

home, in local communities, and as the intersectoral consortium leader of AHA.SI project (2014 – 2016, www.staranje.si).

PANGeA project aimed at defining healthy ageing nutrition and physical activity factors to prevent frailty in older adults, living mainly in local environments, being healthy or stable in chronic health conditions. Protocols for effective collection of data on healthy ageing were developed. Project provided programs for optimal physical activity for older population, linked with the nutritional recommendations, with special focus to conditions where decreasing catabolic processes while being physically inactive is vital.

PANGeA first project step, that's bed rest as a basic research approach, has generated evidence on the specific importance of the additional increase in protein requirements in older adults in anabolic resistance status, as a consequence of bed rest conditions. Basic research step provided the baseline for the second step, more public health oriented mass measurements, thus providing cross-sectional survey data in the selected population of older adults. PANGeA in its third step is translating research knowledge to guidelines for health enhancing physical activity and healthy nutrition for professionals (including guidelines for energy intake, macro and micronutrients and relevant hydration) working with older population and for older citizens themselves. Last step, establishment of the free of charge motor health parks for the older members of local communities is additional unique added implementation value of the project.

Specific challenge of the PANGeA project is linking basic research evidence and epidemiological data with implementation and translation of the produced new knowledge to the policy action and practice at different levels. Namely, one of today's opened questions in public health is how to effectively link research results and policy issues. Finding and using appropriate mechanisms for transferring research into policy and practice has become a major policy driver around the world. Nutrition recommendations for older population are the emerging issues at the policy level of today, too. In the case of PANGeA the research process itself was used to connect the evidence to its use and users by involving Association of Social Institutions of Slovenia in participatory research of the needs of healthy nutrition in older population in Slovenia.

In comparison to PANGeA, the AHA.SI project was less research oriented, it was more a process of participatory preparation of the background documents and proposals for the ageing strategy for Slovenia. It was based on the previous research results in the area of ageing, such as PANGeA and others. AHA.SI has increased the awareness and understanding of the challenges and importance of healthy and active ageing principles, and addressed the challenges posed by demographic revolution, financial constraints and existing regulatory frameworks. The comprehensive analysis performed in the selected areas resulted in solutions and recommendations endorsed through large consultations and participatory process which involved relevant stakeholders. Main thematic areas of AHA.SI were (1) Promotion of senior's employability and postponed retirement decisions, by performing a comprehensive analysis and identify arguments on how to achieve synergies to improvement of the labour market situation for older people as a necessary basis for further reform steps of the pension system with the aim to achieve a long term sustainable system – to enable older people distant living conditions with accessibility to nutritious food and conditions for physical activity. (2) Active and healthy ageing for active and healthy old age to increase the self-esteem of older people by offering different possibilities for societal inclusion regardless their social and economic situation; to identify possible strategic solutions in the area of falls prevention, preretirement preparation for active and healthy life, frailty prevention – to enable older individuals approach to up-to-date knowledge and skills for healthy nutrition and physical fitness. (3) Assisted independent living and long-term care with identifying the evidence to support consideration for the principles of long-term care and long-living society when planning different social systems as well as in the field of education, health, management, with support to informal carers and non-governmental organisations – being able to prevent frailty on a grand scale and provide older individuals with the conditions for high quality of life and independent living as long as possible.

In the second part of the 20th century was more and more obvious that multisectoral competence, knowledge, strategies, measures and activities, inside and outside health sector, influencing health of the population, are

important for better public health and wellbeing, moving governments and stakeholders towards a shared governance for health and well-being, using research knowledge translated to everyday's practice. At the same time, health sector is increasingly engaged in initiating intersectoral approaches for health and acting as health broker and advocate and the power of knowledge is one of the crucial political forces for moving health issues onto policy agenda and thus to implementation. PANGeA and AHA.SI project results have a full potential for such move on the political scene in the sense of the adoption of modern and evidence based strategy for active and healthy ageing in Slovenia.

Conclusion

Transferring research knowledge into policy and practice is "a messy and complex process which both policymakers and researchers can struggle with". In the case of PANGeA and AHA.SI the engagement and mobilisation of the relevant stakeholders and end users was an important part of both projects. Participatory research has provided better results in the sense of understanding the challenges of target audiences, fine-tuning project recommendations and increasing implementability of project results.

Keywords: PANGeA, AHA.SI, older population, nutrition, physical activity

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- <http://www.zrs.upr.si/monografije/single/telesna-aktivnost-in-prehrana-za-kakovostno-staranje-attivitva-fisica-e-nutrizione-per-un-invecchiamento-di-qualita-1850>

ANTIOXIDANTS AS DIETARY SUPPLEMENTS FOR THE ELDERLY

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Abstract

The need for antioxidants, such as vitamin C, E and selenium does not diminish with age; it may even increase by the concomitant diseases. Decreased basal metabolism and reduced food intake, deterioration of taste, reduced absorption of nutrients and lowered appetite can contribute to a reduced intake of micronutrients in the elderly. Recently, the antioxidant intake in the three groups of Polish population of 20–40 years, 41–60 years

and 61–74 years was determined. The least antioxidants and flavonoids was consumed by the oldest of all the age groups, as a consequence of the smallest intake of food [1].

