

Nutrition Close-Up

Egg Nutrition Center



Spring 2015

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CHOLESTEROL

Egg consumption and coronary artery disease risk

By Valentine Njike, MD, MPH

Coronary artery disease (CAD) remains the leading cause of death in the United States. Well-known risk factors for CAD include hypertension, cigarette smoking, physical inactivity, and high serum cholesterol. The prevailing view tends to be that dietary cholesterol intake leads to elevated serum cholesterol, thereby increasing heart disease risk. Evidence to support this is at best controversial. *The American Heart Association* (AHA) recommends that daily dietary cholesterol be limited to 300 mg/day for healthy adults and 200 mg/day for individuals with heart disease.¹ Eggs are the single largest source of dietary cholesterol consumed in the U.S. Due to the cholesterol content of egg yolks (approximately 200 mg each), reduction in egg consumption had been recommended in the past in an effort to lower dietary cholesterol intake. However, there is a lack of consistent evidence to support the notion that egg ingestion leads to substantial elevation in serum lipids. It has been argued that the minimal impact of dietary cholesterol on blood cholesterol does not justify current AHA recommendations; the reduction in blood cholesterol elicited by a 100mg/day reduction in dietary cholesterol intake would result in a meager 1% decrease in mortality risk.

In our prior studies, daily ingestion of eggs for a period of six weeks showed no adverse effects on endothelial function (a marker of cardiovascular risk) in healthy adults or adults with hyperlipidemia.^{2,3} In our more recent study published in the *American Heart Journal*, we investigated

the effects of eggs, Egg Beaters®, or a high-carbohydrate breakfast on endothelial function in adults with clinically established coronary artery disease.⁴ Specifically, participants with established coronary artery disease consumed 2 eggs, ½ cup of Egg Beaters®, or a high-carbohydrate breakfast daily for six weeks as part of their normal diet. The high-carbohydrate breakfast consisted of what is typically consumed in the U.S. (i.e., bagel, waffles,

"...eggs for a period of six weeks showed no adverse effects on endothelial function..."

pancakes, or cereal and skim milk). The brands and types of high-carbohydrate breakfast products consumed were selected to provide a similar amount of calories, total carbohydrates, sugar, fiber, fat, and protein. At the end of the intervention phase, we assessed the impact of eggs, Egg Beaters®, or a high-carbohydrate breakfast intake by evaluating the change in endothelial function, lipid profile, blood pressure, and body weight of the study participants. We found that daily consumption of eggs or Egg Beaters® for six weeks did not show any improvement or deterioration in endothelial function, lipid profile, blood pressure, or body weight. In comparison, daily consumption of a high-carbohydrate breakfast (excluding egg intake) for six

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Providing dietary guidance amidst inevitable change

By Mitch Kanter, PhD



By now you are well aware that the Dietary Guidelines Advisory Committee has concluded its deliberations, and has submitted its recommendations to USDA and HHS regarding the 2015 Dietary Guidelines. A few issues addressed by the Committee that have provoked discussion include sustainability and the significant limits placed on added sugars and saturated fat-containing animal products in the diet.

For some, the loosening of the reins on dietary cholesterol remains an area of contention. Doing what is perceived by many to be a 180 degree turn on more than 50 years of dietary guidance may seem like a sea change to many. However in many cases, the preponderance of available evidence shows no appreciable relationship between consumption of dietary cholesterol and serum cholesterol.

This may be why a 2013 AHA/ACC Guideline on Lifestyle Management to Reduce Cardiovascular Risk states, in part, that “there is insufficient evidence to determine whether lowering dietary cholesterol reduces LDL-C.” And it further suggests that adults who would benefit from lower LDL-C should hold saturated fat intake between 5% and 6% of calories; reduce the percent of caloric intake from saturated fat and from trans fat; and consume a dietary pattern emphasizing particular foods such as vegetables, fruits and whole grain. None of the advice put forth in these guidelines dealt with cholesterol-rich foods.

