



Volume 2 Issue 9

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Building Your Own High-Performance Athletic Body

Carl Lewis, the world’s fastest man, is my biggest claim to fame for an athlete who follows the McDougall Diet. (Not too shabby, huh.) He set the world record for the 100-meter dash, won two gold medals, and had the best long-jump series of his career (29 feet three times – these are considered the best series of jumps of all times) while following the McDougall diet.¹ I met Carl Lewis in 1990 in Minneapolis one morning while we were both appearing on a TV talk show. He told me he was frustrated because all previous eating plans had either caused him to become overweight or left him too weak to compete and win (these were mostly low-calorie, portion-control diets). Shortly afterwards he began eating our recommended low-fat, pure-vegetarian diet and his dilemma was resolved. Yes, he discovered there **IS** a diet that would allow him to look, feel, function, and perform at his best without ever being hungry – shouldn’t that be the way for all of us? In the introduction to his new cookbook “Very Vegetarian” (written by Jannequin Bennet – Rutledge Hill Press -- released in 2001), he says, “In fact, my best year of track competition was the first year I ate a vegan diet.” He continued, “Dr. McDougall challenged me to make a commitment to eating a vegetarian diet and then to just do it.” Thousands of other world-class athletes have learned to follow a near-vegetarian diet simply because they have no other choice if they want to join the winners’ circle. By the nature of the foods, a winning athlete must eat mostly plants to obtain high-octane fuel (carbohydrate).

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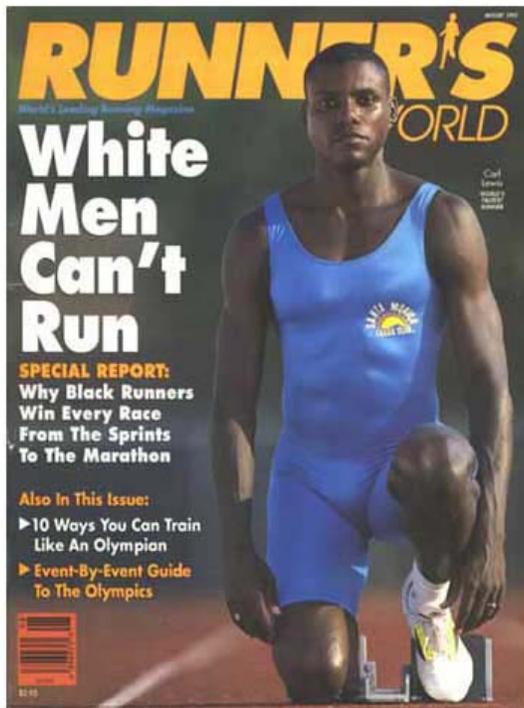
Proof that the Atkins Diet Works Like Chemotherapy By Sickness-Induced Starvation

(I would like to stop writing about this subject, but the number of people trapped in this deadly dietary foolishness increases by thousands everyday. See below a summary of my articles on Atkins and high protein diets.)

“I have a friend who went on the Atkins Diet – a very high fat, high cholesterol diet – and his cholesterol dropped 50 points. So, this is solid evidence that Dr. McDougall and other medical experts have things all backwards. Obviously this low-carbohydrate diet is a healthy diet.” So, I hear all too often.

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Winning at All Costs

Serious competitors would drink cockroach saliva and eat rat droppings to improve their performance by 0.0001%. Fortunately, the winning edge is not so unappealing. All knowledgeable scientists agree that for the best performance during prolonged exercise the best fuel for the body is carbohydrate. In practical terms, this means eating starches (rice, corn, potatoes, beans, pasta, bread), vegetables, and fruits – all of these plant foods contain 70% to 95+% of their calories as carbohydrate. Winning athletes shun foods devoid of meaningful amounts of carbohydrate – these are meat, poultry, fish, eggs, cheeses, and vegetable oils. Therefore, a near-vegetarian diet is necessary for athletes to attain the recommended 60% to 70% of their daily energy as carbohydrate.^{2,3}

Sugar is Energy

There are 3 potential sources of fuel (calories) from our foods – protein, fat, and carbohydrate. Protein is only used as fuel during times of extreme deprivation, such as

starvation. Fat is the “metabolic dollar” stored for the day when no food is available (a day which seems to never come). Theoretically, fat can provide fuel for several days of continuous low-intensity activity, and is reserved for use when sufficient carbohydrate is not available.

Carbohydrate is the body’s preferred fuel for daily activities and high-intensity exercise performance. Following a low-carbohydrate regime will impair performance.^{4,5} In general, research shows 3 to 4 days of following such a high-fat, high-protein diet is enough to deplete the body of its stores of carbohydrate, clearly impairing short-term performance.⁶ The well-known feeling of *fatigue* results from low carbohydrate reserves in the body.²

Carbohydrate is another name for sugar. The topic of carbohydrate is so important to human health that there are medical journals, like the *Journal of Carbohydrate*, and yearly medical symposiums that focus solely on these vital sugars. Some cells in the body, like the red blood cells and filtering cells of the kidneys (glomerular cells), can only use carbohydrate for energy. The brain and other parts of the nervous system have a very strong preference for carbohydrate – burning fat only under extra ordinary circumstances. When sufficient carbohydrate is not available, because of starvation or when someone foolishly

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Food	% Carbohydrate
Bananas	95+
Beans	72
Broccoli	71
Carrots	92
Corn	85
Oranges	95+
Potatoes	90
Rice	80
Zucchini	95+
Beef	0
Chicken	0
Fish	0
Lobster	0
Cheese	2
Olive Oil	0

Except for milk and honey, carbohydrates are found in significant amounts only in plant-derived foods. Even these two foods (milk and honey) obtain their simple sugars originally from plant sources (grasses, grains, and pollen).

