



Volume 3 Issue 5

In This Issue

- The Atkins Scientific Research—Deceit and Disappointment (page 1)
- Favorite 5—My favorite 5 articles found from my medical journals from this past month (page 15)
- Highlights of the May 14-16 McDougall Advanced Study Weekend (page 17)
- Featured Recipes (page 18)

The Atkins Scientific Research – Deceit and Disappointment

During the Great Nutrition Debate held February 24, 2000, by the United States Department of Agriculture in Washington D.C., Dr. Robert Atkins, founder of the world's most famous low-carbohydrate diet plan, was challenged for his lack of medical research to support his claims, especially about the benefits of his high-fat, high-cholesterol diet for heart disease. Dr. Atkins responded, "And I haven't been able to fund the study." Dr. Keith-Thomas Ayoob, associate professor of nutrition at Albert Einstein College of Medicine, New York continued his cross examination, "Excuse me. Excuse me. Ten million books in print, and you can't fund the study?" Dr. Atkins responded, "Now I can, and I will be the first doctor to dig into his own pocket to do a study..." And he made true on his promise and since has funded sufficient research to persuade doctors, media personalities (like Neal Cavuto of Fox News Channel), and as many as 15% of the population of the USA, to believe that eating pork rinds, fried cheese, and lobster dripping in butter is good for body, heart, and soul – and that his previous 35 years of diet claims were right all along.

Dr. and Mrs. Atkins established the Dr. Robert C. Atkins Foundation in 1999, and thus far have endowed it with \$3 million in grants – furthermore, the organization that bears their name, Atkins Nutritionals Inc., has a yearly income of \$100 million; therefore, money for supportive research should be no barrier. Over the past three years several published studies, laced with sufficient bites of truth to influence the practice of medicine, have indeed been published. The consequences have been so profound that the Atkins Diet is now taught to medical students as part of their first year medical curriculum at the New York Downstate Medical Center in Brooklyn.²⁵ These impressionable students learn that replacing potatoes with beefsteak protects against the development of heart disease and that the diet is a safe and effective solution to America's obesity epidemic.²⁵ The time has come for a thorough review of this research and a challenge to those who would distort the truth, often at the expense of your health.

Prominent Researchers Employed by the Robert C. Atkins Foundation:

Jeff S. Volek; University of Connecticut
Matthew J. Sharman; University of Connecticut
Eric C Westman, Duke University
William S. Yancy; Duke University

The Science behind Atkins

I have spared no effort to locate and carefully read the scientific papers that have been published about the Atkins Diet. The ones that have received most public attention are those directly comparing the Atkins Diet to a “low-fat” diet. Of the nine research papers¹⁻⁹ I was able to obtain and review that directly compare the Atkins Diet with a “low-fat” diet, four^{4,6-8} were funded by the Robert C. Atkins Founda-

tion. Other research papers funded by the Atkins Foundation were also located and reviewed;¹⁰⁻¹² as were several others on this topic with independent financial support.¹³⁻²⁰ The funding for the third issue of the journal of *Metabolic Syndrome and Related Disorders* was not identified, but the entire edition was dedicated to the memory of Robert Atkins, MD – and by no coincidence, the articles within were highly supportive of his low-carbohydrate diet.²¹⁻³² There were a few abstracts (a brief written paragraph about an unpublished study) and several related research papers in obscure journals that I could not obtain – I doubt that these would have altered my findings.

Ten Conclusions I Reached after Reviewing the Scientific Research Published on the Atkins Diet:**1) Use of the Term “Low-fat” in the Comparisons Is Dishonest**

Researchers have deceived the public by claiming they have compared the Atkins Diet with a “low-fat” diet. The truth is all of their comparisons are with a calorie-restricted (portion-controlled) version of the typical American diet, containing approximately 30% of the calories as fat.¹⁻⁹ The “dieting” (calorie-restricted, portion-controlled) approach to weight loss has a consistent history of failure; therefore, choosing this kind of diet for comparison greatly increases the odds that the Atkins Diet will appear favorable.

2) Long-Term Weight Loss Is Insignificant

Over the short-term (weeks), people on the Atkins Diet lose more weight than on the calorie-restricted diet, but this benefit does not last. After one year, the difference in weight lost between those following the Atkins Diet and those on the calorie-restricted diet was found to be statistically insignificant by the only two studies performed for this period of time.^{1,2}

3) A Real Low-Fat Diet Is Far More Effective

Direct comparison of a truly low-fat diet (10% or less of the calories from fat) with the Atkins approach is long overdue. Available evidence supports superior benefits with a low-fat diet.³³⁻³⁴ A low-fat diet (and exercise) is the only approach found to provide long-term successful weight loss (an average of more than 70 pounds of weight lost per person and maintained for more than 6 years, based on a population of over 4,000 people).³⁵⁻³⁷

4) The “Metabolic Advantage” Is Nothing to Brag About

Over the short-term, the Atkins Diet will cause more weight loss, for the same number of calories consumed, as a calorie-restricted diet. This is referred to as the “metabolic advantage” of the low-carbohydrate diet. When the body is burdened with the wrong fuel (a diet of fat and protein, and insufficient carbohydrate) it must make changes that are metabolically expensive, thus burning extra calories.²⁷ Better stated, the burden of the Atkins Diet requires the body to make adaptations originally intended for survival; in order to stay alive under this adversity.

5) The Atkins Diet Worsens Some Important Risk Factors for Heart Disease

The Atkins Diet consistently raises total and “bad” LDL-cholesterol, whereas, a calorie-restricted (30% fat) diet lowers these important predictors of future heart trouble.^{1,2,18} A truly low-fat diet (10% or less of calories from fat) is even more effective at reducing these risk factors than the 30% fat diets used for these comparisons.³⁸⁻⁴¹

6) The Atkins Diet Improves Some Less Important Risk Factors for Heart Disease

The Atkins Diet lowers triglycerides (a less important risk factor), but so does a healthfully designed low-fat diet. “Good” HDL-cholesterol is increased^{1,2,4,7,8} on the Atkins Diet, but homocysteine (which predicts more heart disease) is also increased.¹⁷ When it comes to “heart health,” triglyceride and HDL-cholesterol values are of questionable importance and far less significant than total- and LDL-cholesterol.^{42,43} But to read the research paid for by Atkins you would think otherwise.^{4,6-8}

7) Atkins Is Harder to Follow Long-term

Dropout rates are very high with both the Atkins and calorie-restricted diets, because both programs are very hard to follow. The Atkins Diet causes people to become “sick” and the calorie-restricted diet causes them to suffer the pains of hunger. When comparing these two unpleasant living conditions, the authors of the most recent one-year study published in the *Annals of Internal Medicine* raised “the possibility that the Atkins Diet was less sustainable.”² In other words, constant sickness is more difficult to endure than the everyday pains of hunger.

8) Exercise Is Not an Easy Addition to the Atkins Program

Exercise is not a part of most of the research studies performed.¹⁻⁹ On a low-carbohydrate diet people are too fatigued to participate in increased physical activity.