“Our understanding of the relationship between dietary cholesterol, serum cholesterol, and heart disease risk has changed dramatically...”

The lack of a relationship between dietary cholesterol and serum cholesterol may also explain why a number of developed and developing countries focus heart healthy diet advice on reductions in saturated fat and trans fat intake as opposed to reducing dietary cholesterol. Among the countries that do not recommend an upper limit for dietary cholesterol are Australia, the United Kingdom, Ireland, South Korea, India and New Zealand. The European Society of Cardiology and other professional bodies likewise have issued guidelines that do not include upper limits on cholesterol intake. As two prominent British

nutritionists recently wrote: “Most health and heart advisory bodies in the UK, Europe and elsewhere no longer set limits on the number of eggs people should eat, provided they are consumed as part of a healthy diet that is not high in saturated fatty acids.”

So, based purely on the science, it does appear that the DGAC's recommendation to alter cholesterol guidance is warranted. This does not mean, however, that everyone in (or out) of the nutrition science community is ready to jump on board. Animal action groups, or groups and individuals who support a vegan lifestyle, have not been eager to accept the committee's recommendation. And some nutritionists have argued that by “taking the shackles off” of dietary cholesterol intake we may be sending the erroneous signal that folks can now eat other high-fat, high-calorie foods with impunity. This may well be a valid public health concern, and one that clinicians and researchers alike will need to keep an eye on should the committee's recommendations be accepted by USDA/HHS.

With that in mind, it should be remembered that the DGAC's recommendation to de-emphasize cholesterol as a nutrient of concern for overconsumption does not suggest that it can or should be consumed in excess, particularly when accompanied by high saturated fat, high-calorie fare. So when consuming cholesterol-containing foods like eggs or shell fish, it's still important to be mindful of “the company” that they're keeping. Few would argue that a breakfast consisting of eggs with whole grain toast, low fat yogurt/milk, and a cup of fruit, for example, is anything less than a heart-healthy meal.

Our understanding of the relationship between dietary cholesterol, serum cholesterol, and heart disease risk has changed dramatically in recent years with the publication of various up-to-date meta analyses, and other epidemiological and experimental studies. And it's heartening to know that the DGAC apparently read many of these new studies, and altered recommendations accordingly. Nutrition science is not a static field. Things are changing constantly, and keeping up with the literature is important in order to make prudent dietary choices. Whether or not you agree with all of the recommendations put forth by the 2015 Guidelines Committee, it must be acknowledged that the panel did use available science as best it could to make the recommendations it did. In an ever-changing scientific environment, that's probably the best that we could ask for.

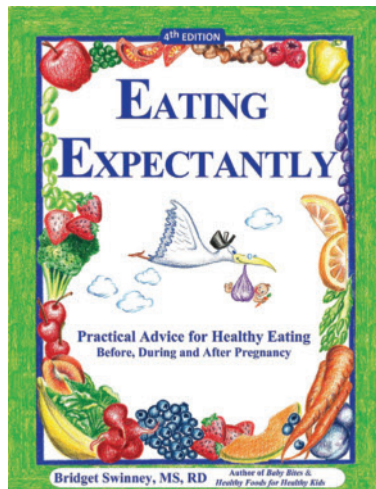
Mitch Kanter, PhD, is Executive Director of The Egg Nutrition Center.

'Eating Clean' for pregnancy

By Bridget Swinney MS, RDN



Along with eating local and organic, "Eating Clean" is a new trend that is growing in popularity. What exactly is clean eating? Although there are many interpretations, the overriding philosophy is to eat foods as close as possible to their natural state and minimize or avoid processed foods and refined sweeteners.



Though clean eating may be a new buzzword, it's really nothing new. In fact, the *American Institute for Cancer Research (AICR)*, the *Academy of Nutrition and Dietetics*, and the *Institute of Medicine* have all been recommending a diet rich in whole foods for decades. Karen Collins, MS, RDN, FAND, Nutrition Advisor to AICR, says "the concepts of

'eating clean' line up with steps to promote long-term overall health and reduce cancer risk as part of an ongoing lifestyle. But it's important to know that research shows benefit even without changes as dramatic as some advocates of 'clean eating' suggest."

