from the association

IN THIS ISSUE
New in Review Editor: Judith Beto, PhD, RD, FADA
Sites in Review Editor: Eileen Vincent, MS, RD

PERIODICALS
BUSINESS AND INDUSTRY

CLINICAL NUTRITION


Abstract: The essential amino acid tryptophan is a precursor of serotonin (5-hydroxytryptamine), which has been linked to sleep and emotion brain activity. This single-blind randomized crossover metabolic study of 20 Dutch adults (mean age 52 years) examined the pharmacokinetic changes of tryptophan and other competing large amino acids using varying doses of a strawberry-flavored egg-protein hydrolysate (EPH at 4 g, 8 g, 12 g) drink compared to one of two reference beverages of either 4 g skim milk powder or 2 g skim milk powder with 4 g EPH. Subjects completed the five metabolic sessions in random order 1 day per week over 5 weeks. After an overnight fast, each consumed the study beverage, and eight interval plasma draws were completed over 210 minutes. A mixed-model analysis of variance for repeated measures was used to assess effects; a dose-time-response graph was calculated for each intervention. Results showed the desired increase in plasma tryptophan could be achieved (>40%) with the use of the lowest dose of 4 g EPH or the 2 g skim milk powder. Funding was industry sponsored by Unilever Netherlands and conducted at their research facility.


Abstract: Tea is the most widely consumed beverage in the world after water. This interventional study used nine healthy adults to quantify the effect of ingestion of 400 mL of 1.25% green tea infusion on the plasma methylated components using time-ingestion curve methodology. The tea was consumed after an overnight fast with blood draws at 0.5, 1, 1.5, 2, 3, 4, 5, 6, 8, 10, 11, and 12 hours post-dose. A standard lunch and dinner were served along with ad libitum water. Plasma was analyzed for a multitude of components, specifically catechins and methyl fractions related to bioavailability. Time curves were plotted to analyze plasma kinetics. The most important metabolite, 4'-O-Me-EGC, was measured at 40% of parent EGC mean area under the curve (AUC). Maximum absorption was 1 to 2 hours after ingestion. The research was industry funded and conducted at Nestlé Research Center in Lausanne, Switzerland.


COMMUNICATION/PUBLICATION

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COMMUNITY NUTRITION

CONSULTATION AND PRIVATE PRACTICE
Playing a computer game during lunch affects fullness, memory for lunch, and later snack intake.

Abstract: Motivational strategies to adhere to planned goals may be challenged by distracting behaviors. This between-subjects design enrolled 22 adult volunteers into a lunch-time interventional distraction experiment (playing a computer solitaire card game with one hand) and 22 adult volunteers with no computer game interaction to test the hypothesis that eating lunch while distracted would result in consumption of a different amount of food (lunch, post-meal snack) and have lower memory capacity of the meal content. All volunteers were served lunch consisting of assorted savory items (cheese twists, ham or cheese sandwich, raw carrot sticks, small Cornish pasty, small sausage rolls, cherry tomatoes, scotch egg, potato chips). Each participant was served alone with each food item served at 90-second intervals from a food window. The amount and type of food eaten was recorded. Approximately 30 minutes later, each participated in a biscuit tasting test for sensory characteristics. All volunteers completed the Dutch Eating Behavior Questionnaire along with recall and serial order of food items presented. None were told the true purpose of the experiment. A multivariate analysis of variance of repeated measures with sex and distraction as factors was used to analyze the data. The distraction group consumed significantly more food at lunch, reported less meal satisfaction, and had lower recall scores. Funding was internal from the Department of Experimental Psychology, University of Bristol, United Kingdom.

CULINARY
The effect of protease inhibitors derived from potato formulated in a minidrink on appetite, food intake, and plasma cholecystokinin levels in humans.

Physical and antibacterial properties of edible films formulated with apple skin polyphenols.

Role of steaming and toasting on the odor, protein characteristics of chickpea (Cicer arriepnun L.) flour, and product quality.

Celiac disease, gluten-free diet, and oats.

