

Insights on Feeding Practices from a National Survey of Daycare Caregivers & an Intervention to Increase Feeding of Avocados to Infants & Toddlers

Author(s): F. Cheng¹, N. Ford¹, S. Maniscalco², T. Psota²; ¹Hass Avocado Board, ²Nutrition on Demand

Learning Outcome: Upon completion, participants will be able to understand infant and toddler feeding practices surrounding vegetables and fruits, especially avocados, among caregivers at childcare centers.

Background: Most young children have inadequate intakes of fiber, fruits, and vegetables. Compared to most fruits, avocados are higher in fiber and monounsaturated fatty acids and lower in sugar, which can help meet children's dietary needs. Since caregivers at childcare centers play an important role in a child's diet, this study aimed to better understand their feeding practices surrounding vegetables and fruits, particularly avocados, and whether providing relevant resources can help to increase their use of avocados.

Methods: We used SurveyMonkey to survey childcare centers throughout the US in 2021 and 2022. To be eligible, centers had to care for ≥ 10 children (4-24 months) and provide at least two meals and one snack OR two snacks and one meal. After the first survey, caregivers received avocados and educational resources. We summarized data using descriptive statistics.

Results: 99 and 63 childcare centers participated in the initial and follow-up surveys, respectively. Caregivers ranked nutrition as the most important factor when selecting foods and beverages (FB) to be served to children. Of the various nutrition factors, they selected FB that are low in sugar and contain vitamins, minerals, protein, and unsaturated fats as the most important. In the follow-up survey, 62% of childcare centers reported increased use after receiving avocados and educational resources, 66% reported purchasing more avocados, and 68% reported that their children liked eating avocados.

Conclusion: Overall, caregivers reported being confident that avocados deliver numerous health benefits to children, and providing educational resources on avocados helped caregivers incorporate them into meals.

Funding Source: None.

Intake Patterns of Essential Amino Acids in Latin America: Results from the ELANS Study

Author(s): M. Herrera¹, P. Hernandez², G. Ramirez², Y. Vásquez², Y. Sifontes², M. Landaeeta-jiménez², M. Yépez García⁴, L. Cortés Sanabria³, G. Gómez⁶, R. Pareja⁷, A. Rigotti⁸, I. Kovaslkys⁹, M. Fisberg¹⁰; ¹Framingham State University and MV Nutrition Consulting, ²Central University of Venezuela, ³Fundación Bengoa, ⁴Universidad San Francisco de Quito, ⁵Pontificia Universidad Javeriana, ⁶Universidad de Costa Rica, ⁷Instituto de Investigación Nutricional, Lima, ⁸Pontificia Universidad Católica de Chile, ⁹Pontificia Universidad Católica Argentina, ¹⁰Universidade Federal de São Paulo

Learning Outcome: Upon completion, participants will be able to describe the intake patterns of essential amino acids in 8 Latin American countries according to the source of protein intake.

Background: Traditionally, nutrition epidemiological studies have analyzed the intake of each amino acid (AA) separately. Essential AA are key components of the human diet because the body cannot synthesize them. In order to study the complex interaction between AA and food in the diet, this study aimed to identify and analyze the intake pattern of essential AA through foods in ELANS countries.

Methodology: The ELANS was a Cross-sectional, multicenter study conducted in Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Peru, and Venezuela; in both sex adolescents and adults aged 15–65 years. Food and beverage consumption was recorded during two non-consecutive household visits using 24-hour recall. The Nutrition Data System for Research transformed this intake into AA values. The final sample comprised 9218 individuals, of whom 6648 were considered plausible reporters. Principal Component Analysis (PCA) was performed to obtain the AA intake patterns, and non-parametric tests were used to identify patterns by food group.

Results: Less than 8% of study participants had a deficient intake of essential AA (mg/kg/d). Ecuador had the highest AA intake, while Costa Rica and Chile had the lowest. Ecuador and Peru stand out for a high consumption of tryptophan (mean:13.1; std.err.:0.12), which is related to the high consumption of poultry and fish, while Brazil, Colombia, and Argentina reported high consumption of lysine (mean:77.8; std.err.:0.62) and histidine (mean:31.6; std.err.:0.24) aligned with high consumption of beef and pork.

Conclusions: The pattern of essential AA intake between countries differed according to the type of animal food source.

