

CASE AND COMMENTARY

How Should a Physician Counsel a Vegan Patient With IBD Who Might Benefit From Supplements?

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Abstract

Veganism has grown in popularity in recent years. We argue that physicians should share the best available evidence on the efficacy of such diets while respectfully trying to understand the perspectives of patients who choose vegan diets. The first section establishes the need for physicians to understand reasons behind patients' dietary and health preferences. The second section considers evidence, or lack thereof, for nutritional supplementation in special populations, such as those practicing veganism.

Case

Kate is a 29-year-old with inflammatory bowel disease (IBD) who has visited her family physician, Dr C, about involuntary weight loss, fatigue, agitation, and lethargy over the past month. As an animal lover, Kate adopted a vegan diet a little over 6 months ago after watching a documentary about veganism's environmental benefits. She also brought a copy of an article published by the Academy of Nutrition and Dietetics that states that a well-planned vegan diet "can be healthful, nutritionally adequate and may provide health benefits in the prevention and treatment of certain diseases."¹ The article also spoke about the health benefits of a vegan diet, including decreased risk for type 2 diabetes, high cholesterol, and hypertension. Kate is devoted to maintaining a vegan diet and has never felt better, until recently.

"Well, Kate, your bloodwork from last week looks pretty normal except for your iron, calcium, and folic acid levels. I think these below-normal numbers might point to the reasons why you feel tired," notes Dr C.

"That's good. So what kinds of vegan foods can I eat to get those specific nutrients? I really want to stick to my diet. It's environmentally kind, and I believe it will help me avoid getting diabetes, which runs in my family," says Kate firmly.

"I understand your commitment and fears. The fastest way to get you into the normal range for these nutrients is to have you take iron, calcium, and folic acid supplements," Dr C offers with reassurance.

“But I do not want to take supplements because I have read that supplements can contain animal products. Besides, what’s the evidence that supplements work? I might be better off drinking kombucha tea as a natural way of boosting my energy without interfering with my vegan diet.”

Dr C considers how to respond to Kate.

Commentary

In this case, we have a young patient (Kate) who is a committed vegan. Vegans represent a very small group—about 1% of the US adult population, according to a 2009 poll²—who eschew all animal products in their diet. While vegans represent a small portion of the patient population, appropriate nutritional intake of vitamins and minerals and supplementation of nutrients is a critical issue for physicians and vegan patients. Physicians have responsibilities to understand the unique health needs of those who eliminate specific foods from their diets and thus must have a working knowledge of nutrition. To this end, a patient interview should probably begin with an in-depth exploration of that patient’s dietary habits. In taking Kate’s history, it is important for the physician, Dr C, to explore with Kate the values that inform her relationship with food and, if relevant, their connection to her broader sense of spirituality. Many people adopt diets strictly for their own health improvement. Others might do so out of a sense of vanity. Indeed, the fitness industry often markets products by appealing to people’s sense of vanity rather than their desire to pursue a healthy lifestyle. But, in Kate’s case, we have someone committed to veganism because she feels obligated to animals, to the environment, and to her own health.

Ethical and Spiritual Reasons for Veganism

Many activists, scholars, and other individuals espouse a vegetarian or even vegan diet because of their commitment to the welfare of animals. Philosophers such as Mylan Engel have argued forcefully against the meat industrial complex (that is, the large-scale industrialization of meat processing).³ They believe that raising, killing, and consuming millions of sentient animals is immoral *per se* and should be abandoned for a plant-based diet. If Kate subscribes strongly to an ethical commitment to animals, Dr C should ask about her commitment.

Environmental stewardship can also motivate individuals to adhere to veganism. The meat industry has a large carbon footprint and is a significant source of greenhouse gases.⁴ A vegetarian diet greatly reduces one’s carbon footprint, thus reducing one’s impact on the environment and contribution to greenhouse gas production.⁵ Based on these facts, Dr C might understand why Kate would think it reasonable to reduce her carbon footprint and negative impact on the environment through a vegan diet.

