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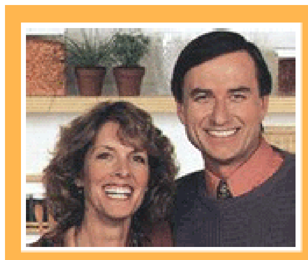

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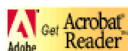
PDF Format 

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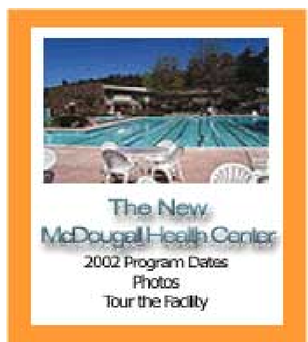

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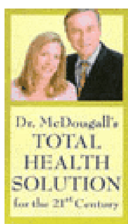

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July 2002 Vol. 1 No. 7

The Pancreas – Under Attack by Cow-Milk

This article continues a series exploring the health of your intestinal tract. Consider the strongest contact with the world around you is through your food, processed and absorbed by your intestine.

Most likely you will never know you have a pancreas, yet without it you would become very sick, and likely die. So this little organ is working 24/7 for you, most of the time without a single complaint. Anatomically, the pancreas is about six inches long and two inches wide, weighs about 3 ounces, and is situated in the posterior, upper left part of your abdomen. In the butcher shop this organ is sold as sweetbread (from a cow). Based on its functions, the pancreas would best be thought of as two separate organs: the organ that makes digestive juices (the exocrine pancreas) and the one that makes hormones for the whole body (endocrine pancreas).

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Nutrition Committee and AHA Battle

The story begins with the publication of an article on the hazards of high protein diets (Atkins, the Zone, Sugar Busters, etc.) by the Nutrition Committee of the American Heart Association (AHA). Unfortunately, the Committee made a serious error when writing about plant-food based diets. As you will read below, I have attempted to correct this mistake; so far without success. And it appears the battle for the truth may have just begun.

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What's a Woman to Do? Stop HRT Says Major Study

A large federal study on hormone replacement therapy (HRT) in postmenopausal women was halted on July 8, 2002 because the drugs caused an increase in the risk of invasive breast cancer. There was also an increase in heart attack, stroke, and blood clots. There were benefits seen from HRT with a slight decrease in colon cancer and hip fractures. These findings will be officially published in the July 17, 2002 issue of the *Journal of the American Medical Association.*

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Antioxidant Vitamins (in Foods) Prevent Alzheimer's Disease

Two studies in the June 26, 2002 issue of the *Journal of the American Medical Association* found less chance of Alzheimer's disease with more antioxidant intake. Antioxidants are substances that remove damaging compounds, known as free radicals, from our bodies. Damage caused by free radicals may disrupt normal cell function and lead to the death of nerve cells. (Free radicals are very active substances that can damage our tissues.) Lesions are present in the brains of Alzheimer's disease patients that are typically associated with attacks by free radicals.

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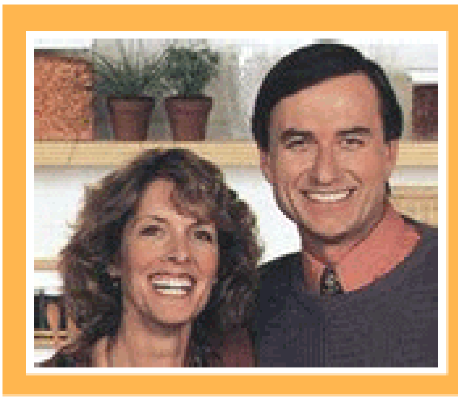

The McDougall NEWSLETTER

July 2002 Vol. 1 No.7

The Pancreas - Under Attack by Cow - Milk

Most likely you will never know you have a pancreas, yet without it you would become very sick, and likely die. So this little organ is working 24/7 for you, most of the time without a single complaint. Anatomically, the pancreas is about six inches long and two inches wide, weighs about 3 ounces, and is situated in the posterior, upper left part of your abdomen. In the butcher shop this organ is sold as sweetbread (from a cow). Based on its functions, the pancreas would best be thought of as two separate organs: the organ that makes digestive juices (the exocrine pancreas) and the one that makes hormones for the whole body (endocrine pancreas).

The “exocrine pancreas” produces enzymes (delivered through a duct to the first part of the small intestine) that digest proteins, fats and carbohydrates, so they can be absorbed through the intestine. The “endocrine pancreas” produces hormones, like insulin, which regulate the use and storage of the body's main energy sources, glucose (sugar) and fats. These hormones (delivered through the blood stream) are produced in very specific clumps of cells (islets). The insulin-producing cells are called **(**beta) cells.

