

## Comparative Effect of Calisthenic and Proprioceptive Exercises on Pain, Proprioception, Balance and Function in Chronic Osteoarthritis of Knee

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### Abstract

**Aim:** the present study was intended to study the effect of calisthenic exercises and to compare effectiveness of calisthenics and proprioception exercises as an adjunct to conventional treatment in subjects with chronic Osteoarthritis knee. **Method:** It was randomized clinical trial. 43 participants diagnosed with chronic osteoarthritis knee were randomly allocated into two group's viz. Calisthenic exercise group and Proprioception exercise group. The outcome measures were pain, proprioception deficit, balance and functional disability. **Result:** Both intervention groups showed significant improvement when pre and post values were analyzed for all the outcome parameters ( $p < 0.05$ ). But, inter group comparisons showed Proprioceptive exercise group to be more effective ( $p < 0.05$ ) than Calisthenic exercise group for all outcome parameters except for functional disability scale. **Conclusion:** Light intensity Calisthenic exercises are effective and can be recommended as an adjunct to conventional physiotherapy for the patients with Osteoarthritis knee. However, proprioceptive exercises were superior to calisthenic exercises when prescribed along with conventional physiotherapy.

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### Introduction

Osteoarthritis (OA) is the second most common rheumatologic disorder after soft tissue rheumatism. It's the most common rheumatic disease and a leading cause of pain and disability. Osteoarthritis is marked by progressive destruction of articular cartilage and formation of bones at the margins of the joint (Klippel et al. , 1997; Linos et al.,1980; Sokoloff 2016). Anepidemiology study conducted to determine region-specific prevalence of knee osteoarthritis and risk factor profiles in India, found overall prevalence of knee OA was found to be 28.7% (Chandra et al., 2016). In India, the rheumatologic disorder affects 10 -20% of the population across different ages. As put forth by the American College of Rheumatology the criteria for osteoarthritis includes age of 50 years and above, regular experience of knee pain, crepitus on motion coupled with either osteophytes findings on the radiograph or combination of morning stiffness lasting for 30 minutes or less.(Bhan 2002; American College of Rheumatology 2012). As the disease progresses the