

Nutrition In Medicine NEWS

Nutrition Education for
Healthcare Professionals

September 2014

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Special points of interest:

- ◆ Does eating a large evening meal hinder weight loss?
- ◆ Irritable Bowel Syndrome or is it something else?
- ◆ How common is vitamin B12 deficiency?
- ◆ Is green tea more effective than black tea?
- ◆ ...and more....

What is the NIM team up to?

We have been hitting rough waters (below), but just for fun. Medical nutrition education, on the other hand, sometimes feels like it's sinking. Our recent survey data (thanks everybody for helping) indicate that 36% of US medical schools provide 12 hours or less of nutrition education, often due to a lack of qualified instructors and teaching resources. In this environment it is critical to keep our online nutrition curriculum afloat, despite the continuing difficulty to find funding for support and updates.

Use of all of our materials is free for medical students and physicians in training. **We do take donations, however, administered through the University of North Carolina's Nutrition Research Institute. 100% of such donations will directly benefit Nutrition in Medicine and our Nutrition Education for Practicing Physicians project. To make a tax-deductible donation, follow the instructions at:**

tiny.cc/nimgift



Call for nutrition education papers

The Journal of Biomedical Education invites contributions to a special edition on nutrition education for all healthcare professions. The issue will feature practice accounts, research articles, and review articles that illus-

trate current educational practices, describe innovative teaching methods, and demonstrate effective integration of nutrition into the curriculum. Submissions on teaching all the healthcare professions are welcome.

For more information go to <http://www.hindawi.com/journals/jbe/osi/>

Manuscripts due 10/31/14
Publication date 3/20/15

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Nutrition in the News: Is a Large Dinner Detrimental?

Does eating more calories at night really make it more difficult to lose weight? Or is that just a myth?

A randomized trial published in the journal *Obesity* sheds some light on the belief that eating more in the evening makes it harder to lose weight. This study examined the association between time-of-day nutrient intake and weight, waist circumference, and a variety of markers for metabolic syndrome in overweight and obese women.

The higher-calorie breakfast plan (700 kcal breakfast; 500 kcal lunch; 200 kcal dinner) was easier for subjects to comply with than the large dinner plan (200 kcal breakfast, 500 kcal lunch, 700 kcal dinner).

The large breakfast plan was also beneficial for weight loss, insulin sensitivity, triglyceride levels, and reducing hunger.

Avoiding large meals in the evening may be a simple way for patients at risk

for metabolic syndrome to gain an extra edge in managing their weight and improving their metabolic profiles.

Source: Jakubowicz D et al, *Obesity* (Silver Spring) 2013

Have you seen our 15-min online module “Effective weight-loss strategies for Adults” ? It might be a fit for one of your courses because it efficiently covers best practices for weight management.



His metabolic syndrome may improve if he changes his eating and other lifestyle habits and tightens his waistline.

Several commonly used nutrition indicators are not helpful in clinical practice.

Commonly Used, But Clinically Misused, Nutrition Tests

Clinicians routinely rely on biochemical indicators to assess a patient's nutrition status and monitor response to therapy. Several widely used malnutrition indicators have limited clinical utility in acute care settings for assessment and monitoring. The acute-phase response

increases C-reactive protein, ceruloplasmin and ferritin, and at the same time decreases albumin, transferrin, prealbumin (transthyretin) and retinol-binding protein. Although outcomes can be improved in the ICU with nutrition interventions, these commonly used biochemical

indicators are not appropriate for diagnosing protein-calorie malnutrition or efficacy of nutrition support, and they do not predict better outcomes.

Source: Ferrie S, Allman-Farinelli M. *Nutr Clin Pract* 2013;28(4):463-84

Holiday Focus: Healthy Harvest

There are 61 days between Halloween and New Year's Day. That means more than two whole months are available to derail even the most well-designed diet plans.

Patients who struggle with weight problems could use some extra support around this time. We can help them verbalize behavioral strategies that they can use, like not skipping meals, starting each meal with fiber-rich fruits, vegetables, and whole grains, and getting more physical activity following meals. Introduce **your students** to mindful eating, the practice of eating slowly, while savoring each bite, paying close attention to the flavors, the process of eating and swallowing, and how the body feels as the feeling of hunger switches to one of fullness.

The plus side is that there is an abundance of colorful as well as nutrient- and antioxidant-rich foods served this time of year, from toasted pumpkin seeds, to sweet potatoes and butternut squash, to cranberries and apples. Now, that's a treat!



Fall offers many tempting opportunities to overeat, but also colorful and tasty foods with fewer calories.



People who avoid milk should make sure to get enough calcium, vitamin D, protein, and riboflavin.