Type 1 (Childhood) Diabetes – The Milk-Drinkers Disease

Type 1 diabetes is often referred to as childhood type diabetes, because this has historically been the most common kind of diabetes in children, and also as insulin dependent diabetes mellitus (IDDM), because patients must take daily injections of insulin for the rest of their lives. However, this relatively common disease is not restricted to children and many times appears for the first time in adulthood. Over 1.6 million Americans have type 1 diabetes. A more common form of diabetes is called type 2 (adult onset and non-insulin dependent). This type 2 form is due to the high-fat Western diet and resulting obesity, and occurs at least

nine times more frequently than type 1.

The evidence incriminating cow-milk consumption in the cause of type 1 diabetes is sufficient to cause the American Academy of Pediatrics to issue this warning, "Early exposure of infants to cow's milk protein may be an important factor in the initiation of the (beta) cell destructive process in some individuals." and "The avoidance of cow's milk protein for the first several months of life may reduce the later development of IDDM or delay its onset in susceptible people." (The American Academy of Pediatrics Work Group on Cow's Milk Protein and Diabetes Mellitus – 1994).

The Milk-Invader and Molecular Mimicry

The problems all begin because of the natural condition of the intestine of a very young infant. Proteins produced by mother, and found in human mother's breast milk, serve to promote an infant's health and immunity from disease. During the first few months of life the intestinal wall of an infant is quite permeable in order to allow the passage of these intact proteins into the infant's body. Unfortunately, serious health problems can develop when foreign proteins are allowed into the infant's permeable intestinal tract. Cow-milk proteins are unique in that they are usually the first foreign proteins entering an infant's gut and body, because most baby formulas are usually cow-milk based.

Once the cow-milk proteins are absorbed into the bloodstream, our immune system recognizes them as invaders, which as far as our bodies are concerned, could be the foreign protein of a virus's coat or a bacteria cell wall. The immune system responds with an appropriate defense – antibodies are made against the foreign protein, and immune cells, called T-cells, are directed to find and destroy these trespassers.

Unfortunately, in an effort to do the right thing, some people's immune systems become slightly confused and attack not only the foreign cow-milk proteins, but also the insulin-producing (beta) cells of the pancreas. The reason this happens in only some people, and not everyone, is unknown. One explanation has to do with the difference in the permeability of intestinal walls. Some intestines allow proteins into the body more easily, because of injuries caused by viruses, environmental chemicals, medications (NSAID, like Motrin and Advil), and the unhealthy, high-fat, high cholesterol diet. This condition is sometimes called a "leaky gut." A very "leaky gut" will indiscriminately allow the influx of foreign proteins into the body.

Once the cow-milk protein is in the blood then a phenomenon, known as "molecular mimicry," occurs. Foreign proteins, like cow-milk, stimulate the production of antibodies directed against small segments of their proteins – specific sequences of amino acids. Unfortunately, these same sequences of amino acids are also found on the body's own tissues (a copy or mimic of the foreign protein segment). In the case of type 1 diabetes, a segment of 17 amino acids has been identified on the cow-milk protein that is identical to a segment on the surface of the insulin-producing ••(beta) cells of the pancreas.[1] Antibodies appropriately produced to attack and destroy the cow-milk protein find the ••(beta) cells first -- they attach to the cell surfaces, activating T-cells, which then attack and destroy these insulin-producing cells. Once these cells are destroyed, the pancreas can no longer produce sufficient amounts of insulin for the body's needs.

The Handicap of Diabetes

Even though the process of ••cell destruction may take three to five years on the average, the onset of the disease usually appears to be sudden and is often catastrophic. The apparently well child (or adult) becomes very ill with symptoms of excessive thirst, urination, and fatigue – many times followed by coma, and sometimes death. The lifesaving treatment is very specific: replacement of insulin by daily injections.

Once the cells are destroyed they will not grow back, therefore the disease is permanent and the patient will always require insulin (unless some future technology changes this). Insulin replacement therapy is far from perfect and does not correct all of the underlying metabolic problems. A patient living with a damaged pancreas has an increased risk for premature development of serious complications, such as kidney failure, blindness, heart attacks, osteoporosis, and cancer. As you will recall, these are also the problems faced by people without diabetes who are on the Western diet. But the threats to a diabetic's health are much greater.

