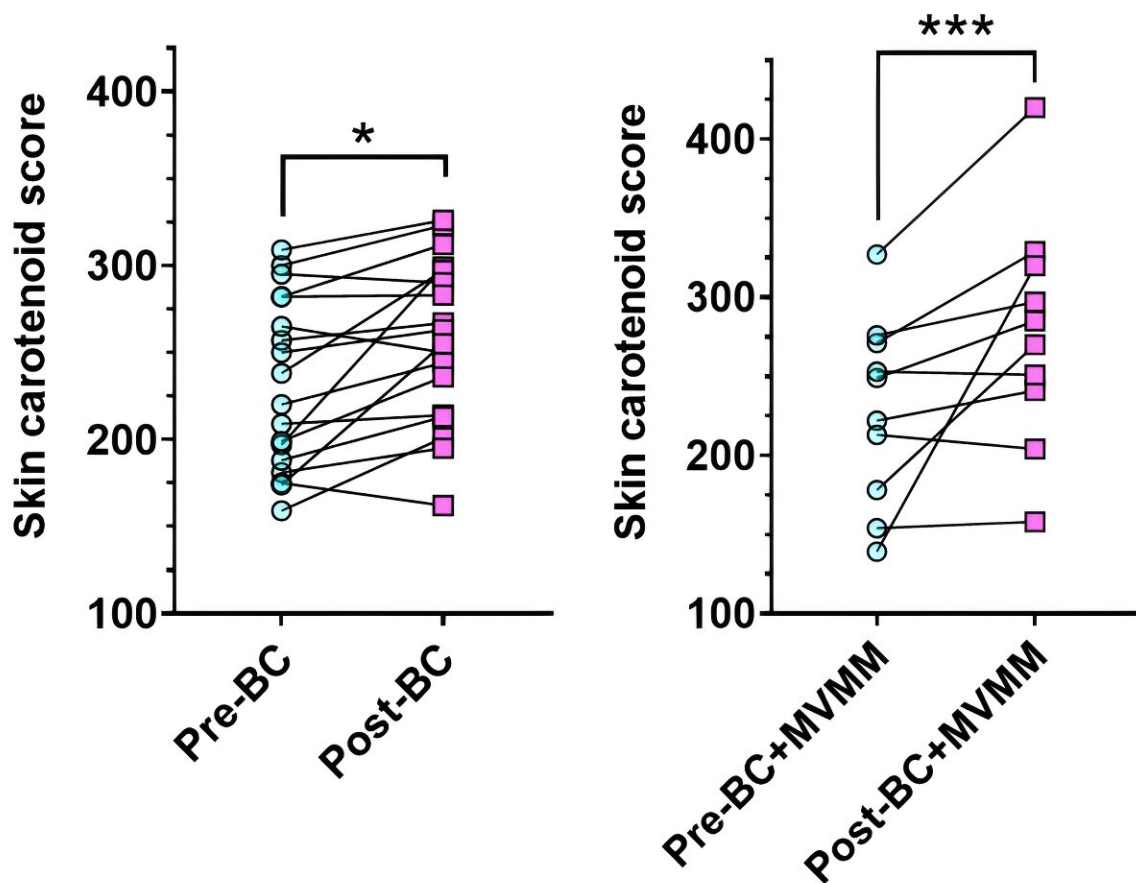


# Study finds snacking on carrots boosts phytonutrients

July 1 2024



Researchers found that eating baby carrots (BC) three times a week significantly increased skin carotenoids in young adults. The increase was even stronger when the carrot snacks were combined with a multivitamin (MVMM) containing beta carotene. Credit: Suresh Mathews, Samford University

A new study found that eating a snack of baby carrots just three times a week significantly increased skin carotenoids in young adults. Levels of these phytonutrients were boosted even more when this healthy snack was combined with a multivitamin containing the carotenoid beta carotene.

