

How Not to Die: Discover the Foods Scientifically Proven to Prevent and Reverse Disease (Greger, Michael, MD;Stone, Gene)

The U.S. health care system runs on a fee-for-service model in which doctors get paid for the pills and procedures they prescribe, rewarding quantity over quality.

Only a quarter of medical schools appear to offer a single dedicated course on nutrition.

During my medical training, I was offered countless steak dinners and fancy perks by Big Pharma representatives, but not once did I get a call from Big Broccoli.

But for most of the leading causes of death, the science shows that our genes often account for only 10–20 percent of risk at most.

The Mayo Clinic estimates that nearly 70 percent of Americans take at least one prescription drug.<sup>18</sup> Yet despite the fact that more people in this country are on medication than aren't, not to mention the steady influx of ever newer and more expensive drugs on the market, we aren't living much longer than others. In terms of life expectancy, the United States is down around twenty-seven or twenty-eight out of the thirty-four top free-market democracies. People in Slovenia live longer than we do.<sup>19</sup> And the extra years we are living aren't necessarily healthy or vibrant.

We're actually living fewer healthy years now than we once did.

The researchers also noted that we're living two fewer functional years—that is, for two years, we're no longer able to perform basic life activities, such as walking a quarter of a mile, standing or sitting for two hours without having to lie down, or standing without special equipment.<sup>21</sup> In other words, we're living longer, but we're living sicker. With these rising disease rates, our children may even die sooner.

Take meat, for example. To see what effect an increase in meat consumption might have on disease rates, researchers studied lapsed vegetarians. People who once ate vegetarian diets but then started to eat meat at least once a week experienced a 146 percent increase in odds of heart disease, a 152 percent increase in stroke, a 166 percent increase in diabetes, and a 231 percent increase in odds for weight gain. During the twelve years after the transition from vegetarian to omnivore, meat-eating was associated with a 3.6 year decrease in life expectancy.<sup>39</sup>

To this end, a dietary quality index was developed that simply reflects the percentage of calories people derive from nutrient-rich, unprocessed plant foods<sup>41</sup> on a scale of zero to one hundred. The higher people score, the more body fat they may lose over time<sup>42</sup> and the lower their risk may be of abdominal obesity,<sup>43</sup> high blood pressure,<sup>44</sup> high cholesterol, and high triglycerides.

The truth is that adhering to just four simple healthy lifestyle factors can have a strong impact on the prevention of chronic diseases: not smoking, not being obese, getting a half hour of exercise a day, and eating healthier—defined as consuming more fruits, veggies, and whole grains and less meat. Those four factors alone were found to account for 78 percent of chronic disease risk.

In a study funded in part by the U.S. Department of Defense, they found that three months of whole-food, plant-based nutrition and other healthy changes could significantly boost telomerase activity, the only intervention ever shown to do so.<sup>69</sup> The study was published in one of the most prestigious medical journals in the world. The accompanying editorial concluded that this landmark study “should encourage people to adopt a healthy lifestyle in order to avoid or combat cancer and age-related diseases.”

A five-year follow-up study was recently published in which the lengths of the study subjects’ telomeres were measured. In the control group (the group of participants who did not change their lifestyles), their telomeres predictably shrank with age. But for the healthy-living group, not only did their telomeres shrink less, they grew. Five years later, their telomeres were even longer on average than when they started,

suggesting a healthy lifestyle can boost telomerase enzyme activity and reverse cellular aging.

In contrast, individuals on the plant-based diet exercised only half as much, enjoyed the same amount of weight loss after just three months,<sup>73</sup> and achieved significant telomere protection.<sup>74</sup> In other words, it wasn't the weight loss and it wasn't the exercise that reversed cell aging—it was the food.

That one unifying diet found to best prevent and treat many of these chronic diseases is a whole-food, plant-based diet, defined as an eating pattern that encourages the consumption of unrefined plant foods and discourages meats, dairy products, eggs, and processed foods.

Treating the cause is not only safer and cheaper but it can work better. So why don't more of my medical colleagues do it? Not only were they not trained how, doctors don't get paid for it. No one profits from lifestyle medicine (other than the patient!), so it's not a major part of medical training or practice.<sup>96</sup> That's just how the current system works. The medical system is set up to financially reward prescribing pills and procedures, not produce.

Just because you're born with bad genes doesn't mean you can't effectively turn them off. As you'll see in the breast cancer and Alzheimer's disease chapters, even if you're born with high-risk genes, you have tremendous control over your medical destiny. Epigenetics is the hot new field of study that deals with this control of gene activity.

Immigration studies show that this resistance to heart disease is not just something in the Africans' genes. When people move from low-risk to high-risk areas, their disease rates skyrocket as they adopt the diet and lifestyle habits of their new homes.<sup>5</sup> The extraordinarily low rates of heart disease in rural China and Africa have been attributed to the extraordinarily low cholesterol levels among these populations.

These included studies not only on fish oil supplements but also studies on the effects of advising people to eat more oily fish. What did they find? Overall, the researchers found no protective benefit for overall

mortality, heart disease mortality, sudden cardiac death, heart attack, or stroke.<sup>12</sup>

After putting all the studies together, researchers concluded that there was no longer justification for the use of omega-3s in everyday clinical practice.<sup>18</sup>

To drastically reduce LDL cholesterol levels, you need to drastically reduce your intake of three things: trans fat, which comes from processed foods and naturally from meat and dairy; saturated fat, found mainly in animal products and junk foods; and to a lesser extent dietary cholesterol, found exclusively in animal-derived foods, especially eggs.<sup>26</sup>

In his editorial “It’s the Cholesterol, Stupid!” Dr. Roberts argued (as noted earlier) that there is only one true risk factor for coronary heart disease: cholesterol.<sup>27</sup> You could be an obese, diabetic, smoking couch potato and still not develop atherosclerosis, he argues, as long as the cholesterol level in your blood is low enough.

Dr. Roberts hasn’t only been editor in chief of the American Journal of Cardiology for more than thirty years; he’s the executive director of the Baylor Heart and Vascular Institute and has authored more than a thousand scientific publications and written more than a dozen textbooks on cardiology.

The optimal LDL cholesterol level is probably 50 or 70 mg/dL, and apparently, the lower, the better. That’s where you start out at birth,

An LDL around 70 mg/dL corresponds to a total cholesterol reading of about 150, the level below which no deaths from coronary heart disease were reported in the famous Framingham Heart Study,

The average cholesterol for people living in the United States is much higher than 150 mg/dL; it hovers around 200 mg/dL. If your blood test results came back with a total cholesterol of 200 mg/dL, your physician might reassure you that your cholesterol is normal. But in a society where it’s normal to die of heart disease, having a “normal” cholesterol level is probably not a good thing.

