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Soy – Food, Wonder Drug, or Poison?

Soy-food consuming populations of people, like the Chinese and Japanese, have a much lower incidence of heart disease, osteoporosis, and cancer of the breast and prostate. From this observation, many researchers have come to the conclusion that ingredients in the soybean have anticancer, anti-hypertensive, and anti-cholesterol benefits, and also act as a natural alternative to hormone replacement therapy. Soy foods have become synonymous with health food and vegetarianism. Their popularity is tied to the belief that soy has “wonder-drug” benefits – so powerful that many people suppose they can safely eat their bacon and eggs for breakfast as long as they finish off their morning meal with a cup of soy yogurt.

We recommend that you use traditional soy foods, like soy milk and tofu, only as a small part of your diet, at most 5% of your daily calories. “Synthetic soy foods,” like meats, cheeses, and soy bars, should rarely, if ever, be consumed.

Examples of sensible uses might be:

Soy milk to moisten cereal, not glassfuls as a beverage

Tofu pieces in a “stir-fry” rice dish, not as a soy burger entrée

An occasional tofu-based dessert, not daily soy “candy” bars

However, there is a dark side to the soy story that warns that these foods may increase your risk for cancer, impair your thyroid, immune, and brain function, and cause you bone loss and reproductive problems. Fortunately, these worries are relevant mostly for people lured into consuming “fake foods” synthesized from man-made components of soy and other foods, and high potency soy supplements – not for those who consume traditional soy foods as a small portion of their diet.

Soy’s Effects Are Usually Inconsequential

In Asian countries, soy is consumed as boiled soybeans (edamame), tofu (soybean curd), natto (fermented soybeans), miso (fermented soybean paste), okara (a by-product of tofu), soybean sprouts, soymilk, yuba (by-product of soy milk), kinako (soy flour), and soy sauce. These foods are made from simple processes like grinding, precipitation, and fermentation – thus, most of soy’s ingredients remain little altered. Less than 5% of daily calories in the typical diet of Japanese or Chinese people comes from soybeans.¹ This amounts to about 2 ounces (55 to 64 grams) derived from soy foods daily, which means only 7 to 8 grams of protein and 15 to 45 milligrams of the estrogen-like phytochemical known as *isoflavone*. How could this tiny amount of soy food make a measurable difference – positive or negative – to the health of Asians?

The primary reason these people are so hardy is that the Asian diet is based on a starch – *rice* – with generous amounts of vegetables and fruits. Starches are ideal foods for human nutrition and have many desirable nutritional qualities – they are low in fat, moderate in protein, high in carbohydrates, and contain no cholesterol. The Asian diet also contains few animal products. Any unique pharmacologic benefits from eating soy are unnoticeable compared to the impact of these people’s overall diet. (For a discussion of the benefits of starches, see my April 2004 newsletter article: People – Not Their Words – Tell “The Carbohydrate Story.”)

Soy – Detrimental or Beneficial



The truth behind soy is clouded by emotional reactions from the anti-soy movement of hard-core meat-eaters and soy-loving vegetarians – and as usual, money from big businesses, the soy manufacturers. Most of the rhetoric on both sides of the argument is of no real importance – the real issue is whether you are consuming small amounts traditional soy foods or making yourself a diet of synthetic foods.

The Seven Main Arguments:

Argument 1: Anti-nutrients

Detrimental: Soy contains “anti-nutrients,” which interfere with the digestion of proteins (trypsin inhibitors) and the absorption of miner-

als (phytic acid).

Beneficial: These “anti-nutrient” substances are deactivated by cooking and fermentation. Cooking before consumption is not unique to soybeans – no other beans, peas, or lentils are eaten “raw.” Although adverse effects on experimental animals have been demonstrated, there is no direct evidence as to the physiological effects of the trypsin inhibitors on humans.² Interestingly, Phytic acid has anticancer effects in animal models for both colon and breast cancer.³

Argument 2: Cancer

Detrimental: Soy has estrogen-like activity that may promote the growth of estrogen-sensitive cancers (breast and prostate), especially for those people who already have cancer.⁴⁻⁵

Beneficial: Breast and prostate cancer rates are four to six times lower in Japan and China than Western countries. In laboratory studies, isoflavone from soy can inhibit the growth of breast cancer and prostate cancer tissues.⁶

Argument 3: Heart Disease

Detrimental: Benefits on heart disease are largely unproven and are really due to the low-fat, low-cholesterol qualities of the Asian diet.