Why eat clean during pregnancy?

A healthy diet before and during pregnancy cannot only help a mom have a healthy, uncomplicated pregnancy, it can also positively program her baby's health for a lifetime. The opposite is also true. Developmental Origins of Health and Disease theory (DOHaD), also known as Barker's hypothesis, describes how prenatal "insults" such as undernutrition, overnutrition, and stress, could permanently shape or program the body's structure, function, and

metabolism, and lead to obesity and to cardiac, metabolic and psychological disorders in children and adults.¹

Diet quality plays an important role in pregnancy weight gain and outcomes. An imbalance of nutrients, such as a diet with a high proportion of concentrated sweets and excess saturated fat, or a diet that lacks fruits, vegetables and cereal fiber, has been linked to poor pregnancy outcomes. A high glycemic load in pregnancy has been associated with greater adiposity in offspring in early childhood and markers for metabolic syndrome in early adulthood.^{2,3} Eating more whole instead of processed foods, and limiting sweeteners, as recommended for clean eating, could result in a lower glycemic load and a healthier weight gain during pregnancy. However, if a woman drinks excessive amounts of juice, even organic, or uses a lot of evaporated cane juice or honey, this could have the opposite effect on glycemic load and weight gain.

While some processing increases bioavailability of nutrients like carotenoids and minerals, most forms of processing lead to decreased nutrient content to some extent. A 'clean eating' approach during pre-pregnancy and pregnancy potentially increases the antioxidant content of a woman's diet. Antioxidants are important for fertility and early placental development. Oxidative stress also plays a role in fetal programming for future health and disease.⁴

Some nutrients can protect an infant from negative fetal programming. Choline is one such nutrient, which is found in eggs. Neural tube defects, for example, are much more prevalent in a choline deficient environment.⁵

Choline may also mitigate the negative effects of high cortisol levels caused by prenatal stress or depression. Choline provides methyl groups for cellular methylation reactions. The methylation state of cortisol-regulating genes is particularly sensitive to prenatal and early post-natal exposures. A small study of pregnant women found that women with higher choline intake (903 mg per day vs. 480 mg) were observed to have lower levels of placental cord cortisol and fewer changes in the cortisol-regulating genes.⁶ "The study findings raise the exciting possibility that a higher maternal choline intake may counter some of the adverse effects of prenatal stress on behavioral, neuro-endocrine, and metabolic development in the offspring," says Marie Caudill, PhD, an author of the study and a leading choline researcher.

Clean eating is not just about what's in your food, it's also about what isn't. Choosing organic food when

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- "Clean eating" can mean many different things but the main philosophy is to eat foods as close as possible to their natural state while avoiding processed foods and refined sweeteners.
- Developmental origins of health and disease theory, or Barker's hypothesis, suggests that overnutrition, undernutrition, exposure to stress, and environmental chemicals can program a fetus for a variety of physical and psychological disorders in childhood and adulthood.
- Clean eating before and during pregnancy has the potential to improve fertility, prenatal weight gain, and glycemic load; and decrease risk of birth defects.

Celiac disease in a gluten-free nutshell

By Kristin D. Maggi, MS, PA-C



Celiac disease is a hereditary autoimmune disorder that has become increasingly more common. It is estimated to occur in one out of every 133 people, which means approximately 2.3 million Americans are afflicted. While a large majority of those with celiac disease are undiagnosed, a growing awareness of the condition within the medical community has led to a greater number of screenings in recent years.