To become virtually heart-attack proof, you need to get your LDL cholesterol at least under 70 mg/dL.

Plant-based diets have been shown to lower cholesterol just as effectively as first-line statin drugs, but without the risks.

Their patients' heart disease started to reverse. These patients were getting better. As soon as they stopped eating an artery-clogging diet, their bodies were able to start dissolving away some of the plaque that had built up. Arteries opened up without drugs or surgery, even in some cases of patients with severe triple-vessel heart disease. This suggests their bodies wanted to heal all along but were just never given the chance.<sup>40</sup>

Medicine can offer tremendous relief, but it's not doing anything to treat

Medicine can offer tremendous relief, but it's not doing anything to treat the underlying cause.

We've known for nearly two decades that a single fast-food meal—Sausage and Egg McMuffins were used in the original study—can stiffen your arteries within hours, cutting in half their ability to relax normally.<sup>43</sup>

Unhealthy meals don't just cause internal damage decades down the road but right here and now, within hours of going into your mouth.

Certain foods, such as meats, appear to harbor bacteria that can trigger inflammation dead or alive, even when the food is fully cooked. Endotoxins are not destroyed by cooking temperatures, stomach acid, or digestive enzymes, so after a meal of animal products, these endotoxins may end up in your intestines. They are then thought to be ferried by saturated fat across the gut wall into your bloodstream, where they can trigger the inflammatory reaction in your arteries.<sup>44</sup>

This rapid resolution in chest pain occurred well before their bodies could have cleared the plaque from their arteries, suggesting plant-based diets don't just help clean out arteries but also improve their day-to-day function. In contrast, control-group patients who were instead

told to follow the advice of their doctors had a 186 percent increase in angina attacks.<sup>47</sup>

It was one of the craziest findings I'd ever seen. Researchers from—where else?—Brazil gave ten men and women a single meal containing between one and eight Brazil nuts. Amazingly, compared to the control group who ate no nuts at all, just a single serving of four Brazil nuts almost immediately improved cholesterol levels. LDL—the “bad”—cholesterol levels were a staggering twenty points lower just nine hours after eating the Brazil nuts.<sup>51</sup> Even drugs don't work nearly that fast.<sup>52</sup>

Even a month after ingesting a single serving of Brazil nuts, their cholesterol levels stayed down.

Researchers have found that kale—that dark-green, leafy vegetable dubbed the “queen of greens”—might help control cholesterol levels.

Curcumin, the bright-yellow pigment in turmeric.

Data going back fifty years show that a high intake of fruits and vegetables is positively associated with good lung function.<sup>36</sup> Just one extra serving of fruit each day may translate into a 24 percent lower risk of dying from COPD.<sup>37</sup> On the other hand, a twin pair of studies from Columbia and Harvard Universities found that consumption of cured meat—like bacon, bologna, ham, hot dogs, sausage, and salami—may increase the risk of COPD.<sup>38</sup>

While the pathology of stroke and Alzheimer's are different, one key factor unites them: Mounting evidence suggests that a healthy diet may help prevent them both.

Just as with heart disease, a healthy diet can reduce stroke risk by reducing cholesterol and blood pressure while improving blood flow and antioxidant capacity.

A number of studies now show that high fiber intake may also help ward off stroke.

How does fiber protect the brain? We're not exactly sure. We do know that fiber helps control your cholesterol<sup>14</sup> and blood sugar levels,<sup>15</sup> which can help reduce the amount of artery-clogging plaque in your brain's blood vessels.

If you really want to be proactive, the best available science<sup>20</sup> suggests you can minimize stroke risk by eating a minimum of 25 grams a day of soluble fiber (fiber that dissolves in water, typically found in beans, oats, nuts, and berries) and 47 daily grams of insoluble fiber (fiber that does not dissolve in water, found primarily in whole grains, such as brown rice and whole wheat).

What are some of the truly potassium-rich foods? The healthiest common whole-food sources are probably greens, beans, and sweet potatoes.<sup>28</sup>

What does potassium have to do with stroke? A review of all the best studies on the relationship between potassium and our top-two killers, heart disease and stroke, determined that a 1,640 mg increase per day in potassium intake was associated with a 21 percent reduction in stroke risk.<sup>26</sup>

Good news for all you orange lovers: Citrus fruit intake has been associated with reduced stroke risk—even more so than apples.

Lack of sleep, or even too much of it, is associated with increased stroke risk.<sup>32</sup> But how much sleep may be too little? How much too much?

They followed nearly 100,000 middle-aged men and women for fourteen years. Compared with people who slept an average of seven hours per night, subjects who got four hours of sleep or less, or ten hours or more, had roughly a 50 percent greater likelihood of dying from a stroke.<sup>33</sup>

Higher stroke rates were found among individuals sleeping six hours or less, or nine hours or more. Those at lowest risk got around seven or eight hours of sleep a night.<sup>34</sup> Large studies in Europe,<sup>35</sup> China,<sup>36</sup> and elsewhere<sup>37</sup> have confirmed that seven or eight hours appears to be associated with the lowest risk.

Think about our two most popular fruits: apples and bananas. They turn brown quickly, which means there aren't a lot of antioxidants inside them.

One of the diseases antioxidant-rich foods may help prevent is stroke. Swedish researchers followed more than thirty thousand older women over a period of a dozen years and found that those who ate the most antioxidant-rich foods had the lowest stroke risk.

<http://bit.ly/antioxidantfoods>

On average, plant foods contain sixty-four times more antioxidants than animal foods.

Antioxidant-rich diets appear to protect against stroke by preventing the circulation of oxidized fats in the bloodstream that can damage the sensitive walls of small blood vessels in the brain.<sup>52</sup>

They can also help decrease artery stiffness,<sup>53</sup> prevent blood clots from forming,<sup>54</sup> and lower blood pressure<sup>55</sup> and inflammation. Free radicals can disfigure proteins in our bodies to the extent they become unrecognizable by our immune systems.<sup>56</sup> The inflammatory response this triggers can be prevented by saturating our bodies with sufficient antioxidants.

A study of three hundred Alzheimer's patients found that treating vascular risk factors, such as high cholesterol and blood pressure, may even slow the progression of the disease but not stop it.<sup>78</sup> That's why prevention is the key. Cholesterol doesn't just help generate atherosclerotic plaques within your brain arteries; it may help seed the amyloid plaques that riddle the brain tissue of Alzheimer's victims.<sup>79</sup>

Consuming excess cholesterol, and especially trans and saturated fats, can raise your blood cholesterol level.<sup>80</sup> Too much cholesterol in your blood is not only considered the primary risk factor for heart disease<sup>81</sup> but is also unanimously recognized as a risk factor for Alzheimer's disease.