Diabetics are metabolically handicapped people, hampered in their ability to defend and repair themselves from outside injuries, like an infection or an unhealthy diet (the high-fat, high-cholesterol Western diet). Therefore, to help counteract this disadvantage, people with this disease must be cared for with vigilance – and that means very careful control of their blood sugars with insulin injections, a wholesome lifestyle, and most-importantly, a health-supporting diet. This is a diet of starches with vegetables and fruits – the less meat, dairy, processed foods and vegetable oil the better. By this effort, the type 1 diabetic has the best

chance to avoid premature death and serious complications. In fact, the only people I have met with long-standing diabetes who still have all their parts working after 40 years of disease, have been those following a low-fat nearly vegetarian diet – the best example are those few fortunate people following the Kempner Rice Diet from Duke University – sometimes for 50 years.

Inherited by an Education

There is some inherited tendency to develop type 1 diabetes, but it is only a tendency, and actually most people (90%) who develop this disease do not have close relatives with it. In about 30% of identical twins, both get diabetes. To bring out this genetic tendency requires an environmental toxin. Infectious agents, like viruses, have been suspected to cause type 1 diabetes. More likely, when an infection like a virus is involved, it acts as a nonspecific stress, late in the process of disease development, that increases the body's needs for insulin and precipitates a rise in blood sugar earlier than would have occurred otherwise. Rather than through genetic inheritance or a transmitted virus, the past 20 years of accumulated evidence has shown the tendency to run in families is largely fostered by mother and father teaching sons and daughters to consume dairy products. Since the cow-protein is the culprit activating the immune reaction, low-fat dairy products would cause at least as much harm as the full-fat versions.

Evidence Incriminating Cow-Milk:

1) Population Studies (Epidemiology):

When populations of people who are genetically similar have a different incidence of disease then something in the environment must be suspected as the cause. The strongest contact we have with our environment is our food. This environmental relationship is further confirmed when people migrate from an area of low incidence to high incidence, and increase their risk of developing disease. This migration phenomena has been seen, for example, when Samoan children move to New Zealand and when Asians move to England.[2]

There is a strong correlation between total cow-milk consumption and type 1 diabetes, worldwide.[3] For example, Finland, a high milk-consuming population, has 36 times more type 1 diabetes than does a country of low consumption, like Japan.[4] A similar relationship has been found within a single country, for example, between 9 regions of Italy – regions

consuming the most milk have the most diabetes.[5]

Type 1 diabetes is one of the fastest growing diseases in the world. There has been a rapid increase (greater than 10-fold) in type 1 diabetes in European countries in the past few decades, especially in children under five years.[6] This rise clearly points to an environmental, rather than a genetic cause. This rise has been paralleled by an increase in fluid milk intake.

There are notable exceptions to this strong positive correlation between cow-milk consumption and type 1 diabetes – but there is also a scientific explanation for the discrepancies.[7,8] Examples of this apparent inconsistency are seen in Iceland, New Zealand, and the Maasai people of Tanzania, Africa. In these populations there is high milk consumption and low diabetes. The explanation is: cow-milks from different herds have important differences in their proteins. The cow-milk found in populations with a low incidence of type 1 diabetes has a much lower fraction of A1 and B ••caseins (instead they have the A2 variant). The A1 and B forms of ••caseins are believed to be the proteins that cause the body to respond by destroying the insulin-producing cells of the pancreas. When these variants of cow-milk are taken into consideration then the correlation of cow-milk consumption and type 1 diabetes becomes evident. It is estimated that 80% of dairy cows have this A1 and or B variant. One reason this may be so frequently found is because cows have been selectively bred this way to increase the protein content of the cow-milk (a quality desired by dairy producers).[9]

2) Case Studies:

Studies comparing populations of people with type 1 diabetes with healthy individuals indicate the risk of developing type 1 diabetes is 5.4 times greater in high milk consumers (3 or more glasses a day) compared to those who drink less milk (less than 3 glasses a day).[10]

3) Milk-induced Changes in the Immune System:

Children newly diagnosed with type 1 diabetes have been found to have increased levels of antibodies directed to several different cow-milk proteins.[11-13]

Antibodies against cow-milk protein (specifically bovine serum albumin and an ABBOS peptide of 17 amino acids) were found to react with a similar-looking sequence of

amino acids on the ••cells of the pancreas in 100% of children newly diagnosed with type 1 diabetes.[1]

Antibodies to insulin often appear in children who develop type 1 diabetes. This is caused by exposure of an infant (before the age of three months) to cow's insulin (bovine insulin) found in the milk the child drinks.[14] These antibodies to cow-milk also attack human insulin and may be the trigger for the autoimmune response that causes diabetes.

Immune cells, known as T-cells, have been found to proliferate in response to cow-milk proteins in newly diagnosed type 1 diabetic children.[9] These T-cells, once activated by cow-milk, then attack the cells of the pancreas and destroy them. Molecular mimicry appears to be involved.