Consumption of gluten—a protein found in wheat, barley, and rye—elicits an immune reaction in the small intestine of those with celiac disease. The small intestine is lined with tiny, finger-like projections called villi. These villi aid in the breakdown and absorption of the food we ingest. In the case of celiac disease, eating gluten leads to inflammation and, ultimately, destruction of the villi over time. The villi become flattened, which significantly inhibits their ability to absorb essential nutrients. Hence, prolonged, uncontrolled celiac disease can lead to significant malnutrition. Other complications associated with celiac disease include osteoporosis, iron deficiency anemia, infertility, and a form of cancer known as lymphoma.

There is a broad spectrum of symptoms associated with celiac disease. Classic symptoms include bloating, diarrhea, weight loss, abdominal pain, and delayed growth (in children). Many people, however, exhibit a variety of other symptoms. These include, but are not limited to an itchy rash (Dermatitis Herpetiformis), headaches, joint pain, tingling/numbness of the legs, nausea, fatigue, and mood changes. Conversely, some people are completely asymptomatic. The wide array of symptomatology associated with celiac disease can understandably make diagnosis a bit of a challenge. Compounding matters further is the fact that celiac disease can manifest at any time in the life cycle, from infancy to adulthood. What exactly triggers the onset of the disease process is unknown, but it appears insults to the small intestine may be involved. Environmental factors, intestinal infections, stress, and pregnancy are some of the disease's potential triggers.

Celiac disease is a genetically pre-disposed condition. Most people afflicted by it have the HLA-DQ8/DQ2 genes. The risk

of celiac disease in the general population is about 1%. Having a first-degree family member (e.g. mother, father, sibling, child) with celiac disease increases one's risk of developing it to about 10-15%. Furthermore, if one identical twin has celiac disease, then the other twin will have a 75% chance of manifesting it. Celiac disease is prevalent in those with autoimmune disorders such as Type I diabetes, rheumatoid arthritis, and thyroid disease. It is also common in Down syndrome and Turner syndrome.

Presently, the *American Gastroenterological Association* does not recommend routine screening for celiac disease in the general population. Instead, screening is reserved for patients who are symptomatic and/or in high-risk populations. Blood tests are the current method of screening for celiac disease. Although there are several serum markers available, the standard test is tissue transglutaminase immunoglobulin A (tTG IgA). This test is highly sensitive to and specific for celiac disease. If celiac screening results are positive, then biopsies of the small intestine are used to confirm the diagnosis. Small bowel biopsies are obtained via an upper endoscopy, a low-risk procedure performed under anesthesia by a gastroenterologist. Of note, it is imperative that one continues to consume gluten while the testing is underway, otherwise the results may be falsely negative.

Currently, the only treatment for celiac disease is a strict, lifelong gluten-free diet. It is very important to adhere to this diet because even a small amount of gluten—something as seemingly harmless as a few crumbs of bread—can damage the small intestine. Completely eliminating gluten from the diet can be challenging. Gluten's presence in many common foods (e.g. soy sauce and salad dressings) causes some celiac sufferers to view the diet as overwhelming and cumbersome. Registered dietitians are great assets as they can provide in-depth dietary counseling. With strict dietary adherence, symptoms of celiac disease will generally abate within days to weeks. Although it may take months or even years, the small intestine should eventually heal completely.

Kristin Dermody Maggi, MS, PA-C is a physician assistant currently working at a private gastroenterology practice in the Greater Philadelphia area. She attended George Washington University's Physician Assistant program and graduated in 2010 with a Master of Health Sciences. Prior to becoming a physician assistant, she was a registered dietitian and graduated from Cornell University in 2004 with a Bachelor of Science in Nutritional Science.

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MESSAGES

- Celiac disease is a hereditary autoimmune disorder, which involves inflammation and damage to the small intestine precipitated by the consumption of gluten, a protein found in wheat, rye and barley.
- The only treatment currently available for celiac disease is a lifelong, strict gluten-free diet.