Excess cholesterol in the blood can lead to excess cholesterol in the brain, which may then help trigger the clumping of amyloid seen in Alzheimer's brains.

And indeed, advanced brain imaging techniques, such as PET scans, have shown a direct correlation between the amount of LDL ("bad") cholesterol in the blood and amyloid buildup in the brain.<sup>86</sup>

In the United States, those who don't eat meat (including poultry and fish) appear to cut their risk of developing dementia in half. And the longer meat is avoided, the lower dementia risk may fall.

The highest frequency of the ApoE4 variant occurs in Nigerians,<sup>102</sup> who surprisingly also have some of the lowest rates of Alzheimer's.<sup>103</sup> Wait a second. The population with the highest rate of the "Alzheimer's gene" has one of the lowest rates of Alzheimer's disease? This contradiction may be explained by Nigerians' extremely low blood-cholesterol levels, thanks to a diet low in animal fat<sup>104</sup> and consisting mainly of grains and vegetables.<sup>105</sup> So, it seems, diet can trump genetics.

Consider that in one study of a thousand people over a period of two decades, the presence of the ApoE4 gene, unsurprisingly, was found to more than double the odds of Alzheimer's. But in those same subjects, high blood cholesterol was found to nearly triple the odds. The researchers suspect that controlling such risk factors as high blood pressure and cholesterol could substantially reduce the risk of Alzheimer's, dropping the odds from up around ninefold with the dreaded, double-barreled ApoE4 down to just twice the risk.<sup>106</sup>

These results suggest that simply eating a handful of berries every day, one easy and delicious dietary tweak, may slow your brain's aging by more than two years.

Even just drinking fruit and vegetable juices may be beneficial. A study that followed nearly two thousand people for about eight years found that people who drank fruit and vegetable juices regularly appeared to have a 76 percent lower risk of developing Alzheimer's disease. "Fruit and vegetable juices may play an important role in delaying the onset of

Alzheimer's disease," the researchers concluded, "particularly among those who are at high risk for the disease."<sup>121</sup>

AGE is an appropriate acronym, as they are considered "gerontotoxins,"<sup>139</sup> meaning aging toxins (from the Greek geros, meaning "old age," as in "geriatric"). AGEs are thought to accelerate the aging process by cross-linking proteins together, causing tissue stiffness, oxidative stress, and inflammation. This process may play a role in cataract formation and macular degeneration in the eye, as well as damage to the bones, heart, kidneys, and liver.<sup>140</sup> They may also impact the brain, appearing to accelerate the slow shrinkage of your brain as you age<sup>141</sup> and suppressing your sirtuin defenses.<sup>142</sup>

Where are these AGEs coming from? Some are produced and detoxified naturally in your body,<sup>146</sup> but other than cigarette smoke,<sup>147</sup> major sources are "meat and meat-derived products" exposed to dry-heat cooking methods.<sup>148</sup> AGEs are formed primarily when fat- and protein-rich foods are exposed to high temperatures.<sup>149</sup>

In general, meat, cheese, and highly processed foods had the highest AGE content, and grains, beans, breads, vegetables, fruits, and milk had the least.<sup>150</sup> The top-twenty most AGE-contaminated products per serving tested were various brands of: 1. BBQ chicken 2. Bacon 3. Broiled hot dog 4. Roasted chicken thigh 5. Roasted chicken leg 6. Pan-fried steak 7. Oven-fried chicken breast 8. Deep-fried chicken breast 9. Stir-fried steak strips 10. McDonald's Chicken Selects breast strips 11. Pan-fried turkey burger 12. BBQ chicken 13. Oven-fried fish 14. McDonald's Chicken McNuggets 15. Broiled chicken 16. Pan-fried turkey burger 17. Baked chicken 18. Pan-fried turkey burger 19. Boiled hot dog 20. Broiled steak<sup>151</sup>

Yes, cooking methods matter. A baked apple has three times more AGEs than a raw apple, and a broiled hot dog has more than a boiled hot dog.

But the source is what matters most: a baked apple has 45 units of AGEs compared to a raw apple's 13 units, while a broiled hot dog has 10,<sup>143</sup> units compared to a boiled hot dog's 6,<sup>736</sup>.

Meat averages about 20 times more AGEs than highly processed foods like breakfast cereals and about 150 times more than fresh fruits and vegetables. Poultry was the worst, containing about 20 percent more AGEs than beef. The researchers concluded that even a modest reduction in meat intake could realistically cut daily AGE intake in half.<sup>152</sup>

But the key is starting early. High cholesterol and high blood pressure may begin hurting your brain as early as your twenties. By your sixties and seventies, when the damage can become apparent, it may already be too late.

Like so many other organs, the brain possesses a miraculous ability to heal itself, to forge new synaptic connections around old ones, to learn and relearn. That is, however, if you don't keep damaging it three times a day. A wholesome diet and exercise may offer your best hope for remaining sharp and healthy into your twilight years.

Only a small percentage of all human cancers are attributable to purely genetic factors. The rest involve external factors, particularly our diet.<sup>2</sup>

But, in its early stages, colorectal cancer rarely causes symptoms. If the cancer is not caught until later stages, treatment is more difficult and less effective. Starting at age fifty until age seventy-five, you should either get stool testing every year, stool testing every three years plus a sigmoidoscopy every five years, or a colonoscopy every ten years.

How long it takes food to get from one end to the other can depend on gender and dietary habits. Food goes through men eating plant-based diets in just a day or two, but this transit time takes as long as five or more days among those eating more conventional diets.

You can measure your own oral-anal transit time by eating some beets and noting when your stools turn pink. If that takes less than twenty-four to thirty-six hours, you're probably meeting the healthy half-pound target.<sup>23</sup>

The standard American diet may therefore be a double whammy when it comes to colorectal cancer: Meat contains the type of iron (heme) particularly associated with colorectal cancer<sup>37</sup> but lacks, as do refined plant foods, the phytates to extinguish these iron-forged free radicals.

Phytates may also help protect against colorectal cancer. A six-year study of about thirty thousand Californians found that higher meat consumption was associated with higher risk of colon cancer. Unexpectedly, white meat appeared to be worse. Indeed, those who ate red meat at least once each week had about double the risk of developing colon cancer; that risk appeared to triple, however, for those who ate chicken or fish once or more a week.<sup>45</sup> Eating beans, an excellent source of phytates, was found to help mediate some of that risk, so your colon cancer risk may be determined by your meat-to-vegetable ratio.

