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Author(s)

van den Helder, Jantine; Verlaan, Sjors; Tieland, Michael; Mehra, Sumit; Visser, Bart; Kröse, Ben J.A.; Engelbert, Raoul H.H.; Weijs, Peter J.M.

Publication date

2020

Document Version

Final published version

License

Unspecified

[Link to publication](#)

Citation for published version (APA):

van den Helder, J., Verlaan, S., Tieland, M., Mehra, S., Visser, B., Kröse, B. J. A., Engelbert, R. H. H., & Weijs, P. J. M. (2020). *How to establish increased protein intake in a blended lifestyle intervention in community-dwelling older adults? subgroup-analysis of the VITAMIN RCT*. Poster session presented at 42th ESPEN congress.

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How to establish increased protein intake in a blended lifestyle intervention in community-dwelling older adults?

Subgroup-analysis of the VITAMIN RCT

Jantine van den Helder^{1,2}, Sjors Verlaan^{3,4}, Michael Tieland¹, Sumit Mehra⁵, Bart Visser¹, Ben J.A. Kröse⁵, Raoul H.H. Engelbert^{1,6}, Peter J.M. Weijjs^{1,7}

1 Center of Expertise Urban Vitality, Amsterdam University of Applied Sciences, Amsterdam; 2 Amsterdam Public Health research institute, Amsterdam University Medical Centers, Vrije Universiteit, Amsterdam; 3 Department of Rehabilitation Medicine, Amsterdam University Medical Centers, Vrije Universiteit, Amsterdam; 4 FrieslandCampina, Amersfoort; 5 CREATE-IT Applied Research, Faculty of Digital Media and Creative Industries, Amsterdam University of Applied Sciences, Amsterdam; 6 Department of Rehabilitation Medicine, Amsterdam University Medical Centers, AMC, Amsterdam; 7 Department of Nutrition and Dietetics, Amsterdam University Medical Centers, Vrije Universiteit, Amsterdam; The Netherlands.

Rationale

In order to prevent sarcopenia in community-dwelling older adults a higher daily protein intake is needed. The dietary protein counselling of the VITAMIN trial showed to be effective in increasing the protein intake in community-dwelling older adults up to 1.41 g/kg/day after 6-months intervention and sustaining this intake up to 1.24 g/kg/day at 12-months. In this sub-analysis we determine how the increased protein intake was established.

Methods

- Cluster RCT
- Community-dwelling older adults with weekly exercise program
- 3 groups: Control / Home-based Exercise / Home-based Exercise + Protein counselling (HBex-Pro)
- 3-day dietary record at 0, 6 and 12 months (m):
 - Protein sources - Product groups - Amino acids - Intake per meal moment
- Linear Mixed Models with STATA v13; time and time*group interaction were defined as fixed factors, subject and cluster as random intercepts

Results

Animal protein (g) accounted as major source (6m +25.9 (2.5) p<0.001 | 12m +15.9 (2.6) p<0.001) (**Figure 1**) with the main increase in dairy products (g) (6m +14.0 (1.4) p<0.001 | 12m +9.76 (1.4) p<0.001), followed by fish and meat (**Figure 2**). This resulted in significant changes in amino acid intake: e.g. leucine (g) 6m +2.3 (0.2) p<0.001 | 12m +1.1 (0.2) p<0.001. Significant increased intake for the protein group was seen at all 6 meal moments, and particularly at breakfast (g) 6m +6.2 (1.0) p<0.001 | 12m +6.5 (1.1) p<0.001 and lunch (g) 6m +7.1 (1.2) p<0.001 | 12m +4.0 (1.2) p=0.001 (**Figure 3**).

Conclusion

Blended dietary counselling was effective in increasing protein intake in a lifestyle intervention in community-dwelling older adults.

This was predominantly achieved by consuming more animal protein sources, particularly dairy products, and especially during breakfast and lunch.

Protein intake increase by blended counselling is a promising strategy for dietitians and health care professionals.

Figure 1. Protein sources in HBex-Pro

Figure 2. Product groups in HBex-Pro

Figure 3. Protein intake during meal moments in HBex-Pro

Correspondence

j.e.m.van.den.helder@hva.nl / Jantine van den Helder, Faculty of Sports and Nutrition, Amsterdam University of Applied Sciences, Dokter Meurerlaan 8, 1067 SM Amsterdam, The Netherlands

Sponsor

This analysis is supported by