

Meatless Monday Messaging

RD Talking Points

As a Registered Dietitian, I understand the challenges in trying to help a wide variety of patients/clients choose a more healthful lifestyle and nutritious eating pattern. Unfortunately, the good intentions behind integrating a Meatless Monday into a patient's routine can lead to inadvertent consequences when it comes to nutritional adequacy and fueling for optimal health.

Meat plays a key role in balanced eating patterns, even for those who primarily eat plant-based foods. For example, lean red meats, like beef, are great sources of the essential nutrients required for growth, development and overall wellbeing. For example, the protein, iron, zinc and B-vitamins found in beef help ensure young children start life strong, building healthy bodies and brains.⁴²⁻⁴⁵ These same nutrients play a positive role in weight management and healthy aging, too.⁹⁻¹⁴ After 50 years of age, adults are at risk for losing muscle mass, leading to falls and frailty that affect their ability to age independently.⁴⁶⁻⁴⁸ High-quality proteins, like meat, play an important role in maintaining lean body mass and strength.

I've found that attempts to institute a meatless meal all too often results in patients choosing less nutritious foods that contain more calories. For example, removing ground meat from a burger eliminates the essential amino acids, among other nutrients, not found in plant substitutes. Most of us would benefit from including more whole grains, vegetables, and fruits in our diets, but that doesn't necessarily mean we have to cut back on animal proteins. A healthy, balanced eating pattern should include half a plate of vegetables and fruits, a quarter whole grains, and a quarter protein, like lean meat.¹⁵ Balance is integral to a healthy eating pattern to ensure optimal intake of a variety of nutrients needed throughout the day. Beef's high-quality protein, iron, and zinc strengthen a balanced diet and are a perfect complement to the nutrients found in plant foods.^{10,14}

The *Dietary Guidelines for Americans* recommend eating a variety of foods (from every food group) and yet Meatless Mondays suggest just the opposite: remove certain nutrient-rich foods from the diet, which is contradictory to our mission in helping Americans eat more healthfully. By and large, Meatless Monday is less about encouraging individuals to consume a wider variety of foods and more about suggesting an action of removing certain foods. As a dietitian, it is very important to me that I refrain from eliminating food groups or labeling individual foods as "good" or "bad," because this can lead to a patient developing a detrimental relationship with food. There are many other ways to recommend changes or actions for creating a healthier eating pattern. For example, one suggestion might include recommending a patient/client tops their salad with marinated flank steak to increase their vegetable consumption while also getting in high-quality protein. In this example, adding a lean source of beef may increase the desirability of the salad, therefore, increasing the likelihood that the patient will continue to incorporate vegetables into their eating patterns. It is essential for healthcare professionals to provide realistic and sustainable lifestyle changes in order to ensure adherence to these nutritious changes.

Overall, a healthy diet is balanced in vegetables, fruits, grains, dairy and other high-quality proteins, like beef.⁵⁶ Animal proteins provide nutrients essential to good health⁶¹ and eating a "plant-based" diet – or going meatless – doesn't guarantee a healthy diet.⁵⁷⁻⁶⁰ We all want Americans to be healthier and encouraging people to consume what they can eat will yield far greater results than telling people what they need to avoid or eliminate.

Meatless Monday Messaging

5/18/20

Meatless Mondays are about “what not to do.” What I find is that most people are turning to me as a registered dietitian because they need advice on “what to do/what they can do” to be healthier.

There are many delicious ways to build a healthy plate with meat or specifically beef.

- People come to us as RDs looking for solutions on how to build healthier diets with foods they enjoy. Since more than 90 percent of Americans eat beef, they appreciate ideas for healthier meals with one of their favorite foods.
- Restrictive prescriptions or drastic dietary changes aren't effective long-term. People want to be hear what to do more of rather than what not to do when it comes to their food choices.
- Pairing produce, like vegetables and fruits, with a favorite food like beef can encourage people to eat more fruits and vegetables and help them meet the *Dietary Guidelines for Americans* recommendations
- Lean beef offers a lot of flexibility when building a healthy diet for fewer calories and with more nutrients than many other foods.