The National Cancer Institute's Polyp Prevention Trial found that those who increased their bean consumption by even less than one-quarter cup a day appeared to cut their odds of precancerous colorectal polyp recurrence by up to 65 percent.<sup>47</sup>

The scientists came to the same conclusion as the Harvard researchers: Meat consumption was associated with increased risk of dying from cancer, dying from heart disease, and dying prematurely in general.

What does meat contain that may raise the risk of premature death? One of the possibilities is heme iron, the form of iron found predominantly in blood and muscle. Because iron can generate cancer-causing free radicals by acting as a pro-oxidant,<sup>67</sup> iron can be considered a double-edged sword—too little of it and you risk anemia, too much and you may increase risk of cancer and heart disease.

But this thermostat-like system only works effectively with the primary source of iron in the human diet: the nonheme iron variety found predominantly in plant foods. Once you have a sufficient amount of iron in your blood, your body is about five times more effective at blocking the absorption of excess iron from plant foods than from animal foods.<sup>69</sup>

## Getting Enough Iron on a Plant-Based Diet

The healthiest sources of iron are whole grains, legumes, nuts, seeds, dried fruits, and green, leafy vegetables. Avoid drinking tea with meals, as that can inhibit iron absorption. Consuming vitamin C-rich foods can improve iron absorption. The amount of vitamin C in a single orange can enhance iron absorption as much as three- to sixfold, so those trying to boost their iron absorption should reach for some fruit instead of a cup of tea.<sup>80</sup>

The consumption of fat from all animal sources was significantly associated with pancreatic cancer risk, but no correlation was found with the consumption of plant fats.<sup>84</sup>

That's how we're now learning about the potential cancer-causing effects of poultry viruses. There has been long-standing concern about the possibility that wart-causing chicken cancer viruses are being transmitted to the general population through the handling of fresh or frozen chicken.<sup>87</sup> These viruses are known to cause cancer in the birds, but their role in human cancers is unknown. This concern arises out of studies that show that people who work in poultry slaughtering and processing plants have increased risk of dying from certain cancers.

The study found that those who slaughter chickens have about nine times the odds of both pancreatic cancer and liver cancer.<sup>88</sup> To put this result in context, the most carefully studied risk factor for pancreatic cancer is cigarette smoking. But even if you smoked for fifty years, you'd have "only" doubled your odds of getting pancreatic cancer.<sup>89</sup>

What about people who eat chicken?

The largest study to ever address that question is the European Prospective Investigation into Cancer and Nutrition (EPIC) study, which followed 477,000 people for about a decade. The researchers found a 72 percent increased risk of pancreatic cancer for every fifty grams of chicken consumed daily.<sup>90</sup> And that's not much meat, under two ounces—just about a quarter of a chicken breast.

The researchers expressed surprise that it was the consumption of poultry—not red meat—that was more closely tied to cancer. When a similar result was found for lymphomas and leukemias, the same EPIC research team acknowledged that while the growth-promoting drugs fed to chickens and turkeys could be playing a role, it might also be cancer viruses found in poultry.<sup>91</sup>

As a dark-green, leafy vegetable, kale is not only one of the most nutrient-dense foods on the planet—it may also help fight off infection.

The study showed that people who take probiotic supplements may indeed have significantly fewer colds, fewer sick days, and fewer overall symptoms.<sup>47</sup>

The researchers concluded: “Consumption amounts of beef, pork, chicken, and dairy products could explain the daily excretion amount of several antibiotics in urine.”<sup>149</sup> These antibiotic levels can be lowered, however, after merely five days of removing meat from the diet.<sup>150</sup>

Fortunately, there may be an even better tool than BMI that we can use to gauge the health risks of body fat. It’s called Waist-to-Height Ratio, or WHtR.<sup>120</sup> Instead of a scale, grab a simple measuring tape. Stand up straight and take a deep breath, exhale, and let it all hang out. The circumference of your belly (halfway between the top of your hip bones and the bottom of your rib cage) should be half your height—ideally, less. If that measurement is more than half your height, it’s time to start eating healthier and exercising more regardless of your weight.<sup>121</sup>

Such chronic diseases as diabetes are now the principal cause of death and disability in America, consuming three-quarters of the nation’s health care budget.

The number-one risk factor for death in the world they identified is high blood pressure.

It kills so many people because it contributes to deaths from a variety of causes, including aneurysms, heart attacks, heart failure, kidney failure, and stroke.

The fact that hypertension can damage so many organ systems and increase the risk of heart disease and stroke, two of our leading killers, explains why it is the number-one killer risk factor worldwide.

Just like having too much cholesterol or body fat, there are benefits to having a blood pressure that is even lower than the “normal” range. So even people who start out with a so-called normal blood pressure of 120/80 appear to benefit from going down to 110/70.

The two most prominent dietary risks for death and disability in the world may be not eating enough fruit and eating too much salt. Nearly five million people appear to die every year as a result of not eating enough fruit,<sup>16</sup> while eating too much salt may kill up to four million.<sup>17</sup>

In studies of two of the most important arteries in the body, the coronary arteries that feed the heart and the carotid arteries that feed the brain, people who ate the most whole grains had significantly slower narrowing of their arteries.<sup>90,91</sup> Since atherosclerotic plaque in the arteries is our leading killer, ideally, you should not just slow down the process but actually stop or even reverse it altogether.

As we discussed earlier, the ideal blood pressure, defined as the level at which lowering it further yields no additional benefit, is probably around 110/70.<sup>96</sup>

There appears to be a stepwise drop in hypertension rates the more plant-based foods you eat. Based on the same study of eighty-nine thousand Californians featured in chapter 6, compared with people who eat meat more than once a week, flexitarians (those who eat less meat, perhaps a few times a month) had 23 percent lower rates of high blood pressure. Those who cut out all meat except for fish had a 38 percent lower risk of high blood pressure, and those who cut out all meat had a 55 percent lower rate. People who cut out all meat, eggs, and dairy did the best, with a 75 percent reduced risk of high blood pressure. Those

eating completely plant-based diets appeared to have thrown three-quarters of their risk for developing this major killer out the window.

