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New research suggests choosing different fruits and vegetables may increase phytonutrient intake

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Topping that bowl of cereal with raspberries instead of strawberries, or sautéing kale instead of spinach for dinner can boost phytonutrient intake, which may help decrease risk for certain chronic diseases, including cardiovascular disease, cancer and diabetes.

A study, supported by the Nutrilite Health Institute and presented at the Experimental Biology Meeting, April 25, in Anaheim, California, found that despite the availability of a wide range of foods that contain phytonutrients, many Americans are getting phytonutrients from a relatively small number of specific foods, which are not necessarily the most concentrated sources. Top food contributors for several key phytonutrient families in the diet include oranges, orange juice, carrots, grapes, garlic, tomatoes, strawberries, prepared mustard, tea and various soy products, according to the study.

"Americans could improve their phytonutrient intake by choosing to eat more concentrated sources of phytonutrients as well as a wider variety," said Keith Randolph, Ph.D., Technology Strategist for Nutrilite. "For example, grapes are the top contributor of the phytonutrient family of anthocyanidins in most Americans' diets, but blueberries actually contain higher amounts of this phytonutrient. Research suggests anthocyanidins support heart health," Randolph added.

Phytonutrients are compounds that naturally occur in plants and provide

a range of potential health benefits from promoting eye, bone and heart health to supporting immune and brain function. It's widely believed that the health benefits that phytonutrients may offer come from the pigments in fruits and vegetables that give these foods their vibrant reds, yellows, greens and other rich colors. Certain fruits and vegetables contain higher levels of these compounds, making them more concentrated and potentially more effective sources of phytonutrients.

Phytonutrient Intake Among Americans

The two groups analyzed in the study include adults who eat the recommended amount of fruits and vegetables, as compared to adults who fail to meet U.S. government guidelines on fruit and vegetable consumption based on two days of intake. Findings suggested that for most phytonutrients, there is little difference in the relative contributions of phytonutrients by food source between groups, although those who meet the recommended five to 13 servings per day were shown to consume greater quantities of certain phytonutrient-rich foods.

One key finding of the study concluded that, on average, Americans who consume the recommended amount of fruits and vegetables generally get two to three times more phytonutrients in their diet as compared to people who do not meet fruit and vegetable recommendations. This was true for all but two of the phytonutrients studied. Of note, these data relate to the findings of a previous study conducted by the Nutrilite Health Institute - America's Phytonutrient Report: Quantifying the Gap - that found eight in 10 Americans have a "phytonutrient gap," meaning they are missing out on health benefits provided by phytonutrients given their lack of fruit and vegetable intake.

Power Up Produce

For 10 of the 14 phytonutrients included in the analysis, a single food type accounted for approximately two-thirds or more of an individual's intake of the specific phytonutrient, regardless of whether that person was a high or low fruit and vegetable consumer. Based on the current study, the top food sources consumed by Americans for some selected phytonutrients were as follows:

- Beta-carotene - carrots
- Beta-cryptoxanthin - oranges/orange juice
- Lutein/zeaxanthin - spinach
- Ellagic acid - strawberries
- Isothiocyanates - mustard

For each of these phytonutrients, however, there is a more highly concentrated food that could be chosen instead:

Beta-carotene - sweet potatoes

- Sweet potatoes have nearly double the beta-carotene compared to carrots in a single serving.
- Beta-cryptoxanthin - papaya
    - A serving of fresh papaya has roughly 15 times the beta-cryptoxanthin of an orange.
- Lutein/zeaxanthin - kale

    - By substituting cooked kale for raw spinach, it is possible to triple lutein/zeaxanthin intake.

- Ellagic acid - raspberries

    - Serving per serving, raspberries have roughly three times the ellagic acid compared to strawberries.

- Isothiocyanates - watercress

    - Just one cup of watercress as the basis for a salad has about the same level of isothiocyanates as four teaspoons of mustard.

The overall goal is to encourage Americans to close their "phytonutrient gap" by increasing consumption of all phytonutrient-rich foods. Importantly, by "powering up produce" selection on a regular basis and by seeking a greater variety of fruits and vegetables, phytonutrient intakes can be increased.

"The study reiterates our earlier findings that American adults are missing out on the health benefits of fruits and vegetables by simply not including enough in their diet," said Randolph. "Additionally, these data highlight the importance of not only the quantity, but also the significant impact the quality and variety of the fruits and vegetables you eat can have on your health. All Americans can improve their phytonutrient intake by varying the fruits and vegetables they consume and by focusing on foods that have a higher concentration of certain phytonutrients," he added.

Study Details

Supporting research for America's Phytonutrient Report was conducted

by Exponent for NUTRILITE®, the world's leading brand of vitamin, mineral, and dietary supplements based on 2008 sales. The dataset comes from National Health and Nutrition Examination Surveys (NHANES), surveys that capture what Americans eat daily, supplemental nutrient concentration data from the United States Department of Agriculture (USDA) and the published literature. The study population includes non-pregnant, non-lactating NHANES respondents ages 19 years and older with two complete and reliable 24-hour dietary recalls based on NHANES criteria. MyPyramid guidance for fruit and vegetable intake recommendations, which is based on the 2005 Dietary Guidelines for Americans, was used.

Provided by Weber Shandwick Worldwide

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