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FRENCH FRIES, AS PART OF MIXED MEALS, PRODUCE LOWER BLOOD GLUCOSE AND INSULIN LEVELS IN CHILDREN

In a new study, University of Toronto researchers find that focusing on glycemic index ignores total nutritive value of potatoes in mixed meals

(McLean, VA) February 26, 2016 – A singular focus on glycemic index (GI) to evaluate the nutritive value of carbohydrate-containing vegetables, such as potatoes, misleads the public and can produce poor dietary advice, according to researchers at the University of Toronto.

“Our study shows that a singular focus on the effects of carbohydrate-containing foods on blood glucose, as measured by glycemic index, can lead to counterproductive dietary guidance,” states study lead and co-author G. Harvey Anderson, PhD, executive director, Centre for Child Nutrition and Health, University of Toronto, Ontario, Canada. "For example, focusing solely on GI of potatoes is misleading. We typically eat potatoes in mixed meals and GI ignores the important nutritive value that potatoes bring to the table. In fact, the most favorable metabolic profile we found was a sustained and lower insulin and postprandial blood glucose measured after our study subjects consumed fried French fries with lean meat."

The open access paper, “The Effects Of Potatoes and Other Carbohydrate Side Dishes Consumed with Meat on Food Intake, Glycemia and Satiety Response In Children,” was published February 15 in the peer-reviewed online journal, Nutrition & Diabetes.

Anderson and his research team conducted two randomized crossover studies to assess food intake, calorie intake, blood glucose and insulin levels in normal-weight children aged 11-13 years. The children consumed a fixed amount of meat and an unlimited amount of carbohydrate side dishes, either boiled, mashed potatoes; rice; pasta; baked French fries or fried French fries.
The children consumed fewer calories from meals with boiled, mashed potatoes than with rice, pasta, baked French fries or fried French fries. Children consumed 30 to 40% fewer calories at meals with boiled, mashed potatoes compared with all other carbohydrates. Satiety was higher with boiled, mashed potatoes more than all other carbohydrate side dishes. Consumption of fried French fries resulted in the lowest glucose and insulin at the end of the meal and throughout the 120 minutes after the meal. Contrary to popular belief, the children did not overeat when served fried French fries. The study showed that they did not consume more calories with fried French fries compared with rice, pasta and baked French fries.

The research was supported through an unrestricted grant by the Alliance for Potato Research and Education, a non-for-profit organization dedicated to expanding and translating the latest scientific research and information on potato nutrition, consumption and affordability.

The free open access paper is available to read and download from the Nutrition & Diabetes website at www.nature.com/nutd/journal/v6/n2/full/nutd20161a.html.

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The Alliance for Potato Research and Education (APRE) is a not-for-profit organization 100% dedicated to expanding and translating scientific research into evidence-based policy and education initiatives that recognize the role of all forms of the potato—a nutritious vegetable—in promoting health for all age groups. APRE is actively building the science foundation concerning the nutritional benefits of the white potato; creating partnerships with critical health professional organizations in the United States and Canada; and informing dietitians and health professionals by providing them with the latest scientific research and information on potato nutrition, consumption, and affordability. APRE is a National Strategic Partner with USDA MyPlate and a Produce for Better Health 2015 Champion.

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