9) Adverse Effects Are Common, Expected, and Sometimes Serious on Atkins

Most of the people following the Atkins Diet suffer adverse effects like constipation, fatigue, headaches, muscle cramps, diarrhea, and bad breath. Predictors of future health problems, such as elevated cholesterol, BUN, uric acid, and free fatty acids, are found with this diet.¹⁻²⁰ Furthermore, people have been reported to suffer from serious complications, such as dehydration, cardiac arrhythmias, kidney damage, kidney stones, liver, brain, and eye damage and also death from following high protein and ketogenic diets.^{2,4,14,18,44-55}

10) Atkins Is Not Accepted by the Scientific Community – for Good Reasons

Major health organizations, for example, the American Heart Association Nutrition Committee, warn the public that the kinds of foods encouraged by the Atkins Diet will increase their risk of health problems.⁴⁴

For the Curious Reader Further Explanation and Support of My Findings Follows

Comparing Atkins with a “Low-fat” Diet is Deceptive

All of the papers purporting the comparison of the Atkins Diet with a “low-fat” diet have deceived the public – and their authors must have known better.^{1,3-9} The “low-fat” diet used is actually approximately 30% of the calories from fat in all cases. Consider, the average American eats a diet with 32% to 38% of calories coming from fat. In each case the diet that is labeled “low-fat” is in truth the conventional, always-known-to-fail, calorie-restricted diet. In one of the major studies,³ before the diet began the participants’ diets were 33% fat; the goal was to reduce to 30% fat – but in the end their “low-fat” diets actually contained 33% of the calories as fat (the same as before they started) – so where is the low-fat part of the comparison alleged by the title of the article? – *“A low-carbohydrate as compared with a low-fat diet in severe obesity.”*

Weight Loss of Low-Carb vs. Low-fat Diets

Study Author	% Fat in LF Diet	Wt Loss (Kg) LC vs. LF	Study Duration	Financial Support
Foster ¹	25	-4.3 vs. -2.5	12 mos.	NIH
Stern ²	30	-5.2 vs. -3.1	12 mos.	VA
Samaha ³	30 (33)	-5.8 vs. -1.9	6 mos.	VA
Yancy ⁴	30	-12 vs. -6.5	24 wk.	AF
Brehm ⁵	30	-8.5 vs. -3.9	6 mos.	AHA
Shaman ⁶	30	-6.1 vs. -3.9	6 wk.	AF
Sondike ⁹	30	-9.9 vs. -4.1	12 wk	Unknown

LF = Low Fat (30% fat)
 LC = Low Carbohydrate (Atkins)
 NIH = National Institutes of Health
 VA = Veteran's Administration
 AF = Robert C. Atkins Foundation
 AHA = American Heart Association

For the short-term (6 to 24 weeks) the Atkins approach betters the calorie-restricted diet by 4 to 12 pounds (2 to 5.5 Kg).⁴ Some of this early weight loss (up to 8 pounds) reflects water loss (from diuresis and loss of glycogen stores). However, at 12 months, research financed independent of Atkins has found the difference in weight loss to be insignificant (2.1 Kg or less).^{1,2} The reason people fail to continue to lose weight on the Atkins Diet is primarily because of lack of adherence to the diet. Interestingly, researchers from one of the long-term studies reported those on the calorie-restricted diet who dropped out continued to lose the same amount of weight as those who

stayed in the study, whereas those in the Atkins group were less likely to lose weight if they dropped out. This finding, along with the weight gains that were seen between 6 and 12 months on the Atkins Diet led researchers to raise the possibility that the Atkins Diet was less sustainable (than the portion controlled, calorie-restricted diet).² (I believe the reason Dr. Atkins, himself was so grossly overweight was, not because of the lack of effectiveness of a ketogenic diet, but because even he could not follow his own diet for long.)

The Atkins Diet is inherently difficult to stick with because of the underlying mechanism for weight loss – the diet makes people sick. Followers of this kind of diet complain of reduced appetite, nausea, and fatigue – all symptoms of illness, which result in a natural reduction in daily food intake – which includes consuming fewer calories. You can only stay sick for so long before you long for relief and return to eating more carbohydrates and less fat.

A Low-fat Diet Solves the Obesity Epidemic

A low-fat diet as used by Kempner (the Rice Diet), Pritikin, Ornish, McDougall, and Barnard is based on plant foods and contains 10% or less of the calories from fats of all kinds. Except for the Kempner Diet, all of these truly low-fat diets emphasize unrefined foods consumed in unlimited amounts (*ad libitum*). A recent review of 28 trials using lower-fat, higher-carbohydrate diets found a 10% reduction in fat resulted in a 6.3 pound (2.88 Kg) weight loss sustained over 6 months.⁵⁶ When the researchers in another study allowed the dieters to eat as much as they wanted of a diet containing 18% fat, along with exercise, the results were: an 11 pound (4.8 Kg) weight loss, and without exercise, the same diet resulted in a 7 pound (3.2 Kg) weight loss, over 12 weeks.⁵⁷ Another study of sixty-four healthy post-menopausal women on a low-fat diet (11% fat) for 8 months found an average 13 pound (6 Kg) weight loss.⁵⁸ The composition of these low-fat diets reflect the diets of people living in rural communities in Africa, the Middle East, and the Far East – which means a starch-based diet followed by millions of people living without obesity, type-2 diabetes, coronary heart disease, and the cancers common to Western societies.⁵⁹

The most relevant information on successful weight loss comes from the National Weight Control Registry.³⁵⁻³⁷

Successful dieters have been tracked by this study since 1993. The registry is simply a database of people successful at maintaining a weight loss of at least 30 lbs. (13.6 kg) for at least one year. However, the average registrant has lost 70 pounds (32 kg) and kept it off for 6 years. To date, there are over 4,000 people, from all over the United States, enrolled in the National Weight Control Registry.

On average, registrants report consuming about 1400 kcal/day (24 percent calories from fat) and expending about 400 calories/day in physical exercise. Approximately 80% of the registrants eat less than 30% fat, and 35% eat less than 20% fat. Although they may have lost their initial weight by a variety of methods, including liquid protein diets, on their own, or through an organized program, all are currently maintaining their weight losses by eating low-energy, low-fat diets and engaging in regular physical activity. About 50 percent of participants lost weight on their own without any type of formal program or help.

The “Metabolic Advantage” of the Atkins Diet

The rationale for the Atkins Diet is that severe carbohydrate restriction will result in ketosis which promotes lipid oxidation (fat loss), satiety (satisfaction of appetite), and increased energy expenditure. Supporters of the Atkins low-carbohydrate Diet promote this approach as a faster, more efficient way to lose weight than other diets. They believe there is an increased weight loss per calorie compared to other similar diets, higher in carbohydrate. They refer to this phenomenon as the “metabolic advantage.”²⁷ The increase in energy loss is due to inefficiency in body metabolism caused by the low-carbohydrate diet. For example, the human body on a very low-carbohydrate diet has to expend energy to make carbo-

hydrate for tissues that absolutely require glucose, like the brain and red blood cells (through the process of *gluconeogenesis*, glucose is synthesized from protein) – this means extra calories are expended. This is only one of many calorie-requiring adaptations to survive that occur when the body is forced to live without sufficient carbohydrate.

I believe that following the Atkins Diet does cause the body to become inefficient and to expend more calories – but this transformation is not something to brag about. Gluconeogenesis is a metabolic pathway used naturally during times of duress when people are not eating, because of starvation or sickness. Since the brain, red blood cells, and a few other tissues must have carbohydrate to function, the body must call upon this mechanism to survive. If increasing calorie expenditure by taxing the body's survival mechanisms were truly the proper direction for the diet industry to head, then might not the next generation of weight loss programs include infecting people with dysentery, malaria or HIV? There is no question that the short-term (dysentery and malaria) and long-term (HIV) weight losses will outstrip even the sickness-associated-weight-loss caused by Atkins.

However, not all studies find this “metabolic advantage” and the recent 24-week study published in the *Annals of Internal Medicine* (paid for by the Robert C. Atkins Foundation) found the percentage of total weight lost that was from fat over 24 weeks was similar in the Atkins and “low-fat,” calorie-restricted, diet groups.⁴

Flawed Research Used to Promote the “Metabolic Advantage” – And They Know Better

Promoters of the concept of the “metabolic advantage” of the Atkins Diet are so desperate to make their point that they will use obviously bogus research, and describe this work as the “most striking” evidence.²⁷ This spectacular evidence for the “metabolic advantage,” collected by Stephen Sondike, was published in 2003 in the journal *Pediatrics*.⁹

The work by Sondike is a 12-week, randomized, controlled study of 39 children, aged 12 to 18, placed on either the Atkins Diet or “low-fat” (actually 30% fat) diet.⁹ The results: those on the Atkins Diet lost 12.8 pounds (5.8 Kg) more than those on the “low-fat diet,” while consuming many more calories each day on the Atkins Diet. Calculated from the difference in daily calories – 1830 on Atkins minus 1100 on “low-fat” – there would have been a 730 calorie per day “metabolic advantage” if both groups had lost same amount of weight.

