



Volume 3 Issue 7

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Coffee – Pleasure and Pain

Quitting Is Better Than a Lifetime of Medications or Worse

Of the world's population, 80% consumes caffeinated beverages – Coffee is the most widely consumed of all these stimulating drinks. The user is seeking enhancements in mood, mental performance, and physical activity. (Starbucks' popularity can be directly tied to the potency of their brew – 550 mg of caffeine per Coffee Grande.) Within minutes of that first morning cup, people become keener, more alert, and wide awake. Not only is the mind awakened but so are the bowels – a cup of coffee starts the day right with a vigorous elimination. For some people, coffee serves as a weight loss aid by suppressing appetite and increasing metabolism (burning calories). If not for the side effects, this might be the ideal legal, mind-altering, drug. But, as with all drugs, there are prices to be paid.

Raise Your Cholesterol by 10%

Coffee contains several hundred different substances (in addition to well-known caffeine) and many of these have powerful pharmacological effects on the human body. Two cholesterol-raising substances – cafestol and kahweol – are found in coffee beans. Not only do they raise total cholesterol, but also "bad" LDL-cholesterol and triglycerides, too.¹ On average, cholesterol is increased by 10%; but very potent boiled coffee can raise total cholesterol by as much as 23% (that could mean a 50 mg/dl increase for someone starting with an average cholesterol of 210 mg/dl). Triglycerides may be increased by a similar amount.

The overall effect of elevated cholesterol could be a higher risk of heart attacks and strokes. Heavy consumption – greater than 4 to 9 cups of regular coffee a day – does appear to actually translate into an increased risk of heart attacks. In relevant numbers, a 10% increase in cholesterol could boost your risk of death from heart disease by 20% to 30%. Considering, that cholesterol-lowering medications (statins) accomplish about a 10% reduction in cholesterol; you may decide to stop this daily drink, rather than start daily drugs.

Fortunately, these substances lose their potency when poured through a paper filter. Most coffeemakers in use today drip water through coffee grounds held by a filter. The paper effectively traps the cafestol and kahweol; and as a result, a person's cholesterol and triglyceride levels are little affected by this filtered beverage. Instant coffee is almost devoid of cafestol and kahweol, and would also be a good choice for someone only concerned about the cholesterol-raising effects of coffee.

Decaffeination does not reduce the levels of cafestol and kahweol; you can expect similar raises (10%) in your cholesterol and triglycerides with decaf coffee, just as you would with unfiltered regular coffee. But switching to decaf can be expected to reduce nervousness and insomnia from the caffeine.

You may be able to negate the cholesterol-raising effects of coffee with a paper filter,

but not the other heart disease- and stroke-producing consequences of this beverage, such as an elevation in blood pressure.

Raises Blood Pressure

Coffee causes the blood vessels to constrict and the heart to beat stronger, resulting in an elevated blood pressure for most people. Within minutes of drinking this concoction of invigorating chemicals, the systolic blood pressure (top number) can rise 5 to 15 mmHg and the diastolic (bottom number), 5 to 10 mmHg.² One 5-ounce (150 ml) cup of regular coffee contains 150 mg of caffeine – a substance known to raise blood pressure. However, decaffeinated coffee also increases blood pressure; therefore, ingredients found in the coffee bean other than caffeine also have pressure-raising effects.³

The first sips of coffee cause the greatest amount of stimulation. As more is consumed though out the day (past the second cup) the elevations in blood pressure from subsequent cups are less than those caused by the initial doses.² After an overnight abstinence the sensitivity to that initial morning cup of coffee is fully restored. Contrary to popular belief, with continued use (habitual coffee drinkers) people do not become tolerant (develop immunity) to these blood pressure raising effects.²

The overall effect of coffee consumption for an average population (i.e., people in the USA) is about 2 to 4 mmHg elevation of blood pressure. Lowering blood pressure by 2 to 3 mmHg by using commonly prescribed medications is believed to produce a lifesaving benefit. For example, a 2 mmHg reduction in systolic blood pressure would translate into a 7% decrease in heart disease and 10% decrease in strokes (according to some research). This could be interpreted to mean population-wide cessation of the use of coffee would lead to a decrease in premature death from heart attacks by 14% and strokes by 20%.²

Burns Your Stomach

Coffee is upsetting to the stomach. Every serious coffee drinker keeps a bottle of Tums handy. Both regular and decaffeinated coffees cause indigestion by reducing the function of the lower esophageal sphincter – a valve that prevents the stomach acid from refluxing up into and burning the esophagus.⁴⁻⁶ Regular coffee and decaffeinated coffee both stimulate acid production in the stomach by similar amounts.⁷⁻⁸ Therefore, caffeine is not the cause of either of these effects – other substances in the coffee are creating the heartburn and reflux. Therefore, for relief, coffee drinkers must switch beverages to something like herbal tea or water. Fortunately, even though there is considerably more indigestion among coffee drinkers, there is no increase in the risk of stomach or duodenal ulcers.⁹

Other Reasons to Quit

Irregular heart beats (arrhythmias), nervous tremor, headaches, anxiety, teeth-grinding, jaw-clenching, insomnia, frequent urination, elevated eye pressure (glaucoma), diarrhea, osteoporosis and periodontal diseases may be other reasons to add to your list for quitting. When the fear of future health problems, like heart attacks, and the suffering from anxiety, indigestion, and the urge to urinate every few minutes becomes sufficiently troubling, you then may decide life would be better without this upsetting drug.

How to Quit

Coffee consumption causes physical dependence – you are addicted – making quitting difficult and painful. Headaches, fatigue, depression, and sleepiness can be expected when use is suddenly stopped. Withdrawal symptoms begin within 12 to 16 hours and peak at 24 to 48 hours. This process may last as long as one week.

There are two ways to quit; first and best is to simply stop the coffee and suffer the withdrawal. Some of the symptoms, such as the headache, can be effectively relieved with common analgesics, such as aspirin or Tylenol. There are also immediate rewards, such as almost overnight relief of the indigestion and urinary frequency, which should keep you motivated.

A less painful way to quit coffee is by substitution with another source of caffeine, such as black or green tea. Teas have fewer side effects (and maybe a few health benefits from their antioxidants and other phytochemicals), but they still offer a lift in the morning. (There is some evidence that caffeinated teas can also raise blood pressure, but not cholesterol.¹⁰) Then, over time, you can reduce the dosage of caffeine by making your beverage weaker – eventually switching to a non-caffeinated, herbal tea. You'll be glad you did.

Here is one more example of how powerful you can be over your present state of health and well-being, and in control of your destiny by being informed and acting on this cost-free information.

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Over-treat Your Blood Pressure and You Could Die Sooner

If you have high blood pressure, your doctor may insist that your blood pressure must be lowered all the way to “normal” (110/70 mmHg* or less) – but he’s dead wrong. And no matter how much the pharmaceutical companies protest with their billions of dollars of marketing money for research and advertising, over-treatment of your hypertension increases your risk of heart attacks, strokes, and early death. (*mmHg means “millimeters of mercury” and is the means of expressing blood pressure)

Do not confuse this discussion with naturally-occurring low blood pressure. Without medications a normal blood pressure is 110/70 mmHg or less – and that level is associated with great health.

Lying with Statistics

Your doctor may tell you that by treating your high blood pressure with drugs you will cut your risk of a stroke almost in half. You think, “I’d be a fool to take that risk. If I don’t take the pills I will certainly have a stroke and the medication is unquestionably beneficial.”

The truth is this:

If you have mild hypertension (diastolic – lower number – of 90 to 110 mmHg) your risk of a stroke over the next 5 years is 15 chances of every 1000 untreated patients (or 1.5 in a 100).¹

If you take medication, then your risk for a stroke is 9 chances out of every 1000 treated patients for the next 5 years. Now that is a **relative risk reduction of 40%** ($15 - 9 / 15$)¹ – And if someone told you that you could reduce your risk of having a stroke by 40%, you might jump at the opportunity.

But in real life (absolute) numbers this is not so impressive. Consider that if you treat 1000 people with drugs for five years, the benefit is only six fewer strokes (15 vs. 9). In other words, by spending thousands of dollars and suffering the side effects (which may include impotency, weakness, or worse) you might reduce your absolute risk of having a stroke over the next five years by less than 1%. (Actually, the reduction is 0.6 in a hundred for five years, which calculates out to about one in a thousand fewer strokes per year of treatment.)

You Deserve Better Than Drug Therapy Can Offer

Faced with these numbers you might think again. Or better yet you might decide that a change in diet and lifestyle, which costs nothing, with no side effects and far greater benefits, might be well worth all your efforts (especially since you now realize you are not going to be saved by the pharmaceutical industry).²

Treatment of elevated blood pressure with medications has some benefits; but, aggressive treatment does not bring risks even close to normal. For example, over a 3-year period, men (40 to 59 years old) were found to have a 21% risk of death from stroke and a 20% risk of death from a heart attack even though their pressure was reduced from 183/114 mmHg to a level of 149/91 mmHg with medications.³ This compares to a 1% risk of death from either disease for people without hypertension (133/80 mmHg) over this same 3 year trial period. The obvious conclusion is you want to be a person without hypertension and you accomplish that goal for free by following a healthy diet and lifestyle.