Aren't plant-based proteins better?

While plant-based proteins are gaining attention, many are lower quality proteins and come at a calorie cost, requiring 2-3 times more calories to get the same amount of protein as found in beef¹

Plant-based protein products are often highly processed with added fat, sodium and other potentially unhealthy or unsustainable ingredients, and can reinforce unhealthy dietary patterns.²

While the ingredients in these meat substitute products vary, beef's only ingredient is beef, which is an excellent source of high-quality protein, zinc and B vitamins.³

Is beef bad for your heart and does it raise cholesterol?

Research consistently shows that a heart-healthy diet and lifestyle including lean beef, even daily, can reduce risk factors for heart diseases.⁴⁻⁸ A randomized-controlled trial found that participants who consumed lean beef, as part of a dietary pattern that was rich in fruits and vegetables, low in saturated fat, and included low-fat dairy, experienced a 10% decrease in LDL cholesterol and a moderate decrease in blood pressure, both markers of lower heart disease risk.^{5,6} Another study found that subjects who followed a healthy, higher-protein, weight-loss dietary pattern, combined with physical activity, and consumed lean beef four or more times a week, saw reductions in total cholesterol, LDL cholesterol, triglycerides and systolic and diastolic blood pressure.⁸

Balanced Diet

Meat plays a key role in a balanced diet, even for those who primarily eat plant-based foods. Lean red meats are great sources of the essential nutrients required for growth, development and overall wellbeing. They play a positive role in weight management and healthy aging, too.⁹⁻¹⁴

- The nutrients in beef promote health throughout life.⁴²⁻⁴⁸
 - Protein, iron, zinc and B-vitamins in beef help ensure young children start life strong, building healthy bodies and brains.⁴²⁻⁴⁵

- Protein is especially important as we age. After 50 years of age, adults are at risk for losing muscle mass, leading to falls and frailty that affect their ability to age independently.⁴⁶⁻⁴⁸

Most of us would benefit from more whole grains, vegetables, and fruits in our diets, but that doesn't mean we have to cut back on red meat. Beef's high-quality protein, iron, and zinc strengthen a balanced diet and are a perfect complement to the nutrients found in plant foods.^{10,14}

The best diet to follow is to build a healthy plate. This should include half a plate of vegetables and fruits, a quarter whole grains, and a quarter protein, like lean red meats.¹⁵

It's hard to beat the nutrients you get from a serving of real beef. Beef supplies 10 essential nutrients at 10% or higher than their respective daily values per serving that support a healthy lifestyle, including protein, zinc, iron and B vitamins.¹⁶

Beef is an authentic source of high-quality protein without a long list of ingredients and no added sodium—it's just beef that you're getting for dinner.¹⁶ For example, a 4 oz. serving of 93% lean ground beef (raw) has 10 essential nutrients at 10% or higher than their respective daily values per serving, including high-quality protein, zinc, iron and B vitamins in about 170 calories, providing overall fewer calories, fat, saturated fat and sodium and more protein compared to some meat alternatives on the market.¹⁷⁻¹⁹

Aren't we eating too much beef?

Americans, on average, eat less than 2 ounces of beef each day, which is in line with the 2015 Dietary Guidelines.^{20,21}

Most Americans are only meeting the minimal recommendations for protein. Despite other changes in the way we eat, Americans have not increased their percent of calories from protein in 30 years.

