

# Evidence for health potential of wheat aleurone as part of ready-to-eat cereals and bread

May 5 2010

---

Wheat aleurone is a novel wheat grain fraction with high levels of potentially healthpromoting compounds. New clinical trials with ready-to-eat cereals and bread containing wheat aleurone have been performed, and showed increased blood concentrations of tentatively beneficial compounds such as betaine, and decreased homocysteine and LDL-cholesterol which are both associated with heart disease risk.

It is important for the food industry to understand and to demonstrate the health benefits of foods, so that consumers can be offered foods with scientifically proven health benefits. This needs effective collaborations across the food chain, from growers to processors to food production, and further to the researchers who study the physiological responses and clinical outcome.

Buhler produced aleurone fractions in their pilot production plants in Switzerland, which were then incorporated into ready-to-eat cereal by Buhler, and into [bread](#) rolls by Barilla in Italy. These products contained 9 g aleurone per portion. The University of Ulster in Northern Ireland, UK conducted a 4-week randomised controlled clinical study with human subjects, who consumed two portions of bread rolls, and one portion of ready-to-eat cereal as part of their diets.

The study showed that, compared to control products, the consumption of the products, which provided 27 g aleurone per day, led to significant

changes in a number of plasma biomarkers. Betaine increased, and there were decreases in homocysteine and LDLcholesterol, which are both associated with heart disease risk. Furthermore, there was a decrease in C-reactive protein (CRP) which is a [biomarker](#) for inflammation.

The test foods were produced in collaboration with Walter von Reding and Caecilia Spöerndli from Buhler AG, and Roberto Ranieri and Giancarlo Riboldi from Barilla G. e R. Fratelli SpA.

**More information:** Keaveney, EM, Hamill, LL, Price, RK, Wallace, JMW, McNulty, H, Ward, M, Strain, JJ, Ueland, PM, Scott, JM, Molloy, AM, Welch, RW (2009) Evaluation of the uptake of bioactive components from wheat-bran and wheat-aleurone fractions in healthy adults. *Proceedings of the Nutrition Society*, 67, (OCE7), E244.

Price, RK, Keaveney, EM, Hamill, LL, Wallace, JM, McNulty, H, Ward, M, Strain, JJ, Ueland, PM, Scott, JM, Molloy, AM, Welch, RW (2007) Plasma uptake of methyl donors from wheat fractions by human subjects. *Proceedings of the Nutrition Society*, 66: 114A.

Provided by VTT Technical Research Centre of Finland

Citation: Evidence for health potential of wheat aleurone as part of ready-to-eat cereals and bread (2010, May 5) retrieved 26 April 2024 from <https://medicalxpress.com/news/2010-05-evidence-health-potential-wheat-aleurone.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--