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## The effectiveness of the concentric versus balance exercises in preventing 'Achilles' tendinopathy in healthy footballers and runners and in a healthy living population: A prospective study

A P Georgiadou, E Avdousi and D Stasinopoulos  
European University Cyprus

**BACKGROUND:** Achilles tendinopathy is a common musculoskeletal disorder with various pathological manifestations in both athletes and non-athletes<sup>1,2</sup>. It is an overweight injury characterized by localized progressive pain and

**OBJECTIVES:** The aim of this prospective study was to investigate the effectiveness of concentric exercises versus balance exercises in preventing Achilles tendinopathy on healthy footballers/runners and in a healthy living

**RESULTS:** In this prospective study was analyzed 4th articles to prevent Achilles tendinopathy (Table 2). This results providing the existing knowledge of types of exercises in treatment Achilles tendinopathy in healthy participants. dysfunction<sup>3</sup>. The frequency of Achilles tendon injury is estimated to be 30-50% of all sports population.

**METHODS:** There is no statistically significant difference in efficacy between concentric and balance exercises in the prevention injuries, 50% between athletes running and 6% in sedentary lives<sup>4,5</sup>. The etiology of Achilles' tendinopathy is multi factorial and is due to both extrinsic and insitric injury factors<sup>6,7</sup>. Treatment of tendinopathy usually consists of conservative physiotherapeutic treatment and surgical treatment<sup>8</sup>. However, basic therapy is kinesiotherapy, both in rehabilitation and prevention<sup>8</sup>.

**REFERENCES:** Research will be conducted through the electronic databases PubMed, Science Direct, MEDLINE and Proquest. The search will be limited to English articles. The study will be randomly sampled from the county of Argolida, Greece. A sample of 60 people over 18 years old will be taken by men and women footballers and runners, as well as 30 people from the general population. The evaluation of the sample will be done if crash diaries are provided to each participant where each participant has to record daily injuries or annoyance on the Achilles tendon. Also, the strength will be measured with the maximum repeat (RM), the ankles motion range with a simple goniometer, and the muscular activity of electromyography (EMG) gastrocnemius. Chi-square and exact Fisher test for nominal data on Achilles tendon injury are used and the descriptive data will be calculated with mean and standard deviation. ANOVA analysis and Correlation analysis with the Pearson correlation coefficient for the relationship between exercise and occurrence groups of tendinopathy and equilibrium exercise groups in relation with the occurrence of tendiopathy will be used. The level of statistical significance will be set at  $P < 0.05$ . Finally, SPSS, version 20 for Windows, will be implemented. The intervention protocol contains a warm-up program for the Achilles tendons for all three groups and then each group will receive the specialized exercise program for 9 months and 4 times a week. of Achilles' tendinopathy in healthy footballers, runners and in a healthy living population. The importance of the problem is to include the most effective exercise in the prevention of Achilles' tendinopathy in athletes and in the healthy living population. This will reduce the incidence of Achilles tendon injury to healthy footballers, runners and the sedentary peoples of the population. For the creation of the present research proposal, the condition is the approval of the Ethics Committee of Greece

**CONCLUSION:** The creation of this prospective study will find the effectiveness of concerted exercises against equilibrium exercises in preventing Achilles tennisopause in healthy footballers / runners and in a healthy population of living.

tasose@hotmail.com