

# Nutrition Education for the Health-care Provider Improves Patient Outcomes

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## Abstract

Nutrition education is globally lacking in medical training, despite the fact that dietary habits are a crucial component of physician self-care, disease prevention, and treatment. Research has shown that a physician's health status directly affects the quality of their preventative health counseling and patient outcomes, yet on average less than 20 hours over 4 years of medical education is spent teaching nutrition. This leaves providers with a gap in knowledge regarding this critical component of health. In a recent study, only 14% of resident physicians reported being adequately trained to provide nutritional counseling. Educating health-care professionals on how to eat well provides an opportunity to improve physician and patient well-being.

## Keywords

nutrition education, physician health, patient outcomes

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## Introduction

Nutrition education is globally lacking in medical training, despite the fact that dietary habits are a crucial component of physician self-care, disease prevention, and treatment. Research has shown that a physician's health status directly affects patient outcomes, yet on average less than 20 hours over 4 years of medical education is spent teaching nutrition.<sup>1,2</sup> This leaves providers with a gap in knowledge regarding this critical component of health.<sup>3</sup> In a recent study, only 14% of resident physicians reported being adequately trained to provide nutritional counseling.<sup>2</sup> Educating health-care professionals on evidence-based nutrition counseling has a tangible effect on patient disease outcomes.

## Evidence-Based Nutrition Counseling: Applying It to Practice

In a randomized controlled trial of prediabetics comparing diet and exercise with metformin, lifestyle intervention leading to modest weight loss (5%–7% of total body weight) reduced the incidence of type 2 diabetes by 58% compared to 31% in those using metformin.<sup>4</sup> Plant-based nutrition can help prevent cardiovascular disease, with research showing that a highly motivated

patient can achieve the lipid-lowering effects of a statin with diet. A recent study showed that 7 days of a plant-based, low-fat diet lowered cholesterol by 22 mg/dL, systolic blood pressure by 8 mm Hg, and 10-year risk of cardiovascular events from 7.5% to 5.5% in patients with baseline risk, independent of weight loss.<sup>5</sup> These data suggest that nutritional counseling can be more effective than medication alone in improving patient outcomes.

Consuming a variety of foods in their whole form, including healthy monounsaturated and polyunsaturated fats such as olive oil or avocados, has been associated with decreased mortality.<sup>6</sup> Reducing red meat and egg consumption has been shown to improve cardiac health. Furthermore, antioxidants in whole foods such as dark leafy greens, beets, and berries protect against oxygen free radicals that cause cell damage.

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A Mediterranean-style diet can even impact cognition and brain volume.<sup>7</sup> Processed foods have an effect on the human brain similar to that of recreational drugs, with positive emission tomography scans of dopamine uptake in normal and obese subjects showing reduced sensitivity in patients whose diets contained large amounts of processed foods.<sup>8</sup>

An evidence-based approach also includes encouraging patients to consume energy dilute foods with high water and fiber content, such as vegetables and fruits, which produce a feeling of fullness with fewer calories than energy dense processed foods.

Mindful eating can also promote healthy weight loss. This is an emerging eating philosophy which emphasizes paying attention to internal hunger cues and being mentally present during mealtime.<sup>9</sup> Practicing mindful eating involves setting an allotted time to eat while seated at a table without distractions like technology. During the meal, it involves smelling the food, taking the time to taste each bite, and acknowledging physical responses to food including satiety. By taking the focus away from labeling foods as bad or good, these mindful eating practices promote weight loss without being overly restrictive.

## Provider Health and the Impact on Patient Outcomes

Weight loss counseling is challenging during time-limited medical visits and is less likely to occur if a physician has poor health behaviors or a poor knowledge base on how to effectively deliver this message. Health professionals with normal body mass index are more likely to initiate weight loss discussions with obese patients and reported higher self-efficacy in providing lifestyle counseling.<sup>1</sup> These providers also held more favorable attitudes toward weight management and preventative counseling.<sup>10</sup> Improving health-care provider nutrition education may have a positive impact on the frequency and quality of preventative counseling for patients.

Patients reported that physicians were more believable and motivating if they practiced healthy lifestyles and created a nonjudgmental, safe environment. Nutritional counseling is most effective when health-care providers meet patients where they are and provide a tailored, realistic approach to healthy weight loss. Motivational interviewing techniques, such as in the dialogue below, can be used to achieve these goals.

### Sample Dialogue

*Doctor:* “I’m concerned about the effect your weight is having on your health, how do you view your health right now?”

*Patient:* “Well, It’s been on my mind. I know I have diabetes and that I could lose some weight, but it seems impossible to make any changes with my busy schedule. It just feels like a losing battle.”

*Doctor:* “I am sorry to hear you are feeling this way and I am here to support you. It must be difficult to make time for yourself with all of your other responsibilities. There are some things you can incorporate into your life right now that will improve your health and not take much time. Would you be interested in hearing about these?”

## Opportunities for Implementation

Impactful nutrition education begins early in medical training. This allows learners to examine their own health practices before exposure to patient care. Studies have shown that medical students with healthy lifestyles were more likely to counsel patients about preventative measures including diet. Furthermore, these students reported increased confidence and efficacy doing so compared to their peers. Medical students who received nutritional education via a formalized curriculum more frequently counseled patients on preventative interventions.<sup>11</sup> By educating providers on the evidence-based tenants of nutrition, we can empower patients to take an active role in improving their health.

## Declaration of Conflicting Interests

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