

# Plant hormone may play a vital role in blood sugar control and diabetes management

December 1 2015

---

A treatment for managing blood sugar levels might be as close as the local health food store, suggests a new research report published in the December 2015 issue of *The FASEB Journal*. Specifically scientists from Italy have found that when the plant and mammal hormone, abscisic acid, is taken in low doses, glycemia in both rats and humans is reduced. This suggests that by reducing the chronic stimulation by hyperglycemia of  $\beta$ -cells to the release of insulin, chronic low-dose abscisic acid administration may prolong the survival and function of these cells.

"These results warrant further studies, aimed at developing new pharmacologic approaches to diabetes prevention and/or treatment," said Mirko Magnone, Ph.D., a researcher involved in the work from the Department of Experimental Medicine at the University of Genova School of Medicine in Genova, Italy.

Scientists examined the presence of abscisic acid in plants and fruits and explored the effect of abscisic acid-rich vegetable extracts on glycemia in rats and in humans. Synthetic abscisic acid, an abscisic acid-rich fruit extract, or placebo were administered to rats together with an oral glucose load. Then glycemia and insulinemia profiles were compared. Then a fruit extract or placebo was administered to human volunteers together with an oral glucose load or with a standard breakfast and lunch. Glucose and insulin levels were then compared with and without [abscisic acid](#). Glycemia and insulinemia profiles from the human oral glucose tolerance tests were also compared with those from 12 normal subjects

undergoing a standard [oral glucose tolerance](#) test.

"Mom always said, 'eat your veggies,' and now science backs up this advice," said Gerald Weissmann, M.D., Editor-in-Chief of *The FASEB Journal*. "High [blood sugar levels](#) predict the later consequences of diabetes, and while this hormone may not be a cure for diabetes, it should prove very useful in helping to control progression of the disease."

**More information:** M. Magnone et al. Microgram amounts of abscisic acid in fruit extracts improve glucose tolerance and reduce insulinemia in rats and in humans, *The FASEB Journal* (2015). [DOI: 10.1096/fj.15-277731](#)

Provided by Federation of American Societies for Experimental Biology

Citation: Plant hormone may play a vital role in blood sugar control and diabetes management (2015, December 1) retrieved 28 April 2024 from <https://medicalxpress.com/news/2015-12-hormone-vital-role-blood-sugar.html>

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.
---