- The average intake of protein foods group is close to recommended levels. On average, Americans consume 5.1 oz of protein foods each day, and the Dietary Guidelines recommends at least 5.5 oz of protein foods daily.²² Based on available data, Americans consume about 1.7 oz of beef daily, on average.²³
 - According to available data, on average, less than 15% of Americans' total calories come from protein.²⁴
- Additionally, many Americans may benefit from a moderate to higher high-quality protein diet because of its beneficial role in weight management, healthy aging and disease prevention.²⁵⁻²⁸

And, with almost 40 cuts of beef considered lean as defined by the USDA, there's something for everyone!²⁹⁻³¹

- Our diet is already plant-based -- and has become increasingly more so over the last four decades, when obesity has also increased.^{2,39,41}
 - While people are eating more plant foods, their intake of fruits and vegetables has remained flat during the past 40 years, yet research continues to show this could be one of the most important things we can do to improve our health.^{2,39}

- We need to help people eat more nutrient-dense foods like fruits and vegetables – rather than eliminating food groups or making general recommendations to “eat more plants.”^{39,40}
- Americans are consuming 600 more calories a day, on average, than they did 40 years ago, and these extra calories are coming from refined grains and added fats and oils, not red meat. In fact, Americans eat two times more refined grains than are recommended in the Dietary Guidelines.^{2,39}

Eating less meat may put your health and the planet’s health at risk – today and in the future.³³⁻³⁵

- A plant-only food supply would result in more calories and fewer micronutrients.³⁵
 - Malnutrition is a significant global public health issue, and data shows that countries with the lowest meat access have some of the highest rates of malnutrition.^{33,34}
 - Research shows that expecting mothers who don’t eat meat are more likely to experience premature delivery and low birth weight newborns.³⁶
 - Iron deficiency is a global public health concern among adolescent girls and women, and heme iron found in animal foods, and not in plant-foods, is critical to addressing this deficiency.^{37,38}
 - Lean beef contributes 8% of the iron in a typical American diet.³² At a time when many people are deficient in this essential nutrient, eliminating beef could make this even worse.
- Most people eat enough protein to meet the body’s minimum requirements to prevent deficiency, but few Americans consume what many scientists agree is the optimal amount of protein needed for good health.⁵⁰⁻⁵⁴
- A report from the Institute of Medicine suggests that the range of protein intake be 10-35% of daily calories—this range is associated with reduced risk of chronic disease while also providing intakes of essential nutrients^{50,53,54}
- As we work together to build a healthier, more sustainable food supply for ourselves and future generations, our focus should be on changes that are science-based, practical and highly impactful, like improving global agricultural productivity, reducing food waste, decreasing overconsumption of empty calories and consuming balanced meals.

From a health standpoint, isn’t substituting one day of meat eating with higher amounts of fruits and vegetables a good thing?

This is like comparing apples and oranges because there are different food groups for a reason. As we all know, these foods offer different but complementary nutrients. We fully support Americans eating more fruits and vegetables but we also want to ensure there is balanced approach to healthy eating. The key to healthy eating is to avoid foods with empty calories and instead choose the most nutrient rich foods within a food group. Calorie for calorie, lean beef is one of the most nutrient rich foods. A 3-oz serving of lean beef provides 10 essential nutrients like zinc, iron, protein and B-vitamins for about 160 calories on average.⁵⁵ In fact, it takes two to three times more calories to get the same amount of protein from plant-based meat alternative like a veggie burger compared to 3 oz. of lean beef.

How can Meatless Mondays be harmful when we’re all trying to help Americans eat more healthfully and get more fruits and vegetables in their diet?

Meatless doesn’t equal a healthy diet. For example, (*provide a personal example such as...*) I’ve found that attempts to institute a meatless meal, all too often end up with less nutritious options for more calories, such as a lentil salad, fried mozzarella cheese sticks and a soda, an iceberg lettuce salad with

croutons drenched in creamy salad dressing or a huge bowl of pasta with creamy alfredo sauce. What's important to me as a registered dietitian is to help Americans build an overall healthful diet and give people ideas of things they can do with foods they enjoy—such as making a delicious and nutritious Flank steak salad—rather than telling them not to do.

From a “do no harm” standpoint, what is the harm in Meatless Mondays? Isn't it simply a chance to encourage people to try a wider variety of foods?

