

Presentation food and nutrition

Enhanced knowledge and skills of professional caregivers, cooks and ready meals suppliers to improve food and nutrition in healthcare

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Description of the commitment

A successful implementation of the first common European program of EIP/AHA, translating an integrated approach to nutritional frailty in terms of a multi-dimensional and transnational methodology, very highly depends on the interprofessional collaboration between care staff and kitchen staff. This requires an increased awareness, an inter-professional training and an interdisciplinary life-long-learning approach. Transnational cooperation is needed to share knowledge and experience in cultural differences in food and cooking processes. Therefore we are establishing a Transnational University of Applied Sciences in Gastrology and Primary Food Care Program, comprising a cluster of flexible trainings for chefs, nurses, nurse aides and other healthcare professionals who are involved in the daily care for food.

Results and current status

The ultimate result is the international concrete application of the integrated vision on the nutritional approach to frailty in primary health care settings, with measurable effects in patients and elderly at risk for malnutrition. Furthermore, these training programs will lead to better employability in the catering systems of future health care institutions where hospitality, freedom of choice and mealtime experience are key. The aging population and current migration flows in Europe, stress the importance of transnational trained staff to implement this vision, including Primary Food Care, and to tackle malnutrition in health care. The Karel de Grote University College (Antwerp, Belgium), in collaboration with the Center for Gastrology (Leuven, Belgium) is leading this initiative, with the support of the European Social Fund (ESF). Transnational active partner is Federico II University and Hospital, Health Campus & Endocare Network, Campania EIP-AHA Reference Site, Naples (Italy).

Collaborations that are welcome/needed

Relevant national and transnational partners that are already involved in the design and implementation of the innovative practices outlined in this project are Odisee University College (Belgium), and VTI Hotelschool Leuven (Belgium), HungerNdThirst Foundation, Amsterdam (The Netherlands), Frankelandgroep, Rotterdam and Brabantzorg, Oss (The Netherlands).

We are currently consulting with Medical University of Graz (Austria) and the European Institute for Local Development (EILD), a Greek NGO.

Exercise and supplementation with taurine in the elderly: effects on immune and blood-brain barrier integrity markers.

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INTRODUCTION: The blood-brain barrier (BBB) does not allow any bulk flow of substances between the blood and the brain, and acts as a "gate" that protects the neurons. Dysfunctions in this structure are directly associated with the appearance of neurodegenerative diseases, mainly in the elderly (Takeda, Sato and Morishita, 2014). The widening of inflammation and oxidative processes that occur with aging decrease the BBB integrity and contribute to increased degeneration (Elahy *et al.*, 2015). Both exercise and nutritional interventions have proven to be effective in promoting health benefits. However, their effects on the integrity of the BBB are still unknown. The objective of this work was to study the effect of exercise and supplementation with taurine on inflammatory cytokines and S100 β and NSE levels. **METHODS:** A total of 48 elderly women (age 83,58 \pm 6,9 years) participated in the study and were divided into four groups: combined exercise training (CET: n=13), taurine supplementation (TAU: n=12), exercise associated with taurine (CET+TAU: n=11) and control group (CG: n=12). CET was done 3 times per week, at 60-65% of MHR intensity. Taurine supplementation was given (1,5g/day) during 14 weeks. Interventions lasted 14 weeks and all subjects were evaluated before (T0) and after (T1) this period. The CG did not undergo exercise or supplementation programs. Plasma and serum concentrations of S100 β , NSE, MPO, MMP-9, IL-10, IL1-ra, IL-1 α , TNF- α and IL-17 were determined. **RESULTS:** Levels of IL-17 and S100 β correlated in both moments (p<0,01). The CET group showed a subtle increase in IL-1ra and decrease in TNF- α and S100 β levels (+33%, -15%, and -53%, respectively). The TAU group showed a decrease in IL-1 α , MPO and MMP-9 levels (p<0.05), while no differences were observed for these variables in Ex+TAU between T0 and T1. S100 β levels tended to increase only in the CG (+26%), and differences in this marker were observed between groups at T1 (p<0,01). **CONCLUSION:** Exercise alone promoted an anti-inflammatory effect. Nevertheless, decrease in MPO concentration was only observed in the groups supplemented with taurine. Combination of exercise and taurine did not promote significant added changes in inflammatory or oxidative stress markers when compared to the isolated interventions probably due to a compensation mechanism. However, exercise and taurine (alone or associated) promoted the maintenance of the S100 β and NSE levels when compared to the CG, which suggests that, even in older ages, BBB structure may benefit from the exercise and taurine supplementation induced environment changes.

REFERENCES:

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Standardization in personalized texture-modified foods and thickened liquids in dysphagia management: A challenge in primary food care.

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Description of the commitment

Texture modification has become one of the most common forms of intervention for dysphagia, and is widely considered important for promoting safe and efficient swallowing. However, to date, despite international standardized terminology, in practice there is little continuity in the preparation of food.

This project aims to standardize the rheological (viscosity and yield stress) and material property (density) characteristics of the thickened meals and fluids provided in primary food care to secure individual patients' safety. This methodology fits in a global standardized procedure for texture modified common foods and thickened liquids for individuals with dysphagia in close cooperation with the IDDSI (International Dysphagia Diet Standardisation Initiative) based in Canada, Australia, Japan, UK, and the USA.

As in the Common Vision of the A3 Food & Nutrition Group, Screening & Assessment has to be followed by Action and the impact has to be monitored. Therefore, this standardized methodology will be developed in close cooperation with speech and language pathologists and therapists, nursing staff, dieticians, trained chefs and food companies.

Results and current status

Currently the research protocol has been accepted for partial funding by the province of Antwerp. We are now looking for additional sponsoring to be able to include enough patients and to prepare a substantial amount of tailored modified meals, in order to be able to generalize conclusions to the total population of patients suffering dysphagia.

Collaborations that are welcome/needed

This project will be executed by a consortium consisting of a university college, a university hospital, a public administration and the Center for Gastrology (NPO).