

LAWRENCE DOUGLAS: THE LAST NAZI WAR-CRIMES TRIAL

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STARVING YOUR WAY TO VIGOR

The benefits of an empty stomach
By Steve Hendricks

Two weeks after a Fourth of July at the end of Reconstruction, a doctor in Minneapolis named Henry S. Tanner resolved to end his life. His wife had left him some years earlier in favor of Duluth, which may have spoken to the quality of his husbandship, and his efforts to reacquire her had failed. He had been a lecturer on temperance but not a rousing one, he had owned a Turkish bathhouse but not a successful one, and his health was poor in a manner not specified. The usual methods of self-destruction being too painful or too messy or too likely to succeed, Tanner decided to starve himself. At the time, the consensus among men of science was that a human could not survive more than ten days without food. Christ may have fasted forty, but his was thought a special case.

On July 17, 1877, Tanner drank a pint of milk and repaired to bed. He

Steve Hendricks is the author, most recently, of A Kidnapping in Milan: The CIA on Trial (W. W. Norton).



passed some days, hungrily. His physician, one Dr. Moyer, urged him to eat, but Tanner was firm. Only water crossed his lips. Presently odd things happened. His hunger vanished, and he ceased to think of food. With each new day his ailments, whatever their origin, diminished, and by the tenth

day—which should, by the wisdom of the moment, have been his last—the ills that had plagued him were completely gone. Far from nearing death, he was possessed of a renewed strength. It had been his custom to walk one to three miles twice daily, and after the tenth day he resumed these constitutional. If his step was shaky at first, it quickly grew steady. He judged his recovery complete and bade Dr. Moyer, who had kept a nervous vigil, bring him food.

But while the food was being prepared, Tanner turned to a thought that had lately come to him: If a man might not only survive but indeed thrive after ten foodless days, what would be the limit of his unfed endurance? Twenty days? Thirty? More? And what would the answer say about us? Did it imply, for example, that we were meant to go without food for long periods? If so, why? Was fasting perhaps a healing mechanism, like sleep? It was the sort of pons asinorum that will gnaw at a

person of a certain turn of mind until he must have an answer. By the time Moyer brought his meal, Tanner had come to a resolution. He would forgo gratification of the stomach for gratification of the mind.

Ten fasted days became fifteen, then twenty, then twenty-five. He noted no great changes in his person save loss of weight. (Reconstruction was an era of proud midribs, and doctors did not regard slimming as a benefit per se.) Tanner did acknowledge a slight slowness in cogitation, chiefly on complicated subjects, but otherwise his mental powers were undiminished. On reaching four foodless weeks, he celebrated by walking ten miles of riverbank to Minnehaha Falls and back. He later walked Lakes Calhoun and Cedar, but after drinking from those bodies, he contracted gastritis, and Moyer again urged him to end his fast. On the forty-first day Tanner relented, taking a small glass of milk. He had bested Christ.

Tanner's fast might have been lost to history but for a challenge issued one year later by a Manhattan doctor named Hammond. Dr. Hammond had reservations about the well-publicized claims that one Mollie Fancher, a Brooklynite, had lived for years without food and achieved powers of clairvoyance. He wrote Miss Fancher a \$1,000 check, sealed it in an envelope, and announced that the draft was hers if she could divine the number of the check and the name of the issuing bank. Furthermore, if she would fast for a month under the observation of doctors, he would add an equal sum to her fortune. Miss Fancher spurned the check-reading challenge on grounds that her divinatory powers could not be rented, and she declined the fasting challenge on grounds that decency did not allow her to be examined by (male) physicians. Learning of Miss Fancher's demurrals, Tanner traveled to New York to take up the fasting half of the challenge.

When he and Hammond failed to come to terms, Tanner proceeded without the incentive, raising the dare from a month to forty days. He

arranged for the use of a public hall in which to fast and for lecturers and students of the United States Medical College to monitor him. Because the college was what would be described today as naturopathic (the term then was *eclectic*), and because Tanner was himself a naturopathic doctor, establishmentarian doctors eschewed the affair. Establishments like nothing so little as progress not established by themselves.

Thus it was that on a summer's morning in 1880 the unlikely Tanner, his person having been examined for hidden food and his vitals recorded for statistical baselines, took the stage at Clarendon Hall on East 13th Street. His furnishings consisted of a cot, a cane-backed rocker, and a gas-fired chandelier. The sparseness of the set and the light of the chandelier were meant to dispel suspicions that he had secreted food about him. At the stroke of noon, he took a seat in the rocker and proceeded to do—nothing. This he supplemented, as the hours passed, with a little reading, a little drinking of water, and a little chatting with his public, the size of which would be familiar to a short-story writer on book tour today. A week into this regimen, he had lost more than a dozen of his 157.5 pounds.

His audience grew with the approach of the lethal tenth day. At the dawn of the eleventh, with Tanner still extant, the public's curiosity became wonder, and more spectators appeared, at two bits a head. News of Tanner's survival traveled the continent by telegraph and newspaper. Well-wishers near and far sent him gifts of flowers, slippers, mattresses, exercise gear, roast beef, canned milk, gin, and claret. As many as four hundred letters arrived daily, each screened by the collegians for contraband comestibles. Among his correspondents were a gentlewoman in Philadelphia, who proposed marriage should he live, and the director of a museum in Maine, who proposed to stuff and display him should he not. The ladies of New York arrived to serenade him at piano, and learned gentlemen sounded him on matters of health. Soon telegrams from Europe

were congratulating him on his feat. Toward the end of his allotted time, Tanner was drawing roughly a thousand spectators a day. His share of the gate would come to \$137.64.

On the fortieth morning, the collegians weighed him at 121.5 pounds, thirty-six fewer than when he had begun. His other vitals were interesting only for being uninteresting: normal pulse, normal respiration. At noon, he ate a peach, which went down without trauma. He followed with two goblets of milk, which the collegians thought imprudent on a stomach so long inactive. But the milk not troubling him either, he ate most of a Georgia watermelon, to his colleagues' horror. In succeeding hours he added a modest half-pound of broiled beefsteak, a like amount of sirloin, and four apples. His lubrication was wine and ale. By the following evening he had reclaimed eight and a half pounds. After three days he had regained nineteen and a half, and after five more he had recouped all of the lost thirty-six. The question of which was the greater marvel—surviving his starvation or surviving his wanton refeeding—remains, in light of later learning about fasting, open to debate. In the age of Victoria, however, his ability to recover bulk was a credit in fasting's ledger, proof his famine had not sapped him.