Below-average amounts of antioxidants in the blood have been associated with an increased risk of developing diseases in numerous studies; ClinicalTrials.gov, the database of National Institute of Health, has listed more than 60 clinical studies on beta-carotene only [2]. Serum concentrations of carotenoids and other antioxidants decrease with age [3] and diseases, eg. in dementia [4].

Nevertheless, supplementation with synthetic antioxidants cannot be recommended for all [4]. A meta-analysis of antioxidants supplementation studies from 2000 to 2013 detected no clear benefits in the group taking antioxidants and B vitamins [5]. However, there are many documented associations between the diet rich in vitamins and antioxidants and the reduced risk of diseases observed in many people. In addition to diet, lifestyle is also important for disease prevention and slower progress. This was recently demonstrated by the Finnish prospective randomized intervention study FINGER, where a combination of nutrition, physical and cognitive exercises as well as medical monitoring over 2 years improved the cognitive abilities of elderly participants that were included because of the increased risk of developing dementia [6].

Eventhough the need of antioxidants in the diet has sound experimental foundations, a challenge remains how to identify the subpopulation that would need the antioxidant fortification. The exception are the patients that loose antioxidants, e.g. due to the hemodiafiltration, who should receive additional vitamin C and selenium among other nutrients [7]. The recommended daily intake (RDA) of vitamins, of which vitamin C and E are also antioxidants, have been determined for a healthy adult population. The comparison of RDAs with the actual vitamin intake of 286 healthy women older than 65 years demonstrated that the RDA of the study group, which was calculated from their average intake, was larger than the current RDA values for vitamin C for Italian, European and American populations [8]. The authors recommend raising the current RDAs for the intake of vitamin C in older women.

Undoubtedly, there is a need to include antioxidants in the diet in all periods of life. Vegetables and fruits that are rich in antioxidants, are also rich in several other nutrients, including vitamins, minerals and fiber. There may be a synergism between the nutrients that enable us to delay the onset and progression of chronic diseases [9].

Keywords: elderly, antioxidants, nutrition

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NUTRITIONAL PROBLEMS OF THE ELDERLY, THE IMPACT ON METABOLIC STATUS AND FUNCTION

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Abstract

Old age goes hand in hand with nutrition and metabolism problems. Food intake can be too high, too low or just inappropriate regarding individual's needs, which can change with time and disease. Adequate nutrition thus requires precisely matched short term needs and intake of energy and nutrients.

Malnutrition represents an important problem; its extent depends on the population. It is estimated that more than one third of the USA population aged 65 years or more is obese. The share of obese people is growing with age but starts declining after 75 years. Well nourished are 8.5 – 62.4 %, at risk for malnutrition 31.9 – 53.4 % and malnourished 5.8 – 50.5 % of elderly people. Worst nourished are those included in rehabilitation and hospitalized, better off are those in nursing homes and best, as expected, those who live in the community.

It must not be forgotten that malnourishment is not only about lack of energy and macro nutrients, as elderly are often vitamin D and vitamins B deficient.

The combination of above mentioned factors can manifest itself as protein-energy malnutrition, cachexia or sarcopenia. There are nutrition and metabolic differences between these conditions, although there is also a considerable overlap and manifestation is independent of whether an individual is under, normal or overweight. There is interplay of differently expressed changes in hormone activity, energy intake, activity, neural loss, muscle atrophy and cytokine expression.

The goal of aging society is to keep their members in good health and autonomous. Age related changes in nutrition and age and disease related changes in metabolism can promote more or less expressed changes in the structure of tissues and organs that result in decreased function (mobility problems, falls), changes in body strength or form (fractures, deformation) and in changed cognitive function. To be successful, timely recognition of malnutrition and its causes, as well as timely recognition of metabolic changes is required for the appropriate planning and implementation of nutritional interventions.

Keywords: elderly, nutritional requirements, metabolic status and function

DYSPHAGIA

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Introduction

Dysphagia is a clinical symptom, which patients report as difficulty in swallowing. Dysphagia is a clinical sign when we prove an impaired swallowing. Dysphagia can be caused by the narrowing of the gastrointestinal tract due to mechanical obstacles or failures of those structures in the nervous system and the muscles that are involved in swallowing. From dysphagia we must distinguish other similar clinical conditions.

Clinical manifestation

The exact medical history allows distinction between oropharyngeal and esophageal dysphagia. Medical history helps us to distinguish between structural and functional disorders. With an accurate medical history and clinical examination we can find the underlying pathology that caused dysphagia. Then the patient can be directed to the appropriate specialist. Neurological diseases like stroke, usually cause dysphagia in the early stages of the swallowing process –oropharyngeal dysphagia. In further investigations we usually use endoscopy, barium swallowing and esophageal manometry. Dysphagia after stroke is quite common. In the acute phase of stroke dysphagia symptoms are presented in 30 to 50% of the