As registered dietitians, we recommend eating a variety of foods and yet Meatless Mondays suggests just the opposite: taking certain nutrient rich foods out of the diet which seems quite contradictory to our mission in helping Americans eat more healthfully. Meatless Monday is less about encouraging a wider variety of food and more about suggesting an action of removing certain foods. We all know there are many other ways to suggest changes or actions for building a healthier diet like pairing lean beef with fruits and vegetables, or getting to know a client's specific food preferences and helping them with their specific and unique needs to help provide realistic and sustainable lifestyle changes or even providing simple steps toward cooking and preparing a healthy meal that include whole foods.

A healthy diet is balanced in vegetables, fruits, grains, dairy and other high-quality proteins, like beef.⁵⁶ Oversimplifying “plant-based” to equate to “healthy” is misleading.⁵⁷⁻⁶⁰ Beef provides nutrients

Citations:

1. Layman DK. Assessing the Role of Cattle in Sustainable Food Systems. *Nutr Today* 2018;53(4):160-5.
2. What We Eat In America, NHANES, 2003-2004 and 2015-2016. https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/20_Food_Patterns_Equivalents_0304_1516.pdf
3. U.S. Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA National Nutrient Database for Standard Reference Legacy (NDB#13364 for beef). 2018.
4. O'Connor LE, Paddon-Jones D, Wright AJ, Campbell WW. A Mediterranean-style eating pattern with lean, unprocessed red meat has cardiometabolic benefits for adults who are overweight or obese in a randomized, crossover, controlled feeding trial. *Am J Clin Nutr* 2018;108(1):33-40.
5. Roussell MA, Hill AM, Gaugler TL, West SG, Heuvel JP, Alaupovic P, Gillies PJ, Kris-Etherton PM. Beef in an Optimal Lean Diet study: effects on lipids, lipoproteins, and apolipoproteins. *Am J Clin Nutr* 2012;95(1):9-16.
6. Roussell MA, Hill AM, Gaugler TL, West SG, Ulbrecht JS, Vanden Heuvel JP, Gillies PJ, Kris-Etherton PM. Effects of a DASH-like diet containing lean beef on vascular health. *J Hum Hypertens* 2014;28(10):600-5.
7. Sayer RD, Speaker KJ, Pan Z, Peters JC, Wyatt HR, Hill JO. Equivalent reductions in body weight during the Beef WISE Study: beef's role in weight improvement, satisfaction and energy. *Obes Sci Pract* 2017;3(3):298-310.
8. Petersen KS, Flock MR, Richter CK, Mukherjea R, Slavin JL, Kris-Etherton PM. Healthy Dietary Patterns for Preventing Cardiometabolic Disease: The Role of Plant-Based Foods and Animal Products. *Curr Dev Nutr* 2017;1(12).
9. McNeill SH. Inclusion of red meat in healthful dietary patterns. *Meat Sci* 2014;98:452-60.
10. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015.
11. Leidy HJ, et al. The role of protein in weight loss and maintenance. *Am J Clin Nutr* 2015;101:1320S-9S.
12. Paddon-Jones D, et al. Protein and healthy aging. *Am J Clin Nutr* 2015;101:1339S-45S.
13. Layman DK, et al. Defining meal requirements for protein to optimize metabolic roles of amino acids. *Am J Clin Nutr* 2015;101:1330S-8S.
14. US Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA National Nutrient Database for Standard Reference, Release 28 (Slightly revised). May 2016.
15. U.S. Department of Agriculture. MyPlate. Available at <https://www.choosemyplate.gov/MyPlate> (Last Updated: Jan 26, 2018; Accessed February 15, 2018)
16. <https://www.beyondmeat.com/products/the-beyond-burger/>.
17. <https://faq.impossiblefoods.com/hc/en-us/articles/360018939274-What-are-the-nutrition-facts->.
18. U.S. Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA National Nutrient Database for Standard Reference Legacy. (NDB#23472 for 93% lean ground beef). 2018.
19. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 2015.
20. Zanovec M, O'Neil CE, Keast DR, Fulgoni VL, 3rd and Nicklas TA. Lean beef contributes significant amounts of key nutrients to the diets of US adults: National Health and Nutrition Examination Survey 1999-2004. *Nutr Res*. 2010;30:375-81.