Tanner had hoped to persuade skeptics that fasting was curative, but in New York he had no disease to heal. He was a pitchman without product. Scientists ignored him, the laity did not experiment at home, and the *Times* synopsis his feat as "Tanner's folly," echoing Seward's of a decade earlier. But Tanner knew that such benightedness had long greeted men of genius, from Socrates to Galileo. Time, he doubted not, would vindicate him.

It is a thin imagination that would not be titillated by Tanner's tale, and at the time I became acquainted with it I was thin of neither body nor mind. Several years earlier, for reasons now puzzling, I had been a distance runner, but a pitiable knee injury ended all that, after which lard came upon me. Its accumulation was so gradual that I didn't perceive it until

I saw a couple of family photographs. Who was that shapeless man holding hands with my wife? That doughy guy with his arm around my brother?

Vanity was not my only concern. Fat, in our era, is disease, decrepitude, and death. The odds of incurring diabetes or high blood pressure, respiratory or kidney failure, thrombosis or embolism, gout or arthritis, migraine or dementia, cardiac arrest or stroke, gallstones or cancer, all increase with one's ballast. Although by American standards I could not properly be called fat—my weight being somewhere in the loftier 160s—even this mass the

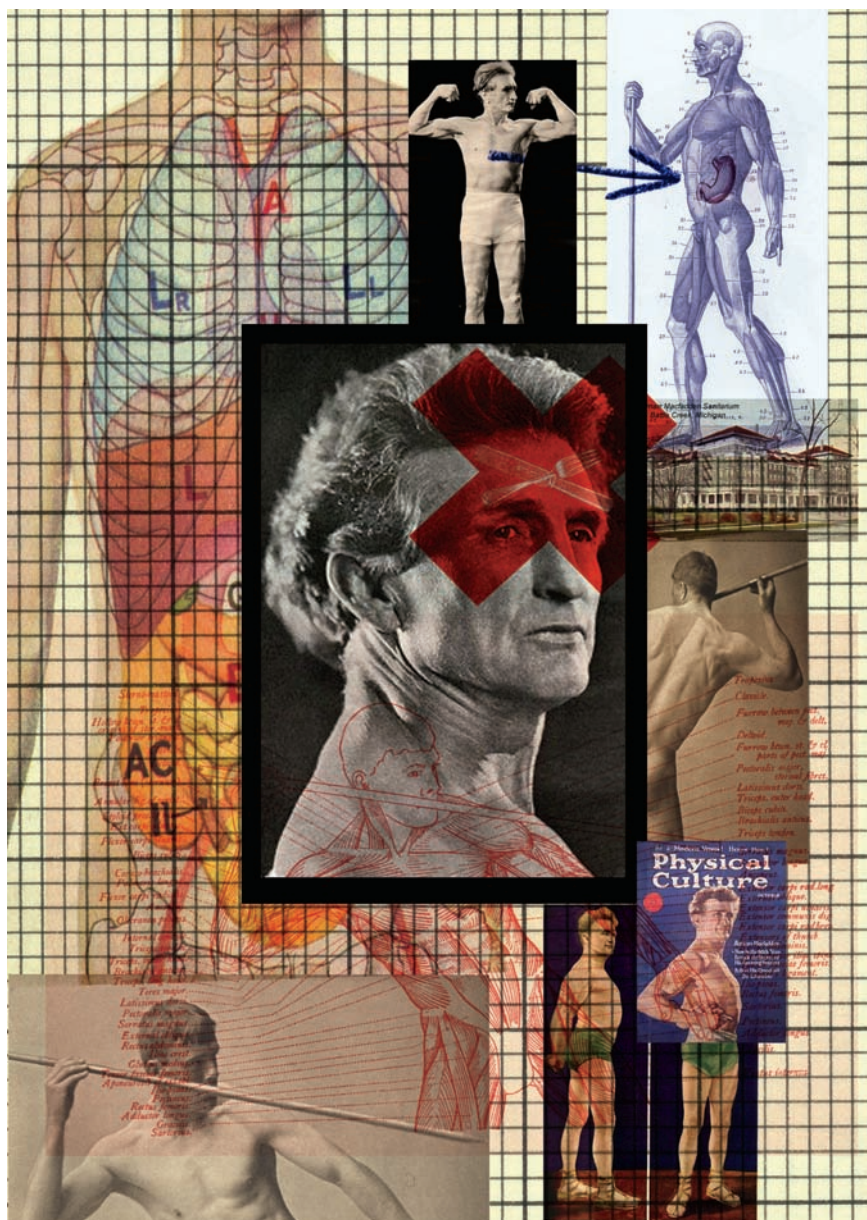
World Health Organization deemed unhealthy for a man five-foot-nine, and some distant athletic part of me was compelled to agree. Had my weight seemed likely to settle there, my concern might not have been great, but my gains gave no sign of slowing. As in a bad novel, I could see where the plot was headed. I resolved to fast.

My ambitions were at first untannerly. I fasted a day, and all went well. Two weeks later I repeated the performance, with a similar result. A few weeks after that, I fasted again, then again. Soon I felt myself master of the one-day fast. I

upped the stakes to two days, then three, and eventually, in what was a marvel to me, a week. I lost a few pounds, and ambition crept up on me. I thought of a fast of weeks. The plural excited me.

I would aim for 140 pounds, my collegiate weight, although to reach it I would have to fast to 135. Fasting is mildly dehydrating, and the faster, on returning to food, rapidly reaccrues a few liquid pounds; he also again carries a semiconstant pound or two of solids in his gut. The typical long-haul faster (so I had read) loses about a pound a day, so I figured I could reach 135 in a bit over three weeks. I made my preparations. The short fast requires little or no groundwork, but longer deprivations (I had also read) are best undertaken after a week or so on a fibrous, low-fat diet. Vegetables, fruits, and whole grains are counseled, meat and dairy discouraged, the idea being to smoothly move out what is in one's interior. To do otherwise is to invite meals to linger in the bowels long after the fast starts, which can be painful at best, damaging at worst. I ate according to plan and on a Sunday night had a last supper of whole-wheat rigatoni and marinara, bland but purgative. I weighed myself. The scale read 160 pounds—a round 160, you might say. I went to bed with visions of a lesser me dancing in my head.