For many committed vegetarians and vegans, an ethical commitment to animals and to their own better health is part of their [spiritual framework](#). Indeed, the vegetarian movement was started in the 19th century by people like John Harvey Kellogg, who was a committed Seventh Day Adventist.⁶ It would be essential for Dr C to better understand how Kate's veganism is part of her spiritual identity.

At our medical school (Loyola University Chicago Stritch School of Medicine), we have small group sessions on both spirituality and integrative medicine. Medical students learn the importance of gathering a spiritual history that aims to identify sources of support and essential values that the patient holds. Ultimately, this history is used to care for the whole patient and allows a clinical team to consider accommodations and modifications that can be made to a care plan that offers quality care and expresses respect for patient autonomy.

Taking a Food History

Next, Dr C should explore Kate's food history. Dr C might hold a misconception that a vegan diet does not meet common dietary recommendations, but he should recognize that there is no overt risk to the patient simply based on her dietary practices. For clinicians, it is easier to discount a practice that is not well understood or mainstream and even more difficult to support a practice that lacks evidence. In the case of veganism, there are few clinical trials that specifically explore the health effects of vegan diets, which limits our understanding of how veganism impacts health. Some studies that have linked veganism to potential health benefits assert that the mechanism could be an improved microbiota balance.⁷ Another observational study, however, demonstrated the need for [supplementation of essential vitamins](#) and minerals in those practicing strict nonmeat, vegan, and lactovegetarian diets, thus illustrating the potential risk of deficiency.⁸ Overall, we do not have sufficient scientific data that would irrefutably support a statement for or against veganism (although there exist many anecdotal reports by persons who report greater weight loss and improved health on a vegan diet).

Through a detailed food history, any potential barriers to eating healthy food can be identified. A popular misconception among some patients is that adopting a vegan diet will automatically lead to improved health outcomes. However, following a vegan diet does not necessarily mean "healthy" foods are being consumed. For example, some who practice veganism eat foods high in sugar or that are processed. Exploring what Kate eats on a daily basis would provide Dr C with a better understanding of why her blood levels of calcium, iron, and folic acid are low. Through this history, Dr C would also be able to demonstrate to Kate a commitment to her health and understanding of her values. As a result, Dr C would be able to better tailor nutrition recommendations to Kate based on her vegan diet and to work with her to identify what she would be willing to do to ensure her health is maintained.

Supplements and a Physician's Role in Counseling Patients

Ideally, patients should, and can, consume essential vitamins and minerals through their diet as opposed to relying on the use of supplements. A study in Finland, however, demonstrated an increased need for vitamin D supplementation during the winter months for vegans, which further supports close monitoring of blood levels of vitamins and minerals to prevent overt deficiency.⁸ Nevertheless, few situations of extreme deficiency, such as megaloblastic anemia, warrant rapid correction with supplementation, and in this case a more conservative approach could be appropriate. In addition, there is a lack of information about optimal blood levels of many vitamins, making it difficult to interpret subtle deficiency states.⁹ Therefore, physicians must take into consideration the full clinical picture before them when counseling a patient with "suboptimal" lab levels and recognize situations in which patient autonomy should be respected with regard to supplementation preferences. In this case, Kate's concern regarding the physician's recommendation for supplementation is 2-fold—she's concerned that the recommended supplements have animal products, and she's also concerned about their efficacy. A cursory search online reveals that many vegan websites recommend paying attention to essential vitamins and minerals. Some of these sites advocate getting essential nutrients through supplements and cite plant-based capsule options. With this knowledge, the physician can educate Kate on available vegan-friendly supplements, if she wishes to take them, to address the lab results.

Considering the nature of Kate's symptoms and her request to avoid supplementation, it might be acceptable either to propose a short course of supplements with purposeful increased dietary intake of foods rich in calcium, iron, and folate or to allow her to try dietary modifications alone with a follow-up appointment to check blood levels. If Kate plans to get pregnant, it is also important for Dr C to understand vitamin recommendations specific to this patient population. Because a deficiency in folate has been linked to neural tube defects in newborns, it is recommended that women of childbearing age maintain appropriate folic acid levels.¹⁰ To this end, many food products, such as cereal, are fortified with folic acid and provide sufficient supplementation to address potential deficiency. Dr C should explore Kate's relationship status and any plans for pregnancy to assess the need for folic acid supplementation, as she might not be consuming fortified foods, and educate her about the health consequences of deficiency.

