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Decline in milk consumption by children in school lunch programs may affect future health

Sensory characteristics and form of milk offered are key to child preferences according to a study in the Journal of Dairy Science®

Philadelphia, August 18, 2020 – Fluid milk consumption among children is vital, as adequate consumption of dairy products, especially during childhood, has beneficial health outcomes later in life. These benefits include reduced risk of osteoporosis, hypertension, obesity, and cancer in adulthood. Milk consumption among children has been declining for decades, so understanding and fulfilling the needs of children is crucial to reverse the decline. In an [article](#) appearing in the *Journal of Dairy Science*, scientists from North Carolina State University and Cornell University studied key contributors to increasing milk consumption among children.

Factors evaluated in the study included food trends, nutritional and school meal program requirements, children's perceptions and preferences, and environmental influences. Among these influences, flavor and habit were the primary drivers for long-term milk consumption. Intrinsic factors ranged in influence over milk preference in the examination, showing that flavoring, heat treatment, and sweeteners positively correlated with higher milk consumption. Extrinsic factors, such as social influence (i.e., peers, parents or caregivers, and school staff), packaging, and health benefits, all affected children's attitudes toward milk as well.

"Making milk more appealing to children, having schools include milk in their meal plans, and increasing the types of milk available in schools are all positive options to encourage children consume fluid milk and receive those health benefits," said senior author MaryAnne Drake, PhD, Department of Food,

Bioprocessing, and Nutrition Sciences, North Carolina State University, Raleigh, NC, USA. “The findings in this study, however, reveal critical insights that will aid in efforts to increase milk consumption among children.”



Caption: Elementary pupils enjoying a healthy lunch in the school cafeteria. Credit: iStock/monkeybusinessimages.

Understanding how to create milk products that are appealing to children without compromising the health benefits and taking note of the various factors that influence a child’s choice are necessary to encourage and increase lifelong milk consumption.

Notes for editors

The article is “*Invited review: Maintaining and growing fluid milk consumption by children in school lunch programs in the United States,*” by Lauren R. Sipple, David M. Barbano, and MaryAnne Drake (<https://doi.org/10.3168/jds.2020-18216>). It appears in the *Journal of Dairy Science*, volume 103, issue 9 (September 2020), published by FASS Inc. and [Elsevier](#).

It is openly available at <https://doi.org/10.3168/jds.2020-18216>.

Full text of the article is also available to credentialed journalists upon request. Contact Eileen Leahy at +1 732 238 3628 or jdsmedia@elsevier.com to obtain copies. Journalists wishing to interview the authors should contact the corresponding author, MaryAnne Drake, North Carolina State University, at mdrake@ncsu.edu.

About the *Journal of Dairy Science*

The *Journal of Dairy Science*® (JDS), an official journal of the American Dairy Science Association®, is co-published by Elsevier and FASS Inc. for the American Dairy Science Association. It is the leading general dairy research journal in the world. JDS readers represent education, industry, and government agencies in more than 70 countries, with interests in biochemistry, breeding, economics, engineering, environment, food science, genetics, microbiology, nutrition, pathology, physiology, processing, public health, quality assurance, and sanitation. JDS has a 2019 Journal Impact Factor of 3.333 and 5-year Journal Impact Factor of 3.432 according to Journal Citation Reports (Source: Clarivate 2020).

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