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subgroup-analysis of the VITAMIN RCT

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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. Weijls^{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).

Blended dietary counselling

Included most effective self-regulatory techniques: goal-setting, self-monitoring, feedback, motivational interviewing

Blended counselling: by use of face-to-face contacts and videoconferencing

Regular supermarket products / personal choice

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.

Population characteristics

	212 (45 clusters)		54% comorbidities
	72 years		77.8 g/day
	71%		1.08 g/kg/day

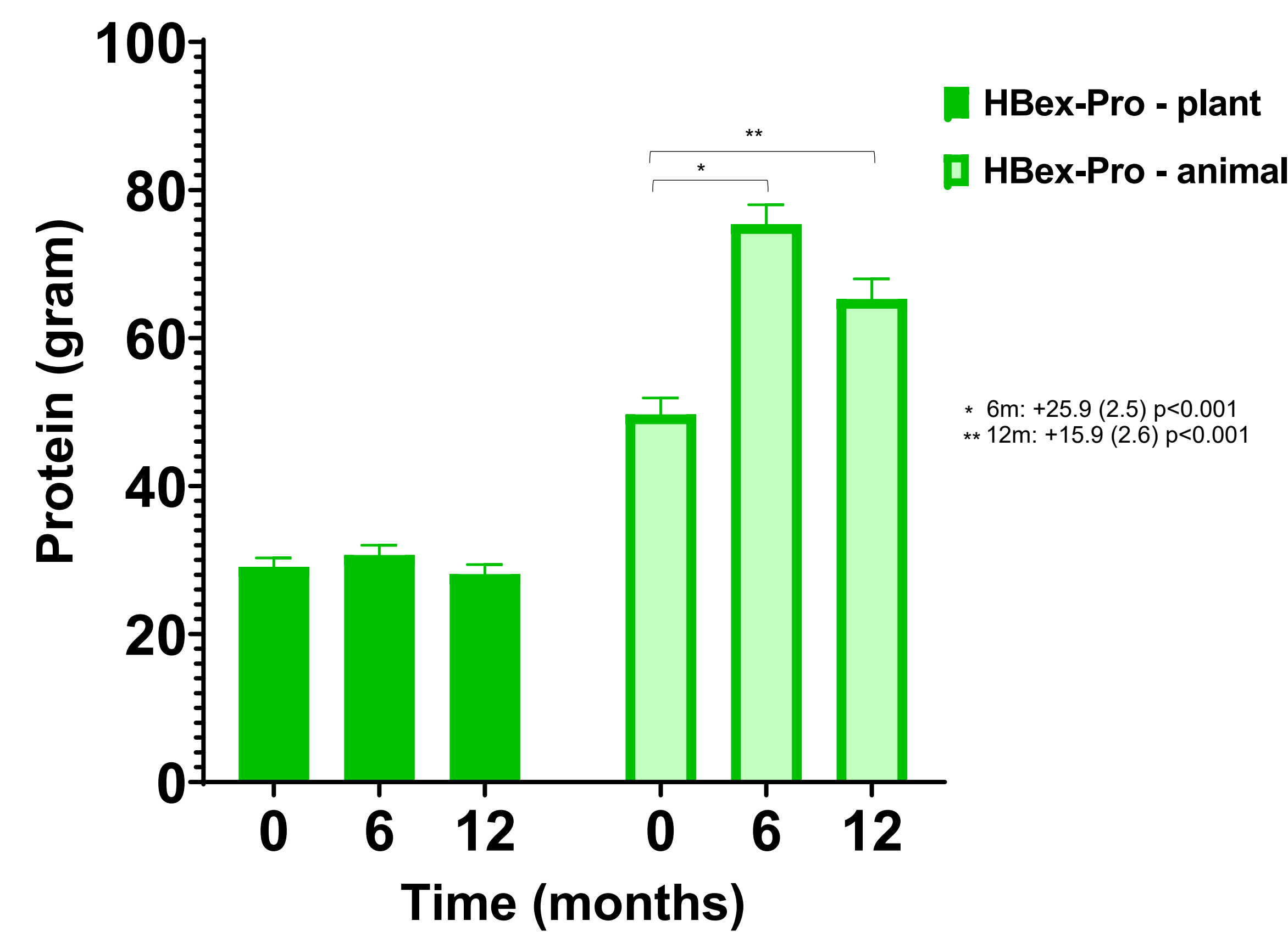


Figure 1. Protein sources in HBEx-Pro

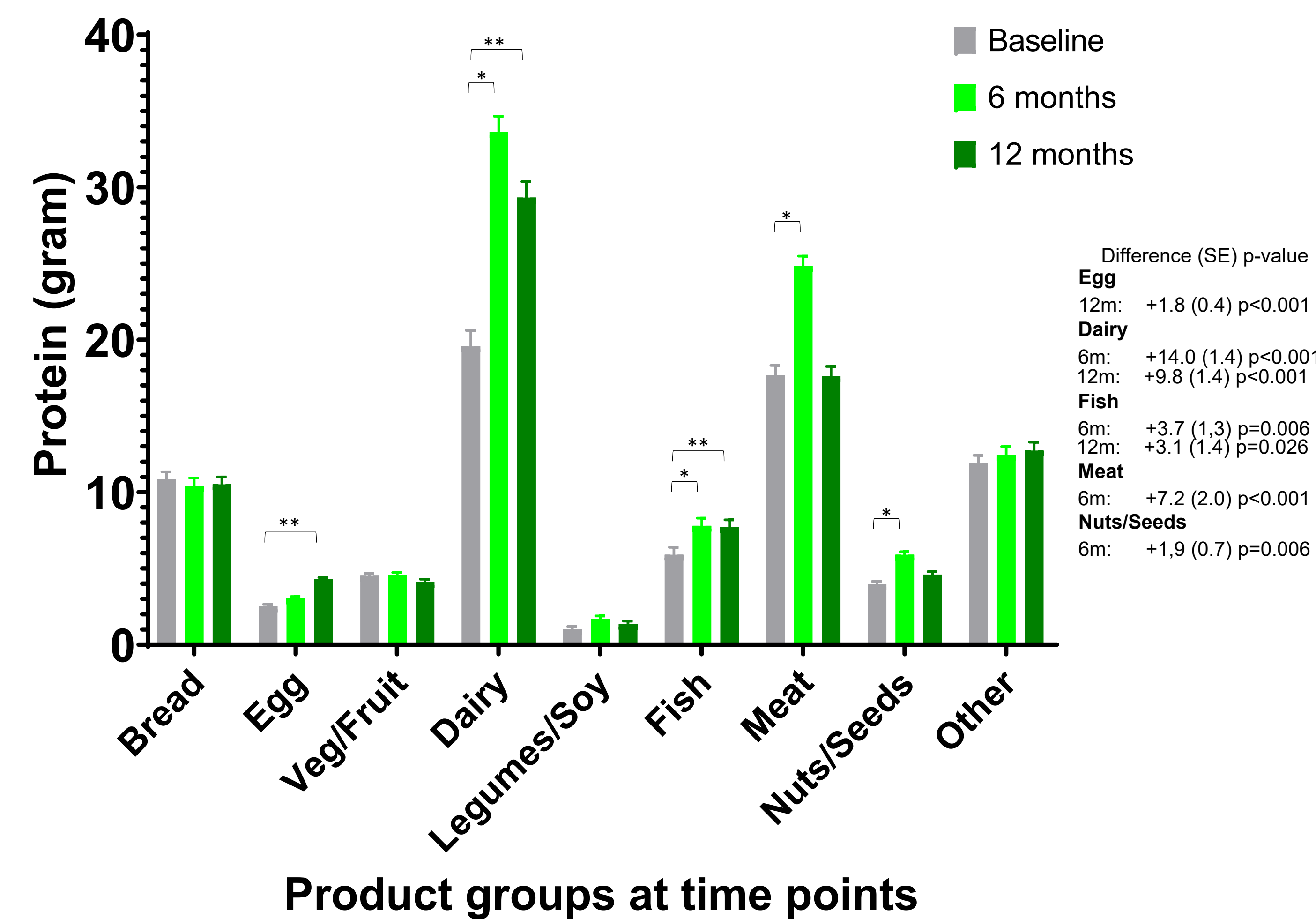


Figure 2. Product groups in HBEx-Pro

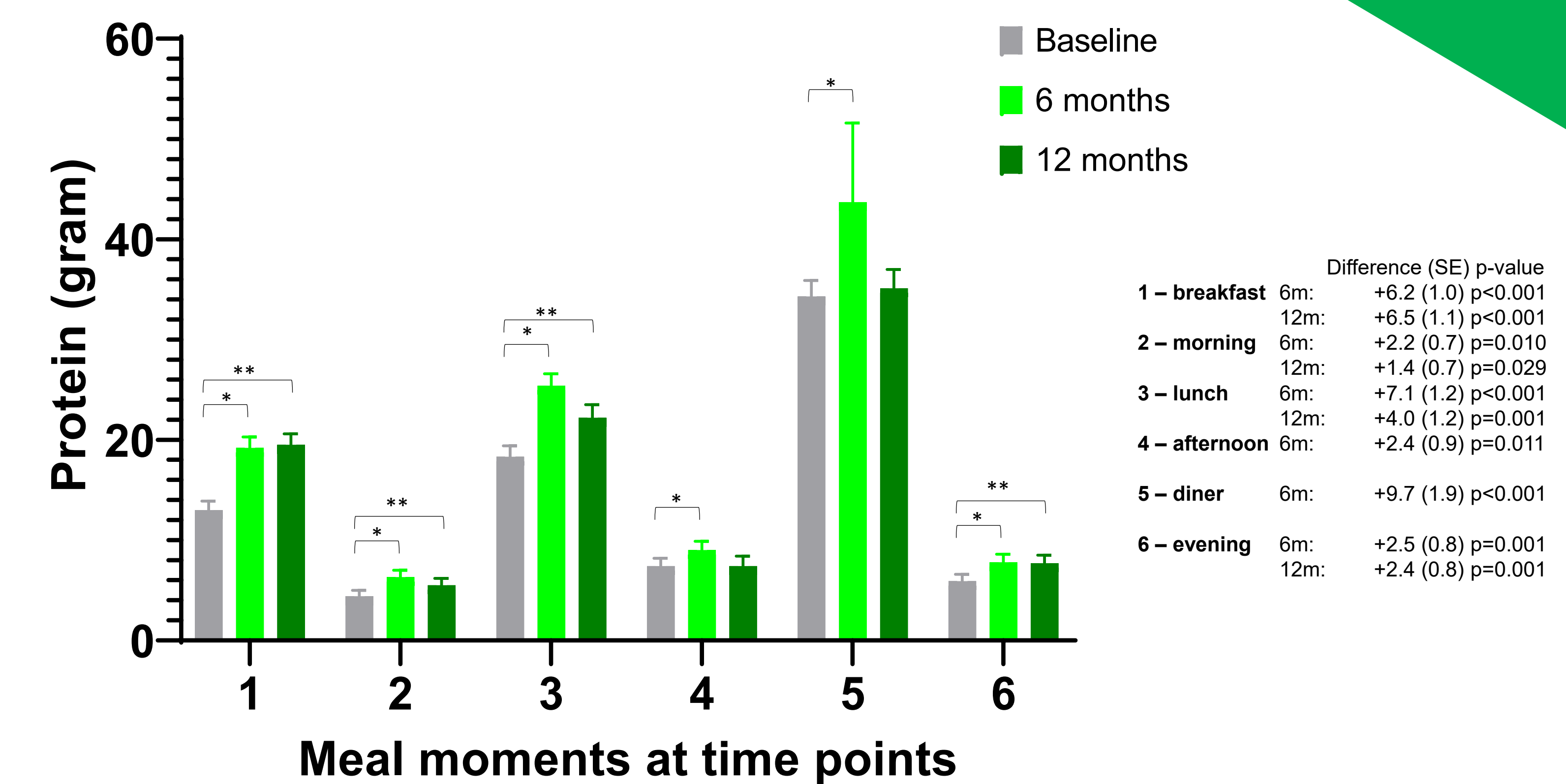


Figure 3. Protein intake during meal moments in HBEx-Pro

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

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