



Dec 2014

## Physical activity, balanced nutrition and cognitive exercise fundamental to stay healthy

All countries in Europe are experiencing an ageing of their populations, with a decrease in the number of people of working age per retiree. By 2050, an estimated 35% of the European population will be over the age of 60, compared to 20% in 2005. Health trends among older people are mixed: severe disability is declining in some countries but increasing in others, while mild disability and chronic disease are generally increasing. As a consequence, long-term care costs are certain to increase with the ageing of the population unless appropriate measures are implemented in time.

### Reduce risk factors

To be effective, these measures should reduce the risk factors linked to functional decline and chronic diseases and provide personalised training able to stimulate older people in order to maintain an active lifestyle.

The DOREMI project focuses on three main health aspects related to ageing: unbalanced nutrition, sedentariness and cognitive decline.

Partners CNR-IFC and SI4LIFE have carried out an extensive literature analysis of these three impairments, and focused on strategies to control them and on the definition of Active Ageing Lifestyle protocol to be applied during experimental trials in the UK and Italy. Active lifestyle, especially physical activity, healthy dietary habits and cognitive stimulation all play a fundamental role in preserving a healthy state: this approach, acting on well-being, can reduce and postpone the natural psychological decline in older people.

### Contents in this newsletter

Physical activity, balanced nutrition and cognitive exercise fundamental to stay healthy	page 1
Nutrition	page 2
Physical activity	page 2
Cognitive decline	page 3

## Nutrition



Prospects for healthy ageing are characterised at first by “a proper nutrition”; evidence-based strategies have been proposed to improve quality of dietary habits, through appropriate protocols, which take into consideration culture specific diet differences, environmental and lifestyle habits.

This approach does not only promote a daily food-based guideline, but also a greater knowledge on food components, which older people generally know too little about. A proper knowledge of food components is much more effective than prescriptions of multivitamin and mineral supplementation in lowering major health diseases affecting older people.

With the support of the Mini-Nutritional Assessment (MNA) test, we will have a validated nutrition screening and assessment tool able to identify geriatric patients aged 65 and over who are malnourished or at risk of malnutrition (excess or defect). During the trial, thanks to the continuous evaluation of weight and the support of a diet app, we will be able to remotely make changes to our users’ food intake and to detect effectiveness of personalised diet prescription on weight.

A collaboration with NU-AGE project, an FP7-KBBE funded project that seeks to demonstrate how, by dietary means, it could be possible to counteract and/or slow down the process of ageing (including decline of cognitive function), was officially approved and started in July 2014.

## Physical activity

No age group gets more benefits from fighting sedentariness with regular exercise than older people.

Research and trials provide specific recommendations on living an active, physically correct daily life that include exercises that promote endurance and flexibility, strengthen muscles, and improve balance. These long-term recommendations prevent all typically age-associated diseases, including hypertension, cardiovascular diseases, diabetes (NIDDM), especially if associated to a healthy nutrition.

Concerning the age-associated loss of body protein and decreased bone density, strength training and muscle mass reinforcement play a role in active prevention, when specific and calibrated programs, targeted to specific conditions of each older person, are adopted.

At the same time, no age group has more difficulties than older people in making regular physical activities outdoor. Therefore it is crucial to reduce sedentariness at home, encouraging people lead an active daily life even if in their own houses.

DOREMI will use the Physical Activity Scale for the Elderly (PASE) test, which will help the user profiling in terms of activity quantification (time and type of actions). Through the bracelet that will be developed by the technical partners of the project, we will be able to monitor users’ activities, in particular for what concerns physical exercises. Moreover, thanks to the DOREMI virtual companion, our users will be stimulated to follow the prescribed daily activities and improve health status.

# Cognitive decline



Foto: Mariano Cuajao

Increasing interest in problems regarding sedentariness and malnutrition as risk factors for chronic diseases has been seen. Unhealthy dietary and sedentary habits influence cognitive decline, which in turn has a relevant impact on the independence and the autonomy of older people, and which plays a primary role in progressively leading to less and less balanced diet and physical activity.

DOREMI will develop games focused on the different cognitive functions analysed by Mini Mental State Examination (MMSE) and other cognitive function tests: Orientation, Registration, Attention and Calculation, Recall, Language and Praxis. Users will be stimulated to play in order to slow down or stop cognitive decline. DOREMI platform will administer on a daily schedule these games and will give feedback to specialists about users' cognitive improvements.

As described, DOREMI measures and lifestyle protocols will be able to synergistically act against these three impairments and prevent or delay a systemic deterioration of health and quality of life, restoring the previously lost well-being.

Lifestyle interventions addressing these three impairments may become effective therapies in older people, leading to increased participation and engagement in everyday life, and reducing physical, nutritional and cognitive decline at the same time.

## Upcoming events

- **European Summit on Innovation for Active and Healthy Ageing**  
9-10 March 2015, Brussels, Belgium
- **3ème Congrès francophone Fragilité et Prévention de la Dépendance du Sujet Agé**  
12-13 March 2015, Paris, France
- **Building an evidence base for active ageing policies: Active Ageing Index and its potential**  
16-17 April 2015, Brussels, Belgium
- **2nd International Conference on Geriatrics & Gerontology**  
24-26 August 2015, Toronto, Canada

### Subscribe to this newsletter

To subscribe to the DOREMI newsletter, please contact:  
daniel.holmberg@age-platform.eu

### Contact the coordinator

The Italian National Research Council (CNR) is the coordinator of the DOREMI project. Contact: info@doremi-fp7.eu