Avoidance of cow-milk through exclusive breast feeding prevents the development of antibodies to cow-milk protein (••casein).[15] Only bottle-fed infants show reactions to cow-milk proteins. Increased levels of antibodies to these cow-milk proteins are found in children with type 1 diabetes.

Please note: A nursing mother consuming cow-milk can pass the proteins to her infant through her breast milk.[16] Whether this kind of cow-milk protein consumption is a cause of type 1 diabetes is not known, but it would be prudent for a nursing mother to avoid cow-milk in her diet.[17]

4) Animal studies:

Experimental animals (mice and rats) fed cow-milk have been found to develop diabetes.[18-20] It is important to note that soy protein and wheat protein have also caused experimental animals to develop diabetes.[21] This is another reason breast feeding exclusively is the right choice and why soy-based infant formulas are not an acceptable substitute for cow-milk based formulas (see next month's newsletter for even more compelling reasons to use soy with caution). For maximum benefit for the young child, feed mother's breast milk exclusively for six months and then as a decreasing part of the diet until the child is two years of age. (For a comprehensive discussion of the importance of breast feeding read The McDougall Program for Women).

Sensible Action: Cow-milk Avoidance:

The dairy industry makes attempts to argue against their products causing type 1 diabetes. (You can view their very selective use of the scientific literature to defend the safety of their products here:
http://www.nationaldairycouncil.org/lvl04/nutrilib/relresearch/diabetes_6.html)

These arguments don't fool the American Academy of Pediatrics and hundreds of top scientists worldwide, and they don't fool me. I would suggest you take the less risky road for your family. Since cow-milk is ideal for baby cows and was never intended for human children, act naturally and avoid a potential tragedy. With the same action you will be reducing the risk of constipation, arthritis, ear infections, asthma, bed-wetting, eczema, lactose intolerance, and obesity, as well as future cancers, strokes and heart disease. There is no human nutritional requirement for cow-milk. It is deficient in dietary fiber, essential fats, niacin, vitamin C, and iron, and overloaded with calories, saturated fat, environmental chemicals, and disease pathogens (bacteria and viruses).

The dairy industry's main selling point is calcium; however a thorough review by researchers at the Department of Nutritional Sciences, University of Alabama, of 57 studies on cow-milk and bone health came to this conclusion: "In fact, of the studies providing strong evidence, only 29% showed favorable effects and 14% showed unfavorable effects on bone status. These values suggest that there is little risk of harm to the skeletal system if recommendations to the general population to consume dairy foods are heeded. However, these values do not provide a solid body of evidence to support this recommendation."[22] By the way, most of the studies reviewed here were paid for by the dairy industry – and they still failed to show their products met the manufacturer's multimillion dollar advertising claims. No one has ever become ill or died from a lack of cow-milk. Without a doubt, the opposite is true for billions of people.

Pancreatic Cancer

Pancreatic cancer is the fifth leading cause of cancer death in the United States. Because of the deep location of the pancreas inside the abdomen, diagnosis of the disease is difficult, and as a result it is nearly always fatal in a matter of months – 90% have died within 12 months of diagnosis. Even with the best that modern medicine has to offer, approximately 25,000 people die from this disease yearly. Therefore, if you want to effectively win the war on cancer of the pancreas you must do so by prevention.

The only well-established causative factor is cigarette smoking. However, diet, I believe, is the most likely cause of most cases. This is disease of developed countries – where the rich Western diet is consumed. There are data that show a diet high in fruits and vegetables is associated with a lower risk of pancreatic cancer.[23,24] Obesity, alcohol, coffee, saturated fat, animal protein, high-fat dairy products, and low physical activity increase the risk. There is also an association with chronic pancreatitis and diabetes – both are diseases of the Western diet (discussed above and below).

Prevention is the key to dealing with pancreatic cancer. But what can be done for those less fortunate patients already with pancreatic cancer? A case control study demonstrated that patients with metastatic pancreatic cancer who ate a diet of fruits and vegetables (a macrobiotic diet) lived longer (17 months versus six months) and enjoyed an improved quality of life.[25] This study from researchers at Tulane University showed half of those on the macrobiotic diet were alive after one year, compared to only 10% on the regular diet. The researchers concluded that the macrobiotic approach may be an effective treatment, writing "This exploratory analysis suggests that a strict macrobiotic diet is more likely to be effective in the long-term management of cancer than are diets that provide a variety of other foods."