To find an omnivorous group that fit and trim, researchers recruited long-distance endurance athletes who had run, on average, forty-eight miles per week for twenty-one years. Running almost two marathons a week for twenty years, pretty much anyone can become as slim as a plant eater no matter what they eat! The researchers then compared these hard-core athletes to two groups: sedentary meat eaters who exercised less than an hour per week and sedentary vegans who ate mostly unprocessed, uncooked plant foods. How did the numbers come out? Not surprisingly, the endurance runners on a standard American diet had a better blood pressure average than their sedentary, meat-eating counterparts: 122/72 compared with 132/79, which fits the definition of prehypertensive. But the sedentary vegans? They averaged an extraordinary 104/62.<sup>115</sup>

Ground flaxseeds alone “induced one of the most potent blood-pressure-lowering effects ever achieved by a dietary intervention.”<sup>116</sup> Eating just a few tablespoons a day appears to be two to three times more powerful than adopting an aerobic endurance exercise program<sup>117</sup> (not that you shouldn’t do both—incorporate flaxseeds into your diet and exercise).

In addition to their anticancer properties, flaxseeds have been demonstrated in clinical studies to help control cholesterol, triglyceride, and blood sugar levels; reduce inflammation, and successfully treat constipation.<sup>127</sup>

Hibiscus ranked number-one, beating out other heavyweights, including the oft-lauded green tea.<sup>128</sup> Within an hour of consumption, the antioxidant power of your bloodstream shoots up, demonstrating that the antioxidant phytonutrients in the tea are absorbed into your system.<sup>129</sup>



Meanwhile, in the Tufts study, a cup of hibiscus tea with each meal managed to lower subjects' systolic blood pressure by six points over the control group.<sup>137</sup>

Drug companies rake in more than \$10 billion a year from blood pressure medications.<sup>145</sup>

About five years ago, one of the gospels of sports physiology got turned on its head—all because of beet juice. Nitrates, concentrated in green, leafy vegetables and beets, not only help deliver oxygenated blood to your muscles by helping dilate your arteries but also enable your body to extract more energy from that oxygen—something never before thought possible. For example, one little shot of beet juice has been found to allow free divers to hold their breath for a half minute longer than usual.<sup>156</sup> After sipping beet juice, cyclists were able to perform at the same level of intensity while consuming 19 percent less oxygen than the placebo group. Then, when they ramped up their bike resistance for an intense bout of what they called “severe cycling,” the time to exhaustion was extended from 9:43 minutes to 11:15 minutes. The beet-juice-drinking group exhibited greater endurance while using less oxygen. In short, the beet juice made the bikers' bodies' energy production significantly more efficient. No drug, steroid, supplement, or intervention had ever before been shown to do what beet juice could do.<sup>157</sup>

This effect works with whole beets too. In another study, men and women eating one and a half cups of baked beets seventy-five minutes before running a 5K race improved their running performance while maintaining the same heart rate and even reported less exertion.<sup>158</sup> Faster time with less effort? Them's some block-rockin' beets!

To maximize athletic performance, the ideal dose and timing appears to be a half cup of beet juice (or three three-inch beets, or a cup of cooked spinach<sup>159</sup>) two to three hours before a competition.<sup>160</sup>

There actually appears to be a beneficial effect on overall mortality by drinking some alcohol—but only, it seems, for those who are not taking good care of themselves already.<sup>17</sup>

Moderate drinking does appear to protect against heart disease, perhaps because of a blood-thinning effect,<sup>18</sup> but even light drinking (less than one drink a day) has been found to increase cancer risk, as you'll see in chapter 11.

One to two drinks a day did lower the risk of heart disease for the “couch potatoes,” those living unhealthy lifestyles. But people who practiced even the bare minimum of healthy behaviors showed no benefit from alcohol.

Here's a simple recipe for a whole-food version of a tasty cranberry beverage, what I call my Pink Juice: 1 handful fresh or frozen cranberries 2 cups water 8 teaspoons erythritol (a naturally derived low-calorie sweetener; read more about erythritol and other sweeteners in part 2) Place all the ingredients in a blender and blend at high speed. Pour over ice and serve. At just twelve calories, this recipe has twenty-five times fewer calories and at least eight times more phytonutrients than typical cranberry juice drinks.<sup>80</sup>

For an extra boost, blend in some fresh mint leaves. You'll get a weird-looking green foam on top, but not only will it taste good, you'll be happy to know that you're chugging down berries and dark, leafy greens, two of the healthiest foods on the planet. Bottoms up!

After following more than sixty thousand people for more than a dozen years, University of Oxford researchers found that those who consume a plant-based diet are less likely to develop all forms of cancer combined. The greatest protection appeared to be against blood cancers. The incidence of leukemia, lymphoma, and multiple myeloma among those eating vegetarian diets is nearly half that of those eating meat.

Plant-based diets are associated with nearly half the risk of blood cancers, protection likely to derive both from the avoidance of foods tied to liquid tumors, such as poultry, as well as the additional consumption of fruits and vegetables. Greens may be particularly useful

for non-Hodgkin's lymphoma and turmeric for multiple myeloma. The role tumor-promoting farm animal viruses play in human cancers is not known, but this should be a research priority given the potential extent of public exposure.

The researchers found three specific dietary components associated with this sign of declining kidney function: animal protein, animal fat, and cholesterol. Each of these is found in only one place: animal products. The researchers found no association between kidney function decline and the intake of protein or fat from plant sources.<sup>9</sup>

Why were these killer fats deemed safe in the first place? Guess who makes the "generally recognized as safe" determination? It's not the government or a scientific body. It's the manufacturer. You read that right. The food maker gets to determine whether or not its own product is safe for the public, a process the FDA refers to as "GRAS self-determination." What's more, these manufacturers can legally add things to our food supply without informing the FDA.<sup>92</sup> An estimated one thousand food-additive safety decisions have never even been reported to the FDA or the public.<sup>93</sup>

Concerns about milk and other dairy products first arose from population-scale data, such as the twenty-five-fold increase in prostate cancer in Japanese men since World War II, which coincided with a sevenfold increase in egg consumption, a ninefold increase in meat consumption, and a twentyfold increase in dairy consumption.<sup>13</sup> Though the rest of their diets remained comparatively stable and similar trends have been noted in other countries,<sup>14</sup> there were myriad changes in Japanese society beyond eating more animal products that could have contributed to these rising cancer rates. So scientists took a closer look.

In contrast, almond milk suppressed the growth of the cancer cells by more than 30 percent.

A 2015 meta-analysis found that high intakes of dairy products—milk, low-fat milk, and cheese, but not nondairy sources of calcium—appear to increase total prostate cancer risk.<sup>19</sup>

Men with higher milk consumption also had a higher rate of death, although they didn't have higher fracture rates.<sup>29</sup> Overall, the study showed a dose-dependent

Harvard University researchers recruited more than one thousand men with early-stage prostate cancer and followed them for several years. Compared with men who rarely ate eggs, men who ate even less than a single egg a day appeared to have twice the risk of prostate cancer progression, such as metastasizing into the bones.