The J-Curve of Mortality

Many studies of people treated for elevated blood pressure with medications have shown that when blood pressure is reduced below a certain level, risk of serious trouble (heart attacks, strokes and deaths) will increase.⁴⁻¹⁵ This relationship is referred to as a “J-shaped” curve. Meaning: lowering the pressure to a certain point is beneficial (that is the first part of the “J” shape), but beyond that point, the patient is harmed (the second part of the “J”) when the pressure is lowered further toward “normal.” This phenomenon is found with both systolic (top number) and diastolic (bottom number) pressure changes.

Data presented at the 2004 annual meeting of the American College of Cardiology reaffirmed the “J-curve.”¹⁶ A study of 22,576 patients treated for hypertension showed that the death rate dropped until a nadir (lowest point) was reached at a diastolic pressure of 84 mmHg. When the diastolic pressure fell below 84 mmHg, then patient deaths and heart attacks rose again. For example, those with a diastolic of 70 mmHg had 20% greater risk, at 65 mmHg the risk was 80% greater, and at 55 mmHg the risk was four times higher than at 84 mmHg.

People treated for isolated systolic hypertension (a case where the systolic pressure is high, but the diastolic is normal or low) are particularly vulnerable to the harms from over-treatment.^{17,18} Your well-meaning doctor has been taught by the pharmaceutical companies that it is the duty of every good physician to make patients' blood pressures normal at all costs, even when the top number is the only one out of range. Two studies have shown that the J-curve applies to isolated systolic hypertension and the risk of strokes, too. The Systolic Hypertension in Elderly Program study found a 14% increase in strokes in those whose diastolic pressure was lowered only by 5 mmHg with medications (starting average of 177/77 mmHg).¹⁹ Overall, the research suggests the greatest benefit for stroke prevention is to reduce the diastolic blood pressure no lower than 85 mmHg.¹⁷

Why Low BP Kills

The reason too aggressive treatment of hypertension with medications causes serious harm is because the artificially lowered blood pressure impairs the flow of blood to the tissues of the heart and brain.^{5,15} The small blood vessels supplying these vulnerable tissues are the ones most affected. The flow of blood to these vital organs can become low enough to cause death of tissues, resulting in a heart attack or stroke. Even before the point of causing death of the heart muscle, an inadequate blood supply can cause irregular heartbeats (arrhythmias) of the heart, which are often fatal. Therefore, great caution must be taken in order to prevent lowering blood pressure too much when medications are used.

Dumber You Will Be Too with Over-Treatment of BP

In line with the recent findings that blood pressure medications compromise the circulation to vital tissues, a recent study found low treated blood pressure was associated with poor thinking, and mild hypertension was associated with better thinking.²⁰ By over-aggressive lowering of blood pressure with medication function of the brain in the elderly was found to be impaired. The best brain function was associated with a blood pressure of about 159/85 mm Hg (a level consistent with the lowest risk of strokes, heart attacks, and deaths). This loss of intelligence may be permanent in some cases. Just published in the journal *Stroke* are the findings that patients whose systolic blood pressure (the top number) dropped 15 mmHg or more in six years or less had triple the risk of Alzheimer's disease, or other forms of dementia.²¹ Their findings indicate that poor blood flow to the brain, resulting from a decline in blood pressure, in some cases from over-treatment with anti-hypertensive medications, promotes permanent loss of brain function – dementia.

How I Treat Hypertension

When I find a patient has an elevated blood pressure reading in my office, my approach is to recommend the following to the patient:*

- 1) Don't panic; your high blood pressure may be secondary to excitement, stress, pain or another reaction completely unrelated to the health of your arteries; and it likely will normalize on its own.
- 2) Begin taking your blood pressures at home and record the results so that we can discuss them later. Blood pressures obtained in an office setting are notoriously inaccurate, because of the "white coat syndrome."²²
- 3) Obtain other information that may help establish your level of risk for future health problems – these are called "risk factors" and are such well-known measures as body weight, and blood cholesterol, triglycerides, and sugar.²³ A patient's history and physical examination are also very helpful in determining the urgency to treat. The decision to treat is a judgment (best guess) that is made by the doctor, and should be made with the patient's full participation in this decision – after all this is usually a lifetime commitment.
- 4) Doctors usually say that once you are on medications for blood pressure you will be on them for life. This is true only if you fail to understand three important things: 1) the actual benefits and risks of these medications; 2) the fact that a healthy diet will lower blood pressure to normal in most cases and medications can be stopped; and 3) exercise and associated weight loss are also powerful tools for reducing blood pressure and improving general health. Therefore, I strongly recommend a healthy diet (low-fat, plant-based and low-sodium), moderate exercise (like walking), and stopping coffee and tea (see above article on coffee, July 2004, McDougall Newsletter).
- 5) If after several months (at least 3 to 6 months) of recording blood pressures of 160/100 mmHg or greater (on average) I may recommend drug therapy.^{23,24} Failure to respond to recommendation four (4) above may be because the patient will not comply with the recommendation to change his/her diet and exercise, or occasionally because all efforts are still insufficient to meet the goal of a blood pressure below 160/100 mmHg (on average).

6) My drugs of choice are time-honored, inexpensive, well-tolerated diuretics and beta-blockers.^{23,25} I rarely use the high-tech, expensive medications like ACE inhibitors. I never use “calcium channel blockers” because these drugs increase a person’s risk of death and disease (more heart disease, cancer, bleeding, and suicide) and make them more stupid (decrease cognitive function).^{26,27}

7) My goal is to reduce the diastolic blood pressure to no lower than 85 to 90 mmHg. A systolic blood pressure of about 140 mmHg makes people happy too – however, I do not routinely lower systolic blood pressure, regardless of the original level, with medications, if that means also reducing the diastolic pressure below 80 mmHg – the risks are too great for more stroke and heart attacks. (Remember, *without medications* a blood pressure of 110/70 mmHg or lower is ideal.)

8) I often use other medications which lower risk factors like cholesterol – “statins” are a class of cholesterol-lowering medications I commonly prescribe after I have squeezed every possible benefit from a healthy diet. My goal is to have total cholesterol below 150 mg/dl (LDL-cholesterol below 80 mg/dl). (See my June 2003 Newsletter article: “Cleaning out Your Arteries,” at www.drmcDougall.com.)

Blood pressure is a number – George and Martha are people. Doctors must first, last, and all the way in between, be focused on the patient and never do harm by treating numbers at the patient’s expense. In other words, a doctor should never brag that his patient had a normal blood pressure from intensive drug therapy during the many months prior to his stroke or heart attack.

*These are general guidelines that I use and I individualize each patient’s care based on other aspects of general health and needs. You must work with your personal physician on your health issues, and if you are going to use this information, please do so in the context of this very valuable doctor-patient relationship.

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THE SKINNY ON ATKINS – (Part II)

By Michael Greger, M.D.*

Reprinted from the June 2004 issue of Dr. Greger's Nutrition Newsletter. To subscribe, send a blank email to drgregernewsletter-subscribe@lists.riseup.net

WHAT THE EXPERTS THINK OF ATKINS

Bringing Home the Bacon

Atkins conceded that the "WORST [emphasis his]" feature about his diet is the "rapidity with which you gain [weight] if you abandon it." "But the BEST feature," he claims, "is that you don't HAVE to go off this diet..."²⁴⁶

The reason people fall off the wagon, Atkins claimed, is because of "carbohydrate addiction." What he calls "addiction," though, others might call our natural urge to eat the fuel our bodies evolved to live on—carbohydrates. Patients inevitably cheat and then tragically blame themselves instead of the diet for this failure.

Low carb diets, like all fad diets, tend to fail.²⁴⁷ Even Atkins admitted that there is "no formal documentation" of long-term weight loss on his diet. He'd been supposedly seeing patients for decades on his diet; why didn't he do a study? When challenged on just that point Atkins replied, "Why should I support a study? It's all in my book." When it was pointed out that the book was "all anecdotal," Atkins said mainstream medicine's demand for proof simply functioned to "maintain it at its current level of ineptitude."²⁴⁸

In February 2000, the USDA brought Atkins in to discuss his diet. When asked why he doesn't conduct his own study, he pleaded poverty: "But I haven't been able to fund a study." To which the Director of Nutrition Sciences at Albert Einstein College of Medicine, replied, "Ten million books in print and you can't fund a study?"

The Director continued: "You market the vitamins. You sell the vitamins. You market this. This is not for the public good. This is a money-making proposition."²⁴⁹ The Chair of the Board of Atkins' own New York County Medical Society made a similar charge when Atkins' book was first published, alleging it was "clearly... unethical" and "self-aggrandizing."²⁵⁰ The New York Board of Health later tried, unsuccessfully, to revoke his medical license.²⁵¹

Why has the U.S. government been lax in testing the Atkins Diet at any point in the last 30 years? One reason may have been that it might be difficult to get approval from an ethical review committee to put people on the diet long term, given what is known about the dangers of a meat-laden diet. As one medical review concluded, "There is no evidence that low carbohydrate diets are effective for long-term weight management, and their long-term safety is questionable and unproven."²⁵²

The current Director of Nutrition at Harvard advises that all physicians should produce a handout warning about all of the adverse effects of the Atkins Diet. Not only should the handout explain explicitly that the diet may increase one's risk of heart disease, cancer, and stroke, but also that "Other health risks include... dizziness, headaches, confusion, nausea, fatigue, sleep problems, irritability, bad breath, and worsening of gout and kidney problems; osteoporosis, since a high ratio of animal to vegetable protein intake may increase bone loss and the risk of hip fracture in elderly women; a rise in blood pressure with age...and rapid falling blood pressure upon standing up (orthostatic hypotension), which can... put older patients at higher risk for falls."²⁵³ After running through the adverse effects associated with ketosis, the American institute for Cancer Research wrote, "Those are the short-term effects. The long-term effects are even more dire."²⁵⁴

LONG-TERM SIDE EFFECTS

"Massive Health Risk"

The Atkins' Diet downfall is also its one saving grace—people may not be able to tolerate it for long enough to suffer the long-term consequences. The American Heart Association states: "Individuals who follow these diets are therefore at risk for compromised vitamin and mineral intake, as well as potential cardiac, renal [kidney], bone, and liver abnormalities overall."²⁵⁵

In Europe, hospitals have already started banning the Atkins Diet^{256,257} after the British government's Medical Research Council, backed up by the British Nutrition Foundation and the British Dietetic Association,²⁵⁸ condemned the Atkins Diet as "negligent"²⁵⁹ "nonsense and pseudo-science"²⁶⁰ posing a "massive health risk."²⁶¹

An article out of the Cleveland Clinic Journal of Medicine entitled "Physician's Guide to Popular Low Carbohydrate Weight-Loss Diets" noted that the Atkins Diet "can jeopardize health in a variety of ways."²⁶² Let us count the ways.