Beneficial: People living in countries with more soy in their diet, for example Japan, have a much lower risk of heart

attacks. Experimental research consistently shows soy foods cause a decrease in total and “bad” LDL cholesterol, and an increase in “good” HDL-cholesterol.⁷⁻⁸ Products containing at least 6.25 grams of soy protein per serving are now allowed to carry a FDA-approved claim on their label; stating a low-fat, low-cholesterol diet containing at least 25 grams (about one ounce) of soy protein a day may reduce one’s risk of heart disease.

Argument 4: Sex Hormones

Detrimental: Twelve ounces of soy milk drunk three times a day for one month will decrease a woman’s estradiol and progesterone levels, and her menstrual cycle length will be increased by about four days.⁹ These effects may cause infertility and contribute to bone loss.

Beneficial: Chinese and Japanese are among the most prolific baby-makers in the world. Phytoestrogens have both a weak estrogen-stimulating (estrogenic) and paradoxically, an estrogen-inhibiting (anti-estrogenic) activity. The estrogen-like activities may strengthen bones and prevent menopausal symptoms like hot flashes. Hot flashes are reported by 70% to 80% of US menopausal women compared to 10 to 14% of women in Japan and Singapore.¹⁰ The anti-estrogen activity reduces the risk of breast and uterine cancer.

Argument 5: Thyroid

Detrimental: Goiter and hypothyroidism have been reported in infants receiving soy formula. Autoimmune diseases of the thyroid and thyroid cancer may also be caused by exposure to soy.¹¹⁻¹²

Beneficial: The addition of adequate iodine to the diet reverses any goiter-causing effects of soy. Population studies suggest soy protects against thyroid cancer.¹³

Argument 6: Immune System

Detrimental: In experimental studies, soy isoflavone suppresses the immune system, and reduces the size of the thymus gland. There are reports of a decrease in antibodies, white blood cells, and other indications of immune system malfunction with soy consumption.¹⁴⁻¹⁹

Beneficial: Soy isoflavone enhances the immune response and provides a possible explanation for lower incidence of certain cancers in soy-eating parts of the world.^{20,21} The pain of arthritis has been helped by soy through modulating the immune system.²²

Argument 7: Brain Health

Detrimental: A recent study of middle-aged Japanese-Americans living in Hawaii found adults consuming tofu had reduced brain function, accelerated brain aging and some structural changes in their brains that might be related to Alzheimer’s disease.²³

Beneficial: Alzheimer’s disease and other forms of dementia are less common in Asian compared to Western populations.²⁴ Recent studies have actually shown improvement in brain functions with the use of soy supplements.^{25,26}

In summary, population studies fail to support real-life soy-caused diseases, experimental data is inconsistent, and the larger components of the diet (starches, vegetables, and fruits) are most likely the reason for the superior health

of soy consuming peoples.

The Whole Is Healthier Than the Parts

Over the past two decades there has been an explosion on the supermarket shelves of soy products that resemble our favorite meat and dairy products. I often refer to these as “fake foods.” Manufacturing processes remove the dietary fibers, carbohydrates, fats, vitamins, minerals, and hundreds of other helpful plant chemicals – leaving behind almost pure soy protein.

These protein concentrates are mixed with extracts of wheat protein, vegetable oils, and sometimes, starch, sugar, salt, artificial sweeteners, and dairy and egg proteins – then the magic of modern technology turns these mixtures into products that look and taste like real cheese, hot dogs, sausages, burgers, luncheon meats, chicken, and turkey. Soy protein is used to replace dairy protein in candy bars, yogurt, ice cream, breads, pastries and cookies.

You can identify the synthesized concentrated proteins on the ingredient list of your foods by these words: defatted soy flour, organic textured soy flour, textured vegetable protein, isolated soy protein, soy protein concentrates, and soy concentrates. These new “foods” in no way resemble nature’s creations and the effects on your health make that clear.

