

Effects of a physical activity program on functional fitness, oxidative stress and salivary cortisol levels in older adults

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Quality of life into later life is influenced by multiple factors. The physical ability to perform common everyday activities represents a key factor to maintain a healthy and independent lifestyle. Moreover, aging is a process characterized by physiological alterations resulting in a progressive decline in biological functions, decreased resistance to stress, and increased susceptibility to diseases. Especially in elderly people, alterations such as imbalance between pro and antioxidant activity and/or hormonal dysregulation negatively affect the physical capacity, the emotional status and the overall general health and quality of life [1]. On the other hand, regular physical activity is considered an effective strategy for older adults to prevent and reduce the risk of developing those negative conditions arising from aging. A 24-week regular physical activity program (twice weekly, 1 hour per session) focused on functional fitness exercises was performed by 20 older adults (aged 55 years or more). A set of anthropometric (height, weight, BMI and body fat percentage) and physical measurements (grip strength, chair sit to stand, sit and reach and back scratch) assessing the functional fitness performance [2] were evaluated. Moreover, biochemical markers (d-ROMs and BAP tests as assessment of oxidative stress and antioxidant potential; salivary cortisol levels) were measured before and after the intervention program. The results confirm the benefits of a regular physical activity in older adults resulting in improved physical strength and flexibility in the functional fitness parameters, and in regulating pro and antioxidant activity and cortisol levels.

References

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Keywords

Functional fitness, oxidative stress, cortisol