Malnutrition

Atkins followers risk a number of serious nutrient deficiencies.²⁶³ In fact some people have become so deficient on low carb ketogenic diets that they almost went blind because their optic nerves started to degenerate.^{264,265} When cutting calories, it's especially important to eat nutrient-dense diets, but the Atkins Diet presents a double whammy; it restricts the healthiest foods, like fruit, and unrestricts some of the unhealthiest, like meat. Shortly after Atkins' original book was published, the highly prestigious Medical Letter on Drugs and Therapeutics concluded that the Atkins Diet was "unbalanced, unsound and unsafe."²⁶⁶ As noted in a Medical Times review, Atkins has created a "ridiculously unbalanced and unsound" "hazardous" diet.²⁶⁷ Twenty-seven years later the Medical Letter offered an update noting that the safety of the Atkins Diet had still "not been established."²⁶⁸

A diet like Atkins maximizes the consumption of disease-promoting substances like the cholesterol, saturated fat, and industrial pollutants in meat, yet restricts one's intake of fiber and the literal thousands of antioxidants and phytochemicals found exclusively in the plant kingdom (like the carotenoids, lycopenes, bioflavonoids, phytic acid, indoles, isothiocyanates, etc.) that have "anti-aging, anti-cancer and anti-heart disease properties."²⁶⁹ As a 2004 medical review concluded, the Atkins Diet is so "seriously deficient" in nutrition that "there is real danger of malnutrition in the long term."²⁷⁰

Where might then one get one's vitamins on the Atkins Diet? From the Atkins website, of course, on sale now for just over \$640 a year.²⁷¹ Add some antioxidants and the tab is up to \$1000.²⁷² That is of course in addition to the estimated \$400²⁷³-\$1400²⁷⁴ the pricey Atkins food—meat and cheese—costs every month (unless one chooses to live off hot dogs).

Realizing his diet is so deficient in nutrients, Atkins prescribed no less than 65 nutritional supplements in part to help fill the nutritional gaps created by his diet.²⁷⁵ A "proper Atkins Dieter" Atkins wrote, "follows the entire program, including the supplements."²⁷⁶ In his last edition Atkins even had a chapter entitled "Nutritional Supplements: Don't Even Think of Getting Along Without Them."²⁷⁷ Perhaps this is because his corporation sells them.

"Who needs orange juice," Atkins wrote, "when a Vitamin C tablet is so handy?"²⁷⁸ Oranges, of course, contain much more than vitamin C. As Sue Radd, a world leader on phytonutrient research, put it "There's not one vitamin pill in the world that can give you everything you need."²⁷⁹ A review in the Cleveland Clinic Journal of Medicine agreed that the Atkins Diet is "deficient in nutrients that cannot be replaced by supplements and are excessive in nutrients that may increase the risk of mortality and chronic disease."²⁸⁰

Responding to the criticism that the Atkins Diet was deficient in fruits and vegetables, Atkins-funded researchers responded that people in Atkins could include a limited quantity of some vegetables "and even small amounts of fruit." Even during later, more liberal phases of the diet, though, Atkins warned readers that eating fruit will "always be somewhat risky." The Atkins researchers continued, "It would be prudent to take a multivitamin/mineral supplement."²⁸¹ A low carb diet is a low nutrition diet.

Cancer

Atkins followers also risk cancer. Studies at Harvard and elsewhere involving tens of thousands of women and men have shown that, for example, regular meat consumption increases colon cancer risk as much as 300 percent.^{282,283} As one Harvard School of Public health researcher noted, because of the meat content, two years on the Atkins Diet "could initiate a cancer. It could show up as a polyp in 7 years and as colon cancer in ten."²⁸⁴ It's tragically ironic that after McDonald's CEO apparently dropped dead of a heart attack in 2004, their new CEO was in the operating room with colo-rectal cancer only 16 days later.²⁸⁵

Women with the highest intake of animal fat seem to have over a 75% greater risk of developing breast cancer.²⁸⁶ The American Cancer Society has officially condemned diets high in animal grease, concluding "a low carb diet can be a high-risk option when it comes to health."²⁸⁷

Kidney "Scarring"

Atkins followers also risk kidney damage.²⁸⁸ Like his advice for pregnant women, Atkins once wrote "The diet is safe for people even if there is a mild kidney malfunction."²⁸⁹ We now know this to be false.

In a press release entitled "American Kidney Fund Warns About Impact of High-Protein Diets on Kidney Health,"

Chair of Medical Affairs, Paul W. Crawford, M.D., wrote, "We have long suspected that high-protein weight loss diets could have a negative impact on the kidneys, and now we have research to support our suspicions." Dr. Crawford is worried that the strain put on the kidneys could result in irreversible "scarring in the kidneys."²⁹⁰

Three months later, the newest edition of the New Diet Revolution was released in which Dr. Atkins stated: "Too many people believe this untruth [that too much protein is bad for your kidneys] simply because it is repeated so often that even intelligent health professionals assume it must have been reported somewhere. But the fact is that it has never been reported anywhere. I have yet to see someone produce a study for me to review..."²⁹¹

Although evidence that such diets could be risky for one's kidneys existed years before he made that statement,²⁹² the definitive study showing just how dangerous his diet could be to a dieter's kidneys was published a month before Atkins died. The Harvard Nurse's Study proved that high meat protein intake was associated with an accelerated decline in kidney function in women with mild kidney insufficiency.²⁹³ The problem is that millions of Americans—as many as one in four adults in the United States—seem to already have reduced kidney function, but may not know it, and would potentially be harmed by high meat diets like Atkins.²⁹⁴ And the "excessive" amount of protein which furthered kidney damage in the women in the Nurses Study is only about half of what one might expect to get on the Atkins Diet.²⁹⁵

The American Academy of Family Physicians notes that high animal protein intake is also largely responsible for the high prevalence of kidney stones in the United States. Kidney stones can cause severe pain, urinary obstruction, and kidney damage. Plant protein did not seem to have a harmful effect.²⁹⁶

American Kidney Fund's Dr. Crawford concluded, "Chronic kidney disease is not to be taken lightly, and there is no cure for kidney failure. The only treatments are kidney dialysis and kidney transplantation. This research shows that even in healthy athletes, kidney function was impacted and that ought to send a message to anyone who is on a high-protein weight loss diet."²⁹⁷

Peeing Your Bones Down the Toilet

A 2003 review of the safety of low carbohydrate diets reeled off an alarming list of potential problems: "Complications such as heart arrhythmias, cardiac contractile function impairment, sudden death, osteoporosis, kidney damage, increased cancer risk, impairment of physical activity and lipid [cholesterol] abnormalities can all be linked to long-term restriction of carbohydrates in the diet."²⁹⁸

There is a particular concern that children who go on the Atkins Diet might suffer permanent physical and mental damage as a result of starving their bodies of critical nutrients. As one U.S. child nutrition specialist explained, "The effect can be to dull the mind, stunt growth, and soften bones...I wouldn't want to risk it by putting my child on a low carbohydrate diet."²⁹⁹

The concern with bone health arises from the fact that muscle protein has a high sulphur content. When people eat too much of this meat protein, the sulphur forms acid within our bodies which must somehow be neutralized to maintain proper internal pH balance. One way our bodies can buffer the sulphuric acid load caused by meat is with calcium borrowed from our bones. People on high meat diets can lose so much calcium in the urine that it can actually solidify into kidney stones.³⁰⁰ Over time, high animal protein intakes may leach enough calcium from the bones to increase one's risk of osteoporosis. People may be peeing their bones into the toilet along with the ketones.

The Harvard Nurse's study, which followed over 85,000 nurses for a dozen years, found that those who ate more animal protein had a significantly increased risk of forearm fracture. While plant-based proteins did not show a deleterious effect, women eating just a serving of red meat a day seemed to have significantly increased fracture risk.³⁰¹ Other studies have linked meat consumption to hip fracture risk as well.³⁰²

Although Atkins conceded, "kidney stones are a conceivable complication,"³⁰³ Atkins dismissed any assertion that his diet might endanger bone health. Researchers decided to test his claim directly.