However, both groups did not lose the same weight – the Atkins people actually lost 12.8 pounds more than the “low-fat” group – so these calories must be accounted for also. These 12.8 pounds of weight loss mean an additional deficit of 532 calories per day (12.8 pounds x 3500 calories/pound of fat / 84 days = 532 calories per day). Adding these two differences together (730 plus 532 calories) would mean that the Atkins Diet in this study had a “metabolic advantage” of 1262 calories a day – that's more calories than the children on the “low-fat” diet were said to eat daily. This is obviously impossible – and any one interested in honest research would know that, and completely discount these findings. Worse than deceiving the public, this flawed study is shamelessly used to instruct medical students on the benefits of the Atkins Diet.²⁵

The Big Lie: Eating Steak Cuts Your Risk of Heart Disease (That's What They Tell Medical Students²⁵ and the Public).

The fact is, eating fat and cholesterol increases your risk of dying of heart disease, strokes and other forms of atherosclerosis (kidney failure and peripheral vascular diseases) – and all major health organizations and almost all doctors

and scientists agree.⁴⁴ All well-designed studies show the total cholesterol and “bad” LDL cholesterol both increase with the Atkins Diet.^{1,2,18} The May 2004 study, financed by Atkins and published in the *Annals of Internal Medicine*, described two participants in the low-carbohydrate diet group (Atkins) who dropped out of the study because of concerns about elevated serum lipid levels.⁴ In one participant, the LDL-cholesterol level increased from 184 mg/dl (4.75 mmol/l) to 283 mg/dl (7.31 mmol/l) in 3 months. Another participant’s LDL-cholesterol level went from 182 mg/dl (4.70 mmol/l) to 219 mg/dl (5.66 mmol/l) in 4 weeks. Overall, LDL-cholesterol increased by more than 10% in 30% of the people on the low-carbohydrate diet.⁴ (Ideally, LDL-cholesterol should be well below 100 mg/dl, and probably, even below 80 mg/dl for people concerned about heart disease.)

Percent (%) Change in Lipids: Low-Carb vs. Low-fat

Study Author	Tot. Chol. LC vs. LF	LDL Chol. LC vs. LF	HDL Chol. LC vs. LF	Triglyceride LC vs. LF
Foster ¹	.2 vs. -5.5	.5 vs. -5.8	18.2 vs. 3.1	-28 vs. 1.4
Stern ²	3 vs. -4	6 vs. -3	-2 vs. -12	-29 vs. 2
Samaha ³	1 vs. -0.5	4 vs. 2.5	0 vs. 0	-20 vs. -4
Yancy ⁴	-3 vs. -6	1 vs. -5	10 vs. -3	-47 vs. -14
Brehm ⁵	-1 vs. -2	0 vs. -5	13 vs. 8	-24 vs. 2
Shaman ⁶	-1 vs. -14	-6 vs. -15	-2 vs. -7	-44 vs. -15
Volek ⁷	16 vs. -5	15 vs. -5	32 vs. -8	-30 vs. 4
Volek ⁸	1 vs. -7	5 vs. -5	2 vs. -8	-22 vs. -11
Sondike ⁹	-2 vs. -9	3 vs. -21	9 vs. 4	-40 vs. -5

LF = Low Fat (30% fat)
 LC = Low Carbohydrate (Atkins)

The spin Atkins promoters use to minimize the impact of these negative findings is to point out the Atkins Diet lowers triglycerides, raises “good” HDL-cholesterol, and increases the amount of “less dense” LDL-cholesterol. Both triglycerides and HDL-cholesterol are considered of much less importance than total- and LDL-cholesterol in predicting the future risk of artery disease. For example, in the well-respected studies on the reversal of

heart disease by Dr. Dean Ornish, participants showed reversal on his very-low fat diet, while at the same time their triglycerides increased and their HDL-cholesterol levels decreased.⁴² In the most important study yet published on the reversal of artery disease using cholesterol-lowering medications (like Lipitor), researchers found that “good” HDL-cholesterol played no role in predicting the condition of the arteries (growth of plaques).⁴³

Their final effort to right the heart-disease-promoting wrongs of the Atkins Diet is to focus on the size of LDL-cholesterol. Some studies show the larger the LDL-cholesterol particles in the blood, the less the risk of heart disease in a population. The size of LDL-cholesterol is tied directly to both triglycerides and HDL-cholesterol. If you agree with me that these two values are of little value in predicting the effects of diet on real-life artery disease, then the LDL-cholesterol particle size cannot be the saving grace for the Atkins Diet.⁶⁰ Furthermore, a very low-fat diet improves the LDL-particle size without the adverse consequences on blood cholesterol caused by the Atkins Diet.³⁹

“The Atkins Diet Does Not Increase Heart Disease” – So They Say

Studies comparing the effects of the Atkins Diet and a relatively high-cholesterol, 30% fat, calorie-restricted diet show, on average, the Atkins Diet increases total cholesterol by about 2%, and LDL-cholesterol by 3% -- whereas, the “low-fat” diet lowers these values by 6 % and 9%, respectively. You may wonder why doubling the saturated fat and cholesterol in the diet by switching to Atkins doesn’t make even a worse impact on the blood lipids (cholesterol). There are two important reasons for these unexpected findings.

First, the body has tremendous capacity to adapt to extraordinary living conditions in order to survive. When the fat intake becomes extreme, as it does with the Atkins Diet, the excess fat interferes with the intestinal absorption of cholesterol in some, but not all, individuals.⁶¹ Also, the first 200 to 400 mg of cholesterol consumed completely saturates the capacity of the gut to absorb cholesterol, so any additional is left behind in the intestine, to be excreted.⁶² When subjects are already consuming 30% fat, and 300 mg to 500 mg of cholesterol, as they are on their pre-Atkins, typical American diet, then little additional impact is caused by further increases when switching to the Atkins Diet. Obviously, meaningful information cannot be gained about the true impact of the Atkins Diet on the body by comparing it with a calorie-reduced version of a diet that kills more than two-thirds of its followers prematurely in the first place, the rich Western diet.

Second, the Atkins Diet works by making people sick. As mentioned above, followers of this kind of diet complain of reduced appetite, nausea, and fatigue – all symptoms of illness, which result in a natural reduction in daily food intake. Expected consequences of eating smaller amounts of red meat, poultry, fish, and cheese – basic components of these low-carbohydrate diets – are that people consume less saturated fat, cholesterol, sodium, animal protein, and fewer calories. Signs of improved health seem to appear because risk factors, like cholesterol, triglycerides, uric acid, glucose, blood pressure, and body weight decrease – and the patient is declared healthier. Not necessarily so. Similar benefits, for similar reasons, are seen when patients are placed on cancer chemotherapy – and doctors don't brag about these results.⁶³

Confirmation of this “semi-starvation” mechanism of the Atkins Diet for improved risk factors comes from the results of research on young people with seizure disorders, treated with a ketogenic diet (like Atkins), who are encouraged to eat sufficient calories to maintain their body weight. Under these circumstances, all risk factors – including cholesterol, LDL-cholesterol, and triglycerides – increase dramatically (and HDL-cholesterol decreases).¹⁴

Changes in Blood Lipids Caused by an Atkins-type Diet Fed in Sufficient Amounts to Meet Calorie Needs¹⁴
Total Cholesterol Up 58 mg/dl
LDL Cholesterol Up 50 mg/dl
HDL-Cholesterol Down 7 mg/dl
Triglycerides Up 58 mg/dl

Obviously, purported benefits of a low-carb diet are due to not eating (food restriction).

In simplest terms, low-carbohydrate diets exaggerate consumption of the unhealthiest components of the Western diet (animal protein and fat) to a level that makes people sufficiently ill to lose their desire to eat – and expected changes follow. The alternative is to encourage people to eat foods that promote both ideal body weight and health – those from a high-carbohydrate, low-fat diet.^{33,34}

Real Damage from Atkins Would Be Seen with Honest Comparisons

To determine the true impact of the Atkins Diet on blood cholesterol, a comparison must be made with a truly low-fat (10% or less), no-cholesterol diet. Two studies of people following very low-cholesterol diets suggest what will be

found: When subjects following a low-cholesterol diet (97 mg/day) were fed one egg a day (an additional 321 mg of cholesterol) their “bad” LDL-cholesterol increased by 12%.⁶⁴ By comparison, the egg industry has funded numerous studies to “prove” eating eggs does not raise cholesterol – they accomplish this by feeding eggs to subjects whose intestines are already fully saturated with cholesterol from their regular diet – so they are able to absorb little more.⁶⁵

A group of Tarahumara Indians from Northern Mexico was switched from their traditional diet of corn, beans, squash and other vegetables (2700 calories, 16% fat and trace cholesterol) to an American diet (4100 calories, 44% fat, and 1020 mg cholesterol) for five weeks.⁶⁶ These changes were seen in their blood:

Total cholesterol increased 31% (121 to 159 mg/dl)

LDL-cholesterol increased by 39% (72 to 100 mg/dl)

HDL-cholesterol increased by 31% (32 to 42 mg/dl)

Triglycerides increased by 18% (91 to 108 mg/dl)

(Note that eating an unhealthy diet with more fat and cholesterol increases all fractions of cholesterol, including “good” HDL-cholesterol.)

