

Regulate Blood Glucose, Appetite With Rye

Editorial Staff

A pair of studies published recently in the *Nutrition Journal* suggest that consumption of rye-flour-based products can improve post-prandial insulin response and satiety. [In the first study](#), researchers gave 12 healthy subjects products made from rye endosperm, whole grain or bran as breakfasts in random order. White wheat bread was utilized as a reference and blood glucose, serum insulin, plasma ghrelin and subjective satiety were measured during 180 minutes immediately following consumption of the products.

Results showed that consumption of whole-grain and endosperm rye products reduced insulin indices compared to white wheat bread (interestingly, rye bran appeared to increase indices). In their conclusion, the authors note: "[E]ndosperm and whole-grain rye products induce low acute insulinaemic responses and improved glycaemic profiles. The results also suggest that the rye products possess beneficial appetite-regulating properties."

[In a study investigating this latter observation](#), that rye products can positively impact satiety, researchers "compared the satiating effect of iso-caloric bread breakfasts including different milling fractions of rye (bran, intermediate fraction (B4) and sifted flour) ... [and] the dose-response effect of rye bran and intermediate rye fraction, each providing 5 or 8 g of dietary fibre per iso-caloric bread breakfast." In this study, also published in *Nutrition Journal*, a wheat-bread breakfast served as a reference for comparative purposes.

Results showed that each of the rye breakfasts suppressed study subjects' appetites in the period between breakfast and lunch (8:30 a.m. to 12 p.m.) compared to the wheat breakfast, with rye bran exerting the strongest effect on satiety. These effects seemed to persist even into the afternoon, with subjects reporting decreased desire to eat.

References

1. Rosen LAH, Blanco Silva LO, Andersson UK, et al. [Endosperm and whole grain rye breads are characterized by low pos-prandial insulin response and a beneficial blood glucose profile.](#) *Nutrition Journal*, 2009;8:42.
2. Isaksson H, Fredriksson H, Andersson R, et al. [Effect of rye bread breakfasts on subjective hunger and satiety: a randomized controlled trial.](#) *Nutrition Journal*, 2009;8:39.

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