Pancreatitis

Pancreatitis is an inflammatory condition of the pancreas that is very painful and at times deadly. The mortality rate of acute pancreatitis is about 10%. Chronic forms of pancreatitis can devastate a person's life over many years. Patients suffer abdominal pain and malnutrition, and have a higher risk of pancreatic cancer. Chronic alcohol abuse and an unhealthy diet are known to cause acute and chronic pancreatitis.[26] A high protein ketogenic diet has been reported to cause pancreatitis that killed a child.[27] (The Atkins diet is a high protein, ketogenic diet). Diets high in sugar and fat will cause the level of blood fats, known as triglycerides, to rise in some people. The elevated triglycerides seem to interfere with the circulation of the pancreas and cause severe inflammation, known as pancreatitis. A low-fat, complex carbohydrate diet and alcohol avoidance is the foundation to preventing further attacks.

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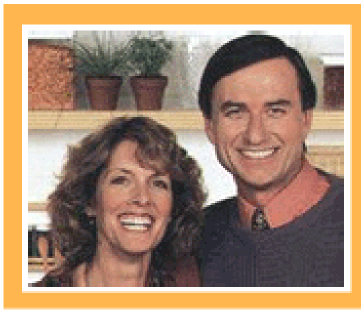

The McDougall NEWSLETTER

July 2002 Vol. 1 No.7

Is There a Battle Brewing between the American Heart Association's Nutrition Committee and McDougall?

The story begins with the publication of an article on the hazards of high protein diets (Atkins, the Zone, Sugar Busters, etc.) by the Nutrition Committee of the American Heart Association (AHA). Unfortunately, the Committee made a serious error when writing about plant-food based diets. As you will read below, I have attempted to correct this mistake; so far without success. And it appears the battle for the truth may have just begun.

This letter from me (John McDougall) appeared in the June 25, 2002 issue of the American Heart Association Journal, *Circulation* (105:197):

Plant Foods Have a Complete Amino Acid Composition

The Statement for Health Professionals from the Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association on Dietary Protein and Weight Reduction contains often quoted, but incorrect, information of the adequacy of amino acids found in plant foods.[1] This report states, "Although plant proteins form a large part of the human diet, most are deficient in 1 or more essential amino acids and are therefore regarded as incomplete proteins."

William Rose and his colleagues completed research by the spring of 1952 that determined the human requirements for the eight essential amino acids.[2] They set as the "minimum amino acid requirement" the largest amount required by any single subject, and then doubled these values to make the "recommended amino acid requirement," which was also considered a "definitely safe intake." By calculating the amount of each essential amino acid provided by unprocessed complex carbohydrates (starches and vegetables),[3] and comparing these values with those determined by Rose,[1] the results show that any single one, or combination, of these plant foods provide amino acid intakes in excess of the recommended requirements. Therefore, a careful look at the founding scientific research and some simple math proves it is impossible to design an amino acid deficient diet based upon amounts of unprocessed starches and vegetables sufficient to meet the calorie needs of humans. Furthermore, mixing foods to make a complementary amino acid composition is unnecessary.[4]

The reason it is important to correct this misinformation is because many people are afraid to follow healthful pure vegetarian diets – they worry about "incomplete proteins" from plant sources. A vegetarian diet based around any single one, or combination, of these unprocessed starches (rice, corn, potatoes, beans, etc.) with the addition of vegetables and fruits supplies all the protein, amino acids, essential fats, minerals, and vitamins (with the exception of vitamin B12) necessary for excellent health. To wrongly suggest people need to eat animal protein for nutrients will encourage them to add foods that are known to contribute to the cause of heart disease, diabetes, obesity, and many forms of cancer, to

name just a few common problems.[5]

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John McDougall, MD

On the same page as my letter there is a rebuttal from a representative of the Nutrition Committee of the American Heart Association. I do not have permission to reprint it for you, but I can tell you my opinion is: It is a poorly written paragraph, which would leave most readers confused. However, in the rebuttal the Committee clearly has refused to admit the error, and make appropriate corrections.

I have sent the following letter to the Nutrition Committee of the American Heart Association, all of the authors of the original article, and the editors of the journal. I will let you know their response.

Thursday, July 11, 2002

To the Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association

Dear Sirs:

The June 25, 2002 issue of the journal *Circulation* (105:197) printed a letter of mine in which I corrected a statement made by the Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association (*Circulation* 104:1869-74, 2001). This report states, "Although plant proteins form a large part of the human diet, most are deficient in 1 or more essential amino acids and are therefore regarded as incomplete proteins." This statement is not correct, as I have clearly shown in my letter.

