



Improving protein intake of hospitalized older patients with protein-enriched familiar foods and drinks: The randomized controlled Cater with Care® trial

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Background

Adequate protein intake is important in preventing and treating undernutrition. Hospitalized older patients are recommended to consume 1.2-1.5 g of protein per kg body weight per day (g/kg/d) but most of them fail to do so.

We investigated whether a range of newly developed protein-enriched familiar foods and drinks were effective in increasing protein intake of hospitalized older patients.

Methods

This randomized controlled trial involved 147 patients of ≥ 65 years (mean age: 78.5 ± 7.4 years). The control group ($n=80$) received the standard energy and protein rich hospital menu. The intervention group ($n=67$) received the same menu with various protein-enriched intervention products replacing regular products (Figure 1). Food intake was derived from the digitized food ordering system. Macronutrient intake was compared between the two groups by using Independent T-tests and Mann Whitney U-tests.

Results

In the intervention group 30% of total protein was provided by the intervention products. The intervention group consumed 105.7 ± 34.2 g protein compared to 88.2 ± 24.4 g in the control group ($p<0.01$); corresponding with 1.5 vs 1.2 g/kg/d ($p<0.01$). More patients in the intervention group than in the control group reached a protein intake of 1.2 g/kg/d (79.1% vs 47.5%) (Figure 2). Protein intake was significantly higher in the intervention group at breakfast, during the morning between breakfast and lunch, and at dinner (Figure 3).