DIABETES CARE
Egg consumption as part of an energy-restricted high-protein diet improves blood lipid and blood glucose profiles in individuals with type 2 diabetes.

Abstract: The ingestion of eggs has been approached as they waited in an outpatient clinic. Data were tabulated by count and percentage by question response followed by grouping by categories. Data were available from 49 type 1 diabetics (49% male, mean age 43 years) and 108 type 2 diabetes (58% male, mean age 58 years). Responses showed higher ranking for importance of medication, then exercise, followed by diet last. Use of blood pressure medications and statins was viewed as more helpful for improved heart health compared to diabetic control. Only 22% felt they adhered to diabetic diet parameters. The study was internally funded by the Department of Psychological Medicine at the University of Auckland, New Zealand.

Vitamin D deficiency and coronary artery calcification in subjects with type 1 diabetes.

Abstract: The relationship between vitamin D and coronary artery calcification (CAC) score has not been clearly correlated. This subgroup analysis of the Coronary Artery Calcification in Type 1 Diabetes (CACT1) study examined this relationship be-
between 652 adult type 1 diabetics (46% male, ages 19 to 56 years, 23-year mean duration of diabetes) and 764 non-diabetic controls. Baseline data was collected in 2000-2002 on diabetics followed by data at year 3 (n=374) and year 6. Variables included laboratory (vitamin D, fasting lipids, genotyping), medical history, demographics, and CAC by high-resolution 3-mm tomographic images. Comparison between groups used multiple logistic regression modeling using grouping by CAC, genotype, and vitamin D levels. Results showed lower serum vitamin D predicted increased CAC even when adjusted for age, sex, and daylight exposure. Differences by vitamin D–binding protein genotype polymorphisms were also observed. Vitamin D appears to have an independent role in coronary artery calcification progression. Funding was provided by the National Institutes of Health, National Heart, Lung, and Blood Institute, with support from the Diabetes Endocrinology Research Center Clinical Investigation Core at the University of Colorado Denver Anschutz Medical Center Adult General Clinical Research Center.

EDUCATION


GERONTOLOGY


Abstract: The symptom of “dry mouth” is a common complaint in elderly people. This cross-sectional study of 1,286 community-living elderly Japanese women assessed the impact of dry mouth using a battery of subjective (self-assessment questionnaire, visual analog scale of mouth dryness) and objective (Tokyo Metropolitan Institute of Geronology Index for function, body mass index, dental examination, oral moisture checking device) tests. Participants were categorized for analysis based on self-reported dry mouth with data compared using Student’s t-tests or Mann-Whitney U-tests. Results showed a mean age of 78.4 years with 38.8% reporting dry mouth. There was no correlation between self-reported dry mouth and oral moisture checking device score. Individuals reporting dry mouth were more likely to have more medications (analogesics, anti-inflammatory drugs), chronic disease conditions, and self-reported swallowing difficulty. Funding was provided by the Tokyo Metropolitan Institute of Gerontology.


Abstract: Supplementation with oral vitamin D-3 is widely used to treat hypovitaminosis, found widespread in American adults. This pilot double-blind, randomized, placebo-controlled trial enrolled 34 male veterans (mean age 80 years) residing in South Florida to examine the efficacy and safety effects of a 2,000 IU daily supplementation of oral vitamin D-3 over 6 months. Baseline and 6-month laboratory values, anthropometrics, and urine samples were compared by t-tests or χ² proportion analysis. Pill counts were used to assess compliance. No dietary records were collected. Some participants received oral calcium supplementation. Results showed similar baseline serum 25-hydroxyvitamin D levels (27.2 to 28.4 ng/mL), but the serum level in the supplement group rose to 42.7±10.5 ng/mL with no adverse effects. Funding was provided by the Geriatric Research, Education, and Clinical Center of the Department of Veterans Affairs and the Indian Trail Foundation.


LONG-TERM CARE


MANAGEMENT/ADMINISTRATION


NUTRITION SUPPORT

Impaired glucose absorption in children with severe malnutrition.