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follows a low-carbohydrate diet for weight loss, the body then makes carbohydrate from protein (for example, from the

Forms of Carbohydrate

Sugars are divided into *complex and simple carbohydrates* (sugars). Simple sugars are usually thought of as unhealthy foods – for example, white sugar (sucrose) or high-fructose corn syrup. But simple sugars are also plentiful in sweet-tasting fruits – an important part of a healthy diet. Complex carbohydrates are long branching chains of simple sugars connected together – they are often called *starches*. This kind of sugar is abundant in common starchy plant foods, like corn, potatoes, rice, whole wheat flours, and beans. Green and yellow vegetables also synthesize and store complex carbohydrate.

Glycogen is a form of complex sugar (branching chains of glucose) synthesized in the human body and then stored for use during future strenuous activities. The liver and muscles are the primary depots for glycogen storage. Glycogen resynthesis is maximal – twice as rapid – during the first 2 hours after exercise.⁷ Running out of glycogen is described by long-distance runners as “hitting the wall.”

body’s own muscle protein). This process occurs primarily in the liver, and is called *gluconeogenesis*. Fatty acids (fats) cannot be converted to carbohydrate (glucose).

Choose High Glycemic Foods

Athletes have learned to choose foods that have a *high glycemic index*.^{*8,9} You eat in order to replenish your energy supplies – the more efficiently a food raises the blood sugar, the better. High glycemic index foods, such as glucose, rice, potatoes, and bread, result in faster and more efficient storage of glycogen, than do low-glycemic foods, like fructose. Winners need their glycogen stores filled to the brim in order to last the long race. To seek foods with a high glycemic index is good advice for every person wanting to be strong and energetic throughout the day – not just athletes.

* *The glycemic index* is a measure of how high a sugar level rises and how long it stays up in the blood after eating.

You may have learned that you should avoid foods high in this index because these foods cause the blood sugar to rise, which then leads to diabetes. Nothing could be further from the truth. You may even have heard that candy bars are healthier for you than potatoes and carrots because of the candy bars’ lower glycemic index – how silly (I’m sure you didn’t fall for that one). Populations of people worldwide who eat diets centered on high glycemic index carbohydrates, like rice for rural Asians, and potatoes for people in Peru, are essentially free of diabetes.^{10,11} People, living like Americans, choosing foods lower in their glycemic index, those foods which are also high in fat and protein, suffer from an epidemic of diabetes – of both types. (For more on type-1 diabetes – see my July 2002 newsletter, and type-2 – see “Common Diseases, Diabetes” on my web site. Type-2 diabetes is soon to be the subject of a newsletter.)

The More Protein, the Better (Not!)

Athletes and their trainers focus on protein, extolling its benefits for muscle size and power. They encourage unlimited consumption of steaks, chicken breasts, pork chops, and fried eggs. In addition, protein powders are touted as absolutely necessary for even the amateur body builder. Advertisements claim, “You only live once...live large...These supplements make body building easy and fast!”

Protein is necessary for building all tissues in the body, including muscles. However, incorporation of protein into the muscles follows hard work, not “hard eating.” If eating muscle foods (cows, pigs, chickens, and fishes) see page 4

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building muscles then all Americans would look like (the much younger) Arnold Schwarzenegger, as a result of the huge amounts of protein they eat everyday. Excess protein is metabolized by the liver and kidneys and excreted out of the body through the kidneys – it is not destined for the muscles. You already know where all that excess protein goes. Recall the pungent smell of the amino acid, asparagine, from your urine after eating asparagus or the froth in the toilet bowl following a high-protein meal. (Fat, on the other hand, stored in our fatty tissues when consumed.) As far as the supplement nonsense – there is no convincing evidence that muscle growth would be improved by taking protein supplements.¹² Likewise, taking certain amino acid supplements, like arginine and ornithine, to stimulate growth hormone, insulin and/or testosterone secretion in the body is unfounded.^{13,14}

Athletes Eat More Food – Not Higher Protein Food

The World Health Organization recommends people consume about 0.5 grams (g) of protein per kilogram (Kg) (2.2 pounds) of body weight. Commonly, dietitians talk about 0.8 g/Kg of protein for the “average” adult (a figure far too high for our actual needs, however). For strength athletes, recommendations are for 1.2 g/Kg and for endurance athletes, 1.4 to 1.5 g/Kg.¹⁵⁻¹⁷ Increases above these levels do not enhance muscle mass or strength gains.¹⁸

However, it is imperative that you understand the higher protein needs of athletes do not mean athletes need to eat foods (diets) more concentrated in protein – like more meat, poultry, fish, and eggs – or worse yet take concentrated protein supplements. *They simply need to eat more food.*

In practical terms, this increased need for protein is naturally met because exercise stimulates appetite, causing the athlete to eat more food – thus consuming more of all nutrients. Let me provide a simplified example: A 70-Kg (154 pounds) sedentary man burning 2000 calories consumes a diet of potatoes, beans, and broccoli. This combination of foods provides him 56 grams of protein (0.8 g/Kg) per day. He then begins training for the Boston Marathon – by gradually building up to run 3 hours a day, he increases his calorie intake to 4000 calories a day – or twice as much food. He now consumes 112 grams of protein from his meals of potatoes, beans and broccoli. He is now consuming 1.6 g of protein per Kg of body weight – an amount in excess of even the higher scientifically-backed recommendations.

