Nutritional strategies in healthy ageing

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Healthy ageing is not a “would like to have”; it is a “need to have”. Societies are becoming older. In 1950, Switzerland still had a population pyramid. That pyramid became increasingly top heavy, and looked like a tree by 2015. We are in an age of high-speed demographic change. Over the next 25 years, on current trends, the number of 65 year olds will double; and the number of 85 year olds will triple. This poses challenges at many levels. Individual must be able to care for themselves; economies must stay productive; and healthcare systems must stay solvent. Maintaining good health into old age will become one of the major political issues of the future.

Perceptions of age will change with our shifting society. Self-perception is changing; and most seniors already regard themselves as being biologically younger than their chronological age. The Gottfried Duttweiler Institute recently published a study on digital ageing, which classified seniors into four groups: the rebel ager; the conservative ager; the predictive ager; and the ageless ager. While their motivation differ, all strive to maintain autonomy and quality of life which critically depend on their health.

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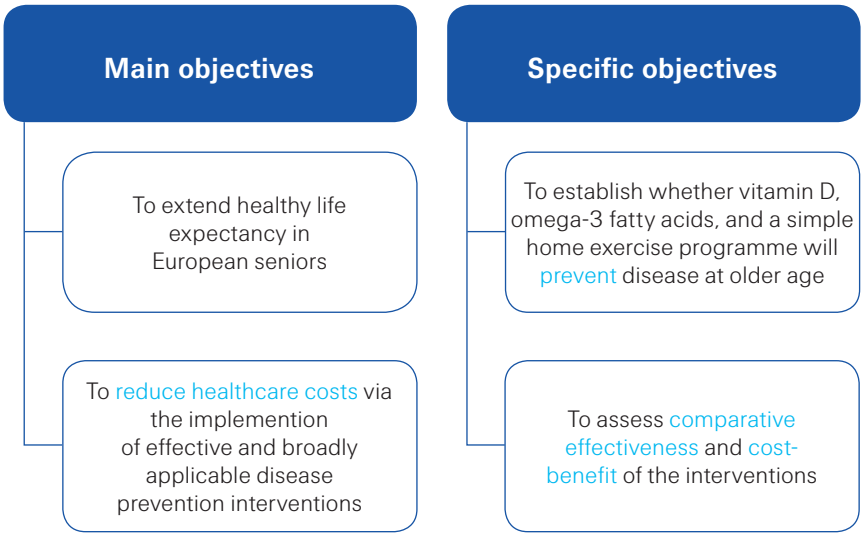
Modern ageing research aims to extend healthy life expectancy. The benefits would be enormous. Models based on epidemiologic data suggest that extending healthy life expectancy by 7 years would cut all chronic diseases by half. The European Commission has set its goal to extend healthy life expectancy by 2 years in the coming 20 years. In order to achieve this, classic research methodologies focusing on a single organ or disease must be adapted in several ways. The novel endpoint of ageing research is functionality. This approach is based on multiple organ functions. Affordable and safe strategies that meet this profile are particularly sought after.

This concept has been applied in the largest European trial on healthy aging, DO-HEALTH, see figure 3. DO-HEALTH is funded by the European Commission Framework 7 Research Program and coordinated at the University of Zurich Centre on Aging and Mobility. DO-HEALTH has recruited 2158 senior men and women age 70 and older from 5 countries. It tests the individual and combined effects of vitamin D, omega 3-fats and a simple home exercise programme on five primary endpoints: any non-vertebral fracture, blood pressure, cognitive function, functional decline, and rate of infections. Key secondary endpoints include joint pain, falls, sarcopenia and quality of life. All DO-HEALTH participants are followed under treatment for three years in yearly clinical visits and phone calls every three months. DO-HEALTH also established a biobank to study markers of healthy aging. The DO-HEALTH Study will be finalised in 2017.

Figure 3
DO-HEALTH: Objectives of Europe's largest healthy ageing study



Source: http://do-health.eu/wordpress/

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The future of senior healthcare needs to put an emphasis on prevention. Prevention is cheaper than treatment and the best way to save money in the healthcare system. Novel endpoints, such as functionality, sarcopenia and frailty need to be assessed in acute care to identify individuals at risk and implement targeted prevention strategies. To cover that need, the University Hospital of Zurich has built a Test and Diagnostic Centre. This is linked to a healthy ageing clinic that targets adults age 50 years and older. DO-HEALTH findings will be continuously integrated in this clinic, as will other new knowledge on how to promote health in old age.

A further refinement of this approach are tandem concepts. The University Hospital of Zurich has linked geriatrics with traumatology in a senior trauma centre for all patients age 70 years and older with fractures. The centre treats the acute fracture as well as assessing all risk factors that could lead to a repeat fracture. This could set precedents across the medical spectrum, with most departments expected to see increasing numbers of geriatric patients. It will also promote research, with university hospitals best placed to use lessons from research in clinical settings.