

Food as Medicine and the Future of Proactive Healthcare

Why nutrition is becoming one of the clearest tests of whether American healthcare is prepared to move upstream

Executive summary: *Food as Medicine matters not because food is the whole answer, but because it is one of the clearest tests of whether healthcare can align evidence, incentives, workflow, and payment around prevention, healthspan, and longevity rather than delayed intervention.*

We are at a pivotal juncture. What we do next may determine whether American healthcare evolves into a more proactive system organized around healthspan and longevity, or remains predominantly reactive. The United States is widely regarded as the global leader in acute care. The more important question now is what happens on the other side of that equation: prevention. Where are we today? What can we learn from history? And what would it take to move toward a truly proactive system that improves health outcomes at scale?

Our current situation

Chronic disease remains the defining challenge of American healthcare. It accounts for most illness, disability, and death in the United States, and chronic and mental health conditions drive 90% of the nation's \$4.9 trillion in annual healthcare expenditures (CDC, 2025). 76.4% of U.S. adults have at least one chronic condition, and 51.4% have multiple chronic conditions (CDC, 2025). 48.1% of U.S. adults, or 119.9 million people, have high blood pressure, yet only 22.5% have it under control (CDC, 2025). 115.2 million U.S. adults have prediabetes, and 8 in 10 do not know they have it (CDC, 2026). Without intervention, up to 70% will progress to diabetes, according to an ADA expert panel. 40.1 million Americans already have diabetes (CDC, 2026). In the Diabetes Prevention Program, lifestyle intervention reduced progression by 58%, compared with 31% for metformin (DPP, NEJM). More than 1 in 4 U.S. deaths each year are due to heart disease and stroke, and roughly 80% of premature cases are preventable (CDC, 2025; WHO/CDC, 2023). At the same time, 76% of Americans say they would prefer to use food over prescription medications to support their health (Deloitte, 2025).

This is not a marginal issue. It underscores how much opportunity exists to act earlier, more consistently, and more intelligently on risk that is already visible.

Recent findings to consider

The evidence base continues to move in one direction. Ultra-processed foods now supply 55.0% of total calories overall in the United States, including 61.9% among youth and 53.0% among adults (Aug 2021-Aug 2023). In other words, upstream exposure remains the majority of calorie intake while the system continues to absorb downstream disease burden.

Recent prospective studies, including analyses from NutriNet-Sante, have associated higher exposure to specific preservatives with increased risks of certain cancers and type 2 diabetes. In cancer survivorship research, patients in the highest third of ultra-processed food intake after diagnosis had 48% higher all-cause mortality and 57% higher cancer mortality compared with those in the lowest third. In JAMA Oncology, women consuming roughly 10 servings of ultra-processed foods per day had an approximately 45% higher risk of conventional adenomas than those consuming roughly 3 servings per day.

At the same time, more granular nutrition science is revealing how much opportunity remains untapped. In a 2024 randomized controlled trial of patients with type 2 diabetes, eating vegetables and protein before carbohydrates reduced post-meal glucose peaks by 44% and significantly improved time-in-range and glycemic variability. Other recent work continues to confirm that glycemic and lipid responses to the same meal vary substantially between individuals. Even when two people eat the same foods, their postprandial glucose and insulin responses can differ dramatically.

Taken together, these findings suggest that nutrition is not merely a wellness topic. It is increasingly measurable, clinically relevant, and operationally actionable.

Nutrition's historical role in medicine

This is not a new idea. Across the earliest and most influential medical traditions, nutrition was treated as central to medicine itself. The Huangdi Neijing, a foundational Chinese medical text, linked food, regimen, and disease prevention. The Charaka Samhita, a foundational Ayurvedic text, placed diet and regimen at the center of health maintenance. Hippocrates, often called the father of medicine, treated nutrition as fundamental to understanding, treating, and preventing disease. Avicenna's Canon of Medicine, one of history's most influential medical works, carried this tradition into medieval and early modern medicine.

For much of medical history, diet was not peripheral. It was fundamental.

