



Durante una cuarentena pueden aparecer problemas de concentración, sensación de confusión y mayor aburrimiento...

Por ello, y para mantener la rehabilitación cognitiva necesaria en fibromialgia, os proporcionamos este recurso **gratuito** con el que entrenar el cerebro

En el estudio se comparó un grupo de pacientes con fibromialgia que recibió entrenamiento con un grupo de ellas que no practicó.

El entrenamiento duró 12 semanas. Cada semana se jugaban 3 días, y cada día unos 20 minutos.

Los análisis estadísticos mostraron que las pacientes que entrenaron mejoraron en:

- Atención selectiva, o la capacidad para no distraerse.
- Fluidez verbal, o la habilidad para encontrar las palabras al hablar.
- Velocidad de procesamiento mental, siendo más rápidas al pensar.

[www.unobrain.com](http://www.unobrain.com)

Number 19  
UNOBRAIN ICRAN2013

### Neuropsychological Rehabilitation In Fibromyalgia Patients: Effects Of An Online Cognitive Training Program

Marisa Fernández-Sánchez<sup>1</sup>, Javier Sánchez<sup>1</sup>, Juan Miguel Diago<sup>1</sup> & José Ignacio Bescós<sup>1</sup>  
<sup>1</sup>Unobrain Neurotechnologies, S.L., Madrid, Spain  
marisaf@unobrain.com

**Introduction**  
Cognitive impairment has been demonstrated in patients suffering Fibromyalgia (FM), a chronic widespread pain syndrome, in which the neural substrate is still under study. Deficits are commonly found in complex attention, working memory, semantic and episodic memory (Glass, 2010), and patients usually comment on the severe impact that these failures have on their daily living. The positive effects of neuropsychological rehabilitation programs in people with acquired brain injury have been well established in the scientific literature (Rohling et al., 2009). More recently, efforts have been made to test the impact of computerized cognitive treatments on the neuropsychological functioning of different clinical populations such as people suffering stroke (Westenberg et al., 2007) or schizophrenia (Fisher et al., 2009). However, up to the authors' knowledge there are no previous studies which test the effects of an online cognitive rehabilitation program directed to improve cognitive failures in a group of FM patients.

**Methods**  
With the aim of exploring these questions, a total of 37 women with FM participated in our study. The total sample was divided in an experimental group (EG; N=18) and a control group (CG; N=18). Clinical and neuropsychological assessment was performed before and after a computerized online cognitive training program (COCTP) was conducted on the EG. Canonical levels were the Fibromyalgia Impact Questionnaire (FIQ), Beck Depression Inventory (BDI), Attention Related Cognitive Errors Scale (ARCES), Memory Failures Scale (MFS) and other questions about medication and years of disease. Neuropsychological evaluation included the Map Search test (MS) (Fig. 1) from the Test of Everyday Attention (TEA), the Trail Making Test (TMT), Phonemic (COWAT) and Semantic Fluency (Animals), Stroop Test (ST), and Digit Symbol (DS) and Vocabulary (V) from the Wechsler Adult Intelligence Scale III.

**Results**  
The statistical analysis did not show significant differences between groups in the pre-program assessment in any of the sociodemographical variables, nor in the clinical or neuropsychological measures (p<0.05) excepting higher scores for the CG in the COWAT (z=2.543; p<0.05). Post-intervention scores analysis showed significant differences only in the DS (the recall) test (z=2.077; p<0.05) with the CG performing slightly better than EG. A Wilcoxon Test of related samples showed significant differences between the two conditions for the EG in the MS, TMTA, COWAT, Animals, Stroop Color Naming, Stroop Word Color score and all DS tests. In the CG only the MS test reached significance.

**Conclusions**  
In our experiment we found that FM patients are able to improve their selective attention, verbal fluency and speed of mental processing after a brief online cognitive intervention. Our results are in the line of other that support the positive effects of cognitive training in people with neuropsychological dysfunction. Different computerized cognitive programs have shown benefits in healthy people (Ackerman et al., 2010), malaria survivors (Bangirana et al., 2009) or Alzheimer disease (Tárraga et al., 2006). Nevertheless, new efforts should be done to shed some light to the neuropsychological rehabilitation of FM patients that would improve their quality of life.