In 2002, researchers from the Universities of Chicago and Texas published a study that put people on the Atkins Diet and measured 1) how acidic their urine got and 2) just how much calcium they were losing in their urine. They reported that the Atkins Diet resulted in a "striking increase in net acid excretion." After just two weeks on the Atkins Diet, the subjects were already losing 258mg of calcium in their urine every day. They concluded that the Atkins Diet "provides an exaggerated acid load, increasing risks for renal calculi [kidney stone] formation and bone loss."³⁰⁴ In addition, the Atkins Diet is actually deficient in calcium in the first place—even if one includes his 65 supplements.³⁰⁵ Luckily there's a 66th, available on his website.³⁰⁶

"Eaters of Raw Flesh"

We don't have any long-term published data on the bone health of Atkins followers (or any other health parameter for that matter). One might look to the Inuit peoples—the so-called "Eskimos"—for hints, though. (The word Eskimo comes from the word Eskimaux—"eaters of raw flesh.")³⁰⁷ They seem to be the only population on Earth approximating the Atkins Diet, living largely off Atkins dream foods like blubber.

Despite having some of the highest calcium intakes in the world, the Inuit also have some of the worst rates of osteoporosis.³⁰⁸ Although calcium intakes vary widely, people in some villages get over 2500mg a day, almost 5 times what most Americans get, due to their eating many of their fish whole, bones and all.³⁰⁹ So for example, in one of their recipes for "Ice Cream," although the "2 cups moose grease" the recipe calls for is not high in calcium, the "1 dressed pike" added to the recipe gives the Atkins-friendly dessert a respectable 130mg of calcium per serving.³¹⁰ The "unusually rapid bone loss" found in every study ever published on Inuit bone health is blamed on the "acidic effect of a meat diet."^{311,312,313,314,315}

While the near-Atkins level of animal protein intake seems to be dissolving their bones, due to the near-Atkins level of animal fat intake, the Inuit women have some of the highest levels in the world of PCBs in their breast milk. Their blood is swimming with mercury and other toxic heavy metals. "They're at the top of the food chain," says Dr. Russel Shearer, an environmental physical scientist with the Canadian Department of Indian Affairs and Northern Development, and therefore "accumulate the highest levels of these contaminants."³¹⁶ In the last edition of his book, Atkins did finally acknowledge the threat posed by the industrial pollutants in animal foods and urged his followers to choose organic free-range meat.³¹⁷

Atkins Distorted His Record on Cholesterol

Although ketogenic diets have caused a number of "serious potentially-life-threatening complications,"³¹⁸ perhaps the greatest danger of the Atkins Diet, according to the American Medical Association, lies in the heart.

Atkins claimed a worsening of cholesterol levels typically only occurs "when carbohydrates are a large part of the diet."³¹⁹ We've known this to be false since 1929 when the Institute of American Meatpackers paid to see what would happen if people lived on an all-meat diet. The blood plasma of the unfortunate subjects was so filled with fat it "showed a milkiness" and one of the subject's cholesterol shot up to 800!³²⁰

Atkins revelations like "Reverse heart disease with filet mignon!"³²¹ notwithstanding, in the head-to-head comparisons of the four popular weight-loss diets, Ornish's vegetarian diet was the only one that showed a significant decrease in LDL levels—the so-called "bad" cholesterol. Even researchers paid by Atkins concede that high saturated fat diets like Atkins tend to increase LDL cholesterol.³²² They have to concede the truth, though, since they publish their work in peer-reviewed scientific journals. Dr. Atkins, though, died without ever publishing a single paper in any scientific journal about anything, and thus had more freedom to bend the truth.

"The truth," Atkins wrote, "is that every one of a score of studies on [very low carb diets] showed a significant improvement in cholesterol." He accused those who say otherwise of simply not doing their homework. Any claim that cholesterol doesn't significantly improve in "every one of scores of studies" is, he wrote in the last edition, "one of the many examples of untruths being perpetrated because the accusers don't bother to read the scientific literature."³²³ Of course he then goes on to recommend no less than 17 supplements for the "prevention of cholesterol elevations" on his diet.³²⁴ But what about his claim that "every one of a score of studies showed a significant improvement in cholesterol." When the AMA and the American Heart Association question this "fact," is it just because they "don't bother to read the scientific literature?" That statement of his, in the latest edition of his book, presents a clear opportunity to test the veracity of his claims. And the actual truth is almost the exact opposite.

Unfortunately, Dr. Atkins didn't include citations to back up his "score of studies" statement. In fact, when pressed for a list of citations in general, Dr. Atkins told an interviewer that "It and the papers I quoted were in a briefcase I lost some time ago."³²⁵ Researchers have located about a dozen studies, though, that measured the effects of low carb diets on cholesterol levels. Did they all "show a significant improvement in cholesterol?" No. In fact, seemingly with only one exception, every single controlled study showed just the opposite—LDL cholesterol either stagnated or was elevated by a low carb diet, even in those that showed weight loss.^{326,327,328,329,330,331,332,333,334,335,336,337,338,339}

During active weight loss—any kind of weight loss (whether from chemotherapy, cocaine use, tuberculosis or the Atkins Diet) cholesterol synthesis temporarily decreases³⁴⁰ and LDL cholesterol levels should go down.³⁴¹ Yet, with all the saturated animal fat in the Atkins Diet tending to instead push levels up, in most studies the bad cholesterol doesn't fall like it should have. The saturated fat in effect cancelled the benefit one would expect while losing weight. And what hap-

pens when people on the Atkins Diet stop losing weight? People can't lose weight forever (Stephen King novels aside). The fear is that their LDL cholesterol level might then shoot through the roof.^{342,343}

Sometimes even during the active weight loss, however, LDL cholesterol levels became elevated on the Atkins Diet. One study on women, for example, showed that just two weeks on the Atkins Diet significantly elevated average LDL levels over 15%.³⁴⁴ In a trial of men on the Atkins Diet, even though they lost an average of 17 pounds after 3 months, their LDL cholesterol jumped almost 20%.

The May 2004 *Annals of Internal Medicine* study showed that a third of Atkins Dieters suffered a significant increase in LDL cholesterol. The goal is to have a double digit LDL—an LDL under 100 (mg/dl).³⁴⁵ In the study one person's LDL shot from an unhealthy 184 to a positively frightening 283 (which means their total cholesterol was probably somewhere over 350).³⁴⁶ With so many people on these diets, that could mean Atkins is endangering the health of millions of Americans.³⁴⁷ LDL cholesterol is, after all, one of the most important risk factors for heart disease, the number one killer in the United States for both men and women.³⁴⁸

In another clinical trial, despite statistically significant weight loss reported in the Atkins group, every single cardiac risk factor measured worsened after a year on the Atkins Diet (measures included LDL, triglycerides, total cholesterol, HDL, total-to-HDL cholesterol ratio, homocysteine, Lp(a), and fibrinogen). While the LDL in the Atkins group increased 6%, the LDL cholesterol levels in the whole-foods vegetarian group was cut in half—dropping 52%. When the pro-Atkins journalist who wrote the misleading *New York Times Magazine* piece was confronted as to why he didn't include the results of this landmark study, which directly contradicted what he wrote in the article, all he could do was to accuse the researchers of just making the data up.³⁴⁹

It's interesting to note that the one exception of a published study of the Atkins Diet showing a significant LDL lowering had no control group, put subjects on cholesterol-lowering supplements and was funded by the Atkins corporation itself. Even in that study though, the drop was modest—only a 7% drop (compared, for example, to the 52% drop on the vegetarian diet)—and didn't include two subjects who quit because their cholesterol levels went out of control.³⁵⁰

Yet studies like this have been heralded as a vindication of the Atkins Diet by the mainstream media.³⁵¹ As journalist Michael Fumento, co-author of *Fat of the Land*, pointed out, "How peculiar when the most you can say for the best-selling fad-diet book of all time is that it probably doesn't kill people."³⁵² To which I might add, "in the short-term." Based on an analysis of the Atkins Diet, long-term use of the Atkins Diet is expected to raise coronary heart disease risk by over 50%.³⁵³ "The late Dr. A," Fumento quips, "still gets an F."³⁵⁴

Less often reported in the media is the fact that one of the research subjects placed on the Atkins Diet in the 2003 "vindication" study was hospitalized with chest pain and another died.³⁵⁵ Similarly, in the widely publicized May 2004 study, less widely publicized was the fact that two people in the low carb-diet arm of the study couldn't complete the study because they died. One slipped into a coma; the other dropped dead from heart disease.³⁵⁶ As the Director of Nutrition at the Harvard School of Medicine has written, "there is still much danger in the widespread fad enthusiasm for these diets."³⁵⁷

The Atkins corporation boasts of the supposed ability of the Atkins Diet to significantly raise the level of HDL, or "good" cholesterol in a consistent manner.³⁵⁸ HDL transports cholesterol out of one's arteries to the liver for disposal or recycling. Only a minority of controlled studies on Atkins-like diets, however, have shown such an effect, ^{359,360,361,362,363,364,365,366,367,368,369,370,371,372} but more importantly, the type of HDL increase seen sometimes on the Atkins Diet isn't necessarily healthful.³⁷³ When one eats more garbage (saturated fat and cholesterol) one may need more metabolic garbage trucks (like HDL) to get rid of it. Eating a stick of butter may raise one's HDL, but that doesn't mean chewing one down is good for one's heart. In any case, significantly lowering one's LDL seems more important than significantly raising one's HDL,³⁷⁴ though the studies done on low carb diets typically show neither.

