

Effect of Aerobic Dance on the Body Fat Distribution and Cardiovascular Endurance in Middle Aged Women

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Abstract

Dance aerobics is a popular means of exercise in the urban population. This study evaluates effect of Dance Aerobics on cardiovascular endurance and body fat percentage in middle aged women. To ensure uniformity in the findings, *Cooper Protocol*, a standardised protocol for dance aerobics was followed, ensuring optimal exercise intensity and minimal musculotendinous damage.

120 middle aged women divided in two groups were examined for VO_{2max} and body fat percentage. Group I comprised 60 women engaged in regular aerobic dance sessions, since 6 months. Group II did not engage in any exertional physical activity. Unpaired t test was used. $p=0.001$ considered significant. Aerobic dancers exhibited i) no significant difference in VO_{2max} ($p=0.00201$) ii) lower fat percentage ($p=0.01462$), indicating aerobics is highly effective in weightloss, but effects on cardiovascular endurance are not pronounced. Increasing intensity of existing protocol to achieve increased VO_{2max} may hasten musculotendinous damage. This should be considered before an individual selects aerobic dancing as fitness activity.

Keywords: Cooper Protocol, VO_{2max} , Callipers

Introduction

The aerobic dancing is a popular means of exercise regimen, especially in the urban population. Exercising to music, non requirement of costly equipments or space especially have made dance aerobics very popular in urban areas. Numerous studies carried out on aerobic dance and its effect on body. These have yielded mixed results of the aerobic dancing on various physiological parameters of the population (Kathleen & Rockefeller, 1979; Patricia, 1987; Williford et al, 1989; Garber et al 1992; Grant et al, 2002; Lehri, and Mokha, 2006; Pantelić et al, 2007; Jakubec et al, 2008; Schiffer et al, 2008; Angioi et al, 2009; Keogh et al 2009; Leclarungrayub et al, 2011;

Hopkins et al, 1990). The difference may be due to difference in the cadence and impact of the various dance schedules (Uchechukwu, 2009). The following study considers the effect of dance aerobics on the VO_{2max} and body fat content on middle aged women. The dance schedule followed in the study was based on Cooper Protocol (Bull, 1996).

Materials and Methods:

The study was carried out after obtaining the Institutional Ethical Committee Approval. The study was carried out in two groups. Group I consisted of 60 middle aged women who practiced aerobic dance since atleast 6 months. Each session of aerobic dance