In the early 1900s, after a couple of fallow decades, fasting enjoyed a brief revival, chiefly by way of Bernarr Macfadden. In books and in magazines of his founding—*Physical Culture*, *The Miracle of Milk*, *Superb Virility of Manhood*—Macfadden propounded then-radical ideas about health, from the salutary effects of salad and vigorous sex to the evils of processed food and “pill-pushers.” He recommended fasts of a week, and to show that they invigorated rather than enervated, he published photographs of his finely carved self at the end of his fasts, lifting, one-armed, hundred-pound weights above his head. Thousands of disciples followed his advice—fasting either at home or in his “healthatorium”—and for a while it seemed fasting

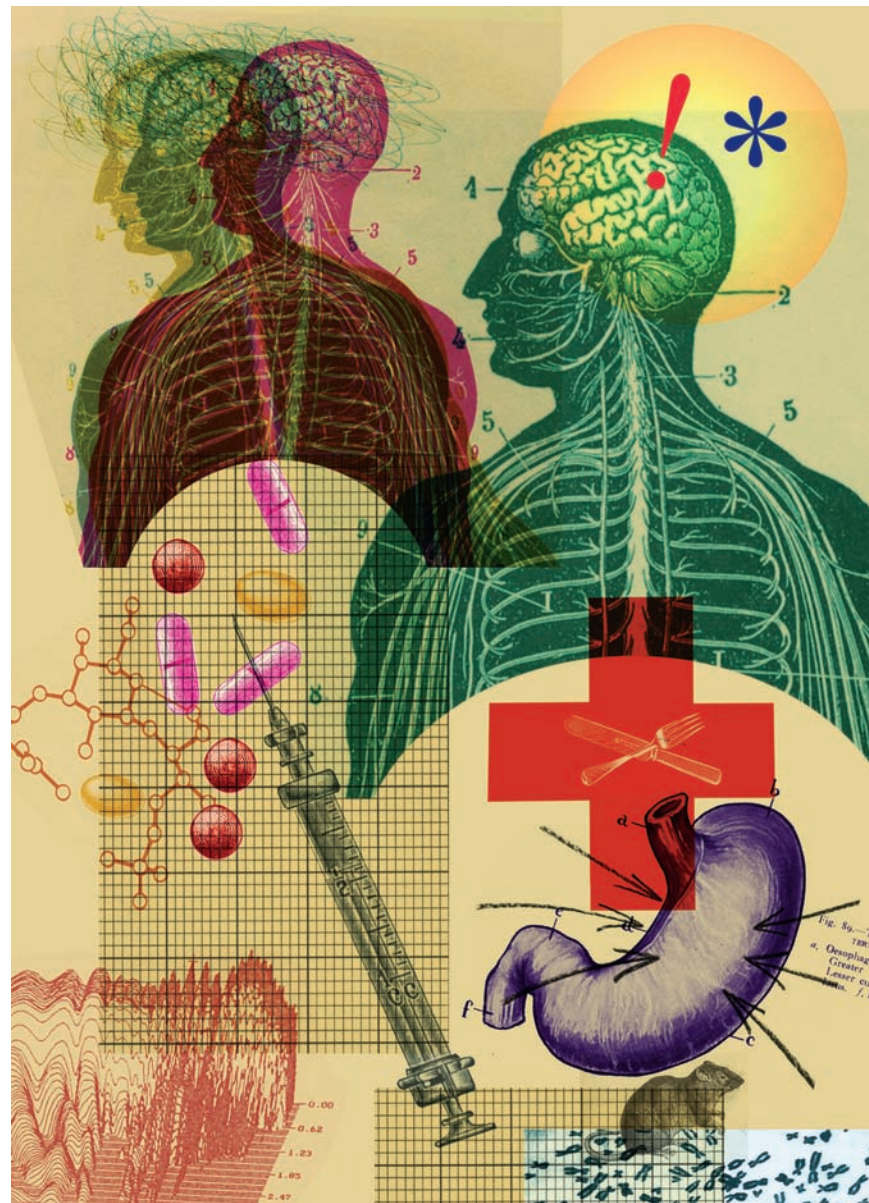


might spread into the broader national consciousness. But in time Macfaddenism faded from public attention, and fasting with it.

Out of the public eye, however, a few scientists, less known than Macfadden but more methodical, had become intrigued by the art. One was Frederick Madison Allen, a physician at New York's Rockefeller Institute who was renowned for his work on childhood diabetes. Allen theorized that since diabetes was a disease of excess glucose, taking glucose away—by, say, fasting—might ease a diabetic's symptoms. He further theorized that any improvements achieved by fasting might be maintained afterward by a diet very low in carbohydrates, the raw material of glucose. Allen fasted dozens of children for a week or more, and it seemed to him that they did not fall into diabetic comas as readily as patients treated with the standard palliatives. Allen, however, had no control group, and his conclusions were more impressionistic than scientific. The chief deficiency of the Allen Plan, as his therapy became known, was that a large portion of his patients died. With the discovery of insulin a few years later, the Allen Plan fell into disuse.

Contemporaneously, one H. Rawle Geyelin, a professor of medicine at Columbia, was puzzling over the severe seizures of a boy who had not responded to bromide or phenobarbital, the leading epileptic treatments of the day. His parents decided to fast him, and on the second day without food his seizures ceased. Three more times over as many months the child was fasted, and he remained seizure-free for two years, at which point his case record ends. Impressed, Geyelin proceeded to fast twenty-six epileptic subjects for lengths of five to twenty-two days, then fasted some a second and a third time. The great majority of them stopped seizing during their fasts, and the seizures of the rest diminished to one degree or another. Alas, seizures returned in full to six patients on breaking their fasts, but the other twenty had few or no seizures for weeks or months, and two remained seizure-free for at least a year.

A handful of researchers, expanding on Geyelin's work, hypothesized that since fasters survived by "eating" their own fat, perhaps put-



ting epileptics on a fatty diet would also help them. The researchers fasted patients, then fed them high-fat foods, and over the long term the majority of patients had improved dramatically. Many hospitals adopted the treatment, but after a new generation of anticonvulsants was developed in the 1930s, it fell, like the Allen Plan, into disuse. A consumerist pattern was emerging: starvation, a remedy that cost nothing—indeed, cost less than nothing, since the starver stopped purchasing food—was abandoned whenever a costly cure was developed. Decades later, studies would show that fasting followed by a high-fat diet was

as effective against seizures as many modern anticonvulsants and that variants of the Allen Diet were effective against diabetes. But America, then as now, preferred the promise of the pill over a modification of menu.