Long-term benefits of a low-fat diet have been seen with the Ornish and Pritikin groups.^{40,41,67} Six month results from the very low-fat diet used by Dr. Ornish found significantly greater reductions in anginal (chest pain) frequency, body weight, body mass index, systolic blood pressure, total cholesterol, low-density lipoprotein cholesterol, and glucose, than in a cardiac rehabilitation group using the standard Heart Association (30% fat) diet.⁴⁰

Results of a study of 4587 adults who attended a 3-week residential Pritikin Program using a very low-fat diet, showed total cholesterol was reduced by 23% (234 to 180 mg/dl) and LDL-cholesterol was reduced by 23% (151 to 116 mg/dl).⁴¹ Follow-up studies for 18 months on a small group of these people showed that, in most cases, continued compliance with the program maintained total cholesterol values well below 200 mg/dl.

The Atkins Diet: Short-term Weight Loss – While Sacrificing Health

The research says the Atkins Diet makes people sick. The most recent study paid for by the Robert C. Atkins Foundation found three of the 59 participants in the Atkins group dropped out; 2 because of a rise in LDL-cholesterol and one because of shakiness and uneasiness.⁴ Many troublesome problems occurred frequently in the low-carbohydrate diet (Atkins) group:⁴

Symptom (% of patients complaining)

Constipation (68%)

Headache (60%)

Halitosis (38%)

Muscle cramps (35%)

General weakness (25%)

Diarrhea (23%)

Rash (13%)

One participant sought medical attention for constipation, but had no complications. One 53-year-old man with a family history of early heart disease developed chest pain near the end of the study, and coronary heart disease was subsequently diagnosed.⁴ In the Samaha study (not financed by Atkins) one patient was hospitalized with chest pain and one patient died while on the low-carbohydrate, Atkins Diet.³

Other reported adverse effects of a low-carbohydrate/ketogenic diet include:

- * Increased fat and cholesterol increases the blood cholesterol and risk of heart attacks.⁴⁴
- * Increased fat increases the long-term risk of obesity.⁴⁵
- * Increased dietary fat has been linked to various common cancers.⁴⁶
- * Increased dietary protein and acid increases the risk of kidney stones and osteoporosis.^{47,48}
- * Free fatty acids, which increase the risk of heart (cardiac) arrhythmias double.¹⁸
Cardiac arrhythmias have been observed on the diet.¹⁸
- * Uric acid, creatinine and BUN increase, which reflect an increased workload on the kidneys and a prediction of future kidney failure.²
- * Patients complain of fatigue, thirst, lassitude, bad taste, and foul breath.¹⁸
- * Increased depression, anger, confusion, fatigue and decreased vigor.⁴⁹⁻⁵¹
- * Neuropsychological tests show worsening performance when people are on a ketogenic diet (like Atkins).⁵²
- * Damage to the eyes (optic neuropathy) has been seen with a ketogenic diet.⁵³

Special Problems for Children (The diet is recommended for children by Atkins and others.^{9,20})

- * Long-term adherence to a low-carb (ketogenic) diet may cause permanent damage to the developing brain.⁵⁴
- * Short-term effects include hypoglycemia, vomiting, diarrhea, dehydration, and refusal to eat; long-term effects include irritability, lethargy, kidney stones, acidosis, hyperuricemia, hypocalcemia, decreased amino acids, growth, and hypercholesterolemia.¹⁴
- * Serious adverse events were experienced by five children (10% of the group): severe hypoproteinemia, lipemia (excess triglycerides in the blood), and hemolytic anemia, Fanconi's renal tubular acidosis; and two children manifested marked increases in liver function tests.⁵⁵
- * Long-standing ketosis has been associated with myocardial dysfunction (heart problems) in children.⁵⁶ Of twenty patients on the ketogenic diet, 3 had EKG abnormalities (prolonged QT interval) and three patients had evidence of cardiac chamber enlargement. In one patient with severe dilated cardiomyopathy and EKG abnormalities, these problems normalized when the diet was discontinued.⁵⁶

Also understand that the foods recommended on a low-carbohydrate diet are primarily meat, poultry, fish, and cheeses. Over 90% of the environmental chemicals, such as DDT, dioxin, and PCB – substances known to cause cancer and damage to your nervous system – enter your body through these foods (not plant-foods). Also realize that these same animal foods carry microbes known to infect people, including bovine leukemia viruses, the “mad-cow” agent, E. coli,

salmonella, tuberculosis, and listeria, to name a few well-known threats to your health.

You Can Have Weight Control and Health, Too

The overwhelming popularity of low-carbohydrate diets and the acceptance of supportive scientific research are largely because Atkins is speaking to the choir – people love to hear good news about their bad habits. “Just tell me I will lose weight and avoid heart disease and diabetes by eating more eggs, cheese, lobster, and steak.” But that is not the truth and deep down inside even the current followers of Atkins must know this. The overwhelming evidence clearly condemns the low-carb diet, and this approach should not be used for even short-term weight loss.

Don't despair, there is a meal plan that will allow you good looks and good health – and that is a time-honored diet that most people who have ever walked this earth have consumed – a high-carbohydrate, low-fat diet, based on starches with the addition of fruits and vegetables. Leave the eggs for Easter, the ham for Christmas and the turkey for Thanksgiving – rather than eating these “Atkins delights” every meal, everyday, until you make yourself so sick you lose a little weight – then you quit and you regain your lost fat – just as the two, twelve-month-long studies on the Atkins Diet prove you will do.^{1,2}

References:

- 1) Foster GD, Wyatt HR, Hill JO, McGuckin BG, Brill C, Mohammed BS, Szapary PO, Rader DJ, Edman JS, Klein S. A randomized trial of a low-carbohydrate diet for obesity. *N Engl J Med.* 2003 May 22;348(21):2082-90.
- 2) Stern L, Iqbal N, Seshadri P, Chicano KL, Daily DA, McGrory J, Williams M, Gracely EJ, Samaha FF. The Effects of Low-Carbohydrate versus Conventional Weight Loss Diets in Severely Obese Adults: One-Year Follow-up of a Randomized Trial. *Ann Intern Med.* 2004 May 18;140(10):778-785.
- 3) Samaha FF, Iqbal N, Seshadri P, Chicano KL, Daily DA, McGrory J, Williams T, Williams M, Gracely EJ, Stern L. A low-carbohydrate as compared with a low-fat diet in severe obesity. *N Engl J Med.* 2003 May 22;348(21):2074-81.
- 4) Yancy WS Jr, Olsen MK, Guyton JR, Bakst RP, Westman EC. A Low-Carbohydrate, Ketogenic Diet versus a Low-Fat Diet To Treat Obesity and Hyperlipidemia: A Randomized, Controlled Trial. *Ann Intern Med.* 2004 May 18;140(10):769-777.
- 5) Brehm BJ, Seeley RJ, Daniels SR, D'Alessio DA. A randomized trial comparing a very low carbohydrate diet and a calorie-restricted low fat diet on body weight and cardiovascular risk factors in healthy women. *J Clin Endocrinol Metab.* 2003 Apr;88(4):1617-23.
- 6) Sharman MJ, Gomez AL, Kraemer WJ, Volek JS. Very low-carbohydrate and low-fat diets affect fasting lipids and postprandial lipemia differently in overweight men. *J Nutr.* 2004 Apr;134(4):880-5.
- 7) Volek JS, Sharman MJ, Gomez AL, Scheett TP, Kraemer WJ. An isoenergetic very low carbohydrate diet improves serum HDL cholesterol and triacylglycerol concentrations, the total cholesterol to HDL cholesterol ratio and postprandial lipemic responses compared with a low fat diet in normal weight, normolipidemic women. *J Nutr.* 2003 Sep;133(9):2756-61.
- 8) Volek JS, Sharman MJ, Gomez AL, DiPasquale C, Roti M, Pumerantz A, Kraemer WJ. Comparison of a very low-carbohydrate and low-fat diet on fasting lipids, LDL subclasses, insulin resistance, and postprandial lipemic responses in overweight women. *J Am Coll Nutr.* 2004 Apr;23(2):177-84.
- 9) Sondike SB, Copperman N, Jacobson MS. Effects of a low-carbohydrate diet on weight loss and cardiovascular risk factor in overweight adolescents. *J Pediatr.* 2003 Mar;142(3):253-8.
- 10) Westman EC, Yancy WS, Edman JS, Tomlin KF, Perkins CE. Effect of 6-month adherence to a very low carbohydrate diet program. *Am J Med.* 2002 Jul;113(1):30-6.
- 11) Sharman MJ, Kraemer WJ, Love DM, Avery NG, Gomez AL, Scheett TP, Volek JS. A ketogenic diet favorably af-