The only thing potentially worse for prostate cancer than eggs was poultry: Men with more aggressive cancer who regularly ate chicken and turkey had up to four times the risk of prostate cancer progression.

But what cancer-promoting substance is there in eggs? How could eating less than an egg a day double the risk of cancer invasion? The answer may be choline, a compound found concentrated in eggs.<sup>35</sup>

Higher levels of choline in the blood have been associated with increased risk of developing prostate cancer in the first place.<sup>36</sup>

The same Harvard team found that men who consumed the most choline from food also had an increased risk of cancer death.<sup>38</sup>

Nathan Pritikin, the man who helped launch a lifestyle medicine revolution—and saved my grandma's life—wasn't a nutritionist or a dietitian. He wasn't even a doctor. He was an engineer. When he was diagnosed with heart disease in his forties, Pritikin reviewed all the available research himself and decided to try eating the type of diet followed by populations in places like rural Africa, where heart disease was rare. He figured that if he stopped eating a heart-disease-promoting diet, he could stop the advancement of the disease. What he found was even more remarkable. He didn't just stop the disease from getting worse, he reversed his condition.<sup>45</sup> He then went on to help thousands of others do the same.

The blood of men on the standard American diet slowed down the rate of prostate cancer cell growth by 9 percent. Place men on a plant-based diet for a year, though, and the blood circulating within their bodies can suppress cancer cell growth by 70 percent—that's nearly eight times the stopping power compared to a meat-centered menu.<sup>47</sup>

Prostate cancer can be so slow growing and the side effects of treatment so onerous that men diagnosed with it often choose to be placed in a medical holding pattern called “watchful waiting” or “expectant management.” Because the next step is often chemotherapy, radiation, and/or radical surgery that may leave men incontinent and impotent, doctors try to delay treatment as long as possible. And since these patients aren't actively doing anything to treat the disease, they represent an ideal population in whom to investigate the power of diet and lifestyle interventions.

Cancer progression was tracked using PSA levels, a marker of prostate cancer growth inside the body. After a year, the control group's PSA levels increased by 6 percent. That's what cancer tends to do: grow over time. But among the healthy-living group, PSA levels decreased by 4 percent, suggesting an average shrinkage of their tumors.<sup>53</sup> No surgery, no chemotherapy, no radiation—just eating and living healthfully.

This was one of the first demonstrations that changing what you eat and how you live can affect you at a genetic level, in terms of which genes are switched on and off.

It is worth noting, though, that Dr. Ornish and colleagues were able to demonstrate that a full-time plant-based diet allowed for an apparent reversal in cancer growth: The subjects' PSA levels didn't just rise more slowly, but they trended downward. Thus, the ideal animal-to-plant protein ratio may be closer to zero to one.

Based on the Harvard University prostate cancer progression and mortality data detailed above, eggs and poultry may be the worst offenders: Patients may face twice the cancer progression risk from eating less than a single egg per day and up to quadruple the risk from

eating less than a single serving of chicken or turkey daily.<sup>62</sup> On the other hand, if you were to add only one thing to your diet, consider cruciferous vegetables.

Less than a single serving a day of broccoli, brussels sprouts, cabbage, cauliflower, or kale may cut the risk of cancer progression by more than half.<sup>63</sup>

As detailed in chapter 11, the other major class of phytoestrogens is lignans, found throughout the plant kingdom but especially concentrated in flaxseeds. Higher levels of lignans tend to be found in the prostate fluids of populations of men with relatively low rates of prostate cancer,<sup>67</sup> and lignans have also been shown to slow the growth of prostate cancer cells in a petri dish.<sup>68</sup>

Researchers decided to put lignans to the test by asking men with prostate cancer scheduled for prostate-removal surgery the following month to consume three tablespoons a day of flaxseed. After surgery, their tumors were examined. Within just those few weeks, the flaxseed consumption appeared to have lowered their cancer-cell proliferation rates, while at the same time increasing their rate of cancer-cell clearance.<sup>69</sup> Even better, flaxseeds may also be able to prevent prostate cancer from advancing to that stage in the first place.

After the first biopsies of their prostates came back PIN positive, fifteen men were asked to eat three tablespoons of flaxseed a day for the six months until their next biopsy. After that time, they showed a significant drop in PSA levels and biopsy cell-proliferation rates, suggesting that flaxseeds may indeed thwart the progression of prostate cancer.

Both the historic rarity of BPH and prostate cancer in Japan and China have been attributed to the countries' traditional plant-based diets.<sup>79</sup>

This time, they performed the same experiment on the type of normal prostate cells that grow to obstruct urine flow. Within just two weeks, those eating plant-based diets saw their blood acquire the ability to suppress the abnormal growth of noncancerous prostate cells too—and the effect didn't seem to dissipate with time. The blood of those eating

plant-based diets over the long term had the same beneficial effect for up to twenty-eight years straight.

Some plants may be particularly prostate friendly. Research has found that flaxseeds can be used to treat BPH. Men given the equivalent of about three tablespoons of flaxseeds a day experienced relief comparable to that provided by commonly prescribed such drugs as Flomax or Proscar<sup>81</sup>—without the drugs' side effects, such as lightheadedness or sexual dysfunction.

You just don't want to make more cells than you're putting out to pasture. In adults, extra cell growth can mean the development of tumors.

Should your levels of IGF-1 remain too high when you reach adulthood, however, your cells will constantly receive a message to grow, divide, and keep going and growing. Not surprisingly, the more IGF-1 you have in your bloodstream, the higher your risk for developing cancers, such as prostate cancer.<sup>88</sup>

After just eleven days of cutting back on animal protein, your IGF-1 levels can drop by 20 percent, and your levels of IGF-1 binding protein can jump by 50 percent.<sup>92</sup> One of the ways your body tries to protect itself from cancer—that is, excessive growth—is by releasing a binding protein into your bloodstream to tie up any excess IGF-1. Think of it as the body's emergency brake. Even if you've managed to down-regulate production of new IGF-1 through diet, what about all that excess IGF-1 still circulating from the bacon and eggs you may have eaten two weeks before? No problem: The liver releases a snatch squad of binding proteins to help take it out of circulation.

Only men<sup>93</sup> and women<sup>94</sup> who limit their intake of all animal proteins appear able to significantly drop their levels of the cancer-promoting hormone and raise their levels of the protective binding proteins.

Hospitals are terrible places to be and terrible places to die. That is why each of us needs to take care of ourselves.

