

**MOVE for your MIND: Dalcroze Eurhythmics and a strength home program to prevent cognitive decline and falls among seniors**  
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**Background:**

The number of seniors aged 70 and older living in Europe is predicted to rise from 25% to 40% by 2030 (Eberstadt N, 2007) and at the same time the number of seniors facing cognitive impairments, physical frailty and resulting challenges, such as falls and loss of autonomy, will increase (Corrada MM et al., 2010; Collard RM et al., 2012). One out of three seniors at the age of 65 and one out of two seniors at the age of 80 experience at least one fall per year (Tinetti ME et al., 1988). Prevalence of dementia increases with age (Hofman A et al., 1991) and more than doubles a senior's risk of falling (Delbaere K et al., 2012; Morris JC et al., 1987). Music- and dance-based interventions have been shown to improve muscle strength and balance skills, multi-tasking abilities, and enhance cognitive functions (Kattenstroth JC et al., 2013; Fernández-Argüelles EL et al. 2015). Dalcroze eurhythmics is a music-based exercise method that consists of multitask exercise conducted to the rhythm of improvised piano music (Jaques-Dalcroze E, 2013). People at early stages of cognitive decline are more likely to benefit from prevention strategies and the stage of "subjective cognitive decline (SCD)" might be a window of opportunity to prevent cognitive decline (Mitchell AJ et al., 2014). Seniors with SCD report that their memory has worsened over the past years but the decline is not yet objectively detectable in clinical tests.

**Aim:**

This presentation aims to highlight the specific needs of seniors with SCD regarding a dance- or music-based intervention and to present the study protocol of the MOVE for your MIND trial. MOVE for your MIND is a randomized controlled trial, which will examine the effects of a Dalcroze eurhythmics program and a home exercise strength program on cognitive function and fall prevention among seniors with SCD.

**Methods:**

The MOVE for your MIND trial will be a 12-month RCT, recruiting 195 senior men and women aged 70 years and older who meet the criteria for SCD. Participants will be randomly assigned to Dalcroze eurhythmics, the home strength exercise program or to a non-exercise control group. Outcome measure includes change in cognitive function, fall rate, physical performance, mental health and quality of life. Additionally, blood markers of brain and muscle health will be assessed and MRIs conducted to detect structural brain changes.

**Relevance:**

The need for high quality studies examining different exercise interventions on objectively measurable health outcomes has been stated by many authors in the field (Fernández-Argüelles EL et al. 2015). Therapeutic interventions for seniors with early subjective signs of cognitive decline that are effective, affordable, and well-tolerated in the prevention of both cognitive and physical function decline are urgently needed and will have an outstanding impact on public health strategies. Providing an evidence-base for a group and home-based exercise will give a choice to patients and to therapists.

**References:**

Corrada MM et al., 2010; Collard RM et al., 2012  
 Jaques-Dalcroze E, 2013  
 Delbaere K et al., 2012; Morris JC et al., 1987  
 Eberstadt N, 2007  
 Fernández-Argüelles EL et al. 2015  
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 Tinetti ME et al., 1988

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