Calcium Loss and Cancer Growth from Protein Concentrates

Concentrated dairy (cow-milk) protein, when consumed by people, causes large and important losses of calcium contributing to osteoporosis and kidney stones. You would hope that replacement with soy protein concentrates would eliminate this health hazard. Unfortunately, recent research on people has demonstrated that the addition of 40 grams of concentrated soy protein to a diet, already low in protein (40 to 50 grams daily) and high in calcium (1100 mg daily), causes significant net losses of calcium from the body.²⁷ Other research shows isolated soy protein is just as damaging as meat protein to the bones.²⁸

Another recent study showed how 40 grams of soy or cow-milk protein concentrate added to the diet significantly



increases levels of a powerful cancer-promoting growth hormone, called *Insulin-like Growth Factor 1* – IGF-1.²⁹ However, soy protein was almost twice as powerful as the milk protein concentrate – doubling the levels of IGF-1 with 40 grams of soy protein isolate. This growth promoter has been strongly linked to the development of cancer of the breast, prostate, lung, and colon.³⁰ Excess IGF-1 stimulates cell proliferation and inhibits cell death – two activities you definitely don’t want when cancer cells are involved.³⁰

What does 40 grams of isolated soy protein mean to you? In real life, a person seeking excellent health by following a low-protein version of the McDougall diet with 1100 mg of calcium (which would have to be added with a calcium supplement) becomes at risk for osteoporosis, kidney stones, and cancer with the daily addition of a soy “candy bar” and a soy shake. One soy “chicken” patty for lunch and 2 soy burgers for dinner will also add that 40 grams of isolated protein daily – and so will just four soy breakfast patties. Now soy has real meaning in your life.

The effects of adding soy protein concentrates on people already consuming the bone-losing, high-animal-protein Western diet (100 to 160 grams of protein daily), or worse yet, the Atkins diet (up to 300 grams daily) have yet to be determined.³¹ Because of the very low incidence of osteoporosis, and breast and prostate cancer, among people who consume traditional soybean foods, there is every reason to believe that only the synthetic soy foods need to be of concern. (Studies have yet to be done to specifically test the effects of traditional foods in laboratory settings – in the meantime, we will keep these as a small part of our diet.)

Examples of Common Foods with Protein Isolates

Eating "fake foods" adds 40 grams of protein concentrate effortlessly to your diet:

Item:	Serving:	Grams of Protein
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Desserts and Snacks:

Cliff® Builder's Bar	1 bar	20
Cliff® Bar (Oatmeal, Raisin Walnut)	1 bar	10
Revival Soy Bars®	1 bar	17
Atkins Nutrition Bars®	1 bar	21
ZonePerfect Nutrition Bars®	1 bar	15
Revival Soy Shakes® Splenda®	1 shake	20

Meats:

Morningstar Farms® Sausage Patties	1 patty	10
Boca® Breakfast Links	1 link	8
Gardenburger® Chik'n Grill	1 patty	13
Boca Burger® Original	1 burger	13
Boca® Ground Burger	2 ounces	13
Boca® Chicken Patties	1 patty	11
Smart Dogs®	1 dog	9
Boca® Chili	1 serving	20

Cheeses:

Veggie Shreds® (Cheese)	2 ounces	6
Boca® Pizza	1 slice	13

Tofu with Added Isolates:

Lite Tofu®	3 ounces	5
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Flour:

Benesoy® High Protein Soy Flour	1 ounce	15
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Many of these foods also contain an isolated wheat protein (gluten) which has similar effects on calcium loss.³²

Pharmaceutical-grade Soy Hormones

Phytochemicals found in plants are important ingredients for radiant health, but must be consumed in their natural packages – like the traditional soy foods – to reap the most benefits with the least risks. After isolation from their natural environment – the soybean – these chemicals unquestionably become pharmaceuticals.

Manufacturing processes concentrate the pharmacologic ingredients of soy into powerful drugs sold to women to treat menopausal symptoms and osteoporosis. Unfortunately, drugs have side effects. A concentrated preparation of isoflavone, sold as Novasoy®, and mixtures of the active chemicals (isoflavone and/or genistin), have been shown to be strong promoters of breast cancer growth in animals.³³ Long-term treatment (up to 5 years) with soy isoflavone preparations was associated with an increased occurrence of endometrial hyperplasia in women – a precancerous condition of the female uterus.³⁴

Soy Infant Formula

Soy baby formula is synthesized from pure sugar (corn syrup), oil (safflower), and protein (soy protein isolate) – this is the epitome of “fake food” – especially when considering the potential consequences. Approximately 1.4 million (36%) infants per year in the United States receive soy formula. Because 100% of the dietary protein and isoflavone that the baby gets is from soy, the chemical compounds reach levels many times higher than the levels found in adults who consume soy foods – and even exceed concentrations shown to be toxic in laboratory experiments. For example, daily exposure to estrogen-like compounds from soy formula results in levels 6 to 11 times higher in infants than the level that will cause changes in the menstrual cycle of women.³⁵⁻³⁶

The reason so little is known about the harmful effects of feeding soy formula to babies is that these effects in real life situations have not been adequately studied. However, some indication of the sensitivity of a baby to soy's estrogen-like effects might be learned from a recent study finding birth defects of the genitalia of male infants (hypospadias) born to mothers who consumed large amounts of soy products.³⁷

Reserve Traditional Soy foods for Special

Despite concerns, there is no definite evidence that traditional soy foods are harmful at levels customarily consumed. Consider the hundreds of millions of people living in Japan, consuming soy products throughout their life – and they enjoy the longest life expectancy in the world (Japanese women are expected to live 84.93 years, compared to US women to 79.5 years; and Japanese men to 78.07 years, compared to 74.1 years for US men).

