

# Research Rundown

## Article

### A Review of the Science of Colorful, Plant-Based Food and Practical Strategies for “Eating the Rainbow”

## What did this study examine?

This systematic review article evaluated the health benefits of fruits and vegetables along with the major issues surrounding deficiencies in intake. This review also organizes the findings to establish an “eat by color” approach, which is proposed in this article.

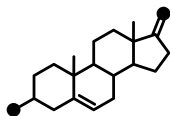
### How were the fruit and vegetable color categories created?

Each of the different colors of foods were reviewed for their health properties for specific organ systems or functions. These established color categories are general patterns based on scientific research. The categories in this article include:



**Green Foods:**

Cardiovascular Health



**Orange Foods:**

Antioxidant/Hormonal Health



**Red Foods:**

Immunity/Inflammation



**Yellow Foods:**

Digestion



**Blue/Purple Foods:**

Cognition

**Each color category, associated corresponding foods, phytonutrient content, and conferred benefit(s) were determined based on evidence in previous research publications.**

## Key Findings:

A report from the National Health and Nutrition Examination Survey (NHANES) found that **8 out of 10** Americans fall short in every color of phytonutrients (referred to as a “phytonutrient gap”).



**Research shows that a qualitative approach (different colors) rather than a quantitative approach may be more effective in helping children improve their fruit and vegetable variety intake and overall diet!**



“Eating the Rainbow” and increasing intake of “color dense” foods has also been found to help:

- **Reduce the risk of chronic and acute illness;**
  - **Increase individuals' levels of happiness, life satisfaction, confidence and well-being;**
  - **Assist picky eaters in increasing their self-esteem and likelihood of trying new foods;**
- ...and much more!**

## Put it into practice!

Aim to increase the fruit and vegetable color variety in your schools by:

- Involving nutrition education in school and implementation of nutrition concepts through school gardens
- Incorporating different variations on raw, steamed, or boiled fruits and vegetables
- Including the use of spices, seasonings, and herbs on all foods, specifically fruits and vegetables
- Getting creative! Serve blended fruit and vegetable drinks, and fruit and vegetable-infused waters
- Offering fruit and vegetable juices and dried vegetable and fruits, which are good options to increase variety, but should be limited to once or twice a week

### Reference:

Minich DM. A Review of the Science of Colorful, Plant-Based Food and Practical Strategies for “Eating the Rainbow”. J Nutr Metab. 2019 Jun 2;2019:2125070. doi: 10.1155/2019/2125070. Erratum in: J Nutr Metab. 2020 Nov 28;2020:5631762. PMID: 33414957; PMCID: PMC7770496.



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