fects serum biomarkers for cardiovascular disease in normal-weight men. *J Nutr.* 2002 Jul;132(7):1879-85.

12) Volek JS, Sharman MJ, Love DM, Avery NG, Gomez AL, Scheett TP, Kraemer WJ. Body composition and hormonal responses to a carbohydrate-restricted diet. *Metabolism.* 2002 Jul;51(7):864-70.

13) Volek JS, Gomez AL, Kraemer WJ. Fasting lipoprotein and postprandial triacylglycerol responses to a low-carbohydrate diet supplemented with n-3 fatty acids. *J Am Coll Nutr.* 2000 Jun;19(3):383-91.

14) Kwiterovich PO Jr, Vining EP, Pyzik P, Skolasky R Jr, Freeman JM. Effect of a high-fat ketogenic diet on plasma levels of lipids, lipoproteins, and apolipoproteins in children. *JAMA.* 2003 Aug 20;290(7):912-20.

15) Alford BB, Blankenship AC, Hagen RD. The effects of variations in carbohydrate, protein, and fat content of the diet upon weight loss, blood values, and nutrient intake of adult obese women. *J Am Diet Assoc.* 1990 Apr;90(4):534-40.

16) Gutierrez M, Akhavan M, Jovanovic L, Peterson CM. Utility of a short-term 25% carbohydrate diet on improving glycemic control in type 2 diabetes mellitus. *J Am Coll Nutr.* 1998 Dec;17(6):595-600.

17) Hays JH, DiSabatino A, Gorman RT, Vincent S, Stillabower ME. Effect of a high saturated fat and no-starch diet on serum lipid subfractions in patients with documented atherosclerotic cardiovascular disease. *Mayo Clin Proc.* 2003 Nov;78(11):1331-6.

18) Larosa JC, Fry AG, Muesing R, Rosing DR. Effects of high-protein, low-carbohydrate dieting on plasma lipoproteins and body weight. *J Am Diet Assoc.* 1980 Sep;77(3):264-70.

19) Lean ME, Han TS, Prvan T, Richmond PR, Avenell A. Weight loss with high and low carbohydrate 1200 kcal diets in free living women. *Eur J Clin Nutr.* 1997 Apr;51(4):243-8.

20) Willi SM, Oexmann MJ, Wright NM, Collop NA, Key LL Jr. The effects of a high-protein, low-fat, ketogenic diet on adolescents with morbid obesity: body composition, blood chemistries, and sleep abnormalities. *Pediatrics.* 1998 Jan;101(1 Pt 1):61-7.

21) Dandona P. Editorial. *Metabolic Syndrome and Related Disorders.* 2003;1:179-179.

22) Freedland E.S. A Tribute to Robert C. Atkins, M.D. *Metabolic Syndrome and Related Disorders.* 2003;1:181-182.

23) Atkins V. The Robert C. Atkins, M.D. Issue. *Metabolic Syndrome and Related Disorders.* 2003;1:183-184.

24) Aljada A.; Mohanty P.; Dandona P. Lipids, Carbohydrates, and Heart Disease *Metabolic Syndrome and Related Disorders.* 2003;1:185-188.

25) Feinman R.D.; Makowske M. Metabolic Syndrome and Low-Carbohydrate Ketogenic Diets in the Medical School Biochemistry Curriculum. *Metabolic Syndrome and Related Disorders.* 2003;1:189-197.

26) Bell S.J.; Sears B. A Proposal for a New National Diet: A Low-Glycemic Load Diet with a Unique Macronutrient Composition. *Metabolic Syndrome and Related Disorders.* 2003;1:199-208.

27) Feinman R.D.; Fine E.J. Thermodynamics and Metabolic Advantage of Weight Loss Diets. *Metabolic Syndrome and Related Disorders.* 2003;1:209-219.

28) Bailes Jr. J.R.; Strow M.T.; Werthammer J.; McGinnis R.A.; Elitsur Y. Effect of Low-Carbohydrate, Unlimited Calorie Diet on the Treatment of Childhood Obesity: A Prospective Controlled Study. *Metabolic Syndrome and Related Disorders.* 2003;1:221-225.

29) Hickey J.T.; Hickey L.; Yancy Jr. W.S.; Hepburn J.; Westman E.C. Clinical Use of a Carbohydrate-Restricted Diet to Treat the Dyslipidemia of the Metabolic Syndrome. *Metabolic Syndrome and Related Disorders.* 2003;1:227-232.

30) Vernon M.C.; Mavropoulos J.; Transue M.; Yancy Jr W.S.; Westman E.C. Clinical Experience of a Carbohydrate-Restricted Diet: Effect on Diabetes Mellitus. *Metabolic Syndrome and Related Disorders.* 2003;1:233-237.

31) Yancy Jr. W.S.; Vernon M.C.; Westman E.C. A Pilot Trial of a Low-Carbohydrate, Ketogenic Diet in Patients with Type 2 Diabetes. *Metabolic Syndrome and Related Disorders.* 2003;1:239-243.

