

**P52: Cardiovascular rehabilitation program: The influence on cognitive and executive function, kyphotic index, joint range of tibiotarsal and balance**

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**Introduction:** Cardiovascular disease arises from pathological changes, such as atherosclerosis, and continues to be the main cause of mortality, as coronary artery disease that is responsible for 20% of deaths each year. Cardiovascular rehabilitation programs have several phases, and the last one, the maintenance phase, which aims are to implement healthy lifestyles habits on people.

**Objectives:** To analyze the influence of a specific exercise program, in the maintenance phase of a Cardiovascular rehabilitation program, home-based during six months, on cognitive and executive function, kyphotic index, joint range of tibiotarsal and balance.

**Materials and Methods:** Experimental study on subjects with coronary artery disease, followed in Centro Hospitalar do Porto. The sample was randomly divided into an experimental group (n=11), that has done all specific exercise program, and control group (n=12), that has done only the educational component. The evaluation included the cognitive and executive function (Trail Making Test, Verbal Digit Span and Stroop Test), balance (Star Excursion Balance Test and One-Leg-Standing), joint range of tibiotarsal and kyphotic index. This review was carried out in three stages, namely an initial moment (M0), after 3 months (M1) and after 6 months (M2). It was used descriptive and inferential statistics to compare groups, as well as to analyze the intragroup evolution, using in all variables nonparametric tests. The significance level was 0,05.

**Results and Discussion:** After 6 months, significant improvements were found in the experimental group in executive function, specifically in the Set Shifting component ( $p=0.009$ ), and also in lateral position ( $p=0.011$ ) in right leg and anterolateral ( $p=0.032$ ), lateral ( $p=0.037$ ) and posterior lateral ( $p=0.002$ ) positions in left leg of Star Excursion Balance Test.

**Conclusion:** In this sample, the implementation of this home-based specific exercise program during 6 months demonstrated benefits on executive function, including cognitive flexibility, and dynamic balance.

## References

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