Winners Forget Protein and Seek Carbohydrate

All of the great feats in history have been accomplished by men following near-vegetarian diets from infancy. Grains, fruits, and vegetables made up most of the diet of ancient conquerors of Europe and Asia, including the armies of Alexander the Great (356-323 BC) and Genghis Kahn (1167 – 1227 AD). Caesar's legions complained when they had too much meat in their diet and preferred to do their fighting on corn and other grains.¹⁹

The protein intakes in athletes are always adequate, whereas carbohydrate intakes often fail to meet their needs because of faulty nutritional advice and dietary myths.¹⁵⁻¹⁶ A notable exception in athletic circles is the Tarahumara Indian ultra-marathon runners and triathletes. These people are known worldwide as “the running Indians,” because their entire culture is based around this activity, and they have been known to travel between 50 and 80 miles every day at a race-like pace. There are currently about 50,000 Tarahumara living in the Sierra Madre Occidental in northwestern Mexico.²⁰ Their diet is practically meatless, consisting of 90% corn and pinto beans (chili), and vegetables (like squash).²¹

There is a growing trend, especially among females, for athletes to eat more like these winning ultra-marathon runners – in other words, vegetarian diets.¹²

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Mary Uhl, age 38, from Santa Fe, New Mexico is an example of this trend – she has been a follower of the McDougall diet since she began competing. She just took a 2nd place at Ironman Wisconsin on September 7, 2003. (A triathlon – Swim 2.4 miles, bike 112 miles, and run 26.2 miles.) She writes, “Earlier this year I was 7th at Ironman New Zealand, and last year I was 3rd at Ironman Canada. I’m still McDougalling (it has been about 7 years now) and I think it is a key reason that I can race well and recover quickly from the Ironmans. This diet is perfect for the training I need to do to race at a very high level in triathlon. People often ask me how I can perform so well with the diet and my question back to them is “How can I



NOT perform well on this diet?” It keeps me healthier than ever before (my asthma no longer exists). I can’t really understand why anyone would think the standard American diet would be better for an athlete...” (Letter from Mary on 9-24-03)



Ruth Heidrich is a 68-year-old Star McDougaller from Hawaii who wins triathlons all over the world. She changed from a sedentary lifestyle and the American diet more than 20 years ago after discovering invasive breast cancer that had spread to her bones and lung. (Read more about Ruth under “Star McDougallers” on my web site www.drmcDougall.com.) “Since my diagnosis in 1982, I have completed the Ironman 6 times, run 67 marathons, have been declared “One of the Ten Fittest Women in North America” in 1999, and have a Fitness Age of 32 although chronologically I am 68! Last weekend I did a double-header, a 5K race Saturday and a 10K Sunday with first places in my age group in both. These were my 19th and 20th races this year so far with every one of them gold medals. My total of first-place trophies

is now up over 900! I should reach 1,000 sometime before I reach 70. My daily training routine consists of an hour run, an hour on the bike, and alternating a mile swim with weight training. I also do 100 crunches a day in addition. I do all this on a vegan, low-fat diet which I’ve been following now for 21 years.”

Vital Statistics on Ruth:

My Body fat % = 14%; Ave. 20-yr-old female = 30%

My Resting Heart Rate = 44; Ave. adult RHR = 72

My Blood Pressure = 90/60; Common BP = 120/80

My Bone Density = 529 mg/cm²; Ave. 30-yr-old female = 411 mg/cm²

(Letter from Ruth on 9-25-03). Learn more about Ruth Heidrich at www.RuthHeidrich.com.

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Many other vegetarian athletes are listed at this web site: <http://veggie.org/veggie/famous.veg.athletes.shtml>

Body Builders should be Vegetarians, Too

Andreas Cahling, a former Mr. International bodybuilder (1980) and vegetarian for more than 25 years, used to tell me the difference between him and other bodybuilders was he did not have to diet for 2 weeks before a competition to get the fat off. Pre-contest dieting was the normal routine for bodybuilders “bulking up on protein” in order to remove that extra layer of fat that covered their rippling muscles. The protein in vegetables is every bit as high quality as the protein in meats. Hard work builds hard muscles. Consider the biggest-muscled animals on earth are pure vegetarians (horses, elephants, etc.) – obviously there must be loads of protein in plant foods. Too many people think they can take an easier route and “eat their muscles bigger” – not true.