Effectiveness of a new hypertonic oral rehydration solution containing zinc and prebiotics in the treatment of childhood acute diarrhea: A randomized controlled trial.


Nutrition support for the acute lung injury/adult respiratory distress syndrome patient: A review.


Glucose control in the intensive care unit: A nutrition support perspective.


ONCOLOGY

Nutritional predictors of postoperative outcome in pancreatic cancer.


PEDIATRIC

Effects of eating breakfast compared with skipping breakfast on ratings of appetite and intake at subsequent meals in 8- to 10-year-old children.


Abstract: The importance of eating breakfast continues to be a key component of children’s intake. The purpose of this crossover repeated measures study was to examine the correlation between breakfast intake in a cohort of young children (8 to 10 years old) and subsequent food intake later in the day. Children were eligible to participate if they had a body mass index in the 5th to 94th percentile and rated the majority of foods to be consumed in the study acceptable on a 3–cartoon-character rating scale during a screening visit. On each of two fasting study visits, children were fed a standard lunch at 11:45 AM after either a breakfast or nonbreakfast morning. Children participated in standard sedentary activities and completed hunger perception scales. All food was weighed to measure intake. Parents completed a food diary for the rest of the day. Data were compared using a mixed-effects linear model for repeated measures. Results showed intake of breakfast changed daily calorie intake by a mean of 362 calories but did not change lunch or subsequent food intake. The importance of eating breakfast continues to be a key component of children’s intake.

Management of drooling in children.


The impact of salt, fat, and sugar levels on toddler food intake.


Abstract: Early introduction of food parameters often influences later intake. This French study studied the impact of three levels of food seasoning (salt, fat, sugar) at no, usual, and twice usual cooking levels in 74 children attending a day care nursery setting. Children ate the food items in a group feeding session replicating normal school patterns with test lunches alternate weeks. Typical portions (50 to 100 g) were weighed prior and after presenta-

Infant-feeding patterns and cardiovascular risk factors in young adulthood: Data from five cohorts in low- and middle-income countries.


Accuracy of home enteral feed preparation for children with inherited metabolic disorders.


Acute respiratory distress syndrome: Use of specialized nutrients in pediatric patients and infants.


Interventions that involve parents to improve children’s weight-related nutrition intake and activity patterns—What nutrition and activity targets and behaviour change techniques are associated with nutrition effectiveness?
Transparency and oversight in local wellness policies.

PUBLIC HEALTH
A 2020 vision for educating the next generation of public health leaders.

Model approaches for advancing interprofessional prevention education.

Assessing the impact of migration on food and nutrition security.

RENAI NUTRITION
Physical inactivity and chronic kidney disease in Australian adults: The AusDiab study.

Olive (Olea europaea) leaf extract effective in patients with stage-1 hypertension: Comparison with captopril.

RESEARCH
Energy expenditure in adults living in developing compared with industrialized countries: A meta-analysis of doubly labeled water studies.

Recalculation of the calcium requirement of adult men.

Qualitative research in nutrition and dietetics: Data collection issues.
Draper A, Swift JA. J Hum Nutr Diet. 2011;24:3-12.

SCHOOL NUTRITION
Obesity-promoting food environments and the spatial clustering of food outlets around schools.

Evidence-based health promotion programs for schools and communities.

School feeding programs in developing countries: Impacts on children’s health and educational outcomes.

SPORTS NUTRITION
Fat adaptation in well-trained athletes: Effects on cell metabolism.


The Canadian sedentary behavior guidelines for children and youth.
WEIGHT MANAGEMENT
Hypertriglyceridemic waist: An alternative to the metabolic syndrome? Results of the IMAP study (multidisciplinary intervention in primary care).

A qualitative study comparing commercial and health service weight loss groups, classes, and clubs.

Early-onset copper deficiency following Roux-en-Y gastric bypass.

Fermentation potential of the gut microbiome: Implications for energy homeostasis and weight management.