I passed Monday morning, the first of my fast, with no evidence of appetite. By afternoon, however, my stomach—I use the term in its general, nonclinical sense—was encircled by emptiness. Soon I felt it contracting, and now and then it murmured aggrievedly. For recompense, I felt none of the sleepiness I usually feel after lunch. Indeed, I was

sharply alert, presumably because my body, not needing energy to digest food, was sending the surplus to my brain. My stomach grew increasingly resentful as the afternoon progressed, but I felt no hunger. This must sound odd to anyone who has skipped a meal or two, but I had learned a few tricks of the antihunger trade. One of my earliest teachers was Gandhi, veteran of seventeen hunger strikes and deviser of a set of precepts about fasting. The majority of the precepts—take regular enemas, sleep out of doors—I honored in the breach. Two, however, I held close. One was to drink as much cool water as possible, a rule that later fasters improved on by recommending that the faster drink whenever a thought of food arises. Gandhi's other worthy precept was simply to banish thoughts of food the instant they spring up. At first I had thought this advice insipid. It seemed to me that a faster—at least a non-Mahatma faster—could no more will away a mental masala than an alcoholic could a mental whiskey sour. But latter-day fasters had again helpfully elaborated, in this case by likening thoughts of food to Internet pop-up ads, which disappear with a simple click on the red X. A faster, my teachers said, had only to click the X, and they would go away. It worked just so for me, to my appreciative surprise.

For nearly half a century after the 1930s, only the odd doctor, often in both senses of the adjective, prescribed the hunger cure for illness. What few fasting “healthatoriums” and clinics remained were chiefly in Europe, particularly Germany. An American exception was Herbert Macgolfin Shelton, a Macfaddenite who set up a fasting clinic in San Antonio. The location, deep in long-horn steer country, testified to Shelton's attitude toward convention. From the 1930s through the 1970s, Shelton fasted perhaps thirty thousand patients. Along the way he preached raw foodism, accepted the presidential nomination of the American Vegetarian Party, received an invitation from Gandhi (not consummated) to explore fasting togeth-

er, and collected a grant of \$50,000 from the creator of the Fritos corn chip, who possibly hoped to make amends. In his copious writings, Shelton claimed to have fasted away the ailments of dyspeptics and depressives, rheumatics and cardiacs, epileptics and diabetics, the cancerous and the gouty. He had even, he wrote, made one or two of the lame rise and walk again.

A historian of fasting, had one existed, might not have looked askance at Shelton's claims. Socrates, Plato, Aristotle, Hippocrates, and Galen all advised short fasts to rid the mind of clutter and the body of malady. “Instead of employing medicines,” Plutarch counseled, “fast a day.” It is said that Pythagoras, on applying to study in Egypt, was required to fast for forty days. He grumpily complied but afterward declared himself a man reborn and later made his matriculating pupils fast. The ancient belief in curative fasting dribbled down to a few of Tanner's contemporaries, among them Shaw and Twain, the latter of whom wrote, “A little starvation can really do more for the average sick man than can the best medicines and the best doctors. . . . I speak from experience; starvation has been my cold and fever doctor for fifteen years, and has accomplished a cure in all instances.”

To a perceptive twentieth-century researcher, the line of sages who claimed vigor through fasting might have suggested a topic worthy of study. But perception was rare, and science largely dismissed curative fasting. Shelton in turn dismissed science—or, as he styled it, *Science*—as unscientific. “*Science*,” he opined, “stubbornly clings to its errors, and resists all effort to correct these. Once an alleged fact has been well established, no matter how erroneous it is, all the gates of hell shall not prevail against it.”

On Tuesday morning, thirty-six hours into my fast, I felt not quite right but in a way that is difficult to capture in words. I felt a little weak, or maybe it was a little light, and I had the sensation that my being was centered in my head or was trying to be, but that my head was too full of

other things to hold all of me. I did not, however, have a headache. My discomfort was remote, although the alertness I had enjoyed the day before had abandoned me utterly. In its place was a heavy, insistent somnolence. I napped in the morning and again at teatime but did not awake from either respite refreshed. I stumbled through the day lethargic.

Endurance fasters say the hardest part of their labor is from roughly the second through fourth days. During this time the body is exhausting its store of glycogen, the compound that is broken into glucose in order to fuel, among other organs, the brain. The brain is ravenous. Though just 2 percent of the body's mass, it uses 20 percent of its resting energy, and the body's other main sources of energy—amino acids, which are broken down from proteins, and fatty acids and glycerol, which are broken down from fats—cannot power the brain. This is a bother, because we store pound on pound of fat, which most of us would just as soon burn for fuel, whereas we store only a few ounces of glycogen. Our brains are thus on a nearly constant prowl for sugar.

There is, however, a fallback: ketone bodies, which are highly acidic compounds created when fatty acids are broken down for energy. The best-known ketone is acetone, as in the clear flammable liquid used to remove nail polish and scour metal surfaces before painting. Once thought to be waste products, ketones are in fact fuel—and fuel that can power the brain. There is evidence that the brain may even run more efficiently on ketones, perhaps because ounce for ounce they contain more energy than glucose. If so, this may account for the heightened sense of well-being and even euphoria that some fasters describe. From the faster's perspective, the only drawback to ketones is that the starving brain does not start using them immediately upon exhausting all available glucose. Instead, it nibbles on muscle for a while—two or three days—with dolorous results.

While my brain was dithering thus, further changes were occurring within me. My sense of smell had grown fantastically sharp. And the

blood vessels of my temples had begun pumping heartily. Previous fasts had taught me that over the next few days the pumping would become so robust that I would be able to count my pulse without putting finger to head. The first time I had experienced such throbbing, I worried that it portended stroke. But that proved hypochondriacal. My heart, I later learned, was merely working harder to compensate for a drop in blood pressure. Although the drop was harmless in the main, it had one danger: if I stood up too quickly, my blood might not stand up with me. The few doctors who prescribe fasting today say the greatest risk in a fast lies not where the layman might suppose—damage to stomach, say, or to liver, heart, and other such organs—but in a contusion or concussion brought about by fainting. The remedy is simple: when feeling light-headed, the faster sits or lies down immediately. I found this precept more sensible than a daily enema and honored it punctiliously.