- 32) Dissertations. *Metabolic Syndrome and Related Disorders*. 2003;1: 245-252.
- 33) Jequier E, Bray GA. Low-fat diets are preferred. *Am J Med*. 2002 Dec 30;113 Suppl 9B:41S-46S.
- 34) Astrup A, Astrup A, Buemann B, Flint A, Raben A. Low-fat diets and energy balance: how does the evidence stand in 2002? *Proc Nutr Soc*. 2002 May;61(2):299-309.
- 35) Shick SM, Wing RR, Klem ML, McGuire MT, Hill JO, Seagle H. Persons successful at long-term weight loss and maintenance continue to consume a low-energy, low-fat diet. *J Am Diet Assoc*. 1998 Apr;98(4):408-13.
- 36) Wing R. Successful weight loss maintenance. *Annu Rev Nutr*. 2001;21:323-41.
- 37) Wyatt HR, Grunwald OK, Mosca CL, Klem ML, Wing RR, Hill JO (2002). Long-term weight loss and breakfast in subjects in the National Weight Control Registry. *Obesity Research*; 10:78-82.
- 38) McDougall J, Litzau K, Haver E, Saunders V, Spiller GA. Rapid reduction of serum cholesterol and blood pressure by a twelve-day, very low fat, strictly vegetarian diet. *J Am Coll Nutr*. 1995 Oct;14(5):491-6.
- 39) Beard CM, Barnard RJ, Robbins DC, Ordovas JM, Schaefer EJ. Effects of diet and exercise on qualitative and quantitative measures of LDL and its susceptibility to oxidation. *Arterioscler Thromb Vasc Biol*. 1996 Feb;16(2):201-7.
- 40) Aldana SG, Whitmer WR, Greenlaw R, Avins AL, Salberg A, Barnhurst M, Fellingham G, Lipsenthal L. Cardiovascular risk reductions associated with aggressive lifestyle modification and cardiac rehabilitation. *Heart Lung*. 2003 Nov-Dec;32(6):374-82.
- 41) Barnard RJ. Effects of life-style modification on serum lipids. *Arch Intern Med*. 1991 Jul;151(7):1389-94.
- 42) Ornish D, Scherwitz LW, Billings JH, Brown SE, Gould KL, Merritt TA, Sparler S, Armstrong WT, Ports TA, Kirkeeide RL, Hogeboom C, Brand RJ. Intensive lifestyle changes for reversal of coronary heart disease. *JAMA*. 1998 Dec 16;280(23):2001-7.
- 43) Nissen SE, Tuzcu EM, Schoenhagen P, Brown BG, Ganz P, Vogel RA, Crowe T, Howard G, Cooper CJ, Brodie B, Grines CL, DeMaria AN; REVERSAL Investigators. Effect of intensive compared with moderate lipid-lowering therapy on progression of coronary atherosclerosis: a randomized controlled trial. *JAMA*. 2004 Mar 3;291(9):1071-80.
- 44) St Jeor ST, Howard BV, Prewitt TE, Bovee V, Bazzarre T, Eckel RH; Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association. Dietary protein and weight reduction: a statement for healthcare professionals from the Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association. *Circulation*. 2001 Oct 9;104(15):1869-74
- 45) Bray GA, Popkin BM.. Dietary fat intake does affect obesity! *Am J Clin Nutr*. 1998 Dec;68(6):1157-73.
- 46) Lichtenstein AH, Kennedy E, Barrier P, Danford D, Ernst ND, Grundy SM, Leveille GA, Van Horn L, Williams CL, Booth SL. Dietary fat consumption and health. *Nutr Rev*. 1998 May;56(5 Pt 2):S3-19.
- 47) Reddy ST. Effect of low-carbohydrate high-protein diets on acid-base balance, stone-forming propensity, and calcium metabolism. *Am J Kidney Dis*. 2002 Aug;40(2):265-74.
- 48) Herzberg GZ, Fivush BA, Kinsman SL, Gearhart JP. Urolithiasis associated with the ketogenic diet. *J Pediatr*. 1990 Nov;117(5):743-5.
- 49) Horswill CA, Hickner RC, Scott JR, Costill DL, Gould D. Weight loss, dietary carbohydrate modifications, and high intensity, physical performance. *Med Sci Sports Exerc*. 1990 Aug;22(4):470-6.
- 50) Keith RE, O'Keeffe KA, Blessing DL, Wilson GD. Alterations in dietary carbohydrate, protein, and fat intake and mood state in trained female cyclists. *Med Sci Sports Exerc*. 1991 Feb;23(2):212-6.
- 51) Filaire E, Maso F, Degoutte F, Jouanel P, Lac G. Food restriction, performance, psychological state and lipid values in judo athletes. *Int J Sports Med*. 2001 Aug;22(6):454-9.

- 52) Wing RR, Vazquez JA, Ryan CM. Cognitive effects of ketogenic weight-reducing diets. *Int J Obes Relat Metab Disord*. 1995 Nov;19(11):811-6.
- 53) Hoyt CS, Billson FA. Optic neuropathy in ketogenic diet. *Br J Ophthalmol*. 1979 Mar;63(3):191-4.
- 54) Zhao Q, Stafstrom CE, Fu DD, Hu Y, Holmes GL. Detrimental effects of the ketogenic diet on cognitive function in rats. *Pediatr Res*. 2004 Mar;55(3):498-506.
- 55) Ballaban-Gil K, Callahan C, O'Dell C, Pappo M, Moshe S, Shinnar S. Complications of the ketogenic diet. *Epilepsia*. 1998 Jul;39(7):744-8.
- 56) Best TH, Franz DN, Gilbert DL, Nelson DP, Epstein MR. Cardiac complications in pediatric patients on the ketogenic diet. *Neurology*. 2000 Jun 27;54(12):2328-30.
- 57) Hays NP, Starling RD, Liu X, Sullivan DH, Trappe TA, Fluckey JD, Evans WJ. Effects of an ad libitum low-fat, high-carbohydrate diet on body weight, body composition, and fat distribution in older men and women: a randomized controlled trial. *Arch Intern Med*. 2004 Jan 26;164(2):210-7.
- 58) Mueller-Cunningham WM, Quintana R, Kasim-Karakas SE. An ad libitum, very low-fat diet results in weight loss and changes in nutrient intakes in postmenopausal women. *J Am Diet Assoc*. 2003 Dec;103(12):1600-6.
- 59) Weisburger J. Eat to live, not live to eat. *Nutrition*. 2000; 16:767-73.
- 60) Kenny J. Very-low-fat diets do not necessarily promote small, dense LDL particles. *Am J Clin Nutr*. 1999; 70:423-25.
- 61) Sehayek E, Nath C, Heinemann T, McGee M, Seidman CE, Samuel P, Breslow JL. U-shape relationship between change in dietary cholesterol absorption and plasma lipoprotein responsiveness and evidence for extreme interindividual variation in dietary cholesterol absorption in humans. *J Lipid Res*. 1998 Dec;39(12):2415-22.
- 62) Connor WE, Hodges RE, Bleiler RE. Effect of dietary cholesterol upon serum lipids in man. *J Lab Clin Med*. 1961 Mar;57:331-42.
- 63) McDougall J. Effects of a low-carbohydrate diet. *Mayo Clin Proc*. 2004 Mar;79(3):431
- 64) Sacks FM, Salazar J, Miller L, Foster JM, Sutherland M, Samonds KW, Albers JJ, Kass EH. Ingestion of egg raises plasma low density lipoproteins in free-living subjects. *Lancet*. 1984 Mar 24;1(8378):647-9.
- 65) McDougall, J. The McDougall Plan. New Win, 1983.
- 66) McMurry MP, Cerqueira MT, Connor SL, Connor WE. Changes in lipid and lipoprotein levels and body weight in Tarahumara Indians after consumption of an affluent diet. *N Engl J Med*. 1991 Dec 12;325(24):1704-8.
- 67) Anderson JW, Konz EC, Jenkins DJ. Health advantages and disadvantages of weight-reducing diets: a computer analysis and critical review. *J Am Coll Nutr*. 2000 Oct;19(5):578-90.

Favorite Five for Children

My favorite 5 articles found in my medical journals this past month (with a focus on children this month) are:

Get the Coke[®] Out of Schools

Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial by Janet James in the April 2004 issue of the *British Medical Journal* found an education program for 7- to 11-year olds in school aimed at reducing the consumption of carbonated beverages (soft drinks) resulted in a reduction in the number of soft drinks consumed and the number of overweight and obese children. Consumption of one or more beverages daily with high sugar content is associated with a 10% greater energy (calorie) intake compared to children who do not consume these beverages. The education program objective was to discourage consumption of sweetened and unsweetened carbonated drinks along with encouragement for a healthy diet. They tasted fruits, learned about the sweetness of natural foods, and the importance of water as a beverage. Over 12 months the percentage of overweight and obese children decreased by .2%, compared to a 7% increase in a control group who did not receive the education -- they seem to have stopped the tide of rising girth with the education.

If the interests of the food industries could be set aside and the sole focus could be placed on the welfare of our children, the reduction of soft drinks and other sugary foods would be one of many changes that would be made in our children's education. When I become Surgeon General, the school lunch program will have a pure vegetarian alternative served everyday along with a big dish of education which explains to the children the impact of the foods they choose everyday on their appearance and health. They will learn how an unhealthy diet rots their teeth, scars their faces with acne, creates heavy menstrual periods and breast pain, causes them to mature precociously, and makes them constipated, fat, and smelly. They will learn how food choices impact their future and the environment – and how a wise person does not destroy his own home (planet Earth). Finally, the osteoporosis, arthritis, heart disease and cancer they face in later years will be mentioned briefly.

James J, Thomas P, Cavan D, Kerr D. Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial. *BMJ*. 2004 May 22;328(7450):1237.

