

ENERGY EXPENDITURE OF WALKING IN RHEUMATOID ARTHRITIS (RA) PATIENTS

MARIA ROSENILDA P. CARVALHO, ANTONIO SERGIO TEBEXRENI, TURÍBIO L. BARROS NETO, JAMIL NATOUR

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Abstract

The aim of this study was to analyze the energy expenditure of 35 patients diagnosed with RA, grouped into class functional classes (I, II and III) while walking at different speeds on a treadmill. The subjects were selected from the out patients clinic and were compared to a control group matched to sex, age and weight. An incremental test protocol was developed for the treadmill to be compatible with normal walking, with metabolic analysis performed by a computadorized gas analyzer, measurement of heart rate, and perceived exertion of each patient using a Borg scale. We also used a visual numeric pain scale, Ritchie index, EPM-ROM, and HAQ to evaluate, respectively, pain level, the inflammatory activity of the disease, and the patient's functional capacity.

The results show a greater metabolic demand for the RA patients compared to the control group at velocities of 3.0, 4.5 and 5.0 km/h, using both Friedman and Mann-Whitney tests with a $p < 0.05$. Also, the RA patients showed significantly higher values for the Borg scale and all other variables, with the exception of heart rate. The results from metabolic demand, Borg scale assessment and heart rate were higher for class II patients compared to the control group, while the class I group performed close to normal values.