WELLNESS/PREVENTION
Sedentary behaviors and health outcomes among adults: A systematic review of prospective studies.

A randomized controlled trial of continuous activity, short bouts, and a 10,000 step guideline in inactive adults.

Participation and cardiovascular risk reduction in a voluntary worksite nutrition and physical activity program.
Thorndike AN, Healey E, Sonnenberg L, Regan S. Prev Med. 2011;52:164S-166S.

WOMEN’S HEALTH
Clinical outcomes of a 2-y soy isoflavone supplementation in menopausal women.

Bisphosphonate use and the risk of subtrochanteric or femoral shaft fractures in older women.

Abstract: Oral bisphosphonate use is commonly given as a preventive treatment for osteoporosis but long-term use may increase some risks. This population-based, nested case-control study used the Ontario, Canada, public drug program database to identify 205,466 women >68 years of age who had been prescribed a bis-
SITES IN REVIEW

These agriculture and gardening resources complement the theme of access to fresh fruit and vegetables in communities with limited resources in the May 2011 issue of the Journal of the American Dietetic Association.

Know Your Farmer, Know Your Food

EATING

In response to a 2010 presidential challenge to promote local food systems, the US Department of Agriculture (USDA) has recently offered grant funding to support small- to medium-sized farms that produce and sell locally-grown foods. To this end, Know Your Farmer, Know Your Food is a USDA-sponsored Web site designed to educate consumers—especially low-income individuals, older adults, and pregnant women—about access to locally-grown food.

Users of the Know Your Farmer, Know Your Food site can search for local farmers markets by zip code, city, or county. Advanced search features can include farmers’ markets that accept government-supported food vouchers. Detailed descriptions of related USDA initiatives are also posted on the site. These include the Farm to School program, Senior Market Initiative, and other community food programs.

A plethora of information about USDA-sponsored grants, loans, and other types of support for developing or expanding local food systems is another key feature of the site. A detailed description of available financial assistance for farmers, community planners, and others involved in local food systems is categorically listed.

USDA Gardening

The USDA Gardening home page serves as a Web portal for consumer gardening, horticulture, and landscape information. The USDA network of state extension services constitutes most of the resources posted on the Web site. Featured topics include organic home vegetable gardening, pest management, and the PLANTS database, which provides evidence-based information about vegetables and other plants with related gardening tips.

APPS IN REVIEW

Fooducate
Developer: Fooducate
For use with: iPhone, iPad, and iPod Touch; Android app coming soon
Version: 1.14 (February 2011)
Price: free

Review: Fooducate is a free app created by dietitians aimed at helping consumers find better options when shopping for food. Users begin by using their phones to scan food product bar codes, which are linked with a database that includes more than 160,000 foods. Foods not included in the database can be easily submitted for inclusion by taking a photo of the product. Once a food is scanned, users view a screen that includes an overall letter grade for the product, calories per serving, and a rating of how many users “like” this product. Also included are brief, informative descriptions or warnings, often highlighting an ingredient that could get overlooked or with which the consumer may not be familiar. There are tabs for finding alternative, healthier products and a function that allows for a side-by-side comparison of two products.

The main concern with this program is the grading system. For example, olive oil received a B−, the same rating as an ice cream and a chocolate almond granola. The grade includes details on how the product rates within its category, which does force some perspective (for example, this oil is a better choice than most other oils). The grading system is described on the Fooducate Web site as using evidence-based science and taking into account “nutrients to encourage,” such as fiber; “nutrients to limit,” such as saturated fat, sodium, and sugar; as well as information from the ingredient list.

One additional concern is that the database of products with food labels does not include the plethora of healthful foods without labels such as fruits, vegetables, herbs, and bulk foods such as grains, nuts, and dried beans. However, used in conjunction with the nutrition advice of a dietetics practitioner, this app is an excellent tool to help clients make educated choices in the supermarket. Overall, Fooducate provides an easy way to scan and compare food products, even using an imperfect rating system. For more information, visit www.fooducate.com.

—Allison Stevens, MS, RD, LD