In June of 1965 a Scotsman of twenty-seven years and thirty-two and a half stone, which is to say 456 pounds, presented himself at the Department of Medicine, Royal Infirmary, in Dundee, with the desire to lose weight. The fellows of the department, thinking the dire case might call for dire measures, suggested that not eating for a short period might help him control his appetite. They did not intend a prolonged fast. As recently as midcentury, some reference works still proclaimed the certain fatality of modest fasts. “Generally death occurs after eight days of deprivation of food,” *Funk and Wagnalls New Standard Encyclopedia* reported—in the same edition in which it reported fasts of forty and sixty days by great hunger artists of old. The Scotsman, known in the annals of science only as A.B., agreed to the fast, and the fellows hospitalized him as a precaution. For several days he took only water and vitamin pills. His vital signs were normal. He asked if he might continue his fast at home, and the doctors released him on condition that he

return for periodic tests of his urine and blood. The checkups were not intended to make sure he wasn’t sneaking food, but they had that incidental effect. One week disappeared into the next, taking with it, on par, five of A.B.’s pounds. His checkups showed that he had less sugar in his blood than a normal man, but his movements and thinking were not impaired.

Summer turned to fall, and fall to winter, but A.B. continued vigorous. During the fourth and fifth months, the fellows thought it prudent to supplement his daily vitamin with potassium, but that was all. They could find no reason to halt the fast, and A.B. was so determined to reach his target of 180 pounds that he probably would not have heard of it anyway. He celebrated a year without food with a glass of water. Seventeen days later, 276 pounds the lesser, he reached his mark. He ate, but not from hunger.

A.B. did not recidivate. Over the next five years, he added just sixteen pounds to his 180. His case was reported in the *Postgraduate Medical Journal* in 1973, and *The Guinness Book of Records* cited him for “Longest Fast,” although *Guinness* later removed the honor for fear of inspiring unsupervised imitators. “Heaviest Weight Dangled from a Swallowed Sword” remains.

By Thursday much of the odd in-my-head feeling had gone, but a moderate pain now assaulted my lower back. Some fasters believe this lumbago, a fasting commonplace, is caused by toxins dislodged by fats that are burned during a fast. Most toxins (so the hypothesis goes) are flushed out of the body via urine and sweat, but some take up an uncomfortable residence in the lower back. There is little evidence to support the lumbago hypothesis, but there is some evidence more generally that fasting detoxifies. For more than a week in 1984, sixteen Taiwanese victims of PCB poisoning were quasi-fasted (they ate nothing for one day and drank a modest amount of juice thereafter). Subsequently their PCB-induced migraines, hacking coughs, skin

pustules, hair loss, numbness, and joint pain either faded or disappeared entirely.

At noon I went for a walk with my wife, who told me I was frigid. I thought this unkind, particularly as I had let her rub my lower back most of the morning, but she clarified that my hand, which she was holding, was cold—an observation never before made of a human hand, living or dead, out of doors in a Tennessee August. By nightfall my feet would become cold, too, and I would have to wear socks to bed. Next day I took to wearing fleece outside and sometimes even in. My coldness, I surmised, was due to my lack of heat-generating digestion.

In the afternoon I went for a two-mile jog, as I had the previous three days, at a pace set by my nine-year-old dog. I felt fine. Later I tried touch football at a pace set by my seven-year-old son. I nearly collapsed. Similar experiments over coming days taught me that although I could exercise moderately for twenty, forty, even sixty minutes, just a few bursts of vigorous effort sent me gasping to the couch. I later read that such bursts are powered by glycogen, which I had used up days ago.

That night I weighed myself. I had not done so since starting the fast, because I wanted the satisfaction of seeing a substantial drop when finally I did. Even so, I wasn’t prepared when I took to the scale and the needle stopped just shy of 151. A decline of nine pounds—more than two a day? It wasn’t possible. Most fasters lose a pound and a half a day in their first week. Two is rare, let alone more than two. I dismounted, fiddled with the scale’s calibration, remounted. The needle stopped at 151. I did not protest further.

At that rate, I was pleased to calculate, I would reach 135 in just one more week, though I knew I wouldn’t maintain quite that rate. Fasters start like hares, thanks to the rapid emptying of the digestive tract and the initial loss of water, but after that they lope along. Still, if I had accelerated the first dash, it stood to reason that my lope would be accelerated too. I was certain that my daily exercise, which most

fasters forgo, had made the difference, and since I would keep exercising, I was equally certain I would see 135 in ten or twelve days rather than the three weeks I had originally envisioned. Clearly I was a fasting prodigy.

In the 1960s a professor of medicine at the University of Pennsylvania named Garfield G. Duncan became troubled by the epidemic of American obesity, which then afflicted a shocking one man in twenty and one woman in nine. (Today it afflicts one in three men and women alike.) Like other researchers, Duncan fasted obese patients and studied how many regained their lost weight. Unlike other researchers, he noticed that the blood pressure of every patient who was hypertensive fell to within normal limits during these fasts. He reported, for illustration, the case of a man of fifty-three years and 325 pounds whose unmedicated blood pressure was 210/130 and whose medicated pressure was 184/106—still menacingly high. The man fasted for fourteen days without drugs, and his blood pressure fell to 136/90. Six months later, it was 130/75. Duncan did not record how many of his patients sustained such improvements after their fasts, but the possibility of a simple cure for some forms of hypertension seemed well worth pursuing.

Not until 2001, however, was there a definitive follow-up to his work. Its author, Alan Goldhamer, had fasted thousands of patients at his TrueNorth Health Center in Santa Rosa, California, and had seen high blood pressures trill downward like Coast Range streams. He studied 174 hypertensives who fasted for ten days; 154 of them became normotensive by fast's end. The others also enjoyed substantial drops in pressure, and all who had been taking medication were able to stop. In patients with stage 3 (the most severe) hypertension, the average drop in systolic pressure was 60 mmHg. In all patients, the average drop in systolic/diastolic was 37/13. According to Goldhamer, this was and remains the largest reported drop in blood pressure achieved by any drug or therapy. Like Duncan, Goldhamer did not formally

study how long his subjects maintained their newly lowered blood pressures, but he surveyed forty-two subjects six months after their fasts, and their average blood pressure had risen hardly a jot.

His findings are all but unknown. A drug company can advertise its latest blood-pressure pill with a budget approximating that of the Kingdom of Belgium, but the promotional funds are somewhat less for a program in which people go to a low-cost clinic to receive a treatment consisting of, well, nothing. Then too, fasting labors under the hoary misapprehension that it is not only injurious but requires impossible willpower.

Not eat for a week? Most people would rather die.