However, soybeans and their by-products should be thought of as rich foods – naturally high in fat and protein. In their traditional forms consider them as delicacies – and you should consume them as you might other plant food delicacies – nuts, seeds, avocados, and olives – in small amounts on special occasions.

Food	% Fat	% Protein	% Carbohy-
Pinto Bean	4	24	75
Soybeans	41	35	31
Tofu	57	40	12
Miso	27	23	54
Tempeh	35	38	34
Peanuts	61	17	2

*These do not add to 100% because of the original data used

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My Favorite Five Articles Found in Recent Medical Journals

Dairy for Weight Loss – Another Big Fat Lie

Dairy products do not lead to alterations in body weight or fat mass in young women in a 1-y intervention by Carolyn Gunther, funded by the National Dairy Council, in the April 2005 issue of the *American Journal of Clinical Nutrition* found that the addition of extra dairy foods to reach a calcium intake of over 1000 mg daily resulted in an average weight gain for 135 young healthy women.¹ The “medium-dairy group” gained 0.7 of a Kg (1.5 pounds) and the “high-dairy group” gained 1.5 Kg (3.3 pounds) over the course of one year. The participants were encouraged to add non-fat and low-fat milk to their diets in order to replace other foods.

The final conclusion of the authors working for the dairy industry was: “Results from this study show that dairy products do not promote gains in body weight or fat mass in young, healthy women. Therefore, public health recommendations can encourage young women to increase consumption of calcium through dairy products for increased bone mass, without the threat of weight gain.”

COMMENT:

The National Dairy Council has a new campaign, “Healthy Weight with Dairy.” They tell you, “Watching your weight? Look to the fridge.” This is grossly irresponsible advertising to a gullible public, telling them that they will lose weight by consuming more dairy products. How did a food naturally designed to grow a cow from 60 pounds to 600 pounds become the weight loss miracle for the 21st century? The dairy industry does not limit their marketing efforts to low-fat products – the consumers are led to believe that cheese, ice cream, and whole milk can be included in their weight loss programs.

The dairy industry is lying to the public and getting away with it, even though the scientific research they pay for proves their dishonesty. Information on weight gain from dairy products was presented at the “Dairy Product Components and Weight Regulation” seminar given at the 2002 Experimental Biology meeting (sponsored by the dairy industry) on April 21, 2002, in New Orleans, LA. Dr. Susan Barr wrote in a follow up article to material she presented at this meeting, “Nine studies of dairy product supplementation were located: In seven, no significant differences in the change in body weight or composition were detected between treatment and control groups. However, two studies conducted in older adults observed significantly greater weight gain in the dairy product groups.”² (These two studies used low-fat dairy products.) She summarizes, “In conclusion, the data available from randomized trials of dairy product or calcium supplementation provide little support for an effect in reducing body weight or fat mass.”²

In this latest study by Gunther, clearly showing weight gain with low-fat dairy, they try to “make lemonade out of sour lemons” by putting a positive spin on the results – concluding that young women can add “...bone mass, without the threat of weight gain.”

Even though the dairy industry spends more than \$166 million annually to try to convince you that cow’s milk is “health food,” the truth will never change: Dairy is the most serious food danger facing men, women and children in developed countries. For a detailed discussion on dairy products, please read from my newsletter archives my April 2003 article: “Dairy Products - 10 False Promises” and my May 2003 article: “Marketing Milk and Disease.”

1) Gunther CW, Legowski PA, Lyle RM, McCabe GP, Eagan MS, Peacock M, Teegarden D. Dairy products do not lead to alterations in body weight or fat mass in young women in a 1-y intervention. *Am J Clin Nutr.* 2005 Apr;81(4):751-6.

2) Barr SI. Increased dairy product or calcium intake: is body weight or composition affected in humans? *J Nutr.* 2003 Jan;133(1):245S-248S.