Some of the best known vegetarian bodybuilders are (most are lacto-ovo-vegetarian):

- Bill Pearl (Mr. America, Mr. USA, and four times Mr. Universe)
- Andreas Cahling (IFBB Mr. International)
- Hercules Steve Reeves (Mr. America, Mr. World and Mr. Universe – and vegetarian at least part of the time during his competitive career)
- Jack Lalane (TV personality and bodybuilder)

There is now an organization for vegan bodybuilders using no animal products. Visit:

<http://groups.yahoo.com/group/veganbodybuilding/>

An inspiring story of a lifelong vegetarian, 77-year-old Roy Hilligenn, can be found at:

<http://www.cbass.com/Hilligenn.htm>

Animal Protein Can Stimulate Growth – At a Price

It has long been rumored that the levels of the muscle building hormone, testosterone, are raised with meat-eating. However, recent research comparing people following various diets has found vegans (no animal products) have 8% more testosterone than lacto-ovo-vegetarians, and 13% more than people on the standard Western diet (with meat and dairy).²² (Fortunately, this extra male hormone is kept safely bound with a protein to prevent over-stimulation of the tissues, including the prostate.) So, if not testosterone, then what in the meat-eater’s diet could possibly be growth-stimulating?²²⁻²³

There may be some truth that eating all that protein stimulates muscle growth.^{24,25} Protein raises *insulin-like growth factor-1* (IGF-1) in the human body, stimulating the growth of muscle and all other tissues. Meat-eaters are found to have 9% higher levels of IGF-1 than vegans.²² People eating dairy and eggs

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(lacto-ovo-vegetarians) have 8% higher levels.²² Unfortunately, IGF-1 also stimulates the growth of cancer of the breast, prostate, lung, and colon by stimulating cell proliferation and inhibiting cell death – two activities you definitely don't want when cancer cells are involved.^{26,27} Eating all that meat and those dairy products could make bigger muscles – but, how often do athletes think about the effects on their health? Beauty is more than skin deep – for sure. And ugly goes clear to the bone.

The rippling firm muscles of athletes send a message of good health, but this appearance is deceptive because what lies underneath is a quagmire of disease. All that “muscle building” food is also loaded with acid, cholesterol, saturated fat, and is deficient in dietary fiber and complex carbohydrate. Looking beyond the exterior you will find bones depleted of strength and structure (osteoporosis) by the acid, arteries filled with festering sores (atherosclerosis) from the fat and cholesterol, and bleeding-bulging hemorrhoids caused by straining to pass a fiber deficient stool (constipation). You may think you are looking at a new Lexus, but rather it's an overdriven Edsel.

Big is Not Better

Greater height and sometimes greater muscle weight are generally considered desirable qualities and size may be the winning difference for athletes, especially for basketball and football players. However, when winning at life and health, increased body size is counterproductive. Shorter, smaller bodies have lower death rates, longer average life-spans, and fewer diet-related chronic diseases. Research shows shorter, lighter people live longer. For example, men of 5 feet 9 inches (175.3 cm) or less live almost five years longer than men over this height. Men shorter than 5 feet 7 inches (170.2 cm) live seven and a half years longer than men taller than 6 feet (182.9 cm).^{28,29} Taller women have more cancer of the ovary^{30,31} and breast,³² and men have more prostate cancer.³³ Overnutrition, especially during youth, results in greater height, and poorer health.³⁴

You Can Have Height, Strength, and Life

If you met my 3 children you would find a serious contradiction with the above discussion. My daughter, Heather, is an inch taller than Mary. My oldest son, Patrick, is 3 inches taller than I am, and my youngest son, Craig, is 2 inches taller (and the boys are very muscular, too). They were all raised on the McDougall diet. So how did they grow so tall and strong?

Feeding a high-fat, high-protein diet is only one way for a person to attain greater body size. The alternative, healthy way is to encourage natural development by allowing the growth plates of a child's long bones to remain open longer, into their mid and late teens. The *growth plates* (called epiphyseal end plates) are located at the ends of the long bones and, as the name implies, this is where growth occurs. A rise in sex hormones (primarily estrogen) after puberty causes the growth plates to close.^{35,36} The rich Western diet prematurely raises sex hormones, causing precocious puberty, and prematurely closes the adolescent's growth plates.³⁶ (For more information on precocious puberty and diet see the [McDougall Program for Women](#) book.) A healthy diet, like the McDougall diet, allows puberty to occur at the correct age (say 14 to 17 years rather than 8 to 12) – thereby growth continues into the late teens. Therefore, you can have it all for your children and grandchildren – tall strong bodies and good health by feeding them plentiful amounts of delicious meals, like oatmeal for breakfast, vegetable soups and sandwiches for lunch, and bean burritos and spaghetti for dinner. (People from some Asian countries, like Japan,

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and from our own past are small because of a relative deficiency of food (calories) during their adolescent growing years.^{34,37)}

Athletes are People, Too

The diet of a horse is essentially grass and grains. To raise a racehorse would you feed your colt meat? – Of course not. You would just feed it more grasses and grains during growth and training. The same applies to people. Basic nutritional needs do not change with an increase in activity. So the same diet recommended for people applies to athletic people, too. To violate this basic truth results not only in horrific health, but also pitiful performance.

However, the more important lesson we have learned here is: the best diet for athletes is also the best diet for all of us. If a diet very high in carbohydrates – starches, vegetables, and fruits – makes athletes – those living at the extremes of human performance – winners, then following their example will result in superior nutrition for all of us and our families. Can't possibly be any other way.

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Good Cholesterol “Worsens” with McDougall?

“My mom has been McDougalling for some time and her doctor is unhappy with her HDL being low, although her LDL is also low.” writes Monica on my discussion board (September 24, 2003).