Child Abuse from the Dinner Table

Associations between overweight and obesity with bullying behaviors in school-aged children by Ian Janssen in the May 2004 issue of the journal *Pediatrics* found overweight and obese school-aged children are more likely to be the victims and the perpetrators of physical and verbal bullying behaviors than are their normal-weight peers. Bullying can include name-calling, teasing, rejection, rumors, sexual harassment, and physical damage. The consequences of being overweight are far greater than just "looking fat" and being unhealthy. Overweight adolescents are less likely to marry as adults, obese girls have less schooling and lower household incomes than non-obese girls. Obese children experience more depression, loneliness, sadness and nervousness. Plus, as this study shows, they are more likely to be victims of bullying and also to commit acts of power and aggression.

The number of 7- to 13-year-old children who are overweight or obese has increased from 12% in 1981 to 30% in 1996 as a result of increases in calories (fat and sugar) eaten as well as by a decrease in physical activity. Yet, obesity and associated consequences are, by and large, accepted as part of normal life, especially by those without the problem. How would society (and you) react if children suffered comparable damage from starvation – my guess is people would be outraged and take action. But, because this is malnutrition due to overnutrition, the suffering is largely ignored. Now, add to this the physical suffering from the Western diet – the constipation, rectal bleeding, stomach pains, arthritis, headaches, and indigestion. If these physical pains were inflicted on a child by a stick-wielding adult, the perpetrator would serve time in prison. Because the pain is caused by a fork and spoon no one acts – but the hurting is just as real and horrible.

It is long past time for all adults, and especially parents of suffering children, to take full account of what is happening to those they love, and make long overdue changes. Explaining to the children the dietary cause of their problems and how these problems can be simply and permanently solved by changing to foods they already enjoy (cereals, sandwiches, soups, burritos, pastas, etc.) will enlist them in improving their present conditions and future lives.

Janssen I, Craig WM, Boyce WF, Pickett W. Associations between overweight and obesity with bullying behaviors in school-aged children. *Pediatrics*. 2004 May;113(5):1187-94.

Bottle-feeding Kills Babies

Breastfeeding and the risk of postneonatal death in the United States by Aimin Chen in the May 2004 issue of the journal *Pediatrics* found children who were breast-fed had a 21% reduced risk of death in the first year after birth compared to bottle-fed children. Longer breast-feeding was associated with lower risk of death. Even the risk of crib death (SIDS) was reduced by 16% with breast-feeding.

In underdeveloped countries where sanitation is lacking, bottle-feeding a child is equated to a “death sentence.” In modern societies with more cleanliness and modern medical facilities the adverse consequences of bottle-feeding are less dramatic, but still too real. The US is ranked 16th in infant deaths in the first few months following birth and the prevalence of breast-feeding is 22% at 6 months. Finland is ranked first, worldwide, with the fewest deaths for infants, with 60% of babies breast-fed at six months, and Sweden is second with 50% of babies breast-fed at this time. Remember from previous newsletters, my first act when I become Surgeon General will be to make formula available by prescription only. See my January 2004 newsletter *Favorite Five* article, “Formula (Bottle) Feeding Causes Infant Brain Damage.”

Chen A, Rogan WJ. Breastfeeding and the risk of postneonatal death in the United States. *Pediatrics*. 2004 May;113(5):e435-9.

Soon Children Will Be on Blood Pressure Pills

Trends in blood pressure among children and adolescents by Paul Muntner in the May 5, 2004 issue of the *Journal of the American Medical Association* examined the trends in systolic and diastolic blood pressure among children and adolescents (8- to 17-year olds) between 1988 and 2000 and found the systolic (top number) pressure was up 1.4 mm Hg and the diastolic (bottom number) was up 3.3 mm Hg. Girls (1.5/3.2 mm Hg) had a larger increase than boys (1.4/2.3 mm Hg). The change was worse for Mexican Americans (2.3/4.4 mm Hg) and Blacks (1.9/4.1 mm Hg) than for Whites. This change in blood pressure parallels the rise in body weight (fatness) and general poor health in the USA – all due to malnutrition. Elevated blood pressure, weight, cholesterol and general poor health in children carry over into adulthood for one simple reason: diet and lifestyle habits, learned young, continue. Of course, all this would change if the child is fortunate enough to change his or her diet and add some exercise.

Although mention has been made by health officials of the importance of making diet and lifestyle changes, the ultimate change will be in prescribing practices of doctors. There is already talk about the need to detect elevated blood pressure early and start the children on a lifetime of blood pressure lowering medications with all their associated side effects and costs.

Muntner P, He J, Cutler JA, Wildman RP, Whelton PK. Trends in blood pressure among children and adolescents. *JAMA*. 2004 May 5;291(17):2107-13.

Food Additives Do Affect Your Child's Behavior

The effects of a double blind, placebo controlled, artificial food colorings and benzoate preservative challenge on hyperactivity in a general population sample of preschool children by B. Bateman in the June 2004 issue of the *Archives of Internal Medicine* found artificial food colorings and a preservative in the diet of 3-year old children caused hyperactive behavior that was easily detected by their parents. When the substances were removed for a week there was significant reduction in hyperactive behavior, which reappeared when the chemicals were reintroduced for three weeks. The degree of hyperactivity was doubled with the chemicals in the diet. The authors concluded: “We believe that this (the results of the study) suggests that benefit would accrue for all children if artificial food colors and benzoate preservatives were removed from their diet.”

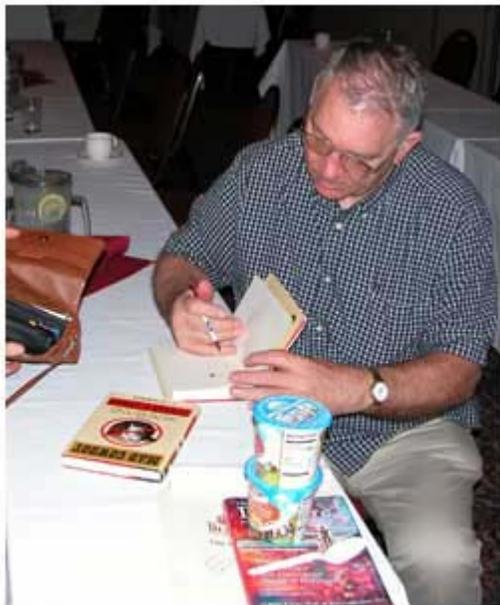
Additives are extensively used in food manufacturing and can simply be avoided simply by feeding your family a diet of natural plant foods, as we recommend. There are over 2000 recipes by Mary McDougall in print – all you have to do is find one dish your family likes for breakfast, one for lunch and three or four meals you can serve them for dinners. Eating out is possible if you choose restaurants with a vegetarian orientation (with very little oil added and no dairy products) – like authentic Mexican, Japanese, Thai, or Chinese.

Bateman B, Warner JO, Hutchinson E, Dean T, Rowlandson P, Gant C, Grundy J, Fitzgerald C, Stevenson J. The effects of a double blind, placebo controlled, artificial food colourings and benzoate preservative challenge on hyperactivity in a general population sample of preschool children. *Arch Dis Child*. 2004 Jun;89(6):506-11.

Highlights of the May 14-16 McDougall Advanced Study Weekend

More than 90 people joined us for a weekend punctuated by high spirits, friendship, fabulous food, and mind-expanding education. The purpose of the “Advanced Study” weekend is to explore new ideas about diet/lifestyle and your health – bringing in fresh speakers with challenging points of view.

Howard Lyman, author of “The Mad Cowboy,” gave two emotionally charged presentations. During his first presentation we learned about the battle waged by the Cattlemen’s Association against himself and against TV personality, Oprah Winfrey – eventually, after multiple legal battles, the beef industry lost. Howard’s second talk was on the damage to our precious environment caused by the wasteful eating habits of Americans.



Howard Lyman

Dr. Katherine Milton, anthropologist from UC Berkeley, explained why we humans always were (essentially) pure-vegetarian, based on our anatomy and physiology -- developed through eons of evolution of primates on a plant-based diet (See my July 2003 Newsletter article “Meat in the Human Diet” for more on this.)

Dr. Anthony Sebastian, from the University of California San Francisco Medical School, discussed the years of research he has carried out on how the acid from our foods (primarily from meat, poultry, fish, eggs, and grains) dissolves our skeleton, resulting in kidney stones and osteoporosis.