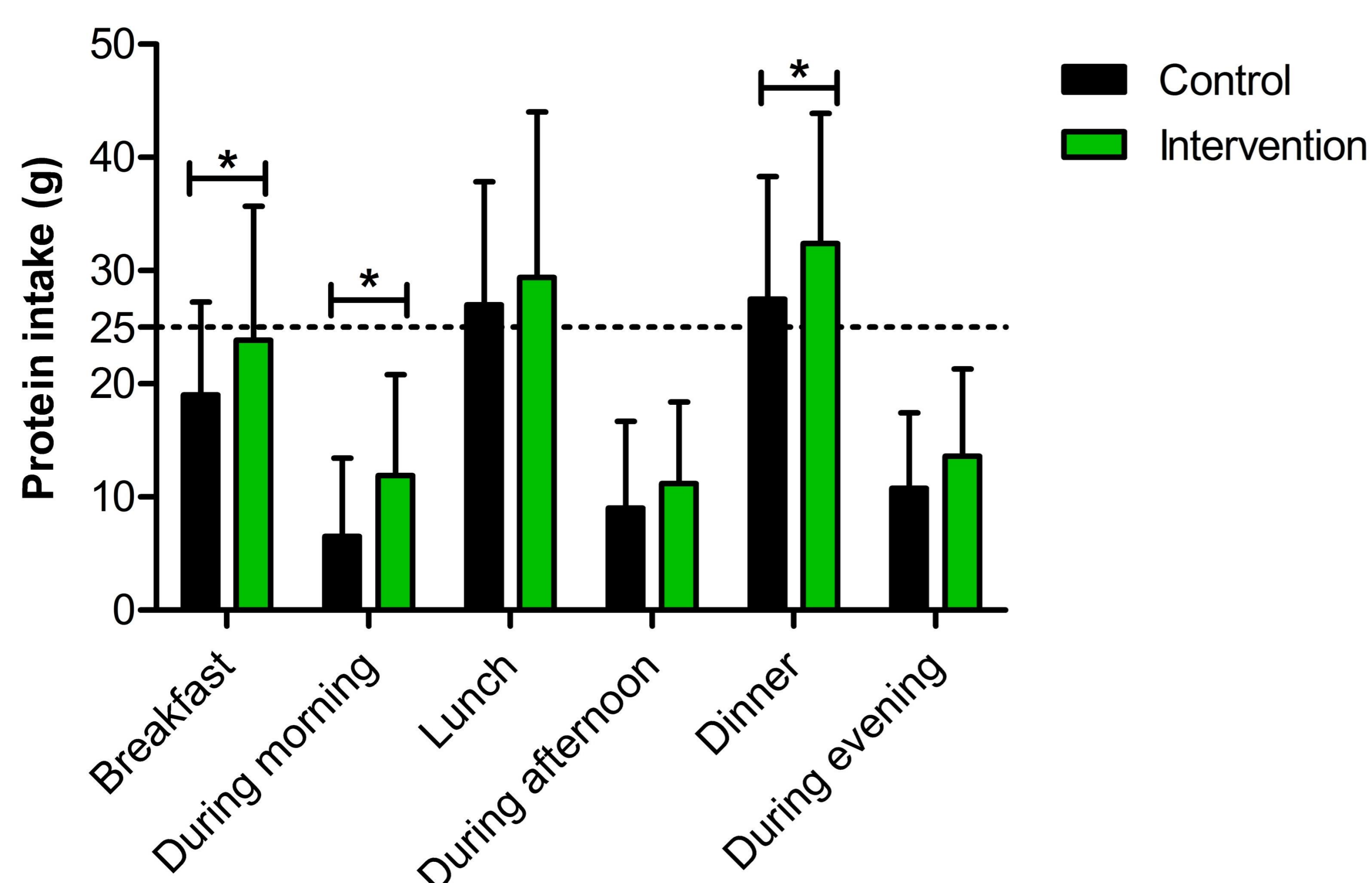


Figure 3. Protein intake per meal moment in grams. Mean and SD are shown, * indicates a $P < 0.05$.

This study was part of the Cater with Care® effect study; this poster reports on findings in the Hospital Phase:

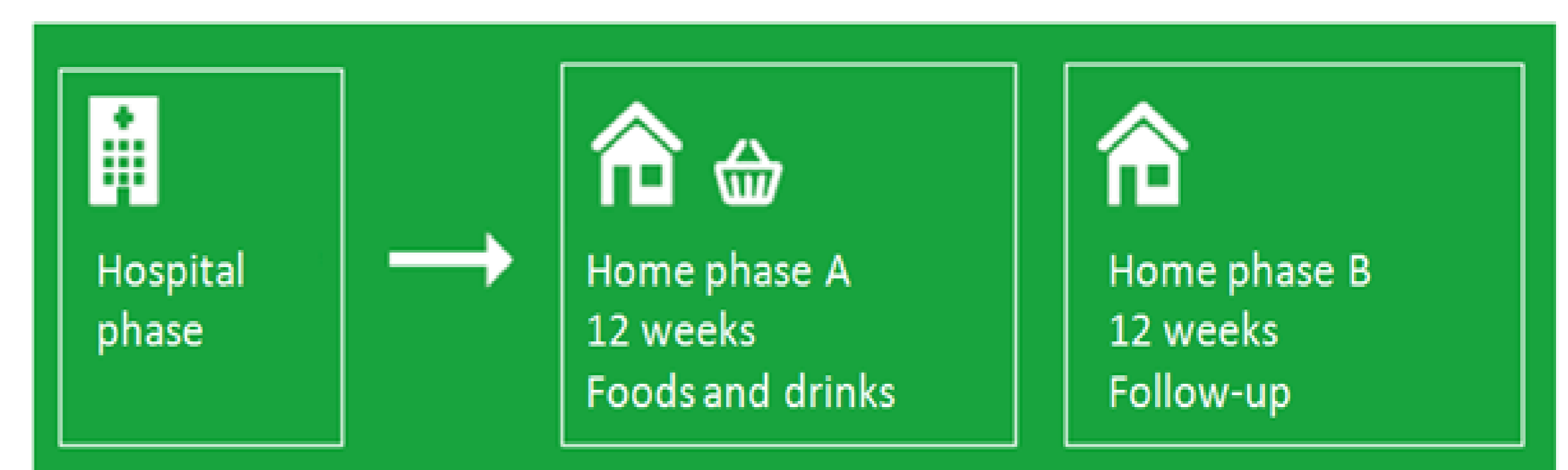


Figure 1. Protein-rich and -enriched assortment (protein-enriched products contribute 5-10 g protein extra per portion compared to regular products).