There is a lot of confusion today about HDL-cholesterol, or *high density lipoproteins*, commonly referred to as “good” cholesterol. HDL-cholesterol is one fraction of total cholesterol (other fractions are classified as VLDL (very low-density lipoprotein), LDL (low-density lipoprotein), and MDL (medium-density lipoprotein). *When total cholesterol is lowered, all fractions of cholesterol are reduced, including HDL-cholesterol.* This is not bad, but expected, and actually of no harm. One simple way to raise HDL-cholesterol is to eat more meat (cholesterol) – but that’s not good, because you also increase your risk of heart disease.

(If you are having trouble understanding this concept, then this analogy may help. Imagine cutting a watermelon (representing the total cholesterol) in half – you now have half as much of all the parts of the melon, including half the number of seeds (HDL). Now double the size of your original watermelon and you now have twice as many seeds.)

Here is a classic experiment demonstrating how eating cholesterol raises cholesterol in the blood. An “affluent” high-fat, high-cholesterol diet was substituted for five weeks for the traditional near-vegetarian diet of a group of 13 Tarahumara Indians – a Mexican people known to have virtually no coronary heart disease. Cholesterol levels increased by 31 percent (121 to 159 mg/dl), LDL rose 39 percent (72 to 100 mg/dl) and their HDL-cholesterol, usually low in this population, increased by 31 percent (32 to 42 mg/dl).¹ If they had continued to eat this way they would soon have had heart disease, like their genetic relatives, the Pima Indians, living in Arizona on the Western diet – where 15 percent of males and 8 percent of females aged 40 years and over have had heart attacks, and approximately half of this population are diabetic and /or obese.²

HDL is associated with less heart disease when *comparing people who all eat an unhealthy diet* (like Americans). This is because of differences in metabolism in people – some people more rapidly shift LDL (the form harmful to the artery walls) to HDL (the form that leaves the body). This is fine to have it lower, but the level is dependent upon something you have virtually no control over – your metabolism. Other than having the opportunity to pick out people with “better” metabolisms, knowing this number is largely irrelevant to achieving better health.

Worldwide (comparing people who eat different diets) those who have the lowest HDL levels (like people in rural Japan, China, and Africa) have the lowest rate of heart disease – and also the lowest total cholesterol.³ Those with the highest HDL levels (like people in the USA and Western Europe) have the highest rates of heart disease. Looking at this comparison you realize that you can change your diet and change your risk of heart disease – such as is seen in various countries where people eat different diets.

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One group of researchers summarized the preceding two paragraphs in one sentence, "In assessing coronary heart disease risk, it may be inappropriate to conclude that diet-induced decreases in HDL are equivalent to low HDL within a given diet."⁴

So What if a Number – HDL – Is Lower or Higher?

Many people today rationalize their high total cholesterol levels by saying that they also have high HDL levels. This rationalization occurs not just among lay people, but also among physicians. I have met people with total cholesterol levels of 285 mg/dl who were told by their doctors not to worry because their "good" HDL cholesterol is also high – 75 mg/dl or higher. Unfortunately, tens of thousands of people have heart attacks and eventually go to their graves each year with this false assurance ringing in their ears.

Just as HDL goes up as total cholesterol rises, so too do HDL levels fall as total cholesterol drops. This is the case for anyone who adopts a low-fat, low-cholesterol regimen like ours. In a study of over 2000 of my patients, we have found that, on average, people reduce their overall HDL levels by 19 percent (8 mg/dl – from 41 mg/dl to 33 mg/dl) in 11 days.⁵ (Total cholesterol also drops on average 29 mg/dl.) People on healthy vegetarian diets are sometimes told to eat meat because their HDL is only 25 mg/dl. Yet, their total cholesterol is only 125 mg/dl – a total cholesterol level that makes them virtually immune from heart disease.⁶

HDL cholesterol is a risk factor – not a disease. No one dies of low HDL – they die of rotten arteries. Focusing on risk factors, as the medical business does by treating blood pressure, cholesterol, sugar, triglycerides, and homocysteine with drugs, causes little or no improvement in health and longevity. To get the health we deserve we need to correct the cause of the problem; an unhealthy diet and lifestyle (not the signs of disease – the risk factors). Total cholesterol (as apposed to the cholesterol fractions, like HDL) is the number that matters most to me (an ideal level and your goal is 150 mg/dl or less⁶). Don't be misled by partially-informed people. When you adopt the McDougall Program, you will watch your total cholesterol fall dramatically. As it does, both LDL and HDL levels will drop, as well. And as they do, so too will your risk of heart disease. And your health will improve dramatically. Unfortunately, because HDL doesn't go up with a healthy diet some unenlightened physicians – acting like puppets for the pharmaceutical industry – give their patients a totally undeserved hard time.

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Just Established this Month – A Way to Make a Difference

The McDougall Research & Education Foundation

A Tax Deductible Corporation – a 501 (c) (3)

Employer ID # 82-0573876

We have helped you and your family.

Now you have a chance to help us help many more people.