Accompanying my letter was a response from Barbara Howard, PhD, who I assume represents the Nutrition Committee. Her letter was confusing and undocumented by a single scientific citation. However, rather than admit the Committee's report was in error, she reaffirmed their previous position by writing "…we did carefully state that 'most' are deficient in one or more essential amino acids…"

Failure to resolve the truth about the adequacy of plant proteins threatens the health of millions of people seeking better guidance for proper nutrition; therefore, my efforts will not be dismissed with a careless response from the Nutrition Committee of the American Heart Association. Please grant me the courtesy of a professional and honest answer by either:

1) Showing me that I am incorrect by citing scientific research that contradicts my position and the studies I have provided. These scientific papers accompanying my letter represent the original experiments performed to determine human protein needs. I will not accept someone else's professional opinion on this issue – because, as you know, even the "best experts" can be wrong. Show me the basic research -- as I have done for you.

2) Admitting the article by the Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism of the American Heart Association contains incorrect information concerning the adequacy of plant proteins (*Circulation* 104:1869-74, 2001). And giving this matter the serious, open attention it deserves.

I expect this to be handled in a timely, professional, and public manner. You owe it to society and to your readers. I will not let this matter rest – and if I get another response that suggests disinterest and confusion about the subject, or worse yet, possibly an attempt to avoid admitting an important error in basic science, I will take this matter elsewhere for a public hearing.

Sincerely,

John McDougall, MD

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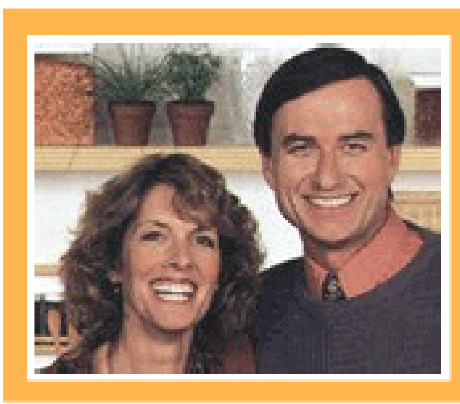

The McDougall NEWSLETTER

July 2002 Vol. 1 No.7

Stop HRT Says Major Study

A large federal study on hormone replacement therapy (HRT) in postmenopausal women was halted on July 8, 2002 because the drugs caused an increase in the risk of invasive breast cancer. There was also an increase in heart attack, stroke, and blood clots. There were benefits seen from HRT with a slight decrease in colon cancer and hip fractures. These findings will be officially published in the July 17, 2002 issue of the *Journal of the American Medical Association.* The full article can be read for free at: http://jama.ama-assn.org/.

What to Do Now?

I would suggest you dust off your copy of the *McDougall Program for Women* book, which first came out in the fall of 1998. The reported adverse effects of HRT and reasonable alternatives are thoroughly discussed in this book. How did I know all of this long before this "new" study? Scientific research repeats the same findings over the years, the truth surfaces for a while, and then it is buried by billions of dollars in advertisements from the pharmaceutical industries. The reason most of my work survives the test of time is because I try to understand the basic science behind issues of nutrition and health. Here are ten important points you need to understand about hormone replacement therapy (HRT):

1) Menopause is a normal natural stage in a woman's life – there is a time to stop having babies, so you can live long enough to raise them. No woman should be coerced into taking HRT by her doctors or the drug companies.

2) The benefits of HRT are small and the risks are significant. But HRT does have a role in

the medical care of some women. HRT can be stopped (suddenly) without adverse health consequences, except for return of menopausal symptoms (like hot flashes).

3) The synthetic hormone medroxyprogesterone (Provera, also one of the two ingredients in Prempro) is the main culprit causing future health problems. Studies over the last 20 years have shown this hormone increases the risk of breast cancer by as much as 400% and raises the risk of heart disease. You may have read the word *progestin* – this refers to any substance that has progesterone-like activity – and usually means medroxyprogesterone (Provera).

4) The hormone women naturally make during their reproductive years is called progesterone. Progesterone does not increase the risk of heart disease. In limited research it appears that progesterone may actually decrease the risk of breast cancer. This hormone can be taken as a skin cream or pill.

5) Estrogens increase the risk of breast and uterine cancer. Women without a uterus may take estrogens alone (however, there still may be some benefits for the breast tissue from progesterone). If you have a uterus you need to take progesterone to counteract some of the effects on the uterus. It reduces, but does not eliminate, the increased cancer risk to the uterus caused by estrogen. Estrogen also raises the risk of blood clots and gallbladder disease.

6) Skin creams are much more potent than pills. When a pill is taken it travels from the intestine to the liver first, where many of the ingredients are deactivated, before it is distributed to the rest of the body. Less than $1/10^{th}$ of the pill dose, when applied to the skin, will cause similar increases in blood levels of hormone.