Dietitians and the food industry: an important seat at the table

By Melissa Joy Dobbins, MS, RD, CDE



More than 20 years ago I became a dietitian because I wanted to help people make informed food decisions and avoid being taken advantage of by the media, marketers and fearmongers. That underlying motivation for me is stronger today than ever. As a self-proclaimed “dietitian enthusiast,” my vision is to hear more dietitian voices “out there” so that credible, meaningful nutrition information and advice dominates the conversation—not oversimplified, sensationalized, fear-provoking misinformation from celebrities and other “experts.”



Registered Dietitians are uniquely qualified to have a powerful voice in all types of nutrition communications: traditional media, social media, public speaking, writing, blogging, podcasting, and more. By working with the food industry—aligning with brands, commodities, manufacturers, and retailers—dietitians can have an important seat at the table, where we are in position to favorably contribute, and play an integral role in the food industry’s health and wellness efforts.

Having been a supermarket dietitian, *National Dairy Council* dietitian, spokesperson for the *Academy of Nutrition and Dietetics*, and now a proprietor of my own food and nutrition communications business, I’ve had the opportunity to work in various capacities with the food industry. I’ve seen first-hand that dietitians can and do have a positive influence on how food is produced and marketed; how research is conducted and communicated; and how the public receives and utilizes information to make health decisions.

Taking a seat

Dietitians possess the skills and expertise to help guide the food industry in science-based nutrition insight, content, and communications. This partnership is intended to be as valuable to the public as it is to the food industry.

People want to know what foods they should be eating, how much, and why. By working with the food industry, dietitians can lend their expertise, creativity, and leadership in a variety of ways, including strategic counsel, product innovation, recipe development, nutrient analysis, and communications.

In addition to nutrition expertise, dietitians have a Code of Ethics to uphold which precludes engaging in false or misleading practices or communications.

Assuming leadership

Working closely with the food industry allows dietitians an incredible opportunity to learn more about food research, production, and consumer behavior patterns. It’s exciting to take a deeper dive and put some of those crucial puzzle pieces together. By taking the lead and speaking up, dietitians can guide the industry in meaningful ways.

As a supermarket dietitian, my job entailed writing articles and product advertisements, conducting media interviews, leading grocery store tours, and holding classes for the community on a variety of food and nutrition topics. I developed the content and messages myself. Occasionally, manufacturers would provide recipes, research briefs and sometimes even product messaging, but I had the final say on content. There was one occasion when I was asked to highlight a product that had a reputation for being unhealthy and I objected. My decision and reasons were respected and the product was removed from the program.

Difficult conversations

Some have criticized that working with the food industry influences dietitians and creates bias. The truth is that each and every person has his/her own biases which have been formed and shaped by his/her own experiences. “Confirmation bias” is the tendency to seek and accept information that confirms one’s beliefs. This tendency is human nature but becomes problematic when people don’t realize they themselves are susceptible to this. This failure to acknowledge our own biases and point fingers at others is hypocritical at best and does nothing to advance the conversation in a positive direction.

When I served as a national media spokesperson for the *Academy of Nutrition and Dietetics*, I attended educational sessions with Academy sponsors such as the *National Dairy Council* and *Unilever*. Contrary to what some critics

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Purdue's Wright an ASN 'Emerging Leader' finalist

Christian S. Wright, Ph.D. student in the Dept. of Nutrition Science at Purdue University, was selected this year as a finalist in the American Society of Nutrition's "Clinical Emerging Leader Competition." ENC is proud to have supported Wright's research, done in collaboration with Jing Zhou, Richard D. Sayer, Dr. Jung Eun Kim and Dr. Wayne W. Campbell, titled: *Effect of a high protein, high egg diet on muscle composition, metabolic health and systemic inflammation in overweight and obese older adults.*



Recently published ENC-funded research

Katz DL, Gnanaraj J, Treu JA, Ma Y, Kavak Y, Njike VY. Effects of egg ingestion on endothelial function in adults with coronary artery disease: a randomized, controlled, crossover trial. *Am Heart J.* 2015; 169:162-9.