Every year you give careful consideration on where to make contributions for the good of others. The **McDougall Research & Education Foundation** is an opportunity to make tax deductible contributions that will make a difference. We have already done some important research with our limited funds and have plans for many more valuable projects. Currently, we are seeking funds to complete phase-2 of two studies:

Life-changing Research:

1) *The Effects of a Very Low-fat Vegan Diet on Inflammatory (Rheumatoid) Arthritis*

We have shown that about 70% of people with moderate to severe arthritis will benefit from a healthy diet. Published in the *Journal of the American College of Nutrition* 17:512, 1998, and the full article in the *Journal of Alternative and Complementary Medicine* 8:71-75, 2002. Money will be spent on a larger study with a more convincing research design. More information at www.drmcDougall.com – “Diet: Only Hope for Arthritis.”

2) *Reduction of Halitosis by Eliminating Animal Proteins from the Diet*

Our initial results from 120 people show changing to a low-fat vegan diet results in a significant reduction in sulfur gases (the smelly ones) in the breath. More important than a heart attack for many people is their personal appearance, especially the way they smell. We are currently in preliminary discussions with a major university about phase-2 of this project.

Many other research projects are planned, but this takes money to gather findings worthy of publication in respectable major medical journals – so long-overdue attention can be given to the benefits of a healthy diet.

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Challenging Big Industries:

The foundation is also exploring legal avenues available to correct misinformation given to consumers by various food industries, including the Dairy and Meat Industries, and by “medical” organizations, like the American Heart Association – see my August 2002 Newsletter at www.drmcDougall.com.

Donations and Information:

Information on our foundation is a matter of public record. Please send inquiries to P.O. Box 14039, Santa Rosa, CA 95402 or e-mail drmcDougall@drmcDougall.com. Donations can also be sent to the same address.

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My answer: Risk factors, like cholesterol, improve because these dieters eat so much less food – because they are sick from the Atkins diet. A recent study of children proves when dieters are forced to eat enough of all those high-fat, high-protein, low-carbohydrate foods (meat, poultry, fish, eggs, etc.) to fulfill their daily calorie needs, their risk factors for, and their actual risks of, premature death worsens.

Atkins-type Diet Raises Cholesterol and More

The August 20, 2003 issue of the *Journal of the American Medical Association* published an article “The effect of a high-fat ketogenic* diet on plasma levels of lipids, lipoproteins and apolipoproteins in children.”¹ In this 6-month study, 141 children (average age 5.2 years – 70 boys, 71 girls) were placed on an Atkins-type diet for seizure disorders.** Researchers found an average increase in total cholesterol of 58 mg/dl, “bad” LDL-cholesterol of 50 mg/dl, triglycerides of 58 mg/dl, and a decrease of “good” HDL-cholesterol of 7 mg/dl. Follow-up of these children at 12 and 24 months showed continued adverse changes in these risk factors for heart disease. All of these deteriorations are serious indicators of poorer health from a high-fat, ketogenic diet.\

The most obvious conclusions from the results of this study mean ketogenic diets promote serious artery damage. The earliest signs of artery damage seen in children are fatty streaks and the later lesions seen in adolescents and young adults are fibrous plaques. Cholesterol levels reflect the chance of finding artery disease upon examination of the arteries (for example, by autopsy) or by clinical events later in life, such as heart attacks.

Here is an example of what increases in cholesterol will mean for your future health: Healthy young men age 20 to 25 years with cholesterol levels of more than 210 mg/dl were found to have 5 times the rate of heart disease 30 to 40 years later compared to those who had cholesterol of less than 170 mg/dl.² In other words, a difference of 40 mg/dl means 5 times the risk of future heart disease. Now consider that the changes produced by the ketogenic diet in this study of children in 6 months were even worse – 58 mg/dl – an average increase in total cholesterol of 174 mg/dl to 232 mg/dl.

The Reason Atkins Lowers Risk Factors

Almost all of the children showed these adverse changes in blood values indicating they were at higher risks of artery disease in the future. But, followers of the Atkins diet claim the opposite – so why the drastic difference? The difference between the children treated for seizure control and people on the Atkins diet is the amount of food consumed. The authors of this study know this difference and state, “...the ketogenic diet was designed to have sufficient calories to promote healthy growth and development. Measurement of lipids and lipoprotein in healthy adults receiving a ketogenic diet has usually been obtained while patients are actively losing weight.”¹

Unless force-fed like the children, loss of appetite caused by a ketogenic diet causes a person to eat less food – which means eating fewer calories, and less cholesterol, fat, sugar, refined and processed foods, animal protein, and salt. As a direct result of less food, signs of improved health *seem* to appear because risk factors, like serum cholesterol, triglycerides, uric acid, glucose, and blood pressure, may decrease – and the patient is declared healthier. Not necessarily so. Similar benefits, for similar reasons, are seen when patients

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are placed on cancer chemotherapy³ – and doctors don't brag about these results.

I hope you can understand how eating smaller amounts of unhealthy foods (red meat, fried chicken, pork rinds, and fried cheese) will lower risk factors, yet cannot possibly transform these same foods into cures for heart disease.

So when your friends boast about their results with the Atkins diet, assure them that those results are not real indicators of better health and will be temporary at best – because no one can stay that sick for very long. Even the founder, Dr. Robert Atkins, could not follow his own diet – look at his pictures before he had his massive cardiac arrest and almost died in April of 2002 – my guess is he was at least 60 pounds overweight with jowls hanging to his chest. Comfort your misguided friends by telling them that when they're ready you will teach them a diet that will reverse much (but not all) of the damage they have done to themselves with the Atkins diet.