Because of these "well-known hazards," the Chair of the Nutrition Department at Harvard when Atkins' book was originally published warned physicians that recommending the Atkins diet "borders on malpractice."³⁷⁵

The Proof is in the SPECT Scan

Until the year 2000, all anyone had to evaluate the impact of the Atkins Diet on the heart was changes in cardiac risk factors like cholesterol. But then a landmark study was published which, for the first and only time, actually measured what was happening to peoples' arteries on this kind of diet. The results were shocking.

Richard Fleming, MD, an accomplished nuclear cardiologist, enrolled 26 people into a comprehensive study of the effects of diet on cardiac function. Using echocardiograms, he could visualize the pumping motion of the heart, and with

the latest in nuclear imaging technology—so-called SPECT scans—he was able to actually directly measure the blood flow within the coronary arteries, the blood vessels that bring blood to the heart muscle and allow it to pump. It is when one of these coronary arteries gets blocked that people have a heart attack.

Fleming then put them all on a low saturated fat, high carbohydrate diet—the kind that has been proven to not just stop heart disease, but to in some cases actually reverse it, to open up the arteries.³⁷⁶ A year later the echocardiograms and SPECT scans were repeated. By that time, though, 10 of his patients had, unbeknownst to him, jumped on the low carb bandwagon. All of a sudden, Dr. Fleming had an unparalleled research opportunity dropped in his lap. Here he had extensive imaging of 10 people following a low carb diet and 16 following a high carb diet. What would their hearts look like at the end of the year? We can talk about risk factors all we want, but compared to the high carb group, did the coronary heart disease of the patients following the Atkins Diet improve, worsen, or stay the same?

Those sticking to the whole-foods vegetarian diet showed a reversal of their heart disease as expected. Their partially clogged arteries literally got cleaned out, and blood flow to their hearts through their coronary arteries increased 40%. What happened to those who abandoned the high carb diet, though, and switched over to the Atkins Diet and started chowing down on bunless cheeseburgers? Their condition significantly worsened. All that saturated fat and cholesterol in their diet clogged their arteries further—the blood flow to their hearts was cut 40%. The only study on the Atkins Diet to actually measure arterial blood flow showed widespread acceptance of a high saturated fat diet like Atkins could be heralding a future epidemic of fatal heart attacks. Validation that "If you were trying to damage your heart," wrote the Center for Science in the Public Interest, "you couldn't do much better than to eat a cheeseburger."³⁷⁷ Maybe filet mignon doesn't work after all.

The blood flow scans have been posted online so people can see the evidence for themselves:
http://my.webmd.com/content/pages/1/3075_903

"We worry about this," explains Dr. James W. Anderson, Professor of Medicine and Clinical Nutrition at the University of Kentucky School of Medicine, "because many of the people who love these diets are men aged 40 to 50, who like their meat. They may be 5 years from their first heart attack. This couldn't be worse for them. Did you know that for 50% of men who die from heart attacks, the fatal attack is their first symptom? They will never know what this diet is doing to them."³⁷⁸

Emerging evidence also suggests that ketogenic diets may "create metabolic derangement conducive to cardiac conduction abnormalities and/or myocardial dysfunction"—in other words cause other potentially life-threatening heart problems as well. Ketogenic diets may cause a pathological enlargement of the heart called cardiomyopathy, which is reversible, if the diet is stopped in time.³⁷⁹ The Atkins corporation denies that Dr. Atkins' own cardiomyopathy induced-heart attack, hypertension, and blocked arteries had anything to do with his diet.³⁸⁰

Saturated Fat and Cholesterol Are Bad for You

The Atkins Diet restricts foods that prevent disease and promotes foods that promote disease.³⁸¹ No matter what Atkins or other diet books tell people, the balance of evidence clearly shows that the intake of saturated animal fat is associated with increased risk of cancer,^{382,383} diabetes, and heart disease.³⁸⁴ For over 40 years medical reviews have also shown the detrimental impact of dietary cholesterol consumption.³⁸⁵ Even independent of the effects on obesity, meat consumption itself has been related to an increased risk of coronary heart disease³⁸⁶

The best dietary strategy to reduce one's risk of dying from the number 1 killer in the U.S. is to reduce one's consumption of saturated fat and cholesterol. The evidence backing this, according to the American Heart Association, is "overwhelming."³⁸⁷

Decreasing America's intake of saturated animal fat is the primary reason why Johns Hopkins, supported by 28 other public health schools, launched the Meatless Mondays campaign trying to get Americans to cut meat out of their diet at least one day out of the week.³⁸⁸ Dr. Jean Mayer, one of the most noted nutrition figures in history—author of over 750 scientific articles, President of Tufts University, recipient of 16 honorary degrees—warned those going on "this faddish high-saturated-fat high-cholesterol [Atkins] diet" that they may be "playing Russian roulette with your heart and with your blood vessels."³⁸⁹ "The Council," wrote the American Medical Association in their official critique of the Atkins Diet, "is deeply concerned about any diet that advocates an 'unlimited' intake of saturated fats and cholesterol-rich foods."³⁹⁰ In return, Atkins accused the American Medical Association of being in the pockets of carbohydrate manufacturers. "If you look at the financial records of the AMA and the Harvard School of Nutrition," said Atkins in an interview, "and see the list of their benefactors, advertisers, and endowers you'll see why they insist on our eating carbohydrates." ³⁹¹ Interestingly, the Atkins corporation seems like it's already backpedaling. A front page article in the New York Times revealed that the Atkins corporation was quietly telling people to restrict their bacon and butter intake, urging people to

keep saturated fat intake under 20% of calories,³⁹² Of course it seems every major health organization on the planet recommends less than half that, but it does show at least that Atkins Inc. may be recognizing the dangers of their diet.³⁹³

The Atkins corporation claimed that their saturated fat guideline was nothing new and that Atkins never said people could eat as much meat as they wanted. They blamed the media for just misconstruing the Atkins Diet as an eat-as-much-meat-as-you-want diet.³⁹⁴ Really? Atkins wrote, "There is no limit to the amount of... [any kind of meat in any quantity] you can eat... You eat as much as you want, as often as you want" (emphasis in original).³⁹⁵ In fact he specifically boasts that his diet "Sets no limit on the amount of food you can eat."³⁹⁶ Maybe the media got it right.

The Director of Research and Education at Atkins Nutritionals claims that "Saturated fat isn't as much of an issue when carbohydrates are controlled; it's only dangerous in excess when carbs are high." Dr. Frank M. Sacks, a professor of cardiovascular disease prevention at the Harvard School of Public Health, scoffed at such a claim. "What they are saying is ridiculous," he said. The revision to 20% saturated fat, he added, "has nothing to do with science; it has to do with public relations and politics."³⁹⁷

Closing Off His Heart to the Atkins Diet

One can still go to the Atkins website, though, and read how innocuous saturated fat is. One reader asks, "Is it OK for me to consume more than 20% of my calories in the form of saturated fat?" The answer given is "Absolutely."³⁹⁸ With this kind of advice, 53-year-old businessman Jody Gorran stayed on the Atkins Diet, and continued to recommend it to his friends even though his cholesterol had shot up 50%. Before starting the Atkins Diet, his cholesterol was excellent, he had no history of heart disease, and an unrelated CT scan showed that his coronary arteries were clean.³⁹⁹ For Jody Gorran it took two years on the Atkins Diet before the crushing chest pain started. By then one of his coronary arteries was 99% blocked and his heart function was suffering for it. An immediate cardiac catheterization and stent placement may well have saved his life. In the opinion of his cardiologist, Gorran might well have otherwise had a massive heart attack and died within a short period of time. Mr. Gorran is now suing the Atkins corporation, alleging that they "knew, or should have known," that what they were saying about their diet and heart disease risk were false. He is trying to get the corporation to include warning labels on its books, website, and products that a low carbohydrate diet "may be hazardous to your health—check with your physician."⁴⁰⁰

This is not the first time Atkins was sued. When the book first came out, a million dollar class action suit was brought against Atkins and his publisher to recover medical expenses incurred by the diet's side effects.⁴⁰¹ A Brooklyn Assemblyman on Atkins who nearly died after a heart attack sued Atkins and the publisher for publishing the book "without regard to the safety, truth or accuracy if the statements contained in the book."⁴⁰² As revealed in the book *Nutrition Cultism*, on three separate occasions Atkins was sued and the cases were settled out of court in favor of the plaintiffs.⁴⁰³ "The point is," Gorran said in an NBC News interview, "Dr. Atkins lied to the public. He didn't care. For his ego or for corporate greed, that's what this thing's about."⁴⁰⁴ "A successful diet has to be more than simply losing weight" Gorran said on Good Morning America, "A successful diet should not kill you."⁴⁰⁵

Rachel

Most people aren't able to remain on the Atkins Diet long enough to develop osteoporosis, kidney damage or hardening of the arteries. Sixteen year-old high school student Rachel Elizabeth Huskey only lasted seven weeks.

Rachel had a crush on a boy in her church. So she started the Atkins Diet to lose weight. In part because she was so nauseated on the diet, she lost 16 pounds. She was hoping being thinner would make her more popular at school. After a brief carbohydrate relapse, she restarted it again "very strictly"⁴⁰⁶ but could only stick with it this time for 9 days. In history class, amidst cheering fellow students for acing a tough question, she collapsed without warning. And then she died. Frenzied attempts to resuscitate her failed.⁴⁰⁷ Her doctors blame the Atkins Diet.

