Lifestyle Is the Medicine, Culture Is the Spoon: The Covariance of Proposition and Preposition*

David L. Katz, MD, MPH, FACPM, FACP

Abstract: We have known now for a span of decades that the leading causes of premature death and chronic disease in the United States and increasingly around the world are behavioral factors under our potential control. We have as well consistent evidence from diverse sources indicating that amelioration of a short list of such factors, with an emphasis on dietary pattern, physical activity, and tobacco use, can slash rates of chronic disease and premature death alike. But choices people make are governed ultimately by choices people have. In an obesigenic and morbidigenic environment that conspires mightily against healthful living, salutary behavior change is all too often forestalled. Constructive and compassionate guidance from clinicians can help confront this challenge, and the case is made that lifestyle in medicine is of real value. But the case is also made that lifestyle is not fundamentally a clinical issue but a cultural one. For the full promise of lifestyle medicine to be realized, it must be lifestyle as medicine—and spoons full of cultural change will be required to make that medicine go down.

Keywords: lifestyle; diet; physical activity; culture; health

The Causes of Causes

Prior to 1993, the only established way to elaborate the leading causes of death in the United States was to note the diseases listed as “causes” on death certificates. The most common entry was heart disease, the second most common was cancer, and so on. The list of chronic diseases comprising the leading causes of premature death has been relatively stable for decades, even as the global toll of such diseases has risen alarmingly.¹

But a little more than 2 decades ago, in 1993, the view of that list was irrevocably altered by the seminal work of William Foege and J. Michael McGinnis, published in the Journal of the American Medical Association and titled, “Actual Causes of Death in the United States.”² The analysis by McGinnis and Foege led them to what they called “root” causes. Diseases were not really causes, they reasoned; they were effects. And the salient question for public health was, “Effects of what? What was causing the diseases that were, in turn, causing premature deaths?” And, because the leading causes of premature death were chronic conditions, the question could be expanded: “What was causing the diseases that were taking both years from life, and life from years?”

To the extent that we medicalize obesity, we may divert both attention and resources away from cultural and environmental responses to it.

*This article is based on a talk delivered at the American College of Lifestyle Medicine 2013 Annual Meeting, October 2013.

DOI: 10.1177/1559827614527720. From Yale University Prevention Research Center, Griffin Hospital, Derby, Connecticut. Address correspondence to: David L. Katz, MD, MPH, FACPM, FACP, President, American College of Lifestyle Medicine, Yale University Prevention Research Center, Griffin Hospital, 130 Division Street, Derby, CT 06418; e-mail: Davkatz7@gmail.com.

For reprints and permissions queries, please visit SAGE’s Web site at http://www.sagepub.com/journalsPermissions.nav.

Copyright © 2014 The Author(s)
in 1990 of just the first 3: tobacco use, dietary pattern, and physical activity. These 3 factors alone accounted for nearly 80% of the total annual burden of premature death and an at least comparable portion of chronic disease in the United States.

A decade after the original publication, researchers at the Centers for Disease Control and Prevention (CDC) replicated the McGinnis and Foege analysis, largely replicating the findings as well.2 Tobacco use, poor diet, and lack of physical activity remained the leading causes of premature death in the epidemiological landscape of 2000, still accounting for almost 8 in 10 premature deaths. All that had changed over the span of a decade was that the gap between tobacco use as the number 1 root cause and the combination of poor diet and physical inactivity as number 2 had narrowed, for one good reason and one had. The good reason was the strides made in that decade against tobacco use; the bad was loss of progress related to diet or physical activity patterns, and worsening epidemics of obesity and diabetes as a result of this societal neglect.3,4

The Remedy

If the decade from roughly 1990 to 2000 clarified the principal causes of chronic disease and premature death, the decade that followed provided equally clear elucidation of the cures. Evidence that roughly 80% of all chronic disease could be attributed to a short list of lifestyle factors hinted at a luminous promise within the dark clouds of modern epidemiology: optimize those same behaviors, and 80% of all chronic disease should be preventable.5 Study after study has suggested exactly that.

