



POWER OF POTATOES ON THE PLATE

Study shows spuds play a beneficial role in encouraging school-age children to eat more vegetables

Submitted by the Alliance for Potato Research & Education

Study shows serving kid-friendly forms of potatoes with other vegetables in a cafeteria setting increases overall vegetable intake.

A new study published in *Nutrients* academic journal (<https://www.mdpi.com/journal/nutrients>) illustrates

how potatoes may play a beneficial role in encouraging school-aged children to eat more vegetables.

The Dietary Guidelines for Americans currently recommends children ages 3-18 consume between 2.5-3 cups of vegetables per day to meet their total

Department of Nutrition, Dietetics and Food Science, Brigham Young University.

The study found children ate more total vegetables when peas and carrots were served in combination with smiley face potatoes, suggesting that pairing kid-friendly forms of potatoes with other vegetables can promote greater overall vegetable consumption.

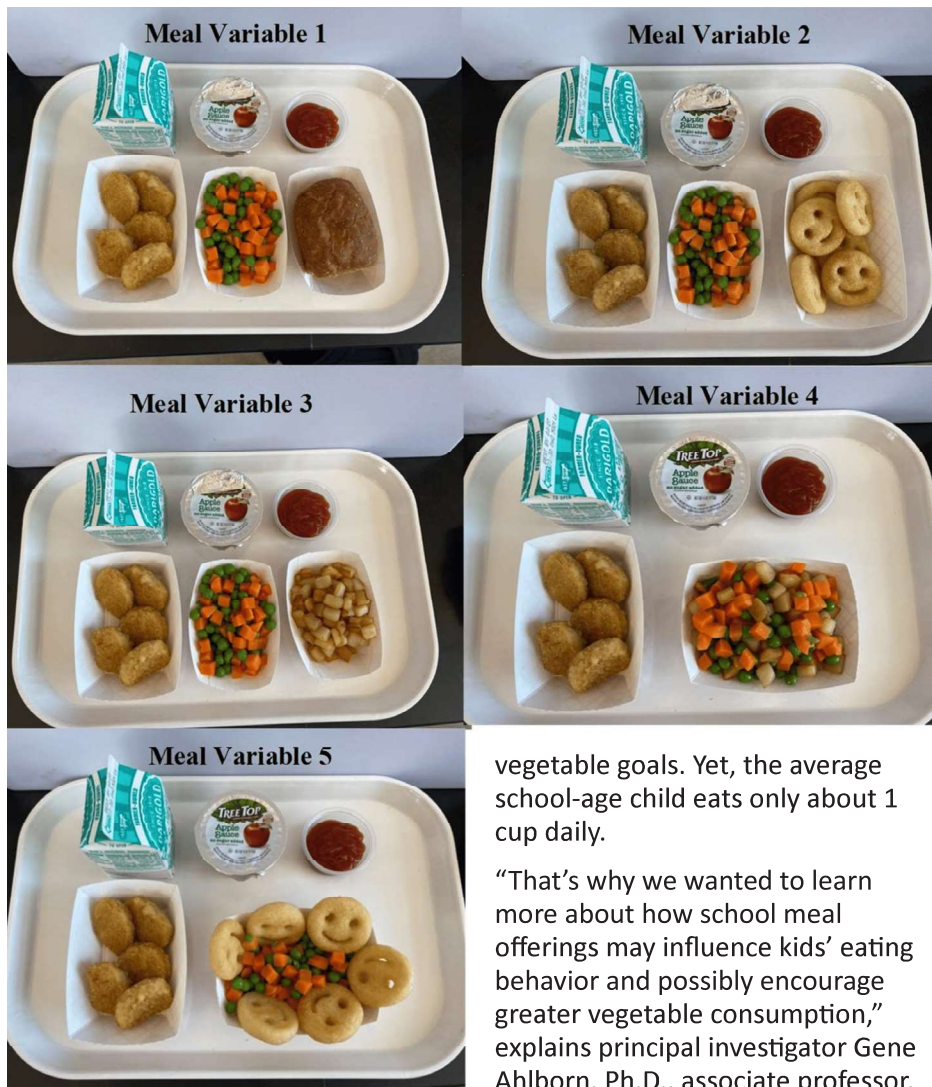
Shaped into happy faces, the product kids seem to like is made with mashed potatoes and sunflower oil to create a slightly crunchy exterior and soft interior.

EAT YOUR VEGGIES

“Getting kids to eat their vegetables is always a challenge,” Ahlborn says. “Potatoes not only add nutrients like potassium directly to the plate, but they may also help encourage kids to explore other veggies that they’re served alongside and thereby help them get closer to their overall nutrition needs.”

Top: Gene Ahlborn, Ph.D., associate professor, Department of Nutrition, Dietetics and Food Science, Brigham Young University, says the goal of the study was to learn more about how school meal offerings may influence kids’ eating behavior and possibly encourage greater vegetable consumption.

Bottom: The study found that children ate more total vegetables when peas and carrots were served in the same bowl as potato smiley faces, suggesting that pairing kid-friendly forms of potatoes with other vegetables can promote greater overall vegetable consumption.



vegetable goals. Yet, the average school-age child eats only about 1 cup daily.

