentary adults. Sixty subjects (15 runners, 15 CrossFitters and 30 sedentary adults) with chronic joint pain were recruited. Participants received a daily capsule containing 300 mg of eggshell membrane (OVOMET Health, Eggnovo S.L., Spain) during 30 (CrossFitters) or 50 (runners and sedentary adults) days. Perceptions of joint pain, stiffness and functionality were assessed using two different validated questionnaires (WOMAC and DASH) before and after the treatment, and every 10 days during the treatment. Eggshell membrane supplementation reduced ($P<0.001$) pain (from 3.1±1.0 to 1.6±1.0 in runners, from 3.0±1.2 a 1.2±0.7 in CrossFitters and from 5.7±0.8 to 2.9±0.8 in sedentary adults) and stiffness (from 2.7±0.8 to 0.9±0.3, from 1.8±0.6 to 1.0±0.6 and from 2.8±0.4 to 1.6±0.4 in runners, CrossFitters and sedentary adults respectively), and improved ($P<0.001$) functionality (from 9.3±2.5 to 2.4±1.2, from 11.0±2.7 to 8.2±2.6 and from 16.7±2.7 to 10.1±2.7 in runners, CrossFitters and sedentary adults respectively). Relative to baseline scores, average improvements in perceptions of pain, stiffness and functionality were 53%, 52% and 46%, respectively. There were no adverse effects reported. In conclusion, daily 300 mg eggshell membrane supplementation resulted in a meaningful symptomatic improvement in 30 athletes and 30 sedentary adults with chronic joint pain. These results support the use of eggshell membrane for joint pain relief as an alternative treatment to conventional treatments such as analgesics or non-steroidal anti-inflammatory drugs.

Characters = 1997 (<2000)