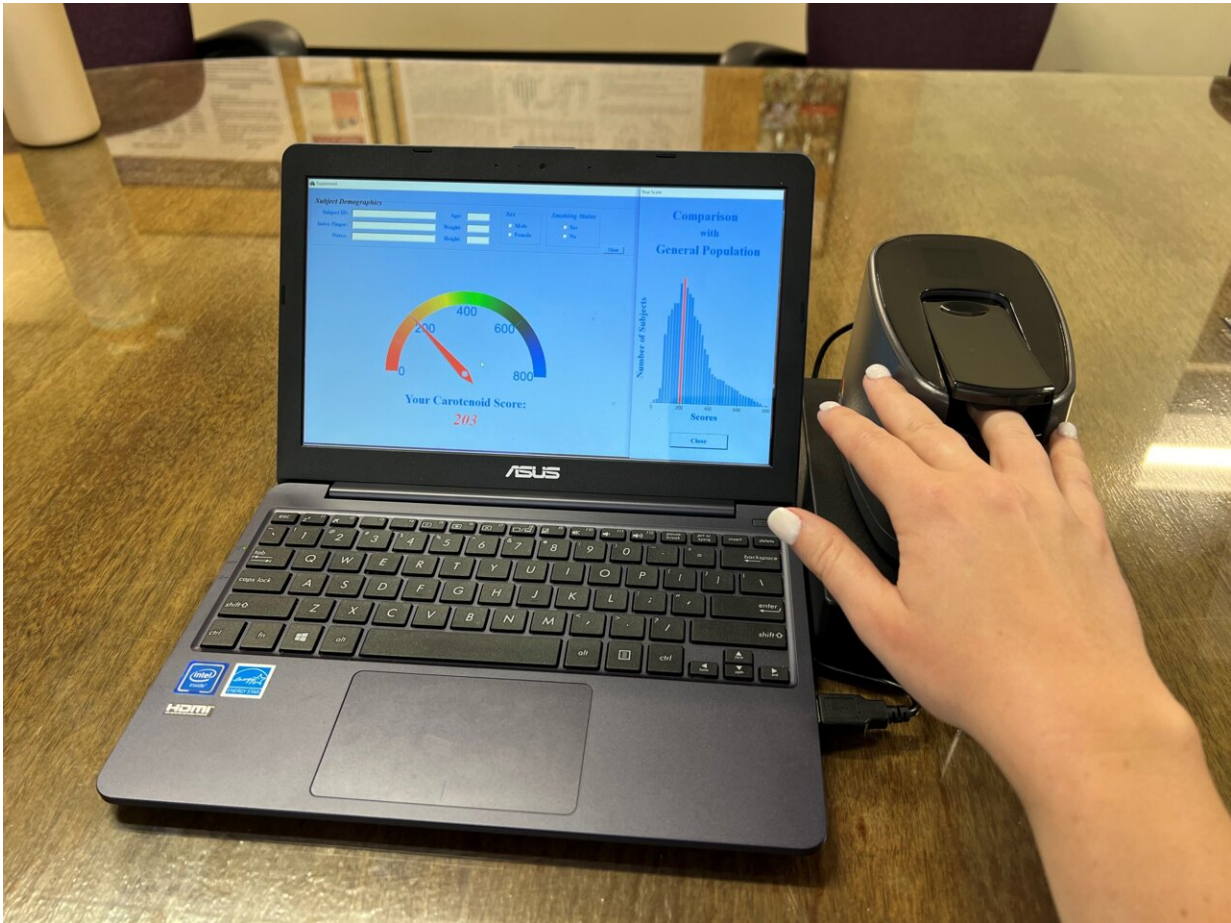
Carotenoids, which are responsible for the bright red, orange and yellow colors of many fruits and vegetables, can be measured in the skin to gauge fruit and vegetable consumption since diet is the only source of these pigments. Higher levels of skin carotenoids are associated with increased antioxidant protection and a lower risk of chronic diseases such as heart disease and certain cancers. This marker also reflects improved skin health and immune function.

"Previous studies have demonstrated that skin carotenoid levels can be increased by consuming three times the recommended serving of fruits and vegetables every day for three weeks," said Mary Harper Simmons, a Master of Science in Nutrition student at Samford University. "Our findings suggest that a small, simple dietary modification — incorporating baby carrots as a snack — can significantly increase skin carotenoid accumulation."

Simmons presented the findings at [NUTRITION 2024](#), the flagship annual meeting of the American Society for Nutrition held June 29–July 2 in Chicago.

For the study, the researchers randomly assigned 60 young adults to groups that received a four-week intervention of either Granny Smith apple slices (control), 100 grams (about half a cup) of baby carrots, a multivitamin supplement containing beta carotene or a combination of baby carrots and the supplement. Before and after the intervention, they used a noninvasive research-grade spectroscopy instrument called a VeggieMeter to detect and quantify carotenoids in the skin of the study

participants.



A noninvasive spectroscopy instrument called a VeggieMeter was used to detect and quantify carotenoids in the skin of the study participants. Credit: Suresh Mathews, Samford University

The researchers found that compared to pre-intervention levels, skin carotenoid scores were significantly increased by 10.8% in the group receiving the baby carrots and by 21.6% in the group receiving the carrots and the supplement. Skin carotenoid levels were not changed in the control group or in those receiving only the supplement.

"We found that the combination of baby carrots and a multivitamin [supplement](#) that contains beta carotene can have an interactive effect on skin carotenoid accumulation," said Simmons. "To get a beneficial effect, people should choose a multivitamin that contains [beta carotene](#), and remember to eat baby carrots at least three times a week."

Since carotenoid accumulation was not increased by multivitamin supplementation alone, there could be differences in how carotenoids are absorbed, depending on whether they are from food or supplements. The researchers would like to explore the mechanism behind these findings and study the effects of other [carotenoid](#)-rich foods, such as [sweet potato](#) or [green leafy vegetables](#).

Please note that abstracts presented at NUTRITION 2024 were evaluated and selected by a committee of experts but have not generally undergone the same peer review process required for publication in a scientific journal. As such, the findings presented should be considered preliminary until a peer-reviewed publication is available.

**More information:** Simmons presented this research at 8–8:12 a.m. CDT on Sunday, June 30, during the Carotenoids and Retinoids in Focus: Insights into Delivery, Vision, and Disease Prevention oral session in McCormick Place ([abstract](#); [presentation details](#)).

Provided by American Society for Nutrition

Citation: Study finds snacking on carrots boosts phytonutrients (2024, July 1) retrieved 20 July 2024 from <https://medicalxpress.com/news/2024-07-snacking-carrots-boosts-phytonutrients.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.