The kidney uses minerals like potassium and calcium to help rid one's body of toxins like ketones. People on the Atkins Diet are urinating these minerals away. And critically low levels in the blood of these electrolytes can lead to fatal cardiac arrhythmias—lethal heart rhythms. Rachel was on the Atkins Diet and was found on autopsy to have critically low blood levels of both potassium and calcium and she died of a cardiac arrhythmia. Rachel was previously in good health and had no history of any medical problems.

After ruling out other potential causes, the medical team of child health specialists that investigated her death couldn't help but conclude in their published report, "Sudden Cardiac Death of an Adolescent During Dieting," that the Atkins Diet was the most likely cause of her death.

The chief executive of the Atkins corporation denied there was a link between the diet and Rachel's death, but implied she should have consulted her doctor before starting the diet.⁴⁰⁸ In fact, concern over just such an event led the Director of the Nutrition Department at the esteemed Cleveland Clinic to declare that for people on the Atkins Diet, "Careful monitoring of electrolytes is absolutely essential..." Those who aren't professionally monitored on this kind of diet "are at the greatest risk for dangerous complications."⁴⁰⁹

Dr. Paul Robinson, the Director of Adolescent Medicine at the University of Missouri involved in the investigation of Rachel's death, is afraid that "we're having lots of near misses that we don't know about."⁴¹⁰ "You wonder," he said, "whether there are other people dying and we don't know about it."⁴¹¹

One would think a teenager collapsing and dying after just 9 days on the diet might have ruined people's appetite for Atkins, but her death was hardly reported in the American press. When her parents held a press conference to tell their story for the first time and warn others that Atkins "killed our little girl,"⁴¹² it was reported in London, Scotland, New Zealand, Australia and South Africa. But out of the 34 reports that made it into the papers around the world about this Missouri teen, only 3 appeared in the U.S.⁴¹³ Despite repeated warnings from the American Heart Association, enthusiasm for the Atkins Diet did not seem to wane.

While tending her daughter's immaculately-kept grave, Rachel's mom told a reporter her thoughts on the diet: "I want people to know you can actually die doing something as stupid as this."⁴¹⁴

Down on Atkins Down Under

Australia seems to be the only nation in which action is actually being taken at a State level. The Victorian Health Minister, supported by the Australian Heart Foundation and the Australian Medical Association, issued a warning to alert people to the dangers of the Atkins Diet and other high-fat fad diets.⁴¹⁵ The government is warning the public about the potential short-term effects—constipation, dehydration, bad breath, low energy and poor concentration—and potential long-term effects such as the increased likelihood of cancer, heart disease, depression, and osteoporosis. "When we know something is bad for people, like smoking," the health minister explained, "then we let people know what the health risks are."⁴¹⁶

Initially, the government will distribute educational materials in doctors' waiting rooms, gyms and universities, probably followed by advertising in bus shelters and in the media.⁴¹⁷ Australia's chief physician urged all governments to follow suit.⁴¹⁸

The Atkins empire said that this was the first government to launch a public health campaign against them. The British government did issue a warning against low carbohydrate diets, saying they were "bad for your health" though it didn't specifically name Atkins.⁴¹⁹ The "US Federal Government officials," Atkins corporate representatives said, "had a much more positive response..."⁴²⁰ Perhaps "low carb" foods aren't a \$30 billion dollar business down under.

Only Under Monthly Clinical Supervision

In a medical journal article entitled "Bizarre and Unusual Diets" the authors warn that the Atkins Diet had such questionable safety that it should "only be followed under medical supervision."⁴²¹ But what do doctors know about nutrition? Even though the United States Congress mandated that nutrition become an integrated component of medical education,⁴²² as of 2004, less than half of all U.S. medical schools have a single mandatory course in nutrition.⁴²³ That explains the results of a study published in the American Journal of Clinical Nutrition that pitted doctors against patients head-to-head in a test of basic nutrition knowledge. The patients won.⁴²⁴ People off the street seem to know more about nutrition than their doctors.

Doctors can monitor for adverse effects, though. "The Atkins program falls short in insufficiently warning dieters," another review of popular weight loss diets warns, so that they "need to be monitored by a physician to ensure his or her safety."⁴²⁵ According to the Chair of the Nutrition Department at Harvard Medical School, people on Atkins "should be monitored for orthostatic hypotension... dizziness, headaches, fatigue, irritability, gout and kidney failure." And laboratory work should include "blood tests (glucose, blood urea nitrogen, sodium, potassium, chloride, and bicarbonate), urinalysis (specific gravity, pH, protein, and acetone) and a lipid profile. Vital signs... should be monitored at least monthly during a low carbohydrate weight-loss program."⁴²⁶

I suppose the expense of monthly visits would be in addition to the \$10,000-\$20,000 the food and supplements are estimated to cost every year.^{427,428,429,430}

THE SAFER ALTERNATIVE

Where Atkins Deserved Credit

Once, when Dr. Ornish was being interviewed on Dateline NBC, his interviewer swore that he had lost 50 pounds on an Atkins Diet, ate a steak every day and felt great. He asked Ornish "How bad could it be?" When Ornish turned the tables and questioned the host, it came out that, before going on Atkins, the guy seemed to be living off french fries, fried onion rings, cheesecake, and at least five soft drinks per day, everyday. He had since cut all those out and started exercising religiously. Ornish pointed out that the reason he's now feeling better was probably in spite of the steak, not because of it.⁴³¹

While Atkins used to tell people to eat unlimited quantities of hydrogenated shortening like Crisco,⁴³² thankfully he flipped and now warns about the "dangers of trans fats." Just cutting out deep fried foods (most often fried in 100% vegetable—and 100% hydrogenated—oil) from one's diet should alone improve one's cholesterol profile. Atkins also encouraged everyone to cut out caffeine, eat more heart-healthy nuts and omega-3 fatty acids and does consider daily exercise a critical "non-negotiable" component to his plan.⁴³³

Anyone completely cutting out sugary soda, pastries, ice cream, cookies, cake, candy, kids' cereals, and Snackwells is probably going to feel better. But does one need a 300-page diet book to tell us that? Anything that can give Krispy Kreme's corporate profits that glazed look⁴³⁴ is a good thing for America's health.

For those who don't remember, Snackwells were Nabisco's line of low-fat and fat-free junk food that went from zero to a billion dollars in revenues in four short years, in effect becoming America's most popular cookie. When Snackwells' fat-free Devil's Food Cookie Cakes first appeared, demand was so high that Nabisco had to ration them out to stores and fights broke out, forcing store managers to keep boxes of the cookie under lock and key.⁴³⁵

People were mistaking low-fat for low-calorie. The intention of the government's recommendation to cut down on fat was to get people to cut down on items like meat and switch to foods that are naturally low in fat—like beans, whole grains, fruits and vegetables. These don't have much of a profit margin, though, so the food industry took advantage of the new guidelines to market low-fat junk food like Snackwells cookies, swapping fat for sugar. Each cookie was basically just white flour, no fiber and two spoonfuls of sugar. Even bags of jellybeans started boasting "fat-free." A similar phenomenon is now happening with low carb junk food. A new Atkins-friendly ice cream, for example, has almost twice the calories of regular ice cream (and of course twice the fat).⁴³⁶ "It's Snackwells all over again," noted one WebMD Medical News article.⁴³⁷ Junk food—low fat or low carb—is still junk food

People also may feel better on the Atkins Diet because he tells people to stop drinking cow's milk. Even the National Dairy Council admits⁴³⁸ that literally most people on the planet are lactose intolerant (and may not even know it).⁴³⁹ That change alone should make a segment of the people trying Atkins feel better. Other easy born-again Atkins converts might be those with an actual dairy allergy or the one out of every few hundred Americans who is allergic to wheat.⁴⁴⁰ Even at his strictest, Atkins "allowed" two small salads a day. Although they can only be a cup of "loosely" packed greens each, that's sadly more salad than many non-Atkins Americans may get. Then again, of course, Atkins' "spinach salad" recipe calls for an entire pound of bacon and 5 eggs. No croutons, of course—"use crumbled fried pork rinds instead."⁴⁴¹

Atkins even recommended eating one's greens organic, dark, and leafy,⁴⁴² although the word "kale" does not seem to frequent the book sleeve. Unfortunately people may ignore the few reasonable suggestions that Atkins made, and just use his low carb phenomenon as an excuse to eat whatever they want.

The Answers are No and No

There seem to be two Atkins Diets: one that he describes in his books (particularly in later editions), and the one the public thinks he describes in his books. How many Atkins Dieters, for example, only eat free-range organic bacon? This may be one of the reasons why we haven't seen even higher rates of serious side effects—so few people may be actually following the diet.

A recent study of 11,000 people found that only one in four of those claiming to be on a low carb diet were actually significantly cutting carbs at all.⁴⁴³ Another survey, commissioned by former Surgeon General C. Everett Koop's organization Shape Up America!, found that most people claiming to be on Atkins, or another of the low carb fad diets, didn't seem to even know where carbs were found.⁴⁴⁴ Most didn't know, for example, that tomatoes were high in carbs. Thankfully, about half of them didn't know apples had a lot of carbs, and 1 in 6 even thought steak was a carbohydrate.⁴⁴⁵ Thankfully most people on Atkins are actually not on Atkins.

Despite the softening of his stance on whole grains and many vegetables, Atkins still made saturated fat-laden meat and

dairy the centerpiece of his diet. The Atkins Diet therefore remains dangerous even when "used as directed." Isn't it possible to do the Atkins Diet healthfully, though? Isn't there some way to modify it to make it safer? Those exact questions were asked of the editors at the Tufts University Health and Nutrition Letter by one of the University's Vice Presidents.

