

ASN Publications

The Journal of Nutrition Media Alerts

The following articles have been published in the October 2018 issue of *The Journal of Nutrition*, a publication of the American Society for Nutrition. Summaries of the selected articles appear below; the full text of each article is available by clicking on the links listed. Manuscripts published in *The Journal of Nutrition* are embargoed until the article appears online either as in press ([Articles in Press](#)) or as a final version. The embargoes for the following articles have expired (**Editor's Choice Articles in bold**):

- Does breakfast influence food intake consumed later in the day?
- Does coconut oil have a role in heart healthy diets?
- Closing the gap: Can linking nutrition and agriculture improve diets?
- **Iron deficiency leads to altered transcriptional patterns in the hippocampus, even after restoration of iron status**
- **On-farm agricultural biodiversity improves diet diversity and micronutrient availability for Peruvian women**

Does breakfast influence food intake consumed later in the day?

According to many health experts, those that consume breakfast on a regular basis are less likely to overeat, seek out compensatory snacks, and more likely to maintain a healthy weight compared to those that habitually skip this morning meal. However, few rigorously controlled studies have substantiated these claims by demonstrating that eating breakfast guards against weight gain. In fact, some researchers have argued that skipping breakfast may actually favor an overall reduction in daily caloric intake. Clearly the association between regular breakfast consumption, health status, and food choices is complex and still unfolding. A study conducted by [Scazzina et al.](#) examined the effects of nutritional and cognitive-perceived characteristics of breakfast on metabolic and behavioral variables related to food intake consumed later in the day.

Reference: Rosi A, Martini D, Scazzina F, Dall'Aglio E, Leonardi R, Monti L, Fasano F, Di Dio C, Riggio L, Furio Brighenti F. [Nature and Cognitive Perception of 4 Different Breakfast Meals Influence Satiety-Related Sensations and Postprandial Metabolic Responses but Have Little Effect on Food Choices and Intake Later in the Day in a Randomized Crossover Trial in Healthy Men.](#) *J Nutr* 2018 148(10):1536-46.

For More Information To contact the corresponding author, Dr. Francesca Scazzina, please send an e-mail to Francesca.scazzina@unipr.it.

Does coconut oil have a role in heart healthy diets?

Fatty acids are important components of a healthy diet. The Dietary Guidelines for Americans 2015-2020 recommend limiting intake of saturated fatty acids and emphasizing unsaturated fatty acids, particularly polyunsaturated fatty acids, which can help to lower plasma cholesterol and may also have other cardio-protective benefits. Because of well-publicized claims about purported health benefits, coconut oil has gained popularity in recent years. Conventional thought is that coconut oil is high in saturated fatty acids and therefore likely to increase plasma cholesterol levels and heart disease risk. However, proponents of coconut oil maintain that the types of saturated fatty acids in coconut oil have demonstrated health benefits such as helping to increase levels of HDL, or "good", cholesterol. Clearly, the cardio-metabolic effects of coconut oil in humans are complex and still unfolding. A study conducted by [Maki et al.](#) provides further insight into the role of coconut oil in heart healthy diets.

Important Dates

Nov 7-9. [Personalized Nutrition 2018: ACN Annual Meeting](#) (Seattle, WA)

Nov 11-15. [18th SLAN Congress of Nutrition](#) (Guadalajara, Mexico)

Nov 11-15. [Obesity Week: TOS Annual Scientific Meeting](#) (Nashville, TN)

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Reference: Maki KC, Hasse W, Dicklin MR, Bell M, Buggia MA, Cassens ME, Eren F. [Corn Oil Lowers Plasma Cholesterol Compared with Coconut Oil in Adults with Above-Desirable Levels of Cholesterol in a Randomized Crossover Trial](#). *J Nutr* 2018 148(10):1556-63.

For More Information: To contact the corresponding author, Dr. Kevin Maki, please send an e-mail to kmaki@mbclinicalresearch.com.

Closing the gap: Can linking nutrition and agriculture improve diets?