Lactose Intolerance? Or Irritable Bowel Syndrome?

Lactose intolerance can easily be mistaken for Irritable Bowel Syndrome. IBS is one of the most common GI complaints in the US, which means proper identification of lactose intolerance is especially important to avoid misdiagnosis. Many patients mistakenly attribute symptoms of intestinal disorders to lactose intolerance. On the other hand, lactose intolerance in many people (particularly of Asian and African origin) is to be expected.

Nutrition advice should be individualized because there is a wide variability in tolerance to lactose. Some lactose intolerant individuals can handle modest amounts of lactose (6-12 g or the amount in ½ - 1 cup milk). Patients who have lactose intolerance should first eliminate lactose from the diet, and then gradually increase it to a level that can be tolerated. Regardless of the reason, patients who limit dairy intake need to get enough calcium, protein, vitamin D, and riboflavin from other sources.

For information on the clinical signs of lactose intolerance, appropriate diagnostic testing, and effective dietary adjustments in lactose intolerance, your students and trainees might want to review our 10-minute online module on Lactose Intolerance at nutritioninmedicine.org

Nutrient Highlight: Vitamin B₁₂

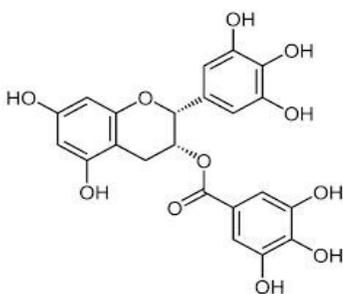
Vitamin B₁₂ (cobalamin) comes only from foods of animal origin (mostly meats, fish, dairy products, and eggs), dietary supplements and fortified foods. Neither plants nor algae contain any usable form of vitamin B₁₂. Vitamin B₁₂ deficiency causes neural degeneration with serious and often irreversible neuropsychiatric and neurological symptoms (including cognitive decline,

hallucinations and dementia, paresthesia, and unstable gait). Tinnitus, tingling toes or hyperpigmentation can be tell-tale symptoms. Anemia in older people with poor B₁₂ status can be mild and is not a reliable sign. Vegans are most at risk. The greatest concern is for women with low B₁₂ intake because the risk of birth defects increases and

breast-fed infants may not get enough B₁₂ from milk alone. Vegans should always use a dietary supplement with at least 2 µg/day. The Institute of Medicine recommends that older people also use a supplement because absorption becomes less reliable with advancing age.

Source: McCaddon, *Biochimie* 2013;95:1066-76

Did you know that 40% of older Americans have signs of vitamin B₁₂ deficiency?



Epigallocatechin-3-gallate (EGCG) is the major catechin in green tea

Recent research suggests that **green tea can slow down overactive lymphocytes.** It was already known that catechins in tea leaves have anti-oxidant, anti-inflammatory and anti-proliferative properties. It has now been shown that epigallocatechin-3-gallate (EGCG), which is the main catechin in green tea, inhibits the key enzyme dihydrofolate reductase (DHFR) in lymphocytes just like low-dosed methotrexate and other DHFR inhibitors would.

Inhibition of the CD4⁺ helper cell types Th1 and Th17 by EGCG from brewed green tea may be significant enough to rebalance the immune system and reduce symptoms of autoimmune diseases.

A small cup of freshly brewed green tea contains as much as 160 mg of EGCG in addition to other catechins. The fermentation process for the production of black tea oxidizes and thereby destroys EGCG.

Source: Wu et al., *Mol Aspects Med* 2012;33:107-18

Inside Story: Green Tea

Check out our short module on “Primary prevention of cancer” for more on anticancer foods.

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We are on the web!
Nutritioninmedicine.org

ABOUT US

We are a team of nationally acclaimed educators and researchers who maintain and enhance the NIM online curriculum for medical students, physicians and other healthcare professionals.

The NIM curriculum aims to teach evidence-based elements of nutrition physiology and clinical practice. Helps us make it better!



Greek yogurt with honey and walnuts

Your Students May Be Asking...

Q: It seems like everyone is eating Greek yogurt these days. Is it all just hype or is it really better for me?

A: Greek yogurt, the thick, tart, high-protein sister of regular yogurt, is experiencing a boom in sales.

Most Greek yogurt is strained, so that even a low-fat variety seems denser and creamier by comparison. This also results in a product that is higher in protein (about twice as much) with less carbohydrate (about half as much) than regular yogurt.

Tell them to always read the labels and be aware that any type of yogurt can contain a lot of added sweeteners. They should choose varieties low in fat and sugar.

Tip: Adding fresh fruit to a cup of Greek yogurt makes a healthy, high protein breakfast.