After trying their best, the editorial staff at the Tufts Letter couldn't help but conclude, "So, as to whether it's possible to follow the Atkins Diet healthfully or tweak it to make it safe and healthful, the answers are no and no"(emphasis in original).⁴⁴⁶

Too Good to Be True

What kind of diet can cause birth defects? Or blindness? Or requires 65 supplements? Or monthly medical checkups, where the monitoring of electrolytes is considered "absolutely essential?" Is it too much to ask that one's diet facilitate instead of debilitate physical activity? (Here in Boston there has yet to be a night of pork-rind loading before the Marathon.) What kind of diet may require prescriptions to deal with the side effects? What kind of diet has side effects at all? Rational people go on irrational diets because "they're desperate," says Kelly Brownell, Director of Yale University's Center for Eating and Weight Disorders. "If you're a person with an overweight body living in a thin-obsessed world... something that offers a miracle is highly attractive."⁴⁴⁷

The Director of Nutrition at the Center for Science in the Public Interest is dumbfounded that the high-fat regimes have caught on. "With all the evidence that saturated fat promotes heart disease, it's almost unbelievable to me that people could successfully tell people to eat bacon, eggs, ground beef, cheese and cream," she says. "It really shows that people care more about how they look than how healthy they are."⁴⁴⁸

Obesity shouldn't be a cosmetic or moral issue, but it does remain a health issue. Obesity, as defined by the Institute of Medicine, is "an important chronic degenerative disease that debilitates individuals and kills prematurely."⁴⁴⁹ Obesity continues to contribute to hundreds of thousands of deaths in the U.S. every year.^{450,451,452,453} Losing weight is important, but the goal should be to lose weight in a way that enhances health rather than in ways that may harm it. People also use cocaine, amphetamines and tobacco to control their weight—not health promoting solutions to the problem. The Consumer Guide concluded that the Atkins Diet "owes its appeal, like pornography, to the naughtiness of the approach, to the titillation we all feel in doing something which we think is not right."⁴⁵⁴ Diet gurus like Atkins—the "bad boy of diets"⁴⁵⁵—gave "his readers what they wanted to hear," says James Hill, Director of the University of Colorado Center for Human Nutrition. Asks one Atkins disciple: "Who wouldn't like a diet that allows fried eggs and bacon and all the steak you can eat?"⁴⁵⁶ "But what people want to hear," Dr. Hill adds, "is killing them."⁴⁵⁷

Atkins is Based on a Half-Truth

Despite U.S. attempts to stall⁴⁵⁸ and sabotage⁴⁵⁹ the World Health Organization's report on diet (as they tried to do with tobacco),⁴⁶⁰ in May 2004 the WHO Global Strategy on Diet, Physical Activity and Health was unanimously endorsed by all 192 Member States of the United Nations. The report blames the growing pandemic of global chronic disease in part on "greater saturated fat intake (mostly from animal sources), reduced intakes of complex carbohydrates and dietary fiber, and reduced fruit and vegetable intakes," in other words, they blame the global epidemic of obesity, cancer, heart disease and diabetes on exactly the kind of diet Atkins' books recommend. As the Harvard Health Letter put simply, the Atkins Diet "is not a healthy way to eat."⁴⁶¹ The World Health Organization is calling for limiting the consumption of saturated animal fats⁴⁶² and "increasing the consumption of fruits, vegetables, legumes [beans, peas and lentils], whole grains and nuts."⁴⁶³

The evidence to support their position is "overwhelming."⁴⁶⁴ After 11 years following 11,000 people, for example, researchers found that eating whole grains may help people live longer. That did not seem to be the case for refined grains, though.⁴⁶⁵ And the Atkins Diet is based on that half-truth.

Atkins was right in going "against the grain" in the case of refined carbohydrates like white flour and sugar. But he was wrong to restrict good carbs—the carbs found in whole unrefined foods—like the WHO's "fruits, vegetables, legumes, whole grains and nuts." A bunless burger is not the answer to a fat-free doughnut. Just because jellybeans and Wonder Bread are not health-promoting foods does not mean one has to switch to pork rinds and bacon. Let's not throw the wheat germ out with the wheat.

You Can Have Your Carbs and Eat Them Too

What evidence do we have that "good" carbs are good? Every single long-term prospective cohort study ever performed on the foods that the Atkins Diet restricts—fruits, vegetables, nuts and whole grains—show that they protect people from

the nations' biggest killer: heart disease.466 Harvard studied 75,000 women for a decade and the results suggest that the more whole grains people eat—like brown rice and whole wheat bread—the lower their risk of having a heart attack.467 Harvard studied 40,000 men for a decade and suggested that eating whole grains may cut one's risk of developing diabetes by more than half.468 The only thing wrong with whole grains, perhaps, is that they may not sell as many books.

Atkins seemed to think that fruit was the worst thing since sliced bread. Fruit consumption alone, however, has been linked to lower rates of numerous cancers469 and may reduce heart disease mortality, cancer and even total mortality.470 The World Health Organization blames low fruit and vegetable consumption on literally millions of deaths worldwide.471 Everyone should eat more fruits and vegetables as if their lives depended on it. The National Cancer Institute's recommendation is now up to nine servings of fruits and vegetables every day. While Atkins preached to restrict fruit and vegetable intake, what Americans really need is more fruits and veggies, not less.472

Lose Weight without Losing Your Health—or Your Life

Life-long weight control is a marathon; fad diets are sold on the 100-yard dash. The UC Berkeley School of Public Health's #1 rated473 newsletter's "Bottom Line" on Atkins: "Bottom Line: If you follow the Atkins Diet, you will lose weight—but it could be dangerous beyond a few weeks. All fad diets get you to cut down on calories, usually by limiting the kinds of food you can eat, so of course you lose weight. Most, like the Atkins Diet, deny that 'calories count,' but nonetheless trick you into cutting way down on calories by distracting you with strange rules and psychological/biochemical babble. As with all crash diets, keeping the weight off is the hard part. Virtually all crash dieters eventually gain the weight back, unless they learn the basics of healthy eating, which crash diets do not teach."474 Diets are not something to be followed for days, weeks, or months. They should form the basis of everyday food choices for the rest of one's life.

So what are the "basics of healthy eating?" According to the American Dietetics Association, "The overwhelming majority of studies reported to date including both epidemiological and laboratory approaches, suggest that eating carbohydrate-rich foods such as vegetables, fruits, legumes and whole grains, and limiting saturated fat intake, over a lifetime, is associated with substantially reduced risk for vascular disease and some cancers."475 It may be no coincidence that the longest-living people in the world, even by some accounts outlasting the Okinawa Japanese,476 are the California Seventh Day Adventist vegetarians.477

Every study over six months in duration of the Atkins Diet found that the Atkins Diet failed to significantly outperform the exact diet Atkins blamed our entire obesity epidemic on.478 Why not, then, choose a healthier diet?

Fewer than 20% of Americans trying to lose weight follow what's considered the optimal diet plan for weight control, the one most proven to be safe and effective for losing weight, keeping the weight off and promoting health—a diet low in saturated animal fats, and high in fruits, vegetables and high-fiber-containing carbohydrates like beans and whole grains.479 How convenient that the most healthful diet also seems to be the one most successful in controlling one's weight.480

To lose weight, one can cut down on calorie intake by restricting the amount of food one eats, or one can transition away from eating junk food—foodstuffs long on calories but short on nutrition—toward eating food that is nutrient-dense, but relatively calorie-dilute: foods like fruits, vegetables, beans and whole grains. One can add nuts to the list as well, since despite their caloric density, a 2003 review concluded eating nuts every day might actually help one maintain or even lose weight.481 People placed on nutrient-dense, calorie-dilute plant-based diets tend not to complain of hunger, but of having "too much food."482,483,484

The healthy alternative to the Atkins Diet is not a fat-free diet, but a fad-free diet. The optimal diet is one centered around good carbohydrates (unrefined), good fats (like nuts) and the best sources of protein, which, according to the Harvard School of Medicine, are "beans, nuts, grains and other vegetable sources of protein..."485 in other words, by eating a whole-food plant-based diet one can control one's weight without risking one's health—or one's life. We don't have to mortgage our health in order to lose weight.

Conclusion

"Nobody wants to hear this," groaned Dr. James W. Anderson in an interview. Anderson is a Professor of Medicine and Clinical Nutrition at the University of Kentucky School of Medicine. "People lose weight, at least in the short term. I am not arguing with that. But this is absolutely the worst diet you could imagine for long-term obesity, heart disease, and some forms of cancer. If you wanted to find one diet to ruin your health, you couldn't find one worse than Atkins'."486 Thankfully, the low carb mania may have peaked. According to the June 14, 2004 issue of Fortune magazine, data show that the number of Americans on a low carb diet has fallen 25% since January. As one Wall Street analyst explained,

"Have you ever tried low carb bread?"⁴⁸⁷

* Michael Greger, MD, is a graduate of the Cornell University School of Agriculture and the Tufts University School of Medicine. Dr. Greger has been publicly speaking about mad cow disease since 1993. In 1997 he was invited as an expert witness to defend Oprah Winfrey in the infamous meat defamation trial. He has contributed to many books and articles on the subject and continues to lecture extensively. Dr. Greger can be contacted at 857-928-2778, or mhg1@cornell.edu.

