



# Cognition and type 2 diabetes in hypertensive physically active older women: a pilot study

## AUTORES

Sarah Costa de Almeida  
Flavia Santos Alves  
Silvio Soglia Neto  
Iago Eirado de Almeida  
Luzia Wilma Santana da Silva  
Iane de Paiva Novais

State University of Southwestern Bahia, Itapetinga,  
Bahia, Brasil.

## CONTATO

*ianepaiva@yahoo.com.br*

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**Abstract:** Type 2 diabetes mellitus (2DM) is associated with an increased risk of dementia and recent data have re-awoken controversy about potential deleterious effect of recurrent, severe hypoglycemia on cognitive function. Physical exercise (PE) is a non-pharmacology treatment to cardio-metabolic diseases and some evidence suggests that it could influence the brain by modulating several mechanisms for the cognition. It remains to be elucidated the key of the development of cognitive impairment in people with 2DM and to establish the beneficial effects of an active lifestyle on the risk of dementia related to 2DM. The aim was to verify association among cognitive function and depressive symptoms, and metabolic and hemodynamic parameters in physically active hypertensive and 2DM elderly women. A cross-sectional study was carried out with 28 women (16 hypertensive and 12 diabetic-hypertensive) participating in a project with PE, social interaction and health care. The cognitive function was evaluated by Mental State Mini Exam (MMSE) and depressive symptoms by the Geriatric Depression Scale (GDS-30). Post prandial glycemia and resting blood pressure were measured. The prevalence of cognitive disorders was 32% and depressive symptoms was 36%. Age, schooling and marital status was not correlated with the MMSE and GDS scores. In the same way, there was no relationship between glycemia and decreased cognition ( $r: 0.17$ ;  $p: 0.31$ ) or symptoms of depression ( $r: 0.10$ ;  $p: 0.46$ ). Despite the limited number of participants, this result shows preliminarily the importance of the activities developed with PE, social interaction and health care.

**Keywords:** Depressive symptoms; Arterial hypertension; Type 2 Diabetes Mellitus

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