The American people—even before they are born—are bombarded continually with myriad combinations of these dangerous exposures. The Panel urges you [Mr. President] most strongly to use the power of your office to remove the carcinogens and other toxins from our food, water, and air that needlessly increase health care costs, cripple our Nation's productivity, and devastate American lives.<sup>2</sup>

Which foods contributed the most heavy metals? The number-one food source of arsenic was poultry among preschoolers and, for their parents, tuna.<sup>15</sup> The top source for lead? Dairy. For mercury? Seafood.<sup>16</sup>

A study of more than twelve thousand food and feed samples across eighteen countries found that the highest PCB contamination was found in fish and fish oil, followed by eggs, dairy, and then other meats. The lowest contamination was found at the bottom of the food chain, in plants.<sup>20</sup>

We've since learned that bowel-movement frequency may even be predictive of Parkinson's. Men with less than daily bowel movements, for instance, were found to be four times more likely to develop the disease years later.<sup>102</sup> Reverse causation has been suggested: Maybe constipation didn't lead to Parkinson's. Maybe Parkinson's—even decades before it was diagnosed—led to constipation. This idea was supported by anecdotal evidence suggesting that throughout their lives, many who would go on to develop Parkinson's reported never feeling very thirsty and, perhaps, decreased water intake contributed to their constipation.

Alternatively, given the link between dietary pollutants and Parkinson's, constipation may be contributing directly to the disease: the longer feces stay in the bowel, the more neurotoxic chemicals in the diet may be absorbed.<sup>104</sup> There are now more than one hundred studies linking pesticides to an increased risk for Parkinson's disease,<sup>105</sup> but many of them are based on subjects' occupational or ambient exposure.



Could your cup of morning joe help prevent and perhaps even help treat one of our most crippling neurodegenerative conditions? It appears so. There have been at least nineteen studies performed on the role coffee may play in Parkinson's, and overall, coffee consumption is associated with about one-third lower risk.<sup>127</sup> The key ingredient appears to be the caffeine, since tea also seems protective<sup>128</sup> and decaf coffee does not.<sup>129</sup> Like the berry phytonutrients, caffeine has been shown to protect human nerve cells in a petri dish from being killed by a pesticide and other neurotoxins.<sup>130</sup>

There are a number of simple things you can do that may decrease your risk of dying from Parkinson's disease. You can wear seat belts and bicycle helmets to avoid getting hit in the head, you can exercise regularly,<sup>133</sup> avoid becoming overweight,<sup>134</sup> consume peppers, berries, and green tea, and minimize your exposure to pesticides, heavy metals, and dairy and other animal products. It's worth it. Trust me when I say that no family should have to endure the tragedy of Parkinson's.

Spending just fifty cents more per day on fruits and vegetables may buy you a 10 percent drop in mortality.

When the Guidelines tell you to eat less added sugar, calories, cholesterol, saturated fat, sodium, and trans fat, that's code for eat less junk food, less meat, less dairy, fewer eggs, and fewer processed foods. But they can't actually say that. When they did in the past, all heck broke loose. For example, when a USDA employee newsletter even suggested trying a meat-free lunch once a week as part of Johns Hopkins University's School of Public Health "Meatless Mondays" initiative,<sup>17</sup> the resulting political firestorm from the meat industry led the USDA to retract the advice just hours later.<sup>18</sup> "As a result of these conflicts [of interest]," concluded an analysis in the Food and Drug Law Journal, "the Guidelines sometimes favor the interests of the food and drug industries over the public's interest in accurate and impartial dietary advice."<sup>19</sup>

It's really the day-to-day stuff that matters most. What you eat on special occasions is insignificant compared to what you eat day in and day out. So don't beat yourself up if you really want to put edible bacon-flavored candles on your birthday cake. (I'm not making those up!<sup>40</sup>)

Your body has a remarkable ability to recover from sporadic insults as long as you're not habitually poking it with a fork.

Similarly, one (well-cooked) hamburger is not going to kill anyone. It's what you eat day to day that adds up. You have to take stock of your disposition to know if you can overcome the risk of sliding down the slippery slope.

I'm regularly asked what I eat every day. I've always been hesitant to answer for a number of reasons. First, it shouldn't matter what I or anyone else eats, says, or does. The science is the science. Too much of the nutrition world is split into camps, each following their respective guru. What other field of serious scientific inquiry is like that?

My hope is to disseminate it in a way that removes me as much as possible from the equation. I don't want to present the trademarked Dr. Greger Diet; I want to present the best-available-evidence diet.

What a person chooses to do with information is highly personalized and often depends on such factors as his or her current life situation and how risk averse he or she is. Given the same information, two people can make two entirely different but legitimate decisions. For this reason, I've been hesitant to share my own personal choices, because I'm afraid they'll unduly sway people to make decisions that might not be right for them. I'd rather just present the science and let others decide for themselves.

Over the long term, the more you eat healthfully, the better healthy foods taste.

While eating a bowl of pea soup or dipping carrots into hummus may not seem like eating beans, it is. You should try to get three servings a day. A serving is defined as a quarter cup of hummus or bean dip; a half cup of cooked beans, split peas, lentils, tofu, or tempeh; or a full cup of fresh peas or sprouted lentils.

A serving of berries is a half cup of fresh or frozen, or a quarter cup of dried.

For other fruits, a serving is a medium-sized fruit, a cup of cut-up fruit, or a quarter cup of dried fruit.

Common cruciferous vegetables include broccoli, cabbage, collards, and kale. I recommend at least one serving a day (typically a half cup) and at least two additional servings of greens a day, cruciferous or otherwise. Serving sizes for other greens and vegetables are a cup for raw leafy vegetables, a half cup for other raw or cooked vegetables, and a quarter cup for dried mushrooms.

Everyone should try to incorporate one tablespoon of ground flaxseeds into his or her daily diet, in addition to a serving of nuts or other seeds. A quarter cup of nuts is considered a serving, or two tablespoons of nut or seed butters, including peanut butter. (Chestnuts and coconuts don't nutritionally count as nuts.)

I also recommend one-quarter teaspoon a day of the spice turmeric, along with any other (salt-free) herbs and spices you may enjoy.

A serving of whole grains can be considered a half cup of hot cereal such as oatmeal, cooked grain such as rice (including the "pseudograins" amaranth, buckwheat, and quinoa), cooked pasta, or corn kernels; a cup of ready-to-eat (cold) cereal; one tortilla or slice of bread; half a bagel or english muffin; or three cups of popped popcorn.

Looking over the checklist, you'll see there are three servings each of beans, fruits, and whole grains, and about twice as many veggies in total than any other food component.

