Buckwheat as a Functional Food and Its Effects on Health

https://www.ncbi.nlm.nih.gov/pubmed/26270637
PMID: 26270637, DOI: 10.1021/acs.jafc.5b02498 [Indexed for MEDLINE]

Cited in:

J Agric Food Chem. 2015 Sep 16;63(36):7896-913.
Buckwheat as a Functional Food and Its Effects on Health.
Giménez-Bastida JA[1], Zieliński H[1].
Division of Food Science, Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences , Tuwima 10, P.O. Box 55, 10-748 Olsztyn, Poland.

Abstract

Buckwheat (BW) is a gluten-free pseudocereal that belongs to the Polygonaceae family. BW grain is a highly nutritional food component that has been shown to provide a wide range of beneficial effects. Health benefits attributed to BW include plasma cholesterol level reduction, neuroprotection, anticancer, anti-inflammatory, antidiabetic effects, and improvement of hypertension conditions. In addition, BW has been reported to possess prebiotic and antioxidant activities. In vitro and animal studies suggest that BW's bioactive compounds, such as D-chiro-inositol (DCI), BW proteins (BWP), and BW flavonoids (mainly rutin and quercetin) may be partially responsible for the observed effects. The purpose of this paper is to review the recent research regarding the health benefits of BW, in vitro and in vivo, focusing on the specific role of its bioactive compounds and on the mechanisms by which these effects are exerted.

Keywords: Fagopyrum; bioactive compounds; buckwheat protein; common buckwheat; rutin

Reference

Bijlani RL, Gandhi BM, Gupta MC, Manocha S, Tandon BN. Effect of whole buckwheat (*Fagopyrum esculentum*) flour supplementation in lipid profile and glucose tolerance. Indian J. Med. Res 81: 162-168, 1985.