

Appetite and food intake after consumption of sausages with 10% fat and added rye or wheat bran

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BACKGROUND AND OBJECTIVES

Addition of rye or wheat bran to sausages might induce satiety and thereby have the potential to add health benefits beyond their reduced energy density.

The objectives of this study was to investigate if appetite sensations and food intake was affected by:

- (1) the presence of dietary fibers in the sausages,
- (2) the type of dietary fibers (rye vs. wheat) and
- (3) the food matrix of the dietary fibers (rye bran sausage vs. rye bran bread).

METHODS

In a randomized cross-over study (n=25), we compared 4 test meals:

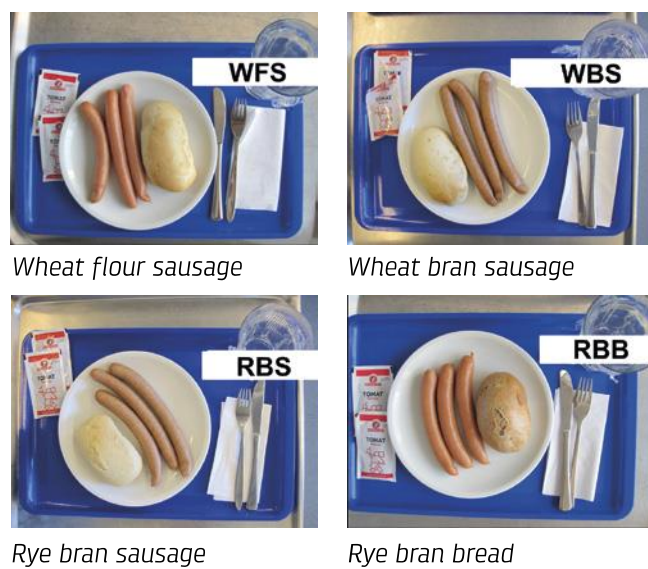


Table 1. Composition of the 4 test meal

	WFS	WBS	RBS	RBB
Meals weight (g)	373	382	388	381
Total dietary fiber (g)	4.4	10.4	9.8	10.6
Energy (kJ)	2753	2902	2875	2745
- Carbohydrate (E%)	51.0	49.3	49.8	50.4
- Protein (E%)	19.5	20.6	20.4	20.0
- Fat (E%)	29.5	30.1	29.8	29.6

Subjective appetite was evaluated by visual analogue scales (VAS) assessed every 30 min for 240 min followed by an *ad libitum* lunch meal.

RESULTS

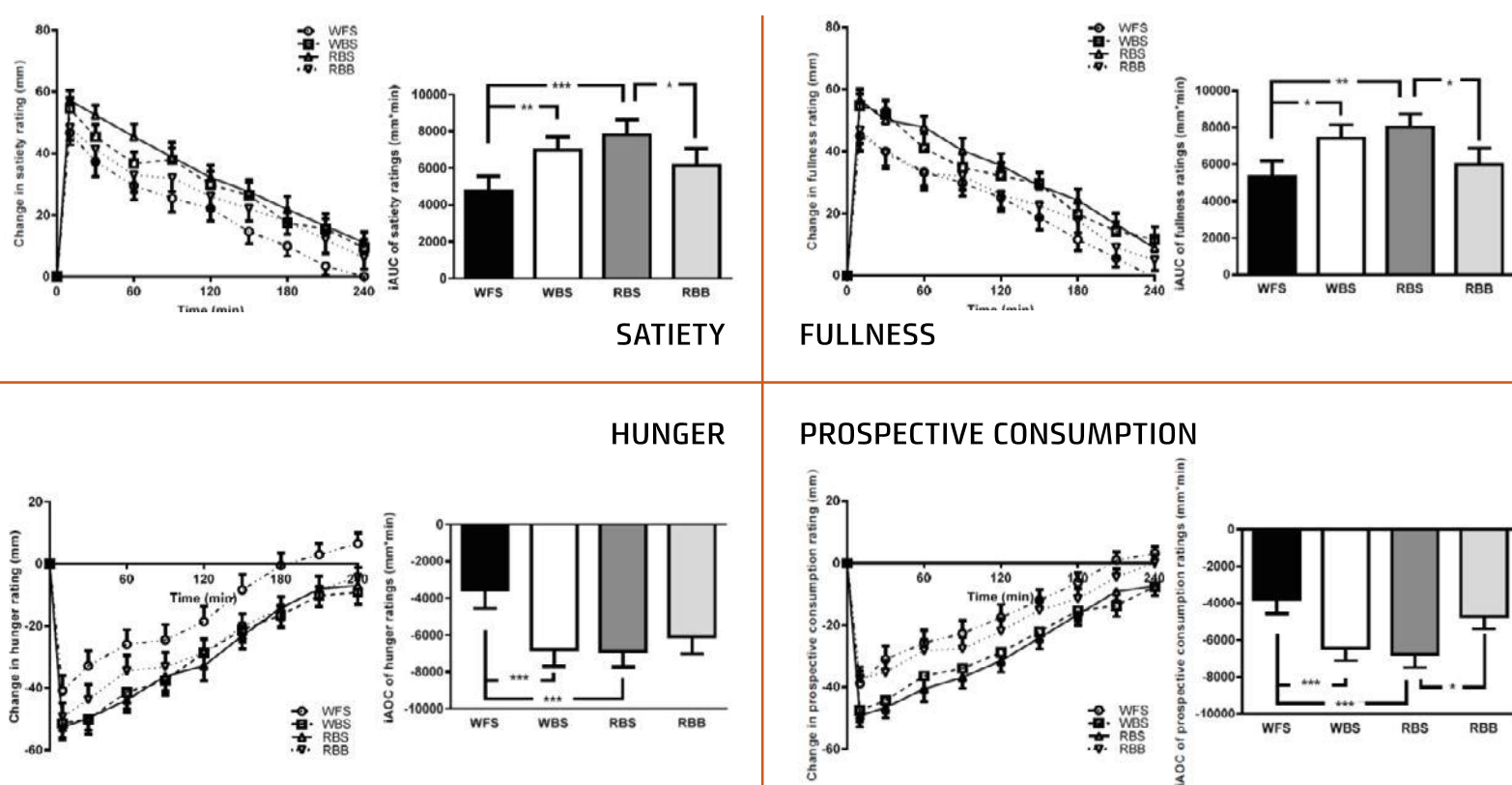


Figure 1: Ratings of appetite sensations at baseline (0 min), after consumption of the test meal (10 min) and for every half hour until 240 minutes presented with corresponding iAUC/iAOC. Data are presented as means ± SEM (n = 25). (* P < 0.05, ** P < 0.01, *** P < 0.001).

- (1) Presence of wheat or rye bran in sausages ↑satiety, ↑fullness, ↓hunger and ↓prospective consumption compared to the wheat flour sausage.
- (2) The satiating effect did not differ between rye and wheat bran.
- (3) Rye bran in sausages compared to rye bran in bread ↑satiety, ↑fullness and ↓prospective consumption.

CONCLUSION

Rye and wheat bran added to sausages decrease appetite sensations, which indicates a potential health benefit. Effect of dietary fibers appears more pronounced when added to sausages than to bread, stressing the importance of food matrix and food processing.

See also: "Sensory characteristics and acceptability of sausages with 10% fat and added rye or wheat bran" by Jakobsen et al. (P02717)



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