7) The most effective ways to prevent heart disease and osteoporosis are with a healthy diet (low-fat, no-cholesterol, low protein) and exercise. HRT should not be primarily used for these purposes. HRT actually increases the risk of heart disease – probably by causing blood clots to form in the heart arteries.

8) The usual reasons I prescribe HRT for women is to counteract unpleasant symptoms: hot flashes, mood changes, and vaginal dryness. The correct combination and dosage of HRT are determined by the woman's response to the medication. Does she get the symptom relief she is looking for? What is the minimum amount of hormone to accomplish

this?

9) I usually prescribe estradiol 0.05 to 0.1 mg with 20 mg of progesterone in 1 gram of a cream-base. The directions are to apply ¼ teaspoon to the skin daily. A small amount of testosterone (0.25 mg) can be added to the cream-base. These preparations are not without side effects and may increase a woman's risk of uterine and breast cancer, heart disease, gallbladder disease, blood clots, as well as other problems.

10) Herbal preparations (black cohosh, chaste berry, and others) may also result in relief of symptoms of menopause. Their safety and efficacy are not established, but they are probably worth a trial for women seeking a non-HRT approach.

Please refer to *The McDougall Program for Women* for more information. Purchase in bookstores or at www.drmcdougall.com

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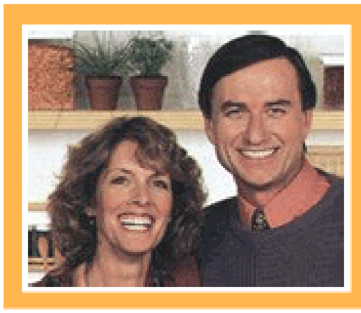


The McDougall NEWSLETTER

July 2002 Vol. 1 No.7

Antioxidant Vitamins (in Foods) Prevent Alzheimer's Disease

Two studies in the June 26, 2002 issue of the *Journal of the American Medical Association* found less chance of Alzheimer's disease with more antioxidant intake.[1,2] Antioxidants are substances that remove damaging compounds, known as free radicals, from our bodies. Damage caused by free radicals may disrupt normal cell function and lead to the death of nerve cells. (Free radicals are very active substances that can damage our tissues.) Lesions are present in the brains of Alzheimer's disease patients that are typically associated with attacks by free radicals. Therefore, it might be expected that antioxidants, such as vitamin C and E would prevent or delay the onset of Alzheimer's disease. These two studies show an association between these vitamins in foods, not from vitamin supplements. Vitamin C is only found in plants, and most of our vitamin E comes from plants. So the most relevant conclusion is plant foods – by a multitude of mechanisms – may reduce our risk of Alzheimer's disease.

But more importantly, it should be asked, what is the source of the oxidative damage? Metals, such as iron, copper, zinc, and aluminum have catalytic activities that produce free radicals. Iron, copper and zinc are nutrients, which are necessary for good health, but aluminum has no nutritional value and is a known toxin to our nervous system tissues. Much evidence has accumulated showing aluminum is involved in the cause of Alzheimer's disease.[3] This metal generates free radicals and promotes inflammation – both processes involved in the development and progression of Alzheimer's disease.[4]

Therefore, in addition to eating a diet high in antioxidants (plant foods), you will want your diet to be free of aluminum. This means you should avoid food additives containing aluminum, soda and other aluminum cans (canned vegetables are usually in steel cans), and aluminum cookware. Another common way aluminum enters our body is through our nose. Antiperspirants (not deodorants) are made of aluminum chloride and are sprayed into the noses of millions of unsuspecting people daily (aluminum is also absorbed though the skin in small amounts from roll-ons).

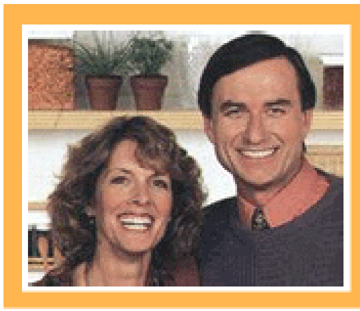
References:

1) Engelhart M. Dietary intake of antioxidants and risk of Alzheimer disease. *JAMA*. 2002 Jun 26;287(24):3223-9.

2) Morris M. Dietary intake of antioxidant nutrients and the risk of incident Alzheimer disease in a biracial community study. *JAMA*. 2002 Jun 26;287(24):3230-7.

3) Yokel R. The toxicology of aluminum in the brain: a review. *Neurotoxicology*. 2000 Oct;21(5):813-28.

4) Campbell A. Aluminum induced oxidative events and its relation to inflammation: a role for the metal in Alzheimer's disease. *Cell Mol Biol (Noisy-le-grand).* 2000 Jun;46(4):721-30.