Population-based research published in 2009 by Ford et al6 showed that people who ate well, exercised routinely, avoided tobacco, and controlled their weight had an 80% lower probability across their entire life spans of developing any major chronic disease—heart disease, cancer, stroke, diabetes, dementia, and so on—than those who smoked, ate badly, did not exercise, and lost control of their weight. Flip the switch on any one of these factors from bad to good, and the lifetime probability of any serious chronic disease was reduced by nearly 50%. But the salutary application of all 4 factors was associated with a greater net benefit than perhaps any advance in the history of medicine. These very findings have been replicated again and again. A 2010 article in the Archives of Internal Medicine, reporting results of a study of some 5000 citizens of the United Kingdom followed for 20 years,7 reaffirmed the findings of Ford et al.8 So, too, did a 2011 study, reporting results from a US cohort in the journal Cancer Epidemiology Biomarkers & Prevention.9 Before, and since, a steady drumbeat of replication has been published, representing diverse research methods and populations around the globe.10-14

The remarkably potent influence of a very short list of lifestyle factors on medical destiny extends even to the actions of DNA. A study by Ornish et al5,11 in 30 men with early-stage prostate cancer demonstrated the capacity of a lifestyle intervention program to alter gene expression in a manner suggestive of favorable effects on cancer prognosis. Other investigators have published related findings,16-18 establishing the primacy of epigenetics and the capacity to “nurture nature.”19 Whereas DNA may have been mistaken for destiny at the excited onset of the genomic age, there is now increasing recognition that what happens to genes generally matters more than the genes we happen to have. DNA, per se, is very rarely destiny; dinner (ie, dietary pattern) may be destiny to a far greater degree.

And so, emphatically, persuasively, and repeatedly, the definition of leading causes of death has been updated over the past 2 decades. It is not diseases, it is the factors, mostly behaviors and choices we control, that underlie diseases. Root causes we have the latent capacity to control account for an appalling loss of years from life and an even more calamitous loss of life from years.20 It is these root causes that matter, because we can—in principle, at least—alter them at will. And thus, the leading causes of chronic disease and premature death have latent potential to be the leading cures.

For the most part, those latent cures are well understood and noncontroversial. The avoidance of tobacco may be hard to accomplish but is easy to define. So, too, is routine physical activity meeting particular recommendations for duration and intensity. Even weight control, though an outcome rather than a behavior, is defined readily, if crudely, with use of the body mass index.

That leaves dietary pattern, which has proven contentious for years.21,22 This article is not the place to explore competing arguments about best dietary pattern for health in detail. It is, however, the place to note that such work has been done23 and that the fundamental theme of health-promoting eating is well established and common to the variations on that theme containing for “best diet” laurels. A diet of real “food, not too much, mostly plants”24 will indeed go a long way toward alleviating the bulk of our diet-related ills. So it is that the knowledge of what is needed to prevent 80% of chronic disease and premature death is sufficiently clear and not rate limiting. The principal challenges before us now relate to application—the translation of knowledge into the power of effective action. We are forestalled not for want of knowing where “there” is but for failing thus far to do what is required to get there from here.

Calling in the Cavalry

There is a gathering impression of both readiness, and urgency, to act on our now long-latent knowledge of disease prevention. The urgency derives from the unsustainable human and economic toll of missed opportunity. The trials and tribulations of health care reform in the United States are a matter of public record.25 Equally clear is that the associated acrimony and conflict derive particularly from concerns about money. Yet there is reason to worry that almost any recapitulation of what is fundamentally a “disease care” system is economically moot should current
epidemiological trends persist. Whereas the approximately 27 million people diagnosed with diabetes in the United States today, for example, represent an already challenging financial burden, the CDC projects that as many as 1 in 3 Americans will be diabetic by the mid-21st century. Alarming progress toward that ominous projection has already been documented. Should that grim prediction come to pass, there will be more than 100 million people with diabetes in the United States. Projections regarding cancer and dementia are, if anything, even greater cause for concern. Thus, urgency regarding the application of lifestyle medicine to the prevention of chronic disease pertains at least partly to the recognition that the solvency of our nation may be at stake.

The clinical urgency relates more to the human than financial costs of the prevailing status quo and is at least comparably compelling. Along with alarming projections about diabetes and dementia comes recent evidence of ever more cardiovascular risk factors in ever younger people and even evidence of a rising incidence of stroke in American children between the ages of 5 and 14. Although the overall prevalence of obesity may have stabilized in adults and children alike, the rates of severe obesity—the variety most likely to induce serious metabolic complications—are rising briskly in both. The mortality toll of that obesity may be greater than previously recognized when the analysis is adjusted for trends over time in sequential birth cohorts.