21. IRI/Freshlook, Total US MULO ending 5/26/19; Categorized by VMMeat System.
22. U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2010*. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.
23. Zanovec M, O'Neil CE, Keast DR, Fulgoni VL 3rd, Nicklas TA. Lean beef contributes significant amounts of key nutrients to the diets of US adults: National Health and Nutrition Examination Survey 1999-2004. *Nutr Res* 2010; 30:375-81.
24. Wright JD, Wang CY, Kennedy-Stephenson J, Ervin RB. Dietary intake of ten key nutrients for public health, United States: 1999–2000. Advance data from vital and health statistics; no. 334. Hyattsville, Maryland: National Center for Health Statistics. 2003.
25. Fulgoni VL, 3rd. Current protein intake in America: analysis of the National Health and Nutrition Examination Survey, 2003-2004. *Am J Clin Nutr* 2008; 87:1554S-7S.
26. Paddon-Jones D, Westman E, Mattes RD, Wolfe RR, Astrup A, Westerterp-Plantenga M. Protein, weight management, and satiety. *Am J Clin Nutr* 2008;87:1558S-61S.
27. Paddon-Jones D, Short KR, Campbell WW, Volpi E, Wolfe RR. Role of dietary protein in the sarcopenia of aging. *Am J Clin Nutr* 2008; 87:1562S-6S.
28. Layman DK, Clifton P, Gannon MC, Krauss RM, Nuttall FQ. Protein in optimal health: heart disease and type 2 diabetes. *Am J Clin Nutr* 2008;87:1571S-5S.
29. 9 CFR § 317.362 - Nutrient content claims for fat, fatty acids, and cholesterol content.
30. Cattlemen's Beef Board and National Cattlemen's Beef Association. *Lean Matters: Chronicling Beef's Change from Gate to Plate*. 2014.
31. Bentley J. U.S. Trends in Food Availability and a Dietary Assessment of Loss-Adjusted Food Availability, 1970-2014. January 2017.
32. Zanovec M, O'Neil CE, Keast DR, Fulgoni VL 3rd, Nicklas TA. Lean beef contributes significant amounts of key nutrients to the diets of US adults: National Health and Nutrition Examination Survey 1999-2004. *Nutr Res*. 2010 Jun;30(6):375-81.
33. Development Initiatives, 2018. 2018 Global Nutrition Report: Shining a light to spur action on nutrition. Bristol, UK: Development Initiatives. <https://globalnutritionreport.org/reports/global-nutrition-report-2018/burden-malnutrition/>
34. FAO, IFAD and WFP. 2015. *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome, FAO.
35. McNeill S, Van Elswyk ME. Red meat in global nutrition. *Meat Sci*. 2012 Nov;92(3):166-73. doi: 10.1016/j.meatsci.2012.03.014. Epub 2012 Apr 1.
36. Rogne T, et al. Associations of Maternal Vitamin B12 Concentration in Pregnancy With the Risks of Preterm Birth and Low Birth Weight: A Systematic Review and Meta-Analysis of Individual Participant Data. *Am J Epidemiol*. 2017 Feb 1;185(3):212-223.
37. Cook JD. Adaptation in iron metabolism. *The American Journal of Clinical Nutrition*. 1990;51(2):301-308.
38. Le CHH (2016) The Prevalence of Anemia and Moderate-Severe Anemia in the US Population (NHANES 2003-2012). *PLoS ONE* 11(11): e0166635.
39. Dietary Guidelines Advisory Committee. 2015. *Scientific Report of the 2015 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and the Secretary of Agriculture*. U.S. Department of Agriculture, Agricultural Research Service, Washington, DC. <https://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>