To test his vow of celibacy, Gandhi slept in the nude with a nubile grandniece. He never advanced on her, but an involuntary emission could prompt weeks of self-recrimination. I lack a grandniece, but I recalled the Mahatma's test on the day I prepared a meal for my family. When starting my fast, I traded my traditional role of family chef for that of dishwasher. But as time passed, I missed cooking, so on Sunday, my seventh day, I made a trial of penne with olive oil and parmesan for my son. I was surprised that the meal aroused me not at all. On subsequent days I made pad thai, potato and leek soup, chickpea curry, and artichoke and feta pizza, all without yearning.

I was without yearning in other spheres too. My libido, which had been *de minimis* since Tuesday, had by the weekend become *defunctus*. I had foreseen this sorry state, another fasting commonplace, but it was still a wound. My avenues of recreation were being hedged in one by one. For paltry redress, the throb in my temples had disappeared, my clarity of mind had returned, and my sense of well-being was once more as intact as a writer's—a sexless writer's—could be.

That evening the scale registered 146 pounds, a decline of five pounds in three days, a rate only slightly less than that of my first four days. My waist had shrunk from what I guessed

was a pre-fast thirty-four inches—I hadn't checked in months for fear of what the horror might do to my heart—to less than thirty-two. On Monday I would search half a dozen stores for a new belt and find none. Evidently the circumference of East Tennessee Man ruled out an economy of scale for the thirty-inch belt. I finally found the right baldric in the boys' section. Over the next week I revisited the section for shirts and pants and paid cheerfully, for it is an economic fact that no one begrudges a new wardrobe so long as it is made of less fabric than the previous one.

Monday dawned flat, even depressive, an unexpected change from my keenness of the previous days. I felt sloth, and I harbored unkind thoughts of Upton Sinclair, a faster of some ardor, who wrote of one of his fasts, "No phase of the experience surprised me more than the activity of my mind: I read and wrote more than I had dared to do for years before"—a horrifying thought, since Sinclair wrote ninety-odd books in as many years.

At bedtime I weighed myself and was distressed to see 146, the same as the night before. I stepped off the scale, checked the calibration, exhaled vigorously to unburden myself of a few ounces, and stepped back on. The figure was unchanged.

This was a cheat. I had swum that morning, had taken a long sweaty dog walk in the afternoon, had moved furniture in the evening in preparation for renovations—and had done all despite appalling lethargy and grievous apathy. I had known there would be days when my weight would not move, but today, when I had struggled so heroically against the oppression of fasting?

I went to bed very much wanting a glass of Malbec.

I awoke Tuesday to the same mood and energy and at bedtime found my weight the same too. On debarking the accursed scale, my thoughts turned to Nanaimo bars, which consist of a layer of buttery graham-cracker crumbs topped by a layer of custard-flavored icing topped by a layer of melted chocolate. After

several defiantly luscious seconds, I clicked an X, trudged to bed, and pulled the comforter over my head.

In 1988 a cadre of young Fischer rats fasted every other day for a week, then were injected “intraperitoneally with 15 million Mat 13762 ascites tumor cells,” which is to say their abdomens were shot full of breast cancer. Another group who ate normally for a week were injected likewise. Nine days after the injections, four fifths of the normally fed rats were dead, but only one third of the fasters were. Come the next day, seven eighths of the feeders were dead, but just half of the fasters were. Two weeks after the injections, only one of the twenty-four feeders remained, but four of the twenty-four fasters were still alive. The researchers concluded that fasting every other day could dramatically slow the growth of breast cancer, at least in adolescent rats.

Other research confirmed that fasting could slow and even prevent cancer in certain lower mammals, although a handful of contradictory studies found that some fasted rodents fared worse against cancer than did their non-fasting peers. The reasons for the contradictory results have not been explained, but they were possibly the result of genetic differences between species and subspecies, and of differences in the duration and timing of the fasts.

In 1997 a promising series of follow-up studies began. In one, at the University of California, Los Angeles, baker’s yeast that was fasted was found to be protected from “oxidative insult.” By “oxidative insult,” researcher Valter Longo and his colleagues meant attacks by free radicals and other agents that damage DNA and thereby cause cancer and other ills. Somewhat paradoxically, oxidative insult also kills cancer—chemotherapy essentially insults cancer cells to death, oxidatively and otherwise. The trouble with chemotherapy, of course, is that it insults healthy cells to death too, and sometimes the patient with them. Hence the oncologist’s recurring dilemma of how to destroy the most cancer and the least patient.

The yeast study was promising in this regard because the fasting seemed to protect only healthy cells. To Longo, this raised an intriguing question: If a cancer patient fasted, would her healthy cells be protected from chemotherapy, while her cancerous cells were not? If so, could she be given a dose of chemotherapy that would kill more cancer without killing her?

Longo and his colleagues explored the theory through several studies. In one, from 2008, they fasted a group of mice for forty-eight hours, fed a control group normally, then gave both groups a monstrous dose of chemotherapy—proportionally three times the maximum amount given to humans. Ten days later, 43 percent of the fed group were dead, against only 6 percent of the fasted group. All the surviving feeders showed signs of toxicity—limited movement, hunched backs, ruffled hair—but the fasters looked healthy. Next, the researchers fasted a set of mice for sixty hours and fed another set normally before administering an even higher dose of chemotherapy. Within five days, all the control mice were dead while all the fasters were not only alive but free of visible toxicity. The researchers repeated the experiment, only this time injecting neuroblastomas, one of the most aggressive types of cancer, before the chemotherapy. In a week, half of the fed mice were dead of toxicity but more than 95 percent of the fasters were still alive. Longo theorized that the fasters thrived because when healthy cells are starved, they shift into survival mode—battening down, curbing their activities, repairing old wounds, and rejecting inputs they might otherwise accept, like chemotherapeutic drugs. Cancer cells know no such restraint. Their selfish mission is to grow at all cost, and even when their host is fasting they take inputs almost indiscriminately.

Longo’s group started a pilot trial in humans of fasting before chemotherapy, but ten cancer patients who did not want to wait for the results experimented on themselves. Each patient fasted for two or more days before chemotherapy, and some also fasted afterward. None experienced the weakness, fatigue, and gastroin-



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testinal misery they had suffered after previous chemotherapies. Whether fasting helped kill more of their cancer is, however, anyone's guess. Longo's pilot study yielded promising enough results for a larger trial to begin.