Serving Sizes:  $\frac{1}{4}$  cup of hummus or bean dip  $\frac{1}{2}$  cup cooked beans, split peas, lentils, tofu, or tempeh 1 cup of fresh peas or sprouted lentils Daily Recommendation: 3 servings per day

But legumes also contain nutrients that are concentrated in the vegetable kingdom, including fiber, folate, and potassium.

There are two principal reasons to avoid salt: stomach cancer and high blood pressure.

Colorful foods are often healthier because they contain antioxidant pigments, whether it's the beta-carotene that makes carrots and sweet potatoes orange, the lycopene antioxidant pigment that makes tomatoes red, or the anthocyanin pigments that make blueberries blue. The colors are the antioxidants. That knowledge alone should revolutionize your stroll down the produce aisle.

Red cabbage may contain eight times more antioxidants than green cabbage,

Shop for the reddest of strawberries, the blackest of blackberries, the most scarlet tomato, the darkest green broccoli you can find. The colors are the antiaging, anticancer antioxidants.

Antioxidant content is one of the reasons I've singled out berries for special treatment. They are second only to herbs and spices as the most antioxidant-packed food category. As a group, they average nearly ten times more antioxidants than other fruits and vegetables (and exceed fifty times more than animal-based foods).<sup>5</sup>

Consuming sugar in fruit form is not only harmless but actually helpful. Eating berries can blunt the insulin spike from high-glycemic foods like white bread, for example.<sup>15</sup> This may be because the fiber in fruit has a gelling effect in your stomach and small intestine that slows the release of sugars<sup>16</sup> or because of certain phytonutrients in fruit that appear to block the absorption of sugar through the gut wall and into your bloodstream.

Low-dose fructose may actually benefit blood sugar control. Eating a piece of fruit with each meal could be expected to lower, rather than raise, the blood sugar response.<sup>18</sup>

Seventeen people were asked to eat twenty servings of fruit per day for months. Despite the extraordinarily high fructose content of this fruit-based diet—the sugar equivalent of about eight cans of soda a day—the investigators reported beneficial outcomes with no overall adverse effects for body weight, blood pressure,<sup>20</sup> insulin, cholesterol, and triglyceride levels.<sup>21</sup>

My favorite fruit snack in the fall and winter is apple slices with dates, for the perfect mix of tart and sweet. Growing up, I never liked dates. They tasted dry and kind of waxy. But then I discovered there were soft, plump, moist varieties that didn't taste like the chalky ones that haunted my childhood. Barhi dates, for example, are wet and sticky, but when frozen, they acquire the taste and chew of caramel candy. Seriously. Paired with my Honeycrisp, it's like eating a butterscotch-flavored caramel apple.

I have tried dates from most of the major online retailers and always go back to ordering from the Date People, a small farm in California.

I suggest using the Five-to-One Rule. When buying healthier, whole-grain products, look at the Nutrition Facts label on the package and see if the ratio of grams of carbohydrates to grams of dietary fiber is five or less (see figure 7). For example, let's see if 100 percent whole-wheat Wonder Bread passes the test: Per serving, the package lists 30 grams of carbohydrates and 3 grams of fiber. Thirty divided by 3 is 10. Well, 10 is more than 5, so the 100 percent whole-wheat Wonder Bread goes back on the shelf even though, technically, it's a whole-grain product. Compare that to Ezekiel bread, a sprouted-grain bread based on a biblical verse. It has 15 grams of carbohydrates and 3 grams of fiber, and, just like that, passes the test. So do Ezekiel english muffins, which taste great with fruit-only jam and nut butter. Though the science on the potential benefits of sprouted grains is still in its infancy, available data look promising.<sup>54</sup>

Apply the same Five-to-One Rule to breakfast cereals, another grocery category that can lull you into believing nearly everything is healthy. Multi-Grain Cheerios, for example, sounds good, but it has a ratio over 7. And then it just goes downhill from there with Frosted Cheerios and

Fruity Cheerios, which have carbohydrate-to-fiber ratios that exceed 10. Compare that with Uncle Sam cereal,

At home, if you want to spice up your oatmeal routine, Google “savory oatmeal” for all sorts of interesting dishes involving sautéed mushrooms, herbs, spinach, curry, roasted vegetables—you name it!

Yes, drinking lots of coffee is associated with a longer life, but the effect is relatively modest. People who drank six or more cups per day had a 10–15 percent lower mortality rate due to fewer deaths from heart disease, respiratory disease, stroke, injuries and accidents, diabetes, and infections.<sup>29</sup> However, when a study looked at people under the age of fifty-five, the opposite effect was found: Drinking more than six cups of coffee daily was found to increase the risk of death. “Hence,” the researchers concluded, “it may be appropriate to recommend that younger people, in particular, avoid heavy coffee consumption (less than 28 cups per week or less than 4 cups in a typical day).”<sup>30</sup>

Daily coffee consumption is also associated with a slightly increased risk of bone fractures among women, but, interestingly, a decreased fracture risk among men.<sup>35</sup> However, no association was found between coffee and hip fracture risk. Conversely, tea may reduce hip

I already discussed the role green tea may play in breast cancer prevention in chapter 11. Drinking tea may protect against gynecological malignancies, such as ovarian cancer<sup>59</sup> and endometrial cancer,<sup>60</sup> as well as lower your cholesterol,<sup>61</sup> blood pressure,<sup>62</sup> blood sugar,<sup>63</sup> and body fat.<sup>64</sup> It may protect the brain from both cognitive decline<sup>65</sup> and stroke.<sup>66</sup> Tea consumption is also associated with decreased risk of diabetes,<sup>67</sup> tooth loss,<sup>68</sup> and up to half the risk of dying from pneumonia.<sup>69</sup> Those who suffer from seasonal allergies may also benefit from drinking tea. Randomized trials have shown that drinking about three cups of Japanese Benifuuki green tea per day starting six<sup>70</sup> to ten<sup>71</sup> weeks before pollen season significantly reduces allergy symptoms. That’s nothing to sneeze at!

Art's passing made me realize that no matter how well we eat or how well we live, we can always get hit by a bus—metaphorically or literally. We need to make sure to look both ways in life and before crossing the street. We need to take care of ourselves. We need to wear seat belts and bike helmets and practice safer sex. (After all, practice makes perfect!)

Everything on NutritionFacts.org is provided absolutely free of charge. There's no special member area where you pay a fee to get extra lifesaving information. What membership websites seem to be saying, in essence, is that if you don't give them money, they'll withhold information that could make your family healthier. That's unacceptable to me. Advances in health sciences should be freely available and accessible to all.

Anytime anyone tries to sell you on some new diet, ask just one simple question: "Has it been proven to reverse heart disease?" (You know, the most likely cause of death for you and everyone you love?) If it hasn't, why would you even consider it?