40. United States. Department of Health and Human Services., United States. Department of Agriculture., United States. Dietary Guidelines Advisory Committee. Dietary guidelines for Americans, 2015-2020. Eighth edition. ed. Washington, D.C.: U.S. Department of Health and Human Services and U.S. Department of Agriculture; 2015
https://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf
41. Flegal KM, et al. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. *JAMA*. 2012 Feb 1;307(5):491-7.
42. American Academy of Pediatrics. Pediatric Nutrition Handbook. 7th ed. Elk Grove, IL: American Academy of Pediatrics, 2014.
43. Tang M, Krebs NF. High protein intake from meat as complementary food increases growth but not adiposity in breastfed infants: a randomized trial. *Am J Clin Nutr* 2014;100:1322-8.
44. Nyaradi A, et al. The role of nutrition in children's neurocognitive development, from pregnancy through childhood. *Front Hum Neurosci* 2013;7:97.
45. Krebs NF, et al. Effects of different complementary feeding regimens on iron status and enteric microbiota in breastfed infants. *J Pediatr* 2013;163:416-23.
46. Wolfe, R. The underappreciated role of muscle in health and disease. *Am J Clin Nutr* 2006; 84:475-82
47. Layman DK, et al. Dietary protein and exercise have additive effects on body composition during weight loss in adult women. *J Nutr* 2005;135:1903-10.
48. Symons TB, et al. Aging does not impair the anabolic response to a protein-rich meal. *Am J Clin Nutr* 2007;86:451-6.
49. McNeill SH, et al. The evolution of lean beef: identifying lean beef in today's U.S. marketplace. *Meat Sci* 2012;90:1-8.
50. Wolfe RR, Cifelli AM, Kostas G, Kim IY. Optimizing Protein Intake in Adults: Interpretation and Application of the Recommended Dietary Allowance Compared with the Acceptable Macronutrient Distribution Range. *Adv Nutr* 2017;8(2):266-75.
51. Berryman CE, Lieberman HR, Fulgoni, VL 3rd, Pasiakos SM. Protein intake trends and conformity with the Dietary Reference Intakes in the United States: analysis of the National Health and Nutrition Examination Survey, 2001-2014. *Am J Clin Nutr* 2018;108(2):405-13.
52. Fulgoni, VL 3rd. Current protein intake in America: analysis of the National Health and Nutrition Examination Survey, 2003-2004. *Am J Clin Nutr* 2008;87(5):1554S-7S.
53. Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, DC: The National Academies Press, 2005.
54. Layman DK. Protein quantity and quality at levels above the RDA improves adult weight loss. *J Am Coll Nutr* 2004;23(6 Suppl):631S-6S.
55. Economic Research Service (ERS), U.S. Department of Agriculture (USDA). Food Availability (Per Capita) Data System. [http://ers.usda.gov/data-products/food-availability-\(per-capita\)-data-system.aspx](http://ers.usda.gov/data-products/food-availability-(per-capita)-data-system.aspx).
56. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines/>
57. Lea EJ, et al. Public views of the benefits and barriers to the consumption of a plant-based diet. *Eur J Clin Nutr* 2006;60:828-37.

58. Satija A, et al. Healthful and unhealthful plant-based diets and the risk of coronary heart disease in U.S. adults. *J Am Coll Cardiol* 2017;70:411-22.
59. Hemler EC, Hu FB. Plant-based diets for cardiovascular disease prevention: All plant foods are not created equal. *Curr Atheroscler Rep* 2019;21:18.
60. Petersen KS, et al. Healthy dietary patterns for preventing cardiometabolic disease: The role of plant-based foods and animal products. *Curr Dev Nutr* 2017;1:e001289.
61. United States Department of Agriculture, Center for Nutrition Policy and Promotion. 10 Tips: Build a Healthy Meal. Available at <https://www.choosemyplate.gov/ten-tips-build-healthy-meal>