The American Cancer Society, vanguard of battlers against cancer, has received these and similarly propitious studies in a manner befitting what Herbert Shelton might have called *Scientific* tradition. "Available scientific evidence," the ACS has declared on its website, "does not support claims that fasting is effective for preventing or treating cancer. Even a short-term fast can have negative health effects, while fasting for a longer time could cause serious health problems. . . . In fact, some animal studies have found that actual fasting in which no food is eaten [for] several days could actually promote the growth of some tumors." The ACS buttressed its claim by citing just four studies while entirely ignoring the far larger body of contrary research.

As to why the ACS would oppose so potentially effective and so cheap an anticancer therapy, the Cancer Prevention Coalition, founded as a counterpoise to the cancer establishment, suggests on its website, "The American Cancer Society is fixated on damage control—diagnosis and treatment . . . with indifference or even hostility to cancer prevention. This myopic mindset is compounded by interlocking conflicts of interest with the cancer drug, mammography, and other industries." Donations from such industries have helped make the ACS one of the world's richest charities, with assets topping \$1 billion and executives earning up to \$2 million annually. If cancer patients remain in the dark about fasting's potential, what worry is it to the ACS? No pharmaceutical companies died of cancer last year.

On Wednesday, Thursday, and Friday—the tenth, eleventh, and twelfth days of my abnegation—my mood climbed somewhat from its low of earlier in the week. Life was not lustrous, but no longer was it gray. It

helped that I had finally dropped a pound on Wednesday and had kept declining, to 143 by Friday.

I was truly thinning now. My cheeks had taken on a runner's concavity, my abdomen was approaching plumb, and my legs could have been taken for a triathlete's. An unforeseen consequence of my rediscovered thinness, however, was that the rest of humanity looked fat to me. It is of course easy, fasting or no, to see fat in America, where, as in Bahrain, Chile, England, Germany, Hungary, Jordan, Mexico, Panama, Peru, Poland, Saudi Arabia, Turkey, and Uruguay, more than half of all adults are overweight. It is easier still to do so in Tennessee, where obesity afflicts one in three adults and garden-variety fat another one in three. But it was not only fat people who looked bloated to me now. The slightest bulge of tummy, the least hint of jowl repulsed me as a sign of reckless feeding. So quickly do we forget our former selves.

The objects of my repulsion reciprocated in kind—at least, they did on learning the reason for my atrophy. In the early going, I had not advertised my fast. Like the newly expectant mother, I was aware of the possibility of miscarriage and was not eager to receive the painful stream of condolences should the worst come to pass. But as my labor began to show, questions grew apace, and I had to confess.

"You're an extremist!" cried one of my brunchtime familiars—spitting forth flecks of whipped cream and nearly choking on her waffle—when apprised of my fast. I replied, purely to educate her, that her extreme devotion to three meals a day, every day, might earn her a tumor. In the same altruistic spirit, I said that since she had just passed fifty and was getting on in years, she might care to know that regular fasting showed potential as a means of retarding aging. She was sullen until her side of bacon arrived.

Among the more important studies on fasting's life-extending possibilities was a 1982 experiment by the National Institute on Aging in which rats were fasted every other day from weaning to death and lived

83 percent—83 percent—longer than the control group. In the seventy-eight years of the typical American life, 83 percent comes to sixty-five years. The rats had lived, in effect, 143 years.

In a later study, fasted mice lived 34 percent longer; in another, fasted rats gained 40 percent. Again, the discrepant outcomes were perhaps the result of genetic variation among species and subspecies, and of differences in when the animals started fasting. To test these possibilities, the NIA in 1989 divided each of three strains of mice into three subgroups, then fasted or fed them on different schedules. One subgroup in each strain was fasted every other day starting at six weeks old, which is adolescence for mice. Another subgroup was fasted starting at six months (young maturity). Another was fasted starting at ten months (middle age). Control subgroups were fed normally. The subgroups that fasted from adolescence lived 12 percent, 20 percent, and 27 percent longer than the controls. Those that fasted from young maturity lived a respective 2 percent, 19 percent, and 11 percent longer. But those that started in middle age lived, in the case of the first strain, 14 percent *shorter* than, or, in the case of the other two, the same length as the controls.

Not that all hope was lost for middle-aged rodents. They could take heart in a rosier study in which rats that started fasting in either middle age or elderhood lived, respectively, 36 percent and 14 percent longer than normally fed rats.

No one has figured out why animals of different species, subspecies, and ages respond so variously to fasting. Neither has anyone learned what might be done to extend rodent life spans still further. Would it help, say, to fast three days on, three days off, in perpetuity? To fast ten random days a month? To tweak a gene that is expressed by fasting? There has been almost no research on such questions. Nor has there been much effort to discover whether the benefits of fasting in *Rattus norvegicus* and *Mus musculus* might be enjoyed by *Homo sapiens*. This last oversight,

however, is understandable. Experimental outcomes are seldom strictly translatable across species, and the benefit to *Homo* may be a mere ten or twenty years instead of the sixty-five that *Rattus* got.

I continued to dwindle. By Wednesday, the seventeenth day of my fast, the report from the bathroom was 138, three pounds from home. So near, I considered for the first time whether I might care to fast longer—a month, say, or the Christly forty days, or even a few days more to out-Tanner Tanner.

I wasn't long deciding no. Endurance, even with my ugly swings of mood and energy, was not the problem. The problem was that I missed eating. I wanted the sensation of food in my mouth again—the textures, the flavors, the hots and colds, the surprises, even the disappointments. I also wanted the fellowship of eating. Sitting to meals with family and friends had been sociable enough at first, but in the end it had proved an inadequate substitute for companionship, a word whose roots *com* (with) and *pan* (bread) reveal its true meaning: breaking bread with others. Not breaking bread with my intimates, I was an outsider in their rite.

Then too I wanted the rest of my life back. I wanted to run more than a mile or two. I wanted to play touch football with my son. I wanted to play touch anything with my wife. Other people wanted things of me as well. In the previous few days, some persons, maybe one or two in my own family, had described me as irritable, even rude. On Wednesday, my son, himself a bit tetchy that evening, insulted first his mother and then his dinner, whereupon I told him, in a tone I usually reserve for the dog when he eats a whole pizza, to get out of my sight. My fast wasn't worth that price.

In 1993 the one-year-old son of the Hollywood director Jim Abrahams and his wife, Nancy, began having seizures. Few at first, the seizures soon numbered several a day, then a dozen, then more than a dozen. A barrage of medications

had almost no effect, and little Charlie stopped developing—cognitively and behaviorally. Five pediatric neurologists later, the Abrahamses opted for brain surgery, but it, too, failed to slow the seizures. So also the ministrations of two homeopaths and, all else having come to nothing, a faith healer. Charlie seemed destined for mental and physical retardation.

