

Alzheimer's study: benefits of long-term cognitive motor intervention last longest on basic daily life activities

- *Researchers from the Maria Wolff Foundation in Madrid and the New York University Langone Medical Center compared effects of a three-year-long cognitive motor intervention for people with Alzheimer's with people who received usual care.*
- *People in the treatment group performed better in activities of daily living, mood and cognition, although not all domains showed the same improvement over the three years studied. A hierarchical time pattern emerged.*
- *These results open the door to the design of potentially more efficacious, non-pharmacological treatments.*
- *The study has been published in the Journal of Alzheimer's Disease.*

New York / Madrid. 07-04-2015.- This first, long-term study on the impact of a multicomponent cognitive stimulation program for people with Alzheimer's has shown that the benefits of this intervention last longest on the basic activities of daily living—those skills learned in the earliest years of life—and mood. The study results, which have just been published in the *Journal of Alzheimer's Disease* under the title: *"Cognitive-Motor Intervention in Alzheimer's Disease: Long-Term Results from the Maria Wolff Trial"*, have many practical implications for Alzheimer's treatments.

The international research team discovered that the impact of long-term multicomponent cognitive stimulation programs is varied, depending on the brain functions. The researchers identified which brain functions benefitted most from long-term intervention.

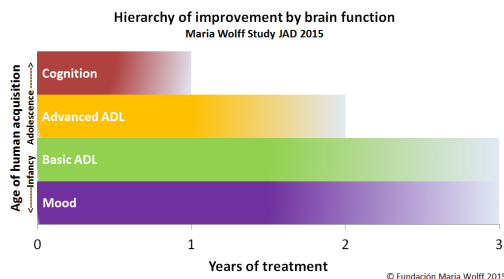
Previous studies compared people with Alzheimer's who received global, or multicomponent cognitive stimulation, with those who received usual care. These trials sometimes showed a small improvement in cognition or functional benefits like dressing or toileting. Mood improved in half of these studies. However, these trials usually lasted only weeks or months. The long-term effects of exposure to this kind of non-pharmacological therapy remained unknown until this publication. These treatments are usually provided by day care centers, memory units or nursing homes, services that people with Alzheimer's often use for a period of years.

In order to evaluate the outcomes of such long-term treatment, an international research team compared two groups of about 40 people each over three years. One group received a cognitive motor intervention through sessions lasting about 3.5 hours twice weekly, whereas the other received usual care.

The intervention method called "[Animus](#)" returned several benefits after one year: participants had better cognitive performance, were more independent in daily activities, and showed both better mood and adapted behavior. In addition to the latter, this group took fewer mood and behavior drugs, as compared to people without the program who were seen to exhibit more depressed moods, less adapted behavior and took more psychotropic drugs. These improvements are clearly relevant, as they show that such a non-pharmacological therapy can improve people's quality of life while avoiding the risks of psychotropics.

A clear hierarchical response to therapy emerged from the data: improvement in cognition - understood as language, comprehension, thinking and orientation - maintained statistical significance for only one year. Instrumental Activities of Daily Living, such as use of money or preparing a meal, improved significantly for two years. The winning domains, those that showed significant improvement *over three years* were: a) Basic Activities of Daily Living like showering, dressing, toileting or eating; and b) Mood, showing those attending the sessions less depressed than those that received usual care.

Ruben Muñoz, Research Director at [Maria Wolff Foundation](#), remarks: *"It is as if those cerebral circuits wired during infancy (eating or toileting) responded longer to non-pharmacological treatment than those acquired later in adolescence (making meals or intellectual comprehension). Data show a temporary hierarchy of responsiveness to our therapy: the brain functions of latest acquisition in human development were the least responsive, while the functions acquired earliest were the most responsive"*.



Dr. Barry Reisberg at New York University Langone Medical Center, adds: *“Brain functions acquired during early human life withstand Alzheimer’s neurodegenerative processes for a longer time than those acquired in later life, for example in adulthood, adolescence or later childhood. This process is called Retrogenesis, and has been described as part of the normal evolution of Alzheimer’s disease”.*

Dr. Teodoro del Ser and Dr. Jordi Peña-Casanova state: *“The study result showing the treatment group’s cognitive status slightly below the control group after three years should be carefully investigated in future research, as it could be due to selective sample attrition”.*

The two study leaders, Ruben Muñoz and Javier Olazarán, point out the practical implications of this study: what, and in what way cognition is stimulated and maintained should be carefully revised, especially after mild dementia. The role of instrumental and basic functioning of daily living should be more specifically targeted from the time mild dementia is diagnosed, onwards. In addition, the emotional and physical well-being should be actively addressed at every stage of the disease.

Scientists at Maria Wolff Foundation stress that this study is the first of its kind in terms of length and quality. All study participants (control and treatment groups) were taking drugs called cholinesterase inhibitors. These drugs can slightly improve cognition in some patients. As the treatment group received cognitive-motor stimulation and the drug, the additive effect of the intervention could be measured.

Patients and their care-giving partners were consistently satisfied or very satisfied over the three-year period of attending the Maria Wolff day care centers in Madrid, where these treatments were provided. Dr. Javier Olazarán, Scientific Director of the Foundation, said: *“Participants enjoyed socializing and did not mind the effort of attending the sessions regularly. Their acceptance is important, as it does not only pay back for them in clinical terms, but because it gave care-givers twice weekly relief”.*

- Click here to download the full article, [“Cognitive-Motor Intervention in Alzheimer’s Disease: Long-Term Results from the Maria Wolff Trial”](#)
- [View interviews of the scientists](#)
- [View/download photos](#)
- Maria Wolff Foundation with the help of many others contributed to give non-pharmacological therapies scientific structure.

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*The **Maria Wolff Foundation** supports a holistic approach to clinical research in dementia. Since 1994 we have been promoting the use of Non-Pharmacological Therapies (NPTs) within welfare services like nursing homes and day care centers.*

Recently we were able to demonstrate that some NPTs are more effective and beneficial than current pharmacological treatments for dementia when we published the most comprehensive review to date of research on the efficacy of NPTs in Alzheimer’s Disease. That said, we defend a rational use of drugs.

Currently we are providing logistical, scientific and organizational support to the world’s largest network of researchers studying NPTs.

Our goal is to provide professionals and caregivers of people with dementia the best available techniques to improve their patients’ quality of life.