

LIVE forever

A RECENT ARTICLE IN *THE NEW YORKER* magazine reports on a Silicon Valley movement to make death optional. Called “Silicon Valley’s Quest to Live Forever,” the article profiles some brilliant, well-funded scientists and entrepreneurs bent on curing senescence – the cell deterioration that causes symptoms of aging. Along with their wealthy benefactors, these longevity explorers break into two camps: those who want to eliminate death altogether (or at least, the inevitability of it) and those pursuing the more modest goal of extending life by 30 high-quality years.


The ambitions of that movement could fool you into lowering your regard for modern medicine, which from 1930 to 2010 helped add a measly 16 years to the average American life. By Silicon Valley standards, that’s slow and plodding progress. Then again, it’s real progress, versus the possibly fantastical hopes of some Ponce-de-Léon cover

It’s hard to ignore Silicon Valley’s all-out war against mortality, but listening to your doctor may be a better choice, say Brunswick’s **KEVIN HELLIKER** and **DAVID SELDIN**

bands in Silicon Valley. Worth noting is that the *New Yorker* examination found no evidence of any longevity breakthroughs.

On the other hand, it’s difficult to bet against Silicon Valley; we still cringe at the memory of rating Facebook stock overvalued. And it’s appealing to think that while we’re ensconced in our leather furniture bingeing on Netflix and nachos, there’s a team of geniuses out there waging a war to keep us alive. For us, living forever may turn out to be as simple as downloading an app.

In case that doesn’t happen, however, we might want to make some changes. Our diet generally is less healthy than it was 100 years ago, and we’re not exercising as much, which helps explain an epidemic of Type 2 diabetes and the staggering global toll of heart disease. Modern medicine is devising ever more treatments to protect us not from the plagues of nature, but from ourselves.



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What to do? The obvious recommendation is to find a primary care physician who documents and gives careful thought to your medical history, including the health biographies of your children, siblings and parents. Your doctor should also double as a coach who nudges you toward healthier habits. That's not a given – research shows that many primary care doctors barely mention diet and exercise.

If your physician seems unaware of the latest medical study to grab headlines, that's a good thing. Weird and wacky medical stories get a lot of clicks, ensuring good play regardless of the science behind them. Just when popular medical thinking got us used to eating fake butter, the wind shifted, and suddenly the culprit is sugar. Most primary care physicians get their information from medical journals and scientific conferences, where shifts in practice guidelines come at the unavoidably slow pace of medical research. A good doctor is one who never pushed extreme diets or 140-mile triathlons, arguing instead for boring old moderation.

“As much as we try to control our weight with fad diets or supplements or the next great drug, it's really about enjoying the food you like in moderation, moving your body doing something that you like, and being happy without feeling like you need to be a triathlete or eat like a monk,” says Tracy Rydel, a family practice practitioner and faculty instructor at the Stanford School of Medicine.

Dr Rydel and her colleague, Megan Mahoney have family medicine practices in Silicon Valley. When not treating patients, Dr Mahoney is Chief of General Primary Care at Stanford, as well as Vice Chief of Staff of the entire Stanford health care system. Dr Rydel teaches medical students and is also leading a task force that aims to overhaul the nutrition curriculum at the school as well as on a national scale for medical students and other health professionals.

As family medicine physicians, Drs Mahoney and Rydel administer the vaccines, antibiotics, scans, checkups and other medicines and services that have played a large a role in elongating lives. Their clinical experience has also taught them how to coach patients toward healthier lifestyles. As academics, they know the latest science, and as clinicians they know how best to implement it.

DO WE DARE TO EAT A STEAK?

EVERYBODY KNOWS THAT GIVING UP MEAT CONFERS health benefits. Vegetarians tend to be thinner and have lower blood pressure, lower cholesterol levels



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and lower rates of heart disease. So meat is a guilty pleasure, right?

Not necessarily, says Dr Mahoney. A vegetarian herself, she offers an important caveat. “I don't necessarily recommend a vegetarian diet for people who have a risk of diabetes,” she says. That amounts to nearly 10 percent of Americans, not counting those who are pre-diabetic. “The high-protein diet is very good for diabetes, because it stabilizes metabolism.”

The leaner the meat, the better, she says.

Dr Mahoney shares with her patients a rules-for-good-health mnemonic that she picked up in a 2010 article in the journal *American Family Physician*. It involves five numbers: 0, 5, 10, 30 and 150. Commit those numbers to memory, and it's easy to remember what they signify.

0 NO CIGARETTES ALLOWED.

No surprise there.

5 EAT THIS MANY SERVINGS PER DAY OF FRUIT AND VEGETABLES. Hey, pizza toppings like broccoli and pineapple count. Plant-based foods battle disease, control appetite and provide vitamins and nutrients.

10 PRAY, MEDITATE OR OTHERWISE ENGAGE IN A MINDFULNESS EXERCISE FOR 10 MINUTES A DAY. Research shows it can lower blood pressure, improve sleep and reduce anxiety and depression. No harm done if you nod off.

30 KEEP YOUR BODY MASS INDEX UNDER 30. Your BMI is your weight in kilograms divided by your height in meters squared. Avoiding obesity staves off all kinds of problems.