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Read more about A Chef's Eye at <http://www.drmcDougall.com/catering/>

Here are some sample past menus:

McDougall Menu Week of July 12, 2004

ENTREES

California Stew
Stuffed Manicotti
Lentil Enchiladas
Thai Tofu with Cashews

VEGETABLES

Roasted Seasonal Vegetables

SOUP

Summertime Corn Chowder

SWEET

Nectarine Cobbler

**McDougall Menu
Week of July 19, 2004**

ENTREES

Sweet Potatoes A L'Orange
Eggplant Scalopinni
Broccoli, Red Pepper & Walnut Calzone
Spaghetti & "Meatballs"

VEGETABLES

Roasted Seasonal Vegetables

SOUP

Peking Hot & Sour

SWEET

Banana Bread

**McDougall Menu
Week of July 26, 2004**

ENTREES

Herby Garden Pasta
Tamale Corn Casserole
Tex Mex Lasagna
Thai Noodle Stir Up

VEGETABLES

Roasted Seasonal Vegetables

SOUP

White Bean Minestrone

SWEET

Berry Kuchen

Recipes

FRESH TOMATO GAZPACHO

There are a lot of varieties of gazpacho: white, red, yellow, and green; Spanish, Mexican, Tex-Mex, Italian, and even fruit-based gazpachos. The word "gazpacho" translates into English as 'salad soup', and what better way to describe this refreshing veggie delight? I make and serve many varieties of gazpacho during the warm summer months. They keep well in the refrigerator for a couple of days and are a simple, cool meal with a loaf of bread and/or a salad from my garden.

Preparation Time: 35 minutes

Cooking Time: 13 minutes

Chilling Time: three hours

1 pound fresh mushrooms, cut in half, then sliced
1/2 cup vegetable broth or water
1/4 cup soy sauce
3/4 cup thinly sliced onion wedges, separated
8 tomatoes, chopped (reserve as much juice as you can)
1 tablespoon lime juice
1/2 cup ketchup
1 1/2 cups hearts of palm, chopped (14.5 ounce can, drained)
1/2 cup chopped cilantro
several twists freshly ground pepper
hot sauce to taste

Place mushrooms in a large non-stick frying pan with 1/4 cup of the vegetable broth or water, and the soy sauce. Cook over medium heat, stirring occasionally, for five minutes. Remove from heat, drain, reserving the liquid, and set aside in a large bowl.

Place the remaining 1/4 cup of the vegetable broth or water in the frying pan with the onion. Cook over medium heat, stirring occasionally, for about three minutes, until onions are translucent and most of the liquid has evaporated. Remove from heat and add to mushrooms.

Place tomatoes and their juice in the frying pan with the lime juice and the ketchup. Cook over medium heat, stirring occasionally, for five minutes. Remove from heat and add to mushrooms and onions. Add hearts of palm and cilantro. Mix well, cover and refrigerate at least three hours to allow flavors to blend.

Before serving, taste the chilled soup and add several twists of freshly ground pepper, hot sauce to taste and about two to three tablespoons of the reserved liquid from cooking the mushrooms.

Hint: This is better if you make it a day ahead of time and refrigerate for 24 hours before serving.

BAKED POTATOES

Store all potatoes in a cool dark place. Fifty degrees is ideal.

Baked potatoes are a simple yet versatile meal. They can be eaten plain or with a wide variety of toppings. Potatoes may be microwaved if you are in a big rush, but the flavor and texture of the potato won't be nearly as delicious as those baked in an oven. Our favorite potatoes for baking are the large brown-skinned russet variety.

Preheat oven to 475 degrees.

Scrub the potatoes well and prick them all over with the tines of a fork.

Bake potatoes directly on the oven rack, for one hour. They will be fluffy and delicious.

Never bake in aluminum foil. It makes potatoes pasty, instead of dry and fluffy. If you like potatoes this way, make sure you wrap them in parchment paper before using the foil.

Make extra potatoes for leftovers. Store unwrapped in the refrigerator. Eat them cold or reheat in the microwave.

Topping Ideas:

Salsa or barbecue sauce

Tofu sour cream and chives

Baked beans

Chili

Pea soup or bean soup

Fat free dressings

Almost any bean recipe goes great over baked potatoes.

One of our favorite toppings for baked potatoes is Mushrooms McDougall, found in The New McDougall Cookbook. (recipe follows here)

Hints: Sweet potatoes are also delicious when baked. They should be baked at a lower temperature, about 350 degrees, for 45-50 minutes. Prick them all over with a fork and place on a baking tray in the oven. (Or place on the oven rack and put a baking tray on the shelf underneath to catch the drips.) Eat plain, either warm or cold, or try them topped with baked beans. Use the Barbecued Bean recipe from the August 2003 newsletter; or open your favorite can of healthy fat-free baked beans, heat, and spoon over the top of the sweet potato.

MASHED POTATOES

Russet potatoes make fluffier mashed potatoes, while Yukon Gold, Yellow Finn or thin-skinned red or white potatoes are denser and heavier in texture. Three pounds of potatoes will yield approximately 6-8 servings. Peel, simmer over low heat until tender, and mash, blending with warmed soy milk. (Or save some of the cooking water and use that to moisten the potatoes.) Add salt and pepper to taste. I like to mash my potatoes using a hand-held electric mixer. Don't use a food processor to mash potatoes - the potatoes turn into a starchy paste within seconds. Potatoes are also delicious when they are cooked and mashed with the skin on. It adds some color and texture to the potatoes when eating, and it also saves a lot of preparation time.

Variations on basic mashed potatoes:

- 1) For garlic mashed potatoes, cook six peeled cloves of garlic with the potatoes.
- 2) For roasted garlic mashed potatoes, cut the top off one head of garlic, drizzle 1 tablespoon vegetable broth over cut portion, wrap in parchment paper, then tightly wrap in aluminum foil. Bake at 400 degrees for about 45 minutes. Cool. Remove from wrapping, invert over bowl, and squeeze garlic out of the cloves. Add to potatoes while mashing.
- 3) For colorful mashed potatoes, add cooked vegetables while mashing. Try carrots, sweet potatoes, turnips, kale or spinach (well drained), broccoli, or celery root.
- 4) For herbed mashed potatoes, add fresh chopped herbs after the potatoes are mashed. Try parsley, dill, chives, cilantro, basil, or another of your favorites.
- 5) For green onion mashed potatoes, add one cup of chopped green onions to soy milk while heating, then add to potatoes while mashing.
- 6) For spicier potatoes, add one to two tablespoons of spicy brown mustard while mashing, or try two tablespoons of prepared wasabi.

ROASTED POTATO CHUNKS

Preparation Time: 15 minutes

Cooking Time: 30-40 minutes

Servings: 4-6

- 1 teaspoon oregano
- 1 teaspoon rosemary
- 1/2 teaspoon paprika
- 1/8 to 1/4 teaspoon cayenne
- 1 teaspoon dry mustard
- 1 tablespoon Dijon mustard
- 1-2 cloves minced garlic or 1/2 teaspoon garlic powder
- 8 to 9 medium potatoes, cut into 1 inch chunks

Preheat oven to 425 degrees.

Mix the oregano, rosemary, paprika, cayenne, mustards and garlic into a smooth paste in a bowl.

Add a few potato chunks at a time and coat with the mixture; keep adding a few chunks at a time until all potatoes are coated. Spread out on two nonstick baking sheets and bake for 30 to 40 minutes until tender.

Hints: Try using smoked paprika in this recipe. Vary the seasonings used to suit your tastes. I have been making many variations of this recipe over the years. This recipe was originally found in The New McDougall Cookbook with slightly different ingredients. This one is our current favorite.

MUSHROOMS MCDUGALL

I have recently rediscovered this old favorite of ours. We like this plain, on baked potatoes and on burritos. It is really quick if you buy presliced mushrooms!

Preparation Time: 15 minutes

Cooking Time: 15 minutes

Servings: 4

1/4 cup water

1 1/2 pounds fresh mushrooms, sliced

1 bunch green onions, chopped

2 cloves garlic, minced

1 4 ounce can chopped green chilies

2 tablespoons lemon juice

1/4 cup sherry

1/2 teaspoon Worcestershire sauce

fresh ground pepper to taste

Place water in a large pan or wok. Bring to a boil, add mushrooms, green onions, garlic and chilies. Cook and stir for a minute or two, then add the remaining ingredients. Cook over medium heat, stirring frequently until all liquid has been absorbed, about 10-12 minutes.

Serve rolled up in a burrito shell with fresh salsa; use on top of beans in a Mexican-style burrito; or serve on top of baked potatoes. This is wonderful on almost anything!

EASY TOMATO SAUCE

This recipe was contributed by Mary Duffield. She shared it with me last month during our program and it is so quick and easy that it makes a fast summer meal. Even the shopping list for this dish is quick and easy. She says it is delicious over pasta, polenta, baked potatoes, and rice or try it over vegetables like steamed spinach, cauliflower or green beans.

Preparation Time: 15 minutes

Cooking Time: 20-25 minutes

Servings: 4

2 large onions, cut in half, then sliced into rings

1/3 cup water or vegetable broth

2 15 ounce cans diced tomatoes with basil, garlic and oregano

1 15 ounce can diced tomatoes with jalapeno peppers

4 small zucchini, cut in half, then sliced into chunks

Place the onions and water or vegetable broth in a large saucepan. Cook, stirring occasionally, until onions soften slightly. Add the canned tomatoes and their liquid and cook for 15 minutes. Add the zucchini and cook until tender.