

# Impact of adding a cognitive task while performing physical fitness tests in women with fibromyalgia: A cross-sectional descriptive study

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Fibromyalgia symptoms cause a significant reduction in the ability to perform daily life activities. These activities often require the ability to perform more than 1 task at the same time. The aim was to investigate how the addition of a cognitive task modifies the performance in physical fitness tests in fibromyalgia and healthy controls. A total of 61 women participated in this study, 31 of them diagnosed with fibromyalgia by a rheumatologist. They performed 3 physical fitness tests (arm curl, handgrip, and 10-steps stair tests) in 2 conditions: a) regular (single task [ST]) and b) while thinking in 3 words that were given before each test and had to be recalled and verbalized after the execution of each test (dual task). The dual task cost was calculated as the difference between the performances in the regular and dual-task (DT) conditions. Healthy controls obtained significantly better results than fibromyalgia in both, dual and single-task conditions. Women with fibromyalgia significantly decreased the performance in the 10-steps stair test when a cognitive task was added. Between-group differences in the dual-task costs (DTC) were not found. Women with fibromyalgia showed lower physical performance than healthy controls in both, single and dual task conditions. In addition, differences between single and dual task conditions were observed in the 10-steps stair test in women with fibromyalgia. This could be related with a reduction in the ability to perform daily life activities. However, results regarding DTC indicate that both groups may be similarly influenced by the addition of a secondary cognitive. Thus, further research with different difficulty levels of DT conditions is needed in fibromyalgia. Copyright © 2018 the Author(s). Published by Wolters Kluwer Health, Inc. This is an open access article distributed under the terms of the Creative Commons

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Cognitive function

Cognitive performance

Dual-task

Fibromyalgia

C reactive protein

adult

Article

clinical article

cognition

controlled study

cross-sectional study

daily life activity

depression

female

fibromyalgia

fitness

human

major clinical study

male

normal human

Parkinson disease

questionnaire

case control study

executive function

exercise test

fibromyalgia

fitness

middle aged

physiology

procedures

Activities of Daily Living

Case-Control Studies

Cross-Sectional Studies

Executive Function

Exercise Test

Female

Fibromyalgia

Humans

Middle Aged

Physical Fitness