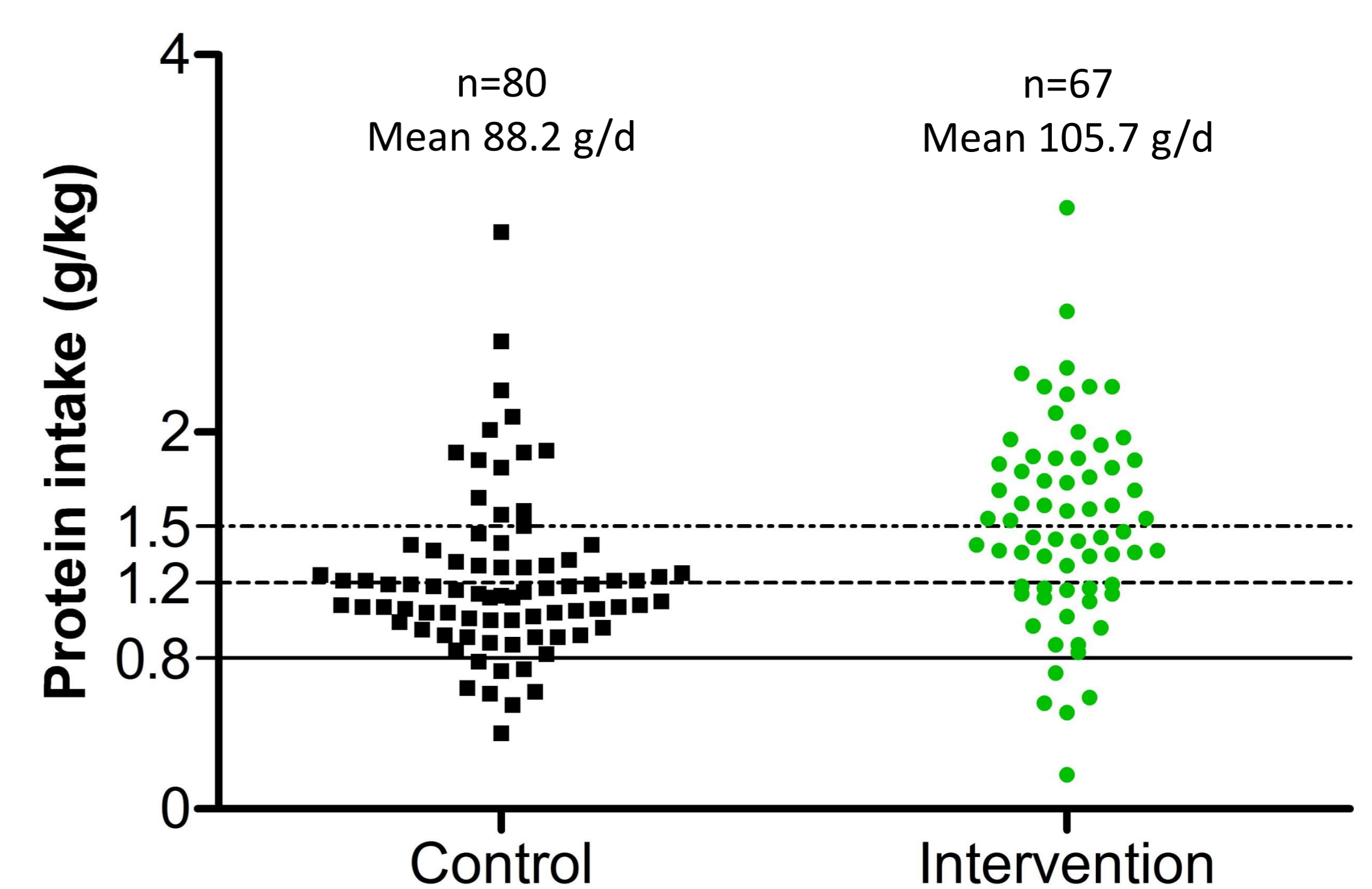


Figure 2. Individual protein intake (g/kg/d). The lower horizontal line at 0.8 g/kg/d represents the protein recommendation for healthy adults; the area between 1.2 and 1.5 represents the target for hospitalized older adults.

Conclusion

This study shows that providing protein-enriched familiar foods and drinks, as replacement of regular products or as additions to the hospital menu, enables hospitalized older patients to better reach protein intake recommendations.

