

# Ignorance of Nutrition Is No Longer Defensible

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**It was the middle of the night**, and the patient's intravenous (IV) line was clogged. Having refused the recommended foot amputation, the patient was receiving IV antibiotics to fight a festering infection, a complication of longstanding diabetes.

During the few minutes it took to replace the IV catheter, the patient let me know that whatever pride I held in my phlebotomy skills was unjustified and that my needle sticks only added to the misery of hospital life. Each time I was called to replace the IV during the patient's hospital stay, I found myself thinking, "Why not just get the amputation over with?" It seemed that the patient was only delaying the inevitable. But I was wrong. The patient eventually left the hospital, foot still attached.

My guess is that the patient eventually lost the battle, and it was not until much later in my career that it struck me that I and other members of the patient's clinical team were wrong in a much bigger way. As magnetic resonance spectroscopy has elegantly demonstrated, the insulin resistance that is fundamental to type 2 diabetes begins with the buildup of lipid particles inside muscle and liver cells, interfering with insulin signaling and pushing blood glucose values skyward. These intramyocellular and hepatocellular lipids come from food. With a sufficient change in the diet, they can diminish, and insulin resistance and diabetes itself can improve and sometimes even disappear. Complications, like the neuropathy that leads to foot ulcers and amputations, can improve too.<sup>1</sup>

During the patient's entire stay, no one on the medical staff had talked with the patient about the fundamental cause of the problem. Even though the roots of type 2 diabetes are in the everyday food choices that lead to obesity and insulin resistance, we were ready to amputate, but never started a discussion about improving diet.

We might have been forgiven for ignoring diet's role. Its importance was only gradually becoming clear. A few years later, I had the opportunity to interview patients with coronary artery disease participating in a clinical trial testing a nutrition and lifestyle intervention.<sup>2</sup> Over the course of the trial, their chest pains had remitted, their clinical status had greatly improved, and they were very appreciative. One participant, however, was angry. Previous physicians, the patient said, had been ready to perform open heart surgery, but no one had communicated that diet changes might be able to fix the problem much more easily.

Overwhelming evidence has established the role of nutrition in the pathogenesis of diabetes, cardiovascular disease, obesity, hypertension, lipid disorders, cancer, and other health problems. Even so, the following clinical scenarios are not unheard of:

A patient with diabetes receives a few obligatory diet-planning sessions shortly after diagnosis but is never again asked about diet, even as the patient's insulin doses escalate and complications worsen.

A patient with a heart complication is told that butter and eggs have been exonerated in cardiovascular disease risk, understands this to mean that diet does not matter, and ends up with progressive artery damage.

A patient with breast cancer saw a prior physician who mistakenly conveyed that soy products increase the risk of dying of cancer, and the patient avoids them despite compelling evidence that the reverse is true.

This is not to suggest that physicians are not interested in nutrition. A 2012 survey of primary care physicians<sup>3</sup> showed strong support for additional training to improve care of obese patients. In 2018, the 2 most-read articles in *JAMA Internal Medicine* related to nutrition issues—one on the associations between coffee use and health outcomes<sup>4</sup> and the other on the potential benefits of organic produce and cancer risk.<sup>5</sup> But the curiosity about nutrition that physicians share with the general public does not equate to clinical competence. In a 2018 survey,<sup>6</sup> 61% of internal medicine residents reported having little or no training in nutrition.<sup>6</sup> Physician inattention to nutrition is not only a function of insufficient training, but also of physicians' own health and dietary practices. A 2012 study<sup>7</sup> demonstrated that physicians were less likely to record an obesity diagnosis (7% vs 93%;  $P < .001$ ) when their own body weight was higher than their estimate of the patient's weight.

There is no need to argue that medical schools need to teach nutrition—obviously, they do. Many medical students can do little more than cough up the words "scurvy" or "cyanocobalamin" for a nutrition board examination. Here is what I suggest as more immediate steps:

1. Nutrition should be a required part of continuing medical education (CME) for physicians everywhere. It need not take the form of additional CME hours but should be part of the hours currently required.
2. Physicians should work with registered dietitians. Physicians do not need to do their own diet counseling, any more than they need to perform their own radiographs or laboratory assays. But they must recognize the role nutrition plays in disease, communicate it clearly to the patient, and refer the patient appropriately.
3. Electronic medical record services should include customizable nutrition questions and handouts, facilitating both education and research on the effect of nutrition interventions.

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4. Physicians are role models and should embrace that fact. Just as a visible pack of cigarettes in a shirt pocket will erode their medical credibility, the same is true for an inability to answer common nutrition questions. So, as physicians learn to talk with patients about nutrition, they must also practice what they preach. To different authorities that means different things, but evidence would argue for a low-fat, plant-based diet for both doctor and patient.
5. Beyond medical practice, there is also a need for healthier foods in schools, hospitals, and the workplace, as well as better governmental food policies. The medical community can support all of these.
- Rather than allowing nutritional ignorance to fester like a gangrenous sore, the medical community can take advantage of current knowledge for patient benefit, as well as their own.

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