July 2002 Vol. 1 No. 7

PICNIC LENTIL SALAD

This is great to take on a picnic and everyone loves it—even those people who are sure they don't like lentils. It keeps well in a cooler or in the refrigerator. Be sure to make it at least 3 hours before you plan to serve it to allow time for the flavors to blend.

Preparation time: 15 minutes
Cooking Time: 30 minutes
Chilling Time: 3 hours
Servings: 6

1 cup dry brown lentils
4 cups water
1 cup grated carrots
½ cup chopped sweet onion
½ cup chopped fresh parsley
½ teaspoon crushed fresh garlic
2 tablespoons red wine vinegar
1 tablespoon water
1 tablespoon soy sauce
2 teaspoons dijon-style mustard
1 teaspoon Worcestershire sauce
½ teaspoon ground oregano
several twists freshly ground pepper

Place the lentils and water in a medium pot. Bring to a boil, reduce heat, cover and cook for about 30 minutes, until tender but still firm. Meanwhile, prepare remaining vegetables. Combine vinegar, water, soy sauce, mustard Worcestershire sauce, oregano and pepper in a small container and mix well. Set aside.

Drain lentils. Place in a bowl. Add carrot, onion, parsley and garlic. Mix well. Pour dressing over and mix again. Cover and refrigerate for at least 3 hours before serving.

SUMMER CORN CHOWDER

I like to serve this cold in the summer. Use fresh corn off the cob just after harvesting for the best flavor. It must be prepared ahead and chilled before serving.

Preparation Time: 10 minutes
Cooking Time: 10 minutes
Chilling Time: 2 hours
Servings: 4

¼ cup water
1 cup chopped green onions
3 cups fresh corn kernels

2 cups soy or rice milk
2 tablespoons chopped pimiento
2 tablespoons chopped green chilies
dash or two of Tabasco sauce
chopped cilantro
chopped avocado (optional)
broken fat-free tortilla chips
fresh lime

Place the water and onions in a saucepan. Cook, stirring frequently, for about 3 minutes. Add the corn and soy or rice milk. Bring to a simmer and cook for 5 minutes. Remove 1 cup to a blender and puree. Return to pan along with the pimiento, green chilies and Tabasco sauce. Mix well. Pour into a covered container and refrigerate for at least 2 hours. To serve, place in individual bowls, garnish with some chopped cilantro, chopped avocado (if desired), tortilla chips, a squeeze of fresh lime juice, and a dash more of hot sauce, if desired.

GAZPACHO

Last month I told you about our wonderful chef at the new McDougall Program in Santa Rosa, CA. This gazpacho was the perfect opener to a delicious meal of veggie burgers and baked beans. During the summer we all look for quick and easy meals that don't take much time in the kitchen, yet are satisfying and filling.

Preparation Time: 20 minutes
Chilling Time: 2 hours
Servings: 6-8

1 32 ounce jar low-sodium V-8 juice
1 cucumber, finely chopped
1 tomato, peeled and finely chopped
1 green bell pepper, finely chopped
¼ cup chopped sweet onion
1 small jalapeno, seeded and finely chopped
Tabasco sauce to taste
Chopped cilantro for garnish

Combine all ingredients, except cilantro, in a large container with a lid. Refrigerate until ready to serve.

Garnish with cilantro, if desired.

AVOCADO & TOMATO PASTA SALAD

Heather McDougall

This delicious and simple salad can be served hot or cold but I think my mom and I like it best cold. The success of this dish really depends on the freshness of the avocados and tomatoes you use, making summer the perfect time of year to enjoy this salad. This dish is easy enough for teenagers to make and enjoy by themselves. Craig McDougall has been known to make this for himself when Heather or mom are busy.

Preparation time: 10 minutes
Cooking time: 10 minutes
Servings: 4

3 cups dried pasta (medium shells work well)
2-3 cloves fresh garlic, pressed
3 medium, ripe tomatoes, chopped
2 medium avocados, peeled and chopped

juice of one lime
salt and pepper to taste

Cook the pasta to *al dente*. When pasta is done rinse with cold water. Combine all fresh ingredients in a large bowl and add salt and pepper. Add pasta and stir well.

CANTALOUPE SUMMER SALAD
Heather McDougall

Preparation Time: 15 minutes
Chilling Time: 1 hour
Servings: 6-8

2 avocados, peeled & chopped into 1–inch cubes
1 cantaloupe, peeled & cut into 1-inch cubes
½ onion, diced
½ cup chopped cilantro
juice of 2 limes
salt and pepper to taste

Combine all ingredients and chill for 1 hour.

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