Shen Q, Riedl KM, Cole RM, Lehman C, Xu L, Alder H, Belury M, Schwartz SJ, Ziuzenkova O. Egg yolks inhibit activation of NF-kappaB and expression of its target genes in adipocytes after partial delipidation. *J Agric Food Chem.* 2015;63:2013-25.

Freese EC, Gist NH, Acitelli RM, McConnell WJ, Beck CD, Hausman DB, Murrow JR, Cureton KJ, Evans EM. Acute and chronic effects of sprint interval exercise on postprandial lipemia in women at-risk for the metabolic syndrome. *J Appl Physiol.* 2015;118:872-9.

Park YM, Heden TD, Liu Y, Nyhoff LM, Thyfault JP, Leidy HJ, Kanaley JA. A high-protein breakfast induces greater insulin and glucose-dependent insulinotropic Peptide responses to a subsequent lunch meal in individuals with type 2 diabetes. *J Nutr.* 2015;145:452-8.

Clayton ZS, Scholar KR, Shelechi M, Hernandez LM, Barber AM, Petrisko YJ, Hooshmand S, Kern M. Influence of Resistance Training Combined with Daily Consumption of an Egg-based or Bagel-based Breakfast on Risk Factors for Chronic Diseases in Healthy Untrained Individuals. *J Am Coll Nutr.* 2015;34:113-119.

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Coronary artery disease risk

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weeks significantly increased low density lipoprotein (LDL) cholesterol among participants.

Thus the results of our recent study, coupled with the overall evidence in the literature, argue against the exclusion of eggs from heart-healthy diets, even among those with confirmed coronary disease. There may be net harm to overall diet quality, and health, from excluding eggs from the diet. Therefore excluding eggs from the diets of patients with coronary artery diseases, as suggested by the current AHA dietary recommendations, could potentially lead to alternate food choices that are unhealthy (e.g. foods high in starch and sugar), which are potentially associated with increased risk for cardiovascular disease morbidity and mortality. Based on our studies' findings, routine egg intake appears to be safe and potentially beneficial for one's health.

In summary, eggs are a nutrient-dense food rich in essential amino acids, and are an important source of iron, riboflavin, folate, choline, and vitamins A, B12, D, and E. Most of these nutrients are present in the yolk portion. The preclusion of whole eggs from the diet, therefore, represents a potential reduction in overall dietary quality. Eggs represent a highly nutritious, relatively inexpensive source of amino acids, minerals, and essential fatty acids, and therefore are most likely to be beneficial to overall health.

Valentine Yanchou Njike, MD, MPH is Assistant Director, Research and Evaluation, at Yale-Griffin Prevention Research Center, which is funded by the Centers for Disease Control and Prevention. Dr. Njike's principal research interests involve methodological design, conduct, and analysis of clinical studies in chronic disease prevention.

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4. Katz DL, Gnanaraj J, Treu JA, et al. Effects of egg ingestion on endothelial function in adults with coronary artery disease: a randomized, controlled, crossover trial. *Am Heart J.* 2015 Jan; 169(1):162-9.



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- The reduction in blood cholesterol elicited by a 100mg/day reduction in dietary cholesterol intake would result in a meager 1% decrease in mortality risk.
- Daily consumption of a high-carbohydrate breakfast (excluding egg intake) for six weeks significantly increased low density lipoprotein (LDL) cholesterol among participants.
- Eggs are a nutrient-dense food rich in essential amino acids, and an important source of iron, riboflavin, folate, choline, and vitamins A, B12, D, and E, most of which are found in the yolk.

'Eating Clean' for pregnancy

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possible has been shown to decrease pesticide intake. Picking more whole foods limits food packaging, which can add unwanted chemicals like bisphenol A (BPA). In recent years, it's been found that all animals, including humans, have a body burden of a variety

of endocrine-disrupting chemicals such as BPA, polychlorinated biphenyls (PCBs), and phthalates.⁷ In fact, worldwide decreases in fertility have been partly blamed on this persistent burden of chemicals. There is strong but limited evidence that prenatal exposure to some of these chemicals may play a role in breast cancer, preterm birth and prostate cancer, as well as male birth defects.⁸ While many fruits and vegetables come in their own "packaging," eggs are the only food that can be distributed, cooked and eaten out of their own natural, biodegradable package.