When addressing Kate's question about efficacy of supplements, Dr C should recognize the complexity of the topic, the history of the supplement industry, and the power physicians have when discussing supplements with patients. Physicians serve as an intermediary between patients and the vast array of medical information available online. Furthermore, they are responsible for distilling medical knowledge, tailoring it to a specific patient's needs, and communicating this information in an effective way. It is the clinician's ethical responsibility to practice evidence-based medicine using the best and most up-to-date data possible.¹¹ When it comes to the use of supplements, physicians

should have a basic knowledge of nutrition, essential vitamin and mineral deficiencies, and supplement risks and recommendations.

The pharmaceutical industry spends millions of dollars each year on drug discovery, development, and clinical trials regulated by the Food and Drug Administration (FDA). At the root of this process is ensuring patient safety and gathering scientific evidence to inform clinical practice. In contrast, the supplement industry is free of stringent FDA evidentiary standards.¹² Moreover, the supplement industry is “a multibillion-dollar a year industry” with an estimated 85 000 dietary supplements for sale in the US; 50% of Americans take a supplement daily.¹³ While supplementation of essential vitamins and minerals in cases of overt deficiency is clinically indicated, in well-nourished adults there is no clear benefit and even potential harm associated with vitamin use.¹⁴ In 2013, the Children’s Hospital of Philadelphia (CHOP) tested Vitamin D drops being given to newborns and found that some formulations contained “more than double” the international units stated on the label, raising concerns about toxicity.¹³ Many supplements contain doses that exceed the daily recommended allowance as set by the FDA, and thus dosing must be carefully considered when “prescribing” supplements to patients. A common misperception is that if a certain amount of a supplement is good, then more would be better. Additionally, people might believe that because supplements are “natural,” they are healthy or better than nonnatural substances. This is an example of the naturalistic fallacy.

Finally, identifying reputable supplement companies is essential to ensuring quality and purity of vitamins and minerals that physicians endorse through their recommendations. Informed consent requires a physician to disclose risks and benefits of and alternatives to any proposed treatment or intervention. If Kate’s vegan diet causes certain vitamin deficiencies, it’s incumbent upon Dr C to inform Kate about potential risks of these vitamin deficiencies. If the data is uncertain, then that should be shared as well. Because Kate is already skeptical of supplements, it is important that Dr C properly inform her of these risks.

A Role for Physician Advocacy in Food Supplementation

This case can be construed as highlighting issues surrounding the medical field’s lack of scientific understanding about nutrition. In a world of evidence-based medicine, it is difficult for physicians to make [recommendations about supplementation and different diets](#) with few rigorous studies on which to base their clinical decisions. It is the ethical responsibility of the physician and the medical profession to recognize this lack of information and call for research that aims to address questions about different diets and the use of supplements. Due to lack of regulatory oversight of the supplement industry, patients are especially vulnerable to the persistent misconception that overconsumption of supplements can lead to better health outcomes without risk. This is a fallacy that physicians can work to rectify with their patients. There is a growing body

of literature and clinical cases demonstrating that supplements are not harmless interventions. The Drug-Induced Liver Injury Network, a community charged with identifying toxicity associated with herbal products and supplements, found that 20% of liver injuries were due to supplements.¹⁵ It is the physician's responsibility when recommending supplements to determine if good clinical data exist and to weigh the risks and benefits. Physicians promoting supplement use must be open and honest with their patients about the lack of regulation of the supplement industry and disclose risks associated with supplements. Finally, physicians must recognize their own limitations in the area of nutrition. [Nutrition education](#) is only recently getting more attention in the medical school curriculum.¹⁶ Acknowledging scope of practice is important and consulting dietitians when appropriate is essential to quality health care.

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Editor's Note

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