

PRESS INFORMATION

Symposium on Nutrient Needs of the Older Adult

The Nestlé Nutrition Institute highlighted the important role nutrition plays in the functional status of older adults during its Satellite Symposium presented at the European Society for Clinical Nutrition and Metabolism (ESPEN) Congress in Nice in September 2010. Sharing knowledge in nutritional science with the medical and science communities is more important than ever due to the growing aging population. Key messages delivered were:

- *Nutritional needs of the older adult are impacted by health status*
- *There is a high prevalence of Vitamin D deficiency in older people leading to an increased prevalence of skeletal and possibly chronic non-skeletal diseases*
- *Nutrition has been shown to have an important role in reducing the risk of hip fracture and supporting the repair process.*

Vevey, Switzerland, November 2010 – Research into the nutrient needs of the older adult and the impact that malnutrition has on patient health status was shared at the Nestlé Nutrition Institute Satellite Symposium at the 32nd ESPEN Congress in Nice in September 2010. Prof. Sieber, Chief of Geriatrics at the Klinikum Nürnberg (Germany) and chairman of this symposium, addressed the need to focus on functionality rather than chronological or biological age.

Changing nutritional needs of the elderly

Professor Dorothee Volkert, from the Institute for Biomedicine of Aging at the University of Erlangen-Nürnberg (Germany), showed that nutrient needs vary with health, functional and nutritional status, physical activity and lifestyle. As people age, there is a reduction in lean body mass and the metabolic rate decreases as does physical activity, contributing to an overall reduction in energy needs. The German National Food Consumption Study showed that there is a reduction of energy intake of 450kcal/d for men and 220 kcal/d for women¹. “It is also well known that sensory perceptions decrease with age, gastric emptying is slower and the production of intestinal hormones is altered” says Prof. Volkert. All of these factors have an impact on the intake of food by older adults. In addition, in case of gastro-intestinal disease the absorption and utilization of nutrients may be compromised.

Protein intake is an important determinant of optimal function and sarcopenia prevention. Castaneda et al. (1995) showed that protein intake was related to both muscle mass and muscle strength². The actual amount of protein required to maintain muscle mass is unknown but experts believe that healthy elderly require 0.8-1g of protein per day, while those with underlying chronic disease or illnesses may need up to 1.2-2.0g³.

Vitamin D in the older adult

Vitamin D deficiency occurs due to limited exposure to sunlight of sufficient strength to allow synthesis of the vitamin in skin, particularly when coupled with low dietary intakes of vitamin D. Professor Kevin Cashman, from the School of Food and Nutritional Sciences, and Department of Medicine, University College Cork (Ireland) confirmed that there is a huge gap between the currently consumed low intake of vitamin D by older adults and the recommended intake values for the vitamin.

The amount of vitamin D in the diet required to maintain blood levels of 25-hydroxyvitamin D (the marker of vitamin D status) in the free-living elderly above the minimum recommended of 25 nmol/L is 10 µg (400 IU) per day and as high as 25 µg (1000 IU) per day if 50 nmol/L is used⁴. This level of 50 nmol/L is gaining increasing acceptance as “optimal” for the elderly. However, the current dietary intake of vitamin D in the elderly populations (typically around 2-5 µg (80 – 200 IU) per day⁵), is substantially below the recommended 10 µg (400 IU) per day and poses a major public health concern. These low intakes arise as a consequence of there being only a few rich food sources of vitamin D. There is a need for effective nutritional strategies to improve vitamin D status, particularly in the vulnerable elderly population. Vitamin D supplementation and/or fortification are possible means of addressing this mismatch.

Preventing hip fracture

Professor René Rizzoli from the Division of Bone Diseases, Department of Rehabilitation and Geriatrics, Geneva University Hospitals (Switzerland) discussed the prevalence, cause, treatment and role of nutrition in hip fractures in the older adult. He noted that osteoporotic fracture is a major risk for all older adults, especially for those older than 70 years of age⁶. Hip fracture is the most serious sub-category of osteoporotic fracture. In the year following a hip fracture, 20% of patients die from complications⁷, 30% are permanently disabled and 40% unable to walk independently⁸. “Nutrition, specifically protein and vitamin D, have been shown to play an important role in preventing falls and fractures through the improvement of bone mineral density” says Prof. Rizzoli.

Malnutrition is associated with bone fragility, resulting in increased fracture risk and slowing of the fracture repair process. Oral nutritional supplements have been shown to have a positive effect on overall nutrient intake, decrease complications and speed up rehabilitation post fracture. Two randomised, double-blind, placebo-controlled trials showed the impact of oral nutritional supplements on bone metabolism in patients with hip fracture: there were fewer medical complications and a significantly shorter length of hospital stay^{9, 10}. These studies provide robust evidence of the importance of meeting nutritional needs in the elderly.

Final statement

The three presentations in this symposium highlighted the importance of good nutritional status, specifically the value of nutritional intervention with protein and vitamin D intake, thereby optimising functionality in the elderly and ultimately helping to reduce the cost burden on healthcare systems.

#####

Notes to editors:

The **Nestlé Nutrition Institute (NNI)** fosters "Science for Better Nutrition" because we are convinced that innovative, science-based nutrition can help enhance the quality of people's lives all over the world. The role of the NNI is to

- contribute to proper nutrition information and education of healthcare providers
- partner with the medical and scientific community by providing enhanced access to the latest knowledge in nutritional sciences to enable continual improvement to healthcare of people of all ages
- foster the communication of sound nutrition research by helping to connect the Scientific Community with Nestlé Research.

For more information, please consult www.nestlenutrition-institute.org

Contacts:

Nestlé Nutrition

Marie-Françoise Rüttimeyer

Head of Communications

marie-francoise.ruetimeyer@nestle.com

References

- 1) Nationwide Food Consumption Study II. Max-Rubner-Institute 2008.
- 2) Castaneda C, et al. *Am J Clin Nutr* 1995;62:30-39.
- 3) Morais et al., *J Nutr Health Aging* 2006; 10: 272-83
- 4) Cashman KD, et al. *Am J Clin Nutr* 2009;89:1366-74.
- 5) Flynn A, et al. *Food Nutr Res* 2009 Nov 12;53. doi: 10.3402/fnr.v53i0.2038.
- 6) Cooper C, et al. *Trends Endocrinol Metab* 1992;3:224-229.
- 7) Trombetti A, et al. *Osteoporos Int* 2002;13:791-737.
- 8) Cooper C, et al. *Am J Med* 1997;103:12S-17S 1992.
- 9) Schürch MA, et al. *Ann Intern Med* 1998;128:801-809.
- 10) Tkatch L, et al. *J Am Coll Nutr* 1992;11:519-525.