* Ketogenic refers to the creation of a state of ketosis. Ketosis is a natural condition the body resorts to under harsh circumstances, such as illness or starvation. When people are ill they need to be recuperating, not gathering and preparing foods. Loss of appetite facilitates recovery. A kindness of Nature for starving people is to quiet the pain of hunger. After 3 days with no food the body enters a state of ketosis and the pain of dying is relieved.

**** The Seizure Treatment**

Almost 80 years ago doctors began using a diet sufficiently restricted in carbohydrate to cause the body to change its metabolism to burn fat, and produce a byproduct – ketones – for seizure control. This diet works as well as, or better than, medications, yet the mechanism which decreases seizures remains unknown. The greater the level of ketosis, the better the seizure control. The anti-seizure benefits may last long after the diet is discontinued. To be effective, the fat content of the child's diet must be about 90% of the calories – carbohydrates are restricted to less than 10g/day – similar to the Atkins diet.

However, the major difference between the two ketogenic diets (Atkins for weight loss vs. the one for seizure control) is the goal for the intake of calories. The diet for the children is calorie sufficient so that they will grow. It is often a chore for parents to get their children to eat enough of these fatty foods to meet calorie needs. This is reflected in the fact that 15% (25 of the 165) eligible subjects quit the diet because it was "too restrictive."¹

Short-term complications of this seizure-control diet included hypoglycemia, vomiting, diarrhea, dehydration, and refusal to eat. Long-term complications included irritability, lethargy, kidney stones, acidosis, hyperuricemia (uric acid), hypocalcemia (low calcium), decreased amino acids, decreased growth, and elevated cholesterol. Most patients stop the ketogenic diet after 2 years – hopefully, temporary use in childhood will not result in a long-term increased risk of heart disease, cancer, osteoporosis, and kidney damage.

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Summary of McDougall Articles on High Protein Diets:

Home Page (www.drmcDougall.com)

The Great Debate – High vs. Low Protein Diets (Mostly about the Zone)

High Protein Diets (Mostly about Atkins)

Newsletters:

February 2002

The Heart Association Condemns High-Protein Diets

June 2002

Atkins' Diet and His Cardiac Arrest

November 2002

Atkins Diet Is As Good as Chemotherapy for Weight Loss

January 2003

The Right Diet Will Save Your Bones

March 2003

Restrict Protein - Save Your Kidneys

May 2003

Understanding the New Atkins Research

August 2003

Suck Carrots, High Protein Diet Advocates

September 2003

Proof Atkins Works Like Chemotherapy

Recipes

CHOCOLATE CAKE

We always serve dessert after dinner at the McDougall 10-day live in program in Santa Rosa, CA. Many people do not feel that dinner is finished until they have dessert. The first night we usually have brownies as a special treat and they are always a welcome surprise. My favorite brownie recipe is in the Quick and Easy Cookbook on page 272. They are very rich and moist and we like them even better when they have been refrigerated for a day before serving. This chocolate dessert was developed with a more cake-like texture. This makes a wonderful birthday cake for your special someone! John made me promise I would caution you that these treats are for special occasions only. They are not recommended to be a part of your daily healthy meal plan. I make these when we are having guests over for dinner or family members are visiting from out of town.

Preparation Time: 15 minutes

Cooking Time: 25 minutes

Servings: 9-12

1 ½ cups unbleached white flour
1 cup Sucanat
¾ cup Wonderslim cocoa powder
1 teaspoon baking soda
1 ¼ cups chocolate soy milk
1 6-ounce container vanilla soy yogurt
1 tablespoon Wonderslim fat replacer
1 teaspoon vanilla extract
¼ cup slivered almonds (optional)

Preheat oven to 375 degrees.

Place the flour, Sucanat, cocoa powder and baking soda in a large mixing bowl and mix well. In a separate bowl, add the soy milk, soy yogurt, fat replacer and vanilla and mix until very smooth. Pour this mixture into the dry ingredients and stir until well mixed. Add nuts, if desired, and stir into batter. Turn into a square non-stick baking pan (8 x 8 inches) and flatten into the corners with a spoon. Bake for about 25 to 30 minutes, until toothpick inserted into center comes out clean. Cool. Remove from pan and cut into squares.

Hints: I make this in a square, non-stick, SiliconeZone baking pan with excellent results. After the cake has cooled slightly, remove it from the baking dish by inverting the pan before cutting into squares for serving. If you are going to frost the cake, do so after removing from the pan but before cutting into squares. Serve with Vanilla soy ice cream for a wonderful special occasion treat.

CHOCOLATE FROSTING

People have been asking for a frosting recipe for many years and I finally have one that I know you will enjoy. This will make that birthday cake really special!

Preparation Time: 3 minutes

Servings: frosts one 8 inch square cake

2 cups confectioners' sugar (powdered sugar)
¼ cup Wonderslim cocoa powder
¼ to 1/3 cup soy milk
¼ teaspoon vanilla extract

Place the confectioners' sugar and cocoa powder in a small bowl. Mix well. Stir in ¼ cup of the soy milk and the vanilla and mix well. Add the remaining soy milk a little at a time until the frosting is a spreadable consistency. Use to frost cakes or brownies.