Cardiologist Pieter Vandenhoven explained the workings of the heart and blood vessels to a captivated audience – and most importantly, he gave us a plan for how to keep from becoming his patient.

Ross Turner, our humorist, did a fine job of roasting everyone in sight. The McDougall Staff also gave some never-heard-before lectures:

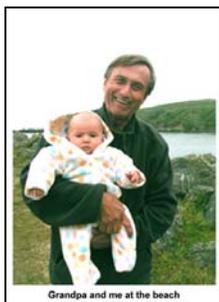
Doug Lisle, PhD talked about “Looking for Health in All the Wrong Places,” Jill Nussinow, RD (chief cooking instructor) gave a new slide presentation on “Spicing up Your Meals for Springtime.” John McDougall, MD held the audience’s attention with three new lectures: First, about the low-carb madness that has swept the modern world; second, about the optimal diet for health and healing; and finally, he showed new slides for his lecture about taking a trip through the gastrointestinal tract (more funny than gross).

As always the food was marvelous and Mary added many new recipes. Guests were surprised and delighted to try three desserts after the first dinner (two on the second night). This was not a weekend designed for Maximum Weight Loss – but rather for Maximum Enjoyment – my guess is that even with all that food, no one gained an ounce.

As an added bonus the McDougalls’ new grandson, 4-month-old Jaysen, attended and provided a shining example of how healthy and alert a baby breast-fed by a vegan mother (Heather) should be.



Jill Nussinow



Grandpa and me at the beach



Grandma and me

Recipes

EAST-WEST BREAKFAST

Preparation Time: 15 minutes (need cooked potatoes and rice)

Cooking Time: 10 minutes

Servings: 4

1 cup vegetable broth
½ cup chopped onion
½ cup chopped red bell pepper
½ cup chopped celery
2 large firm red potatoes, boiled and chunked
1 cup cooked brown rice
1 cup chopped fresh spinach
1 tablespoon soy sauce
½ teaspoon ground cumin
dash Tabasco sauce (optional)

Place ½ cup of the broth in a large non-stick frying pan. Add the onion, bell pepper and celery. Cook, stirring occasionally for 5 minutes. Add the potatoes and the remaining broth and cook an additional 5 minutes. Stir in the rice, spinach, soy sauce and cumin. Cook and stir until heated through and spinach has softened slightly. Season with a dash or two of Tabasco sauce, if desired.

Hint: Serve this plain, or with salsa. Roll it up in a tortilla for something different. This keeps well in the refrigerator and reheats well.

GAZPACHO

Preparation Time: 30 minutes

Chilling Time: 3-4 hours

Servings: 8

4 cups tomato juice
1 15 ounce can chopped tomatoes
1 cup finely chopped cucumber
½ cup finely chopped red onion
½ cup finely chopped celery
½ cup finely chopped bell pepper
½ cup corn kernels
¼ cup finely chopped green onion
¼ cup chopped mild green chilies
¼ cup chopped fresh flat leaf parsley
¼ cup chopped fresh cilantro (optional)
1-2 cloves minced fresh garlic
2 tablespoons red wine vinegar
2 tablespoons lime juice

Combine all of the ingredients in a large container and mix well. Refrigerate at least 3 hours before serving.

Hint: The ingredients may be finely chopped in a food processor to save time. Don't let them get too mushy! For a spicier Gazpacho, add several drops of Tabasco or other hot sauce as desired, before chilling. Then taste after the initial chilling time and add more if you wish.

RAINBOW SALAD

This salad is also wonderful to take to a picnic. It keeps well in a cooler and everyone loves it!

Preparation Time: 15 minutes (cooked rice needed)

Chilling Time: 2 hours

Servings: 6-8

3 cups cooked brown rice
1 15 ounce can kidney beans, drained and rinsed
1 15 ounce can garbanzo beans, drained and rinsed
1 15 ounce can black beans, drained and rinsed
1 cup frozen corn kernels, thawed
1 cup frozen peas, thawed
¼ cup chopped red onion
¼ cup chopped pimiento
2 tablespoons chopped black olives
2 tablespoons chopped fresh cilantro
¾ cup oil-free honey-mustard salad dressing
1 tablespoon soy sauce
½ teaspoon Tabasco sauce

Place the rice and beans in a large bowl and combine. Add the corn, peas, onion, pimiento, olives and cilantro. Toss well to mix. Combine the salad dressing, soy sauce and Tabasco in a mixing cup and whisk until smooth. Pour over the salad and mix well. Refrigerate at least 2 hours before serving.

Hints: Many varieties of oil-free salad dressings are available in supermarkets and natural food stores. It is also very simple to make your own salad dressings. Feel free to use whichever dressing you like in this recipe. Taste salad after it has been refrigerated for an hour or so and adjust seasonings as necessary. Use reduced sodium soy sauce if you prefer.

THAI NOODLES

This is a wonderful meal for hot summer nights because it requires minimal cooking and it may be made completely ahead of time and served cold or at room temperature. It also keeps well in a cooler so it is a great picnic food.

Preparation Time: 30 minutes

Cooking Time: 10 minutes

Servings: 4

12-14 ounces linguini (broken in half)
¼ cup honey
¼ cup natural peanut butter, creamy
¼ cup soy sauce
3 tablespoons rice vinegar
1-2 teaspoons chili-garlic sauce (see hints)
¼ teaspoon sesame oil (optional-see hints)
3 tablespoons vegetable broth
1 bunch green onions, chopped
1 tablespoon minced fresh garlic
1 tablespoon minced fresh ginger
1 ½ cups mung bean sprouts
1 ½ cups shredded carrots
7 ounces baked seasoned tofu, thinly sliced
chopped cilantro
chopped peanuts (optional)

Prepare noodles according to package directions. Drain and set aside.

Meanwhile, combine the honey, peanut butter, soy sauce, rice vinegar, chili-garlic sauce and the sesame oil in a mixing bowl and whisk until smooth. Set aside. Place the broth in a non-stick frying pan with the onions, garlic and ginger. Cook, stirring frequently for 2-3 minutes. Add the sauce, mix well and heat through. Pour over the noodles and toss well to mix. Add the bean sprouts, carrots and tofu and toss again to mix. Serve warm or at room temperature. Let each person add chopped cilantro and/or chopped peanuts, if desired.

Hints: Rice vinegar and chili garlic sauce may be found in most supermarkets in the oriental section. One brand of chili-garlic sauce is made by Huy Fong Foods. It is quite spicy, so you may need to adjust the amount used according to your

tastes. I use a small amount of sesame oil in this recipe for the unique taste it adds to foods. It may be omitted, if desired. This dish keeps well in the refrigerator and may also be served cold. This is great to fix on those busy evenings when everyone is eating at different times because it tastes best at room temperature.

FRESH FRUIT COBBLER

Be sure to use sweet, ripe, seasonal fruit in this recipe. Peaches and nectarines are delicious. For a fresh strawberry pie, see hint below.

Preparation Time: 30 minutes

Cooking Time: 45 minutes

Servings: 8

4 cups sliced fresh peaches or nectarines

1/3 cup apricot preserves

2 teaspoons lemon juice

1/8 teaspoon nutmeg

3 tablespoons flour

1/2 cup quick cooking oats

2 tablespoons cornmeal

2 tablespoons pure maple syrup

1 teaspoon vanilla

Preheat oven to 375 degrees.

Place the sliced peaches in a bowl. Combine the preserves, lemon juice and nutmeg together in another bowl. Spoon over the peaches and mix gently. Sprinkle the flour on the top and then mix again. Place in a 9 inch pie plate. Bake for 30 minutes.

Place the oats and cornmeal in a bowl. Combine maple syrup and vanilla and pour over the oat mixture. Mix well. Remove the cobbler from the oven and reduce heat to 350 degrees. Crumble the oat mixture over the pie filling and return to oven. Bake for an additional 15 minutes. Let rest for 15 minutes before serving. Scoop the cobbler out with a large spoon and serve with Vanilla Soy Ice Cream for a special treat. May be served warm or cold.

Hint: For a fresh strawberry pie, substitute sliced fresh strawberries for the peaches and strawberry preserves for the apricot preserves. Reduce the initial baking time by 10 minutes.