Readiness for action and the conversion of what we have long known into what we more routinely do derives not only from the pertinent urgency, but also a confluence of clinical and societal themes and trends. One salient theme is the central role of the patient, which in turn places an emphasis on lifestyle practices and holistic models of care. Predictably, patient centeredness advances the cause of lifestyle medicine because lifestyle resides much more in the purview of the patient than the provider. Yet another theme is the engagement of clinicians in effective lifestyle counseling, with corresponding changes in reimbursement models. Medicare statutes were updated to allow for reimbursement of weight management/lifestyle counseling; the private insurance industry has placed an increasing emphasis on wellness and prevention; the affordable care act does so as well; and within the past year, the American Medical Association recognized obesity as a disease in an ostensible effort to direct more clinical attention and effort to its treatment, control, and prevention.

All this is good, as far as it goes. But if the hope is to turn the United States into a Blue Zone, where that 80% reduction in chronic disease is fully realized, it almost certainly does not go far enough.

Blue Zones and Big Pictures

The Blue Zones are those societies notable for exceptional longevity and vitality. Related work attributes such advantages to lifestyle but not to medicine. Clinical counseling does not figure among the explanations for Blue Zone blessings; rather, the explanations all reside at the level of culture. If anything, our culture is prone to “over-medicalization,” for reasons we might readily suppose. Even the currently massive societal preoccupation with so-called “health care” reform is principally about access to care for the treatment of illness and much less about building health at its origins in daily living.

We have long had indications of this societal bias. Nearly 2 decades of effort were required before clear evidence supporting a lifestyle intervention as an alternative to coronary bypass surgery resulted in comparable reimbursement. Our society readily accepts the bill for bariatric surgery in obese adolescents while neglecting potentially better, less medical remedies. To the extent that we medicalize obesity, we may divert both attention and resources away from cultural and environmental responses to it.

The importance of the built environment and public policies in the epidemiology of obesity and chronic disease are well established. There is evidence as well of the favorable impact of community-wide interventions that treat a population, rather than an individual, as the patient. And, of course, there is the flagrant if uncontrolled evidence of our recent cultural history. Obesity and its metabolic sequelae were relatively rare before the advent of highly obesigenic environmental and cultural conditions and became prevalent in tandem with their proliferation. During this time, genes and metabolic pathways changed not at all, whereas prevailing dietary and activity patterns changed substantially. Purists might fuss over the want of randomized clinical trials to establish true causality here, but there are no clinical trials to substantiate the link between striking a match and starting a fire either.

Back to the Future

Lifestyle medicine is new, but it is also ancient. We are rediscovering through modern epidemiological research much of what was apparent to Hippocrates on the basis of astute observation. The primacy of lifestyle medicine thus represents a confluence of science and sense, the modern and the ancient, a time long gone and a time whose time has come.

Lifestyle Medicine: the Covariance of Propositions and Prepositions

The role of clinicians in lifestyle medicine varies with circumstance. In the case of advanced metabolic complications, it is inevitably a large role. In the case of lifestyle and weight management counseling, it is a supporting role but an important one nonetheless. We can and should cultivate widespread competency in constructive, compassionate, and streamlined counseling. We can, and should, design programs for finding health and losing weight that involve clinicians strategically...
while sparing them excessive burdens of time and effort.51

There is a strong case for better application of lifestyle in medicine, and the engagement of clinicians in the delivery of effective programming and constructive counseling is thus a welcome trend, as are the improving prospects for reimbursement in this area. But populations around the world enjoying the longest, happiest, most vital lives do not attribute such blessings preferentially to clinical care but rather to culture. If lifestyle is the medicine, culture is the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.

The true prize—more years in life, more life in years—resides with lifestyle as medicine, reverberating throughout our culture. Lifestyle medicine practitioners are thus obligated to do more than practice. We are called on to preach as well and to innovate empowering programs52 from the vanguard of true health care reform, rallying the population to nothing less than a cultural revolution that reveres mind, matter, and message.53

Lifestyle medicine is, clearly, the best of spoons. And so it is that lifestyle in medicine is a valuable, and essential, step, but only an initial step. Lifestyle in medicine, laudable though it may be, and preferable as it is to the omission of lifestyle from medicine, raises the prospect of overmedicalization if we stop there. If we stop there, we fail to concede that lifestyle actually happens not in hospitals and clinics but in the places where people live and learn, work and play, and eat and pray and love.


56. Katz DL. What if health were more like wealth? *The Huffington Post*. March 9, 2012.