

# Are Our Beliefs Regarding Dietary Cholesterol Outdated?

One of the more challenging responsibilities for nurse practitioners (NPs) is staying abreast of current science and the evidence behind treatment protocols and patient education recommendations. The holistic focus of nurse-driven care heightens the need for state-of-the-science information in daily practice.

Take the national weight epidemic, for example. It's not enough to counsel patients to eat less and be more active; NPs must carefully advise patients on what to eat and how to exercise. Such advice must be based on current, evidence-based research. Concerns over heart disease and other chronic illnesses make it imperative to have the latest information on which to base recommendations.

Now consider long-standing recommendations of many clinicians who counsel patients to limit their egg consumption to less than 3 per week and dietary cholesterol intake to less than 300 mg/d to better control their serum cholesterol. Much of the research behind these recommendations was conducted in the 1960s and 70s, and subsequent studies have not always supported previous results. Nevertheless, many clinicians still believe the link between dietary cholesterol and heart disease is irrefutable and have continued to recommend against eggs as part of a healthy diet.

Newer research suggests that many of the epidemiological studies on which this belief was founded do not show a strong relationship between dietary cholesterol and disease risk, particularly in healthy people. A *Journal of Nutrition* article looked at worldwide studies of egg consumption and concluded that the restrictions on eating eggs “are not supported by scientific data.”<sup>1</sup> A 2010 article in *Current Atherosclerosis Reports*<sup>2</sup> presented recent evidence from human studies documenting the lack of effect of dietary cholesterol on heart disease risk, citing data from studies of egg consumption that indicated lipoprotein fractions (primarily HDL and LDL) tended to change slightly and equally after chronic egg consumption, suggesting no change in overall disease risk. Finally, a recent meta-analysis by Siri-Tarino and associates at UC-Berkeley<sup>3</sup> questioned beliefs about the relationship between saturated fat intake

and cardiovascular disease as well, so it may be time to re-examine the role of dietary fats in general on disease risk.

Eggs are excellent sources of choline and selenium and good sources of high-quality protein, vitamin D, riboflavin, and phosphorus. They also provide varying levels of lutein, zeaxanthin, vitamin B12, folate, vitamin A, vitamin B6, vitamin E, iron, and zinc—several of the nutrients for which many Americans are deficient. At a time when people are being advised to increase their intake of nutrient-dense foods, restricting eggs in healthy individuals to avoid the risk of higher serum cholesterol may not be based on sound evidence and does not appear to outweigh the nutritional benefits that eggs provide.

## References

1. Herron KL, McGrane MM, Waters D, et al. The ABCG5 polymorphism contributes to individual responses to dietary cholesterol and carotenoids in eggs. *J Nutrition*. 2006;136:1161-1165.
2. Fernandez ML, Calle M. Revisiting dietary cholesterol recommendations: does the evidence support a limit of 300 mg/d? *Curr Atheroscler Rep*. 2010;12(6):377-83.
3. Siri-Tarino PW, Sun Q, Hu FB, Krauss RM. Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease. *Am J Clin Nutr*. 2010;91(3):535-546.

*Information for this page was provided by the Egg Nutrition Center, a credible source of nutrition and health science information and the acknowledged leader in research and education related to eggs. For more information, go to [www.enc-online.org](http://www.enc-online.org).*

# The 2010 Dietary Guidelines: What Should Americans Be Eating?

The recent release of the 2010 Dietary Guidelines provided some interesting insights into current dietary habits of Americans, as well as some useful tips on what we should and shouldn't be eating. Though few of the recommendations offered by the Guidelines Committee were novel in and of themselves, the guidelines do offer common sense recommendations and reminders about what is good and not-so-good in the American diet.

In general, the 2010 Guidelines stressed 2 overarching concepts: **Maintaining calorie balance over time to achieve and sustain a healthy weight** and **Focusing on consumption of nutrient-dense foods and beverages**. Nutrient-dense foods are those that provide vitamins, minerals, and other substances that may have positive health effects with relatively few calories.

So, for the most part, the guidelines homed in on calorie balance and healthy, lower-calorie food choices in an obvious effort to address the most vexing health and nutrition issue of our time: the overconsumption of calories and the obesity epidemic that is affecting adults and children in all segments of our society. To be sure, the guidelines addressed other nutritional issues as well: the need to increase consumption of vegetables and fruits, to eat at least half of all grains as whole grain, to increase intake of fat-free or low-fat dairy options, and to choose a variety of protein foods (ie, seafood, lean meat, poultry, and eggs), to name a few. Nevertheless, the need to balance calories and to eat more nutritious, low-calorie foods is the recurring theme throughout the guidelines.

What does this all mean for your patients? What should you tell them to eat more of? As mentioned, stressing nutrient density in the diet is a good way to get "more bang for your nutritional buck." Steering clear of foods with added fats and sugars, sodium, and starches and choosing lean meats and poultry, eggs, beans, peas, whole grains, and low-fat dairy is a good start.

Interestingly, the guidelines specifically call out breakfast as a meal in which to focus on nutrient density. According to the guidelines, "Not eating breakfast has

been associated with excess body weight, especially among children and adolescents. Consuming breakfast also has been associated with weight loss and weight loss maintenance, as well as improved nutrient intake." So, getting patients to stress nutritional quality in the breakfast meal—avoiding refined starches and stressing lean proteins, fruits, vegetables, whole grains, and low-fat dairy (think an egg, piece of whole grain toast, an apple, glass of OJ, cup of milk)—is certainly a step in the right direction.

The disease data offered in the guidelines are sobering—72% of men and 64% of women overweight or obese, 81 million Americans (37% of the population) with cardiovascular disease, 24 million (11% of the population) ages 20 and older with diabetes, 74 million Americans (34% of the population) with hypertension. Diet most certainly plays a role in the etiology of all of these conditions, so taking small steps toward better eating can't do anything but help. The guidelines provide a framework for how to get started. Your patients will benefit from the information they provide.

You can learn more about the 2010 Dietary Guidelines at [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

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