150 EXERCISE AT LEAST 150 MINUTES A WEEK. That's only 30 minutes a day, five days a week. Research shows that moderate running confers a longevity benefit of over three years. Other forms of exercise are likely just as beneficial.

Dr Mahoney has found that patients are likelier to put that mnemonic to work if they identify a goal. Do they want to avoid a family history of diabetes, lose five pounds for an upcoming class reunion or regain the strength to walk their daughter down the aisle? “You can talk about discipline and willpower, but it's really important to tap into your motivation for maintaining good health,” she says.

Research shows that when patients share their concerns, a physician's encouragement can push them over the hump. In other words, your doctor should double as a coach. “Many patients have told me, ‘Doc, because you told me I could do that, I did,’” says Dr Mahoney.

Unlike your high school coach, your doctor can remain a coach for life. In fact, research shows medical benefits to so-called continuity of care. Drs Mahoney and Rydel argue those benefits accrue even more if your physician treats your whole family. Think about it: How much better would your doctor know you if your spouse came along on your physical?

In a concept Stanford is calling Precision Health, Dr Mahoney is expecting to see a greater focus on prevention, health maintenance, digital health and advanced diagnostics at Stanford Primary Care, tapping into the resources of Stanford and Silicon Valley. Using devices that monitor metrics such as blood pressure on a daily basis, Stanford physicians will have access to continuous streams of medical information that will help predict, prevent and cure diseases precisely. That, along with good old-fashioned email, should put doctors and patients in much more regular contact. “Ideally, all of us would be able to interact with a primary care team 365 days of the year at a time and place that is convenient for us,” she says.

PRACTICING WHAT SHE PREACHES

IT ISN'T ONLY FOR THE SAKE OF HER HEALTH THAT Dr Rydel takes cardio-kickboxing classes. “If I don't exercise and I don't eat healthfully, I feel like I'm being dishonest with my patients,” says Dr Rydel. “A huge motivator is really to keep me honest, so that I am living by my rules.”

By “rules,” Dr Rydel means the prescriptions she offers patients to exercise, get plenty of sleep and eat fruits and vegetables.

Dr Rydel embodies a health tip: Get yourself a physician who models the healthy lifestyle. Think you don't have the time? Dr Rydel is a clinician, medical school instructor and mother of two (ages 5 and 2). Weekdays, she and her husband take turns minding the children, so that each can hit the gym at least every other morning. On Saturday and Sunday, “we cover for each other so that we both have the chance to work out,” she says, adding that she exercises five to six days a week.

In prescribing exercise, Dr Rydel says, “My No. 1 recommendation is to find something that you really enjoy and not to torture yourself with an activity that you dread.”

For herself, she says, “I need to really mix it up: running, stair climbing, a weight-lifting class that is set to music, because music is something that really motivates me. I love dance classes. I feel very tough after doing a cardio-kickboxing class.”

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DR TRACY RYDEL

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KEVIN HELLIKER is Editor-in-Chief of the *Brunswick Review* in New York. He is a former Pulitzer Prize-winning journalist for *The Wall Street Journal*.

DAVID SELDIN is a Partner in the firm's Washington, DC office, specializing in healthcare and public affairs. He previously served in the White House Press Office under President Bill Clinton.

Annual exams are a good idea after age 50, says Dr Rydel. “Just statistically, we know that the incidence of certain types of cancers increases after age 50. And in the population between 50 and 75, there are very well-studied recommendations for screening, particularly for cancer, cardiovascular disease, diabetes.”

But those recommendations aren't as simple as they sound. Often, specialties that treat particular conditions call for more aggressive screening than does the US Preventative Services Task force, which essentially determines the standard of care for primary care physicians in America. “You can imagine that a board of physicians who treat breast cancer all day might be a little bit more aggressive in recommending screening at a younger age.”

When medical boards disagree, Dr Rydel says the decision comes down to a discussion between physician and patient. “As long as we provide the patients with the information that we have, we have to kind of view ourselves as a guide,” she says.

Silicon Valley, a culture obsessed with fitness and longevity, is the dark heart of one bad health habit: sleep deprivation. “This is a culture where sleep is for the weak and the dead,” says Dr Rydel.

“Research shows that your brain does not function properly when you're sleep deprived. You may be able to convince yourself that you can overcome it by using different tools, but an average of seven to eight hours of sleep is necessary for most individuals. Sleep is when your body restores itself, when your brain puts the different thoughts together. People just have higher rates of positive mental health when they allow themselves to get not only adequate sleep but good quality sleep. So try putting the chargers in another room. Try not to use screens 30 to 60 minutes before bedtime.”

Even as awareness grows of the large role genes play in human health, Dr Rydel believes individuals wield substantial control. “You always hear about the 100-year-old guy who smoked three packs a day and those unfortunate individuals who contract a condition even if they live their lives really healthfully. But most of us fall in the middle, where staying active, eating well, getting good sleep and maintaining social connections can enhance your health and longevity, and improve quality of life.

“Our goal really should be to feel strong, to feel well, and to be kind of proud of ourselves about what we're doing for our bodies.”

Never mind that there's always someone fitter than you, and eager to talk about it. “When you leave the gym, have a little bit of swagger,” she says.