Cataracts from Vegetable Oil

Dietary fat intake and early age-related lens opacities by Minyi Lu in the April 2005 issue of the *American Journal of Clinical Nutrition* found, "High intake of the 18-carbon polyunsaturated fatty acids linoleic acid and linolenic acid may increase the risk of age-related nuclear opacity."¹ This study looked at 444 women (age 54 to 73 years) and compared their diets to discovery of cataracts. Among these women, 55.5% were found to have cataracts. In addition to vegetable fats in general, they found mayonnaise and creamy salad dressing – foods high in vegetable oils – to be associated with an increase in cataracts.

COMMENT: A cataract is a clouding of the natural lens of the eye. The lens is responsible for focusing light and producing clear, sharp images. Degenerative lens opacification (cataract formation) is the leading cause of blindness in the world today and no one seems to know the cause.

The major sources of linoleic acid (omega-6 fat) are sunflower, corn, soybean, and cottonseed oil – found in pure liquid forms in bottles and in ingredients in most packaged foods. The omega-3 fat linolenic acid is found in large amounts in soybean, canola, and flaxseed oils. Both of these fats are synthesized by plants (not animals), and while part of the plant, they are safely protected by antioxidants, vitamins, minerals, fibers and other plant chemicals. As "free oils," both oils are highly toxic. In this case, these oils seem to become incorporated in the lens of the eye, and then they oxidize, causing oxidative damage to the lens, leading to clouding and visual impairment, called a cataract.

To avoid cataracts, another important dietary step to take is to rid your diet of cow's milk, because the milk sugar, lactose, is metabolized to galactose which is known to damage the lens of the eye and evidence indicates that heavy milk drinking can also cause cataracts.^{2,3}

There are many other reasons besides cataracts to avoid consuming "free" vegetable oils, including obesity, type-2 diabetes, excess bleeding, immune system suppression, and the fact that they are well established to promote cancer. See my home page article "Vegetable Fat as Medicine" for more information.

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Fosamax Makes Bones Brittle

Severely suppressed bone turnover: a potential complication of alendronate therapy by Clarita Odvina in the March 2005 issue of the *Journal of Clinical Endocrinology and Metabolism* concluded, "Our findings raise the possibility that severe suppression of bone turnover may develop during long-term alendronate therapy, resulting in increased susceptibility to, and delayed healing of nonspinal fractures."¹ They reported on nine patients who suffered fractures while taking alendronate (Fosamax) and six of them displayed either delayed or absent fracture healing for 3 months to 2 years during treatment. Analysis of the bone under a microscope showed markedly suppressed bone formation.

COMMENT: Fosamax (alendronate) and Actonel (risedronate) have become popular for the prevention and treatment

of osteoporosis, especially since the recent scare about HRT (estrogen/progestin) causing heart attacks, strokes, and cancers. Studies have demonstrated an increase in bone mineral density and a small reduction in fractures with this treatment. For example, Fosamax taken for four years by women who are free of fractures, but who have a bone mineral density that would indicate they have trouble and need treatment, found fractures of the spine to occur in 3.8% in the placebo group and 2.1% in the drug group.² Thus, only a 1.7% reduction in risk of fracture from 4 years of expensive drug therapy.

These drugs work by inhibiting the loss of bone (bone resorption). Unfortunately, it appears the bone activity (turnover) can be over-suppressed. Maybe this is the reason there has been a report of an increase in fractures with long term (7 years) use of this kind of drug.³ Along these same lines of concern for the damaging effects of this treatment, a recent report was published showing areas of dead (necrotic) bone in the jaws of 63 patients on this kind of drug for periods of time as short as 6 months to 2 years.⁴

These drugs have also recently been shown to cause severe bone, joint and muscle pain in women.⁵ The report graphically described the problems for patients, "It (the pain) was often described as 'severe,' 'extreme,' 'disabling,' or 'incapacitating.' Many patients were unable to walk, climb stairs, or perform usual activities. Some became bedridden, and others required walkers, crutches, or wheelchairs."

So what is a woman to do? Osteoporosis is caused by the consumption of high-protein, high-acid animal foods, like cheese, fish, beef, and chicken. Your answer is to get out of the broken bone business by eating well (alkaline vegetables and fruits) and exercising. For a detailed discussion please read my October 2004 newsletter article: "Resisting the Broken Bone Businesses: Bone Mineral Density Tests and the Drugs That Follow."

1) Odvina CV, Zerwekh JE, Rao DS, Maalouf N, Gottschalk FA, Pak CY. Severely suppressed bone turnover: a potential complication of alendronate therapy.

