

# Dance as a Supplementary Instrument for Cardiac Rehabilitation: An Integrative Literature Review

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## ABSTRACT

Intrinsic socio-cultural and motivational dance aspects, physical demands, general and styles characteristics, may promote positive influence on cardiac rehabilitation programs development and progression, if dance is approached as a supplementary activity and resource for cardiac patients. The aim of this study was to conduct an integrative literature review to evaluate dance as a supplementary activity on cardiac rehabilitation, considering physical demands, dance socio cultural aspects and regular practice related effects on cardiac patients' health and quality of life. Classical ballet and modern dance are not supported by this revision as appropriated alternatives to improve cardiovascular capacities for cardiopaths. However, belly dance, ballroom dance, emphasis on Samba, Samkya showed multiple positive effects: glycemia levels reduction, resting heart rate reduction, cholesterol (HDL, LDL) and triglycerides level regulation, BP reduction, cardio respiratory increment and body relaxation.

## KEYWORDS

Belly Dance, Cardiac Rehabilitation, Cardiopaths, Cardiopathy, Classical Ballet, Dancers, Samba, Samky Dance

## INTRODUCTION

Cardiovascular disease is a generic term used to define a group of disorders affecting directly the human heart and the cardiovascular system; corresponding to the number one cause of death in the contemporary world (WHO, 2018; Simão, Precoma & Andrade, 2013; Silveira, Ribeiro & Ramos, 2012; Colombo & Aguillar, 1997). Cardiac insufficiency, arrhythmia and myocardial infarct are common heart dysfunctions that might be emphasized by multifactorial mechanisms such as hypertension, dyslipidemia, smoking, stress, diabetes mellitus, obesity, age over 60 years, sex, familiar history for cardiovascular diseases, and sedentary lifestyle (Simão et al., 2013; Silveira et al., 2012).

Among the aforementioned factors that might increase cardiovascular diseases, the hypertension has been indicated as the most important risk factor for coronary artery disease development. It is defined as blood pressure (BP) higher than 140/90 mmHg for patients with age under 60 years and above 160/90 mmHg for elderlies. Hypertensive patients are also predisposed to cardiac insufficiency, cerebrovascular disease, chronic kidney disease, atrial fibrillation, and, cognitive deficits development and dementia (Simão et al., 2013).

Dyslipidemia (high blood lipids level) is also indicated as a relevant risk factor correlated to cardiac diseases development (CAD) along with hypertension (Oliveira, 2011). High low-density lipoprotein (LDL) concentrations rates and low high-density lipoprotein (HDL) concentration may increase CAD chances, which emphasize the importance of treatments aiming to impact lipids regulation (Simão et al., 2013).

Approximately 75% of the cardiovascular mortality rate could be decreased with lifestyle changes; such as healthy feed, low consumption of sodium and alcohol, suitable potassium ingestion, body mass control, smoking and sedentary lifestyle combat (I Brazilian Guideline of Cardiovascular Prevention - Brazilian Society of Cardiology, 2013; World Health Organization, 2018). Both the cardiovascular risk factors control and the disease development mechanisms comprehension might be carried out by means of either pharmacological or non-pharmacological intervention, since only age, sex and familiar history are considered as non-modifiable factors on CAD (Colombo & Aguillar, 1997; Simão et al., 2013; The American College of Sports Medicine, 2003).

Sedentary lifestyle has been considered to play a role in the CAD (Nery, Barbisan & Mahmud, 2007). Physical activities are strongly recommended to regulate the cholesterol level and for the hypertension control, promoting protective effects on cardiovascular system for healthy people and cardiac patients (The Brazilian Archives of Cardiology, 2005; I Brazilian Guideline of Cardiovascular Prevention - Brazilian Society of Cardiology, 2013).

Aiming to return patients back to activities of daily living, cardiac rehabilitation programs are developed using physical activities and educational approaches, focusing on lifestyle changes (Guimarães, Alves, Araújo & Carvalho, 2005). The rehabilitation programs development depend on adequate physical exercise prescription and intensity modulation in order to assure the expected results. It is indicated the maintenance

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