Infants and children are among those most greatly impacted by low-quality diets and chronic malnutrition. Although there are many factors that contribute to the scarcity of food, social safety nets are an essential part of the solution. Nutrition-sensitive agriculture is an actionable concept that focuses on crop production to improve availability of nutritious foods. This food-based approach addresses the underlying causes of food insecurity by encouraging more diverse and productive agricultural practices. However, some experts suggest that nutrition-sensitive agriculture strategies should also include nutrition programming that provides caregivers with the knowledge and practices to help improve the nutritional status for all household members. Although an integrated approach to nutrition and crop production has the potential to greatly impact household nutrition, few programs of this type have been put into practice. A study conducted by [Gelli et al.](#) implemented an integrated agriculture and nutrition intervention aimed at improving household food production diversity, maternal knowledge on child nutrition and feeding practices, and children's diets and anthropometric measures.

Reference: Gelli A, Margolies A, Santacroce M, Roschnik R, Twalibu A, Katundu M, Moestue H, Alderman H, Ruel M. [Using a Community-Based Early Childhood Development Center as a Platform to Promote Production and Consumption Diversity Increases Children's Dietary Intake and Reduces Stunting in Malawi: A Cluster-Randomized Trial](#). *J Nutr* 2018 148(10):1587-97.

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Read full summaries [here](#).

JN Editor's Choice Articles

Iron deficiency leads to altered transcriptional patterns in the hippocampus, even after restoration of iron status

[Tindall et al.](#) provide a review of the literature exploring the relationship among diet, intestinal microbiota and metabolites, and cardiometabolic disease. The evidence indicates differences in microbial populations that exist among individuals consuming a vegan, vegetarian or omnivore dietary pattern. A vegetarian or Mediterranean dietary pattern was associated with not only altered microbial populations, but also changes in microbial metabolites including short chain fatty acids, secondary bile acids and trimethylamine. The changes in metabolites were also associated with improved cardiometabolic risk factors. The authors conclude the evidence reviewed suggests the beneficial impact of diet on cardiometabolic disease is, at least in part, mediated by the intestinal microbiome and their metabolome.

References: Barks A, Fretham SJB, Georgieff MK, Tran PV. [Early-life neuronal-specific iron deficiency alters the adult mouse hippocampal transcriptome](#). *J Nutr* 2018 148(10):1521-28. Commentary by Murray-Kolb LE. [Examining consequence of brain iron deficiency in the absence of anemia](#). *J Nutr* 2018 148(10):1511-12.

For More Information: To contact the corresponding author, Dr. Michael Georgieff, please send an email to georg001@umn.edu. To contact the corresponding author of the commentary, Dr. Laura Murray-Kolb, please send an email to lem118@psu.edu.

On-farm agricultural biodiversity improves diet diversity and micronutrient availability for Peruvian women

Diet diversity and the opportunity to meet nutrient requirements can be

opportunities to reach our membership.

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Agricultural biodiversity and diet quality
Dietary metabolism and anthropometric
measures in rural women and children
Diet as a driver of and response to metabolic
disease in low-income and high-income countries

challenging in low- and moderate-income countries. Existing literature suggests that on-farm agricultural diversity can contribute toward improving diet quality. However, the published work does not distinguish between the effects on direct foodstuff availability or whether the improvement is produced by the availability of other foods after the agricultural products are sold in the market. [Jones et al.](#) published the results of a study that addressed these questions using a population of women living in three different agricultural regions in Peru in the October issue of *The Journal of Nutrition*. The data suggest that agricultural biodiversity does contribute toward diversity of these women's diets and that it also helps them to achieve micronutrient adequate diets. However, the data did not support an effect of market-orientation on diet diversity. The authors concluded that these observations are indicative of agricultural biodiversity providing a more diverse diet through direct consumption, as opposed to resulting from the purchase of more diverse foods after the sale of their products.

Reference: Jones AD, Creed-Kanashiro H, Zimmerer KS, de Haan S, Carrasco M, Meza K, Cruz-Garcia GS, Tello M, Amaya FP, Marin RM, Ganoza L. [Farm-level agricultural biodiversity in the Peruvian Andes is associated with greater odds of women achieving a minimally diverse and micronutrient adequate diet.](#) *J Nutr* 2018 148(10):1625–37.

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