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The Mediterranean Diet Prolongs Life

Modified Mediterranean diet and survival: EPIC-elderly prospective cohort study by Antonia Trichopoulou in the April 8, 2005 issue of the *British Medical Journal* found, "The Mediterranean diet, modified so as to apply across Europe, was associated with increased survival among older people."¹ The reduction in mortality was 8%. This study of 74,607 men and women, aged 60 and more, looked at dietary habits and found people who are relying on more plant foods lived longer. They could not show any particular benefits from olive oil consumption.

COMMENT: Friends are always asking if you have evidence that your efforts to eat healthier will translate into more life. They may be even so unkind as to remark, "Being a vegetarian won't make you live any longer – the boredom just

makes life seem longer.” The Mediterranean diet research is the largest study ever done to address the question of diet and survival. And yes, diet does work.

They also found that the Mediterranean diet is a healthy diet in spite of the olive oil – it is a great diet because of the higher intake of fruits and vegetables and lower consumption of meats and dairy. Considering all the evidence published to date, including that of the 7th Day Adventist vegetarians showing 10 years longer survival than the average resident of California,² I have no trouble telling you that the more you eat healthy foods (exemplified by the McDougall Diet) the greater your chances of a longer, healthier life.

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Raw Food Vegetarians Have Strong Bones and Better Health

Low bone mass in subjects on a long-term raw vegetarian diet by Luigi Fontana in the March 28, 2005 issue of the *Archives of Internal Medicine* found, “A raw food vegetarian diet is associated with low bone mass at clinically important skeletal regions but is without evidence of increased bone turnover or impaired vitamin D status.” They studied 18 vegetarians, average age of 54 years, 7 women and 11 men, who restricted their diet to raw foods. The vegetarians were found to be much trimmer than a control group of non-vegetarians. The bone mineral density (BMD) was lower, but there was no indication of poor bone health with no evidence of bone loss based on biochemical markers. The vegetarians also had lower levels of Vitamin D, C-reactive protein (meaning less risk of heart disease), and lower IGF-1 levels (indicating less risk of future cancer).

These people’s diets focused on raw vegetables, fruits, nuts, seeds, sprouted grains, cereals and olive oil. Their diet was 9.1% protein, 43.2% fat and 47.7% carbohydrate.

COMMENT:

Raw food vegetarians eat only plant-derived foods that have not been cooked and are largely unprocessed. Their lower BMD was because they were trimmer (not overweight). Heavier people make more estrogen in their body and must carry around more weight – both conditions make the bones look thicker (greater BMD). This study reiterates the message that BMD is not necessarily a valid sign for strong, fracture-resistant bones, and that a diet that avoids animal products, and instead focuses on plant foods, results in robust health.

The reason I recommend a starch-based diet of mostly cooked foods rather than a raw food diet is because the main ingredients of a raw food diet (as this example illustrates) are fat (nuts, seeds, and olive oil) and sugar (fruits and juices). Here, the diet was reported to be almost half fat. Don’t misunderstand me; a raw food diet is much preferable to the usual American diet.

I believe most people accustomed to the American diet would find the transition to a starch-based diet easier because the dishes are so familiar (oatmeal, pancakes, soups, spaghetti, burritos, mu shu vegetables, etc.). A cooked food diet is tastier (subjective opinion), less expensive, more varied, and more easily digested. Most importantly, a diet based on familiar starches (potatoes, rice, corn, beans, whole wheat flour) will be much lower in fats and simple sugars, and ultimately will be more likely to allow people to regain lost health and appearance. I believe it is easy to maintain this way of eating for a lifetime; and much easier than maintaining a raw foods diet.

I do encourage people to add plenty of uncooked fruits, and green and yellow vegetables, to their diet, and I often take

advantage of the fact that raw vegetables encourage greater weight loss, and lower insulin and blood sugar levels than can be achieved with cooked foods.

Fontana L, Shew JL, Holloszy JO, Villareal DT. Low bone mass in subjects on a long-term raw vegetarian diet. *Arch Intern Med.* 2005 Mar 28;165(6):684-9.

MAKING THE CHANGE TO A HEALTHY LIFESTYLE WORK IN YOUR LIFE CHANGE CAN BE BOTHERSOME...OR EXHILARATING

Sometimes I think that, for many people, far worse than the fear of public speaking, or for some few, the fear of dying from a dreaded disease, is the fear about changing their diet. They think, "Life will be worse, I'm not sure how, but I know it will be worse." "My