Funding Source: The ELANS was initially supported by a scientific grant from the Coca-Cola Company and support from the Ferrero, Instituto Pensi/Hospital Infantil Sabara, International Life Science Institute of Argentina, Universidad de Costa Rica, Pontificia Universidad Católica de Chile, Pontificia Universidad Javeriana, Universidad Central de Venezuela/Fundación Bengoa, Universidad San Francisco de Quito, and Instituto de Investigación Nutricional de Peru. The founding sponsors had no role in study design, data collection, analyses, interpretation, manuscript writing, or the decision to publish the results. A grant from Abbott was received for the analysis of protein sources. The sponsor was not involved in any of the stages of this research.

Introducing Various Foods During Infancy and the Development of Food Allergies During Toddler/preschooler Years

Author(s): S. DiGrazia, C. Anstrom; Olivet Nazarene University

Learning Outcome: Describe the consequences of introducing common allergy foods to infants early in life and developing allergies in toddlers/preschool age children.

Introduction: Children are developing food allergies that persist into their adult lives. Literature hypothesizes that introducing allergy foods into a child's diet late increases the risk of developing food allergies. The purpose of this quantitative study was to explore the relationship of introducing allergy foods within the first nine months to determine if allergen symptoms were observed by the age of two.

Methods: The FDA/CDC Global Opinion Panel Section C of the Infant Feeding Practices Survey was administered to 60 parents of children aged 2-5 participated. Twenty-two responses were returned and analyzed using a Chi-Squared Test of Independence. Parents were recruited by MOPS (Mothers of Preschoolers) coordinators.

Results: A statistically significant relationship was found between introducing food early (<9 months) and allergy development in 2 of the 12 allergen foods. Cow's milk $\chi^2(1, n=18) = 5.73, p=0.017$, Cramer's $V=0.564$ and soymilk $\chi^2(2, n=13) = 7.88, p=0.019$, Cramer's $V=0.778$.

Discussion: Introducing cow and soymilk earlier than 9 months led to cases of allergies to these foods compared to introduction after 9 months. Data collected on the other 10 food groups were not statistically significant.

Conclusion: Introducing cow and soymilk before 9 months correlated with a greater chance of developing an allergy to those foods in children older than 2. Further research on this topic must be conducted with larger participant groups. From a health perspective, results emphasize the need and responsibility of parents to educate themselves on the introduction of allergen foods to their children.

Funding Source: No funding was received from any persons in regard to this study.

Investigating Factors Influencing the Silent Generation's Intention to Choose a Dish Featuring Plant-based Meat Alternatives at a Restaurant

Author(s): S. Jung¹, Y. Shin¹, S. Wilson¹, J. Im², H. Kim¹, J. Lawrence³; ¹The University of Alabama, ²Oklahoma State University, ³The University of Alabama College of Human Environmental Sciences

Learning Outcome: Participants will understand that the silent generation is influenced to consume a dish featuring PBMA by attitude, perceived behavioral control, and self-identity.

Background: While there is much empirical evidence and guidelines by government agencies or researchers for the silent generation to help them make healthier eating choices, minimal research has discussed this generation's perceptions of healthier menu options and their intention to choose them. Particularly, regardless of its popularity due to the health and environmental benefits of plant-based meat alternatives (PBMA), the driving forces of this generation's intention to choose the alternatives have been rarely discussed.

Objective: The purpose of this study was to examine factors influencing the silent generation's intention to choose a dish featuring PBMA at a restaurant using an extended theory of planned behavior with self-identity.

Methods: A total of 51 participants completed the survey instrument measuring the theory of planned behavior constructs and self-identity. Partial least squares structural equation modeling (PLS-SEM) was utilized for data analysis due to its ability to analyze multiple variables simultaneously with a relatively small sample size assumption. SmartPLS 3.0 and SPSS 28.0 were used as statistical software.

Results: Results indicated that attitude ($\beta=0.196, p=0.031$), perceived behavioral control ($\beta=0.248, p=0.024$), and self-identity ($\beta=0.518, p=0.000$), had a significant positive effect on the intention to choose a dish featuring PBMA at a restaurant while the subjective norm was not a significant predictor of intention ($\beta=0.066, p=0.530$).

Conclusion: As the silent generation tends to be more interested in healthy food options when eating out, the study findings could be utilized to develop successful marketing strategies for the food service industry.

Funding Source: None.