“That’s why we wanted to learn more about how school meal offerings may influence kids’ eating behavior and possibly encourage greater vegetable consumption,” explains principal investigator Gene Ahlborn, Ph.D., associate professor,

Through controlled mealtime observation, the research team evaluated how different potato presentations and preparation styles impacted the amount of vegetables school-age children consumed in a cafeteria setting.

While seasoned potatoes proved to be less appealing to the 7-13-year-old participants, and the potato smiley faces served separately from the peas and carrots did not encourage greater total vegetable consumption, meals in which potato smiley faces were served with the peas and carrots in the same bowl led to a measurable increase in total vegetables eaten.

Ahlborn and colleagues also found that serving potato smiley faces in a cafeteria setting led to reduced vegetable plate waste compared to the control meal.

“This underscores the wide-reaching impacts of school menus. We want the vegetables on school lunch trays to fuel kids’ bodies, not fill the trash can,” Ahlborn adds.

CUMULATIVE BENEFITS

Considered together, these findings suggest serving kid-friendly preparations of potatoes with other vegetables could lead to cumulative benefits not only to students’ dietary patterns, but also school cafeterias’ food waste reduction efforts.

These results align with other research findings showing that adolescents who consume potatoes are more likely to have higher

“We want the vegetables on school lunch trays to fuel kids’ bodies, not fill the trash can.”

– Gene Ahlborn,
Ph.D., associate professor, Department of Nutrition, Dietetics and Food Science, Brigham Young University

diet quality, nutrient intake, and adequacy, therefore encouraging potato consumption may be a sound strategy to improve nutritional status.¹

Dr. Ahlborn studied children’s dietary behaviors and consumption patterns during a series of mealtimes that took place within a controlled, simulated environment designed to mimic a school cafeteria.

During each session, children were given a base meal that consisted of 2% milk, chicken nuggets, ketchup, and applesauce, along with the experimental meal component (which reflected different presentations and preparations of mixed peas and carrots).

Researchers weighed the food pre- and post-meal to assess plate waste and analyzed total vegetable consumption.

The experimental meal component

came in five variations of mixed peas and carrots (MPACs) including:

1. MPACs and a whole wheat bread roll served separately (control condition)
2. MPACs and potato smiley faces served in separate bowls
3. MPACs and seasoned diced potatoes served in separate bowls
4. MPACs and seasoned diced potatoes served in the same bowl
5. MPACs and potato smiley faces served in the same bowl

These small changes to presentation and preparation style had measurable impact on participant vegetable consumption and were illustrated in study findings. When potatoes were on trays, children ate more peas and carrots than when they were served alongside a separate bread roll.

Participants consumed the most vegetables and calories when peas/

continued on pg. 18

OMEX[®]

Boost Potato Growth with OMEX[®] plant nutrition

Improving potato plant health for 45 years

🌱 Cell Power[®] Zynergy[®]

Bringing plant health to life

🌱 Cell Power[®] SizeN[®]

A nitrogen revolution has arrived

🌱 Cell Power[®] SLYCE[®]

Opening up soils with soluble calcium

🌱 Cell Power[®] Damu

Boron Uptake Technology



✓ 45 years of improving yields

For more information
Call 559-661-6138
or Visit www.omexusa.com

Power of Potatoes on the Plate . . .

continued from pg. 17

carrots and potato faces were served in the same bowl (452 calories total, and 8.77 grams more vegetables than compared to when peas and carrots were combined with rosemary potatoes in the same bowl).

This was a minor difference compared to the control meal, with just 21 additional calories and 5 additional grams of fat (all of which was unsaturated).

Strengths of the study included removal of parents from the immediate study environment to minimize potential bias during mealtime consumption, and food intake and plate waste was measured in real-time, compared to less accurate dietary recall methods.

While researchers took steps to create a controlled environment mimicking a school cafeteria, the experiment took place in a food lab,



Researchers took steps to create a controlled environment mimicking a school cafeteria.

which did not account for duration of mealtimes, timing of lunch before or after recess, nutrition education, or other factors related to mealtime eating behaviors at school.

Full details can be found in the published article, “The effects of potato presentation on vegetable intake in school aged children,” in *Nutrients* (<https://doi.org/10.3390/nu15214496>).

Funding was provided by the Alliance for Potato Research & Education. The funders did not play any role in the design, data collection, analysis, or interpretation of this research. **BC^T**

Reference

1. Agarwal S, Fulgoni VL. Intake of Potatoes Is Associated with Higher Diet Quality, and Improved Nutrient Intake and Adequacy among US Adolescents: NHANES 2001–2018 Analysis. *Nutrients* 2021, Vol 13, Page 2614. 2021;13(8):2614. doi:10.3390/NU13082614

W&W
warner and warner inc.
your packaging professionals

For all your produce packaging needs

- Vented Bulk Totes
- Paper Balers / Vent Views
- Mesh
- Corrugated

NEW 100% Recyclable & Compostable Paper

4020 Corporate Ave. Plover, WI 54467 | 800.927.6373 | warnerpackaging.com