Women looking to have the healthiest pregnancy possible should consider clean eating. It's a trend health professionals can wholeheartedly support, as long as women are counseled that portion size and glycemic load still count.

Bridget Swinney is a registered dietitian nutritionist and author of *Eating Expectantly: Practical Advice for Healthy Eating Before, During and After Pregnancy* and *Baby Bites: Everything You Need to Know about Feeding Infants and Toddlers in One Handy Book*. She is a frequent speaker on the topic of how early nutrition affects lifelong health.

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Dietitians and the food industry

Continued from page 5.

would have you believe, never once was I told by a sponsor what to say about their products in my communications efforts. In fact, instead, I was asked "What would you say about our product and how would you say it?"

For eight years I worked on behalf of America's dairy farmers. I conducted media interviews, community events and health professional outreach. Sometimes when I promoted dairy products people would question me by saying "well of course you would say XZY, you work for the dairy industry." However, I actually conducted my master's research on dairy (and published an article in the *Journal of Nutrition Education*) a decade before I worked for the dairy industry. My education and training provided me with an *informed bias* toward the benefits of dairy products. So, in essence, it wasn't that I was believing and trusting in dairy because I worked for the industry, but the contrary. I worked for the dairy industry because I believe in it and its products.

Joining hands

If you are a dietitian who works with or wants to work with the food industry, pull up a chair! Your expertise, enthusiasm and ethics are an asset! Here are some suggestions:

- Align yourself with brands and companies you like, trust and respect. Make sure the product is consistent with your brand and philosophy. Are these foods that you and your family enjoy and you recommend to your clients? Also, keep in mind that all dietitians may not agree on which foods or companies are "worthy" of promoting. We often see things differently. Our greater task is helping companies create better foods and showing them how to communicate health benefits to consumers in an effective and responsible way.
- Be transparent by disclosing your food industry relationship in all forms of communications: traditional media, social media, public speaking, etc. This is non-negotiable... it's the law. True transparency builds trust, preserves integrity, and produces more meaningful communications.
- Don't let negativity from others be a barrier. Stay positive and vigilant. Your expert, reliable and useful input, perspective and advice is what the public needs to hear—not the negative fearmongering that unqualified "experts" thrive on.

Melissa Joy Dobbins, MS, RD, CDE, is based in Chicago, IL. She is known as *The Guilt-Free RD* "because food shouldn't make you feel bad!"™ Melissa is a frequent guest speaker, media spokesperson, blogger, podcaster and media coach who promotes sound science, smart nutrition and good food. Follow Melissa on Twitter @MelissaJoyRD and visit her at www.SoundBitesRD.com



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ENC 2015 Summer Calendar

Health Professional Events

Collegiate & Professional Sports Dietitians Association (CPSDA)

May 18-21, Point Clear, AL

Breakfast sponsored by ENC: May 19, 8:00-9:00 a.m.

National Lipid Association (NLA)

June 10-14, Chicago, IL

National Nurse Practitioner Symposium (NNPS)

July 9-12, Keystone, CO

Educational Symposium: "Nutrition Myths and Realities"

Wednesday, July 8: 6:30-8:00 pm

Speaker: Robyn Kievet Kirkman, FNP-BC, RDN, LDN, CSSD, CEDRD

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ENC Mission Statement:

ENC is a credible source of nutrition and health science information and the acknowledged leader in research and education related to eggs.

Nutrition Close-Up is a quarterly publication produced by the Egg Nutrition Center that presents up-to-date reviews, summaries and commentaries on nutrition for health promotion and disease prevention, including the role of eggs as part of a nutritious and healthful diet.

Opinions expressed by the authors may not be those of the Egg Nutrition Center.

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