Why this matters now

What makes this moment different is not simply that nutrition matters. That has been understood for centuries. What is different is that the evidence base is becoming harder to ignore, the measurement layer is improving, and the implementation tools are becoming more practical. Advances in digital health, wearables, diagnostics, and nutrition science are making earlier intervention more measurable, more scalable, and more economically viable. At the same time, chronic disease continues to dominate morbidity, mortality, and cost. In that context, Food as Medicine is no longer just a public health concept or a lifestyle conversation. It is becoming a real test of whether healthcare is prepared to translate prevention into operating reality.

The opportunity

Nutrition may not be the most glamorous area of healthcare, but it is one of the most powerful upstream, cross-disease levers available. As care moves closer to home, Food as Medicine is becoming one of the clearest paths forward for any system serious about prevention and health promotion. Its value is not limited to reducing disease risk directly. It is also likely to improve the performance of other interventions by changing the underlying biological terrain on which those interventions operate.

Recent work on medically tailored meals, produce prescriptions, and diet-related chronic disease continues to reinforce this direction. Tufts researchers estimate that medically tailored meals could prevent approximately 2.6 million hospitalizations annually across all 50 states and generate roughly \$23.7 billion in first-year healthcare savings. Produce prescription programs for adults ages 40 to 79 with diabetes and food insecurity were estimated to prevent approximately 292,000 cardiovascular events over a lifetime, generate roughly 260,000 quality-adjusted life years, and produce approximately \$39.6 billion in healthcare savings, along with an additional \$4.8 billion in productivity gains.

These are not trivial gains. They suggest that nutrition is no longer just a public health aspiration. It is emerging as an investable, measurable, and economically meaningful clinical strategy.

U.S. food policy emerged piecemeal, with authority distributed across USDA, HHS, FDA, CDC, and others. One review called this split oversight 'the antithesis of a systems approach.' Nutrition has historically been trapped on the wrong side of nearly every major incentive structure: lower billing power, weaker specialty ownership, longer payoff horizon, fragmented governance, softer exam pressure, and a food environment shaped by strong commercial and political interests. It has not fit the operating model of how medical knowledge is validated, tested, reimbursed, or taught. This pushed the system toward drugs, procedures, imaging, and acute episodes rather than longitudinal nutrition work. Today, advances in digital health, wearables, diagnostics, and nutrition science are making proactive healthcare more achievable, scalable, and economically viable.

In U.S. healthcare, nutrition has historically been economically misaligned with the core operating model: it takes time, context, and follow-through, while payment systems rewarded downstream treatment. That is changing as value-based models expand and as Food as Medicine programs become more standardized and measurable. NIH's Office of Nutrition Research describes the 2020-2030 Strategic Plan for NIH Nutrition Research as the first NIH-wide strategic plan for nutrition research. Meanwhile, HHS is mandating

that hospitals align with updated dietary guidelines, including limits on sugar, refined carbohydrates, and ultra-processed foods, or risk losing funding.

What this means now

The question is no longer whether nutrition belongs in healthcare. It is whether we are prepared to treat risk as clinically actionable before it becomes clinically catastrophic.

- For policymakers, this is a question of benefit design, reimbursement, and accountability.
- For hospital and health system leaders, it is a question of whether prevention remains a pilot category or becomes part of core operating strategy.
- For medical schools and residency programs, it is a question of whether physician training reflects the actual burden of chronic disease.
- For payers, it is a question of whether value-based care is truly serious about upstream intervention or still primarily organized around downstream management.
- For health tech, it is a question of whether we are building engagement tools around the edges of disease, or infrastructure that can support measurable prevention at scale.

In that sense, Food as Medicine is bigger than food.

It is one of the clearest tests of whether the healthcare system can align evidence, incentives, workflow, and payment around prevention, healthspan, and longevity rather than delayed intervention. The institutions that lead the next era of healthcare will be the ones willing to make prevention operational, reimbursable, evidence-literate, and durable.

Food as Medicine is not the whole answer, but it is becoming one of the clearest indicators of which institutions are prepared to redesign healthcare around value - and which are prepared to move beyond a model in which avoidable disease progression remains the default.