WEST AFRICAN STEW

This recipe was sent in by Cheryl Christensen. She says it is a family favorite and she

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often makes it for "carnivorous" company because it is so exotic. Cheryl and her family are "Star McDougallers". Their story can be found on our web site.

Preparation Time: 40 minutes

Cooking Time: 30-40 minutes

Servings: 12

1 yellow onion diced
 6 cloves minced garlic
 3 medium sweet potatoes, peeled, 1/2 inch cubes
 1 small eggplant, peeled, 1 inch cubes
 1 1/2 cups mushrooms, sliced
 1 each: red, yellow, green pepper, 1/2 inch pieces
 2 cups okra, sliced (fresh or frozen)
 1 32-ounce container of vegetable broth
 1/2 teaspoon cayenne (add more if you like spicy dishes...traditionally this is hot)
 3/4 teaspoon ginger
 1/2 teaspoon coriander
 1/4 teaspoon turmeric
 1/4 teaspoon nutmeg
 1/2 cup molasses
 2 28-ounce cans diced tomatoes
 1/2 pound green beans, washed and tipped
 1 bunch kale, collard or turnip greens, chopped in thin strips (about 3 uncooked cups)
 3-4 15-ounce cans garbanzo beans, drained and rinsed

Put the onion, garlic, sweet potato, eggplant, mushrooms, peppers and okra into a large stock pot. Pour in the vegetable broth, and add the spices. Cover pot and bring to a boil. Let the veggies cook until they are just soft.

Add the molasses, tomatoes, green beans, kale, and garbanzo beans and bring pot back to a boil. Cook for another 5-10 minutes or until the green beans are just tender.

Serve over Basmati rice with fresh baked whole wheat bread. This makes a lot of food but is great as leftovers.

Hint: If you can't find okra in your local market, just leave it out. It tastes just fine without the okra, but okra is a traditional African vegetable, possibly introduced into the southern US by slaves.

CANNELLINI BEAN STEW

This is another recipe that is a favorite at the McDougall Program. It is very easy to prepare and the leftovers are great the next day. This recipe may easily be doubled for more servings.

Preparation Time: 5 minutes

Cooking Time: 15-20 minutes

Servings: 2

1/2 onion, chopped
 1/2 -1 teaspoon minced fresh garlic (or bottled minced garlic)
 1/2 cup vegetable broth or water
 1 15-ounce can cannellini beans
 1 tomato, chopped
 1-2 tablespoons slivered fresh basil
 several twists freshly ground pepper

Place onion and garlic in a saucepan with the broth. Cook, stirring occasionally for 2-3 minutes until onion softens slightly. Add remaining ingredients and simmer for about 15 minutes to blend flavors, stirring occasionally.

Serve plain in a bowl with some bread or ladle over whole grains, pasta or potatoes.

Hints: If fresh tomatoes are not in season, use canned diced tomatoes instead. Substitute 3/4 cup of drained, canned diced tomatoes for every 1 tomato.

Continued from page 19**RED LENTIL SURPRISE**

I am always looking for quick and easy meals, and also ways to improve recipes that I have been preparing for a long time. This is one of our favorite fast meals. I like it because it is easy to prepare and I don't have to attend it constantly while it is cooking. John likes it because it is very filling and it tastes great!

Preparation Time: 10 minutes

Cooking Time: 40 minutes

Servings: 8

½ cup water
1 onion, chopped
1 bell pepper, chopped
½ teaspoon fresh minced garlic (or bottled minced garlic)
1 32-ounce box vegetable broth
1 15-ounce can tomato sauce
2 cups red lentils
1 carrot, grated
2 tablespoons soy sauce
2 tablespoons parsley flakes
1 bay leaf
½ teaspoon basil
1 7-ounce package baked tofu, sliced

Place the water in a large saucepan. Add the onion, bell pepper and garlic. Cook, stirring occasionally for 5 minutes, until vegetables soften slightly. Add remaining ingredients, except for the tofu. Bring to a boil. Reduce heat and simmer uncovered for 30 minutes, stirring occasionally. Add tofu, stir gently and heat for about 2-3 minutes. Serve over whole grain toast or rolls.

Hints: This may also be made without the tofu and it is still delicious. You could also serve this over rice or potatoes. This reheats well so it is great as a leftover!

ISRAELI COUSCOUS SALAD

Israeli couscous can be found in most supermarkets in the ethnic foods department. It looks like large couscous. If you are unable to find it, another small pasta may be substituted. Follow directions for cooking time on the individual packages.

4 cups cooked Israeli couscous
1 cups frozen corn kernels, thawed
½ cup diced green onions
½ cup diced red pepper
½ cup diced yellow pepper
½ cup minced fresh parsley
¼ cup chopped black olives
¾ cup fat-free dressing (see hint)
1 teaspoon soy sauce
¼ to ½ teaspoon fresh chopped dill weed
dash Tabasco sauce
freshly ground pepper

Place the cooked couscous in a large bowl. Add all the vegetables and mix well. Combine the dressing, soy sauce, dill weed and Tabasco. Pour over the salad mixture and toss to mix. Season with pepper to taste. Chill before serving.

Hint: This is delicious with many different kinds of dressing. Try fat-free Italian, Honey-Mustard, Raspberry Vinaigrette, Sesame or your favorite dressing. This keeps well in the refrigerator and it easy to pack for a lunch on the go. It is one of my favorite salads and I usually make a double batch.