The Abrahamses, however, continued to sift through research on alternative treatments, and eventually they chanced upon a reference to a successful anti-epilepsy regimen that had been common decades ago but was now nearly extinct. Under the regimen, patients fasted for a few days, then ate a high-fat diet for a year or two, then returned to normal fare. It was, in essence, the 1920s therapy inspired by the work of H. Rawle Geyelin, which had since become known as the ketogenic diet—as in ketones, the favored fuel of the fasting body. One of the few places in the United States where the diet was still used was Johns Hopkins Children's Center. The Abrahamses were appalled that none of their doctors had mentioned it.

Charlie was twenty months old and weighed just nineteen pounds when he went to Hopkins for treatment. By then, notwithstanding the combined powers of Dilantin, Felbatol, Tegretol, and Tranxene, he was having dozens of seizures on most days. Sometimes he had as many as a hundred. On the second day of the ketogenic diet, the seizures stopped. His arrested development became unarrested, and he grew to adulthood as normally as his brother and sister.

A subsequent study would find that the ketogenic diet had been described in nearly every major textbook on epilepsy published between 1941 and 1980. Most of the texts even devoted an entire chapter to administering the diet, but evidently the taboo on fasting counted for more in doctors' minds than a successful treatment. The Abrahamses endeavored to change that. They founded the Charlie Foundation, which sponsors conferences and



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produces videos to enlighten doctors, dietitians, and parents. Jim Abrahams produced and directed a TV movie (. . . *First Do No Harm*) in which Meryl Streep, as the mother of an epileptic child, searches vainly for a cure until she happens upon the ketogenic diet. Thanks largely to the Abrahamses' efforts, the diet is now used in almost every major pediatric hospital in the United States. The number of epileptic children it might have helped over the past century but for

Scientific blindness makes for grim contemplation.

On Friday evening I became imbued with a mystical conviction that I had reached 135 pounds, even though I had not weighed myself since Wednesday's 138 pounds, and I had not lost three pounds over two days in more than a week. My faith in mysticism being what it is, I put off my rendezvous with the scale until nearly midnight, the better to wring every ounce-reducing minute from the day. When finally I stood before the machine, I offered a silent prayer to Venus, whose planet rules Libra, bearer of scales, and within whose power it not incidentally lies to bestow a pleasing form. In case the goddess was in a more Grecian than Roman mood, I appealed to Aphrodite as well. I closed my eyes, stepped up, and made sure my feet were properly placed, nothing hanging over the edge. I did not want to look down and find an agreeable number only to discover on repositioning that it was a fraud. I opened my eyes and looked. The needle rested at 135.

This was highly promising, but not, I cautioned myself, conclusive. I examined the position of my toes more carefully. All constituent parts were on the scale. I stepped off, recalibrated, stepped back on, wiggled around so that the needle wiggled with me, and stood as still as my welling excitement would permit. The number remained—135.

Just nineteen days ago I had been a middleweight. I had, in the interim, slimmed to super welterweight, to welterweight, to super lightweight,

and now, at blessed last, to lightweight. I could have KO'd Roberto Duran just then.

I was not the least surprised on Saturday morning when the scale reported 136, the first gain of my fast. During the night I had thought wantonly of food, so it was to be expected that the thoughts would have added a pound. I appraised myself one last time in the full-length mirror. It revealed a stomach that would commonly be called flat, though in fact two ridges of muscle showed through my abdomen. They left me four cans shy of a six-pack, but they endeared themselves to me all the same. My legs were thew and sinew, my tuchis perky. If it was true that my arms were stickish and my chest boyish, I could take consolation in the fact that I was married and didn't have to be attractive to anyone.

It would have been nice to know whether my fast had done for my insides what it had done for my outsides. Had the walls of my arteries become smooth as spaghetti? Had my cells repaired mutant DNA that might otherwise have grown into a tumor? I didn't have the money to test those questions laboratorily, but not knowing had its advantages. In my ignorance, I was like a fund-raiser for the American Cancer Society and could believe whatever I wanted about fasting. I decided the fast had put off Alzheimer's by five years.

I breakfasted at lunch, a few hours short of twenty days. Notwithstanding my desire for mealtime companionship, I dined alone. My fast had been an essentially solitary endeavor, and it seemed fitting that my departure from it should be, too. After heated internal debate, I had chosen for my first course applesauce that my wife had made from our backyard apple tree. I took a spoonful. What occurred within me with this first taste was what occurred in the Starburst commercials of old, the ones in which liquid explosions of kaleidoscopic joy burst forth from the actors' mouths. It was an inundation. I took another spoonful, then another, each yielding the same joyful psychedelia. I waited ten minutes to see whether my stomach would approve, and

when it offered no objection, I gave it a handful of Rainier cherries. These, too, were a wonder—every one its own dessert. Thereafter, at intervals of an hour or two, I took a modest helping of fruit or vegetable, and none was less than stupendous in its savor. I capped my resurrective day with a soup of squash and ginger, though it might have been of ambrosia and nectar. By night's end I weighed a tad over 137.

At a family reunion the next day, I moved up the food chain to deviled eggs. Also potato cream casserole. Also fried okra. There were other coronary assailants, but they were lost to memory after a few slices of pumpkin pie. I am confident about subsuming the number six in "a few," since any rational response to pumpkin pie would be to eat ten or twelve slices. My stomach, however, did not rationally respond. It told me I had overdone it well before the scale said so that evening. Specifically, the scale said 140.

A good night's sleep, however, quieted my stomach, and I resumed eating with what an impartial observer might have called abandon. By Tuesday I weighed 142 pounds. At that rate, I calculated, I would weigh 940 on the one-year anniversary of my fast. I returned to clicking X's, at least on the more gluttonous of my desires, and my weight leveled.

Two years have passed since my great fast, and although my girth has fluctuated a bit, I have kept it in check with short fasts and such exercise as a bum knee permits. Like the Scotsman A.B., I have not recidivated. At press time I weighed 140 pounds.

My thoughts have turned often since my fast to the rats that fasted every other day and lived, in effect, 143 years. I have thought too of the less fortunate mice that started fasting in middle age and gained not an hour for their trouble—or, worse, lost a few ticks. But I have also thought of their more fortunate cousins that started in middle age, or even dotage, and gained what amounted to years. I have wondered: Is a man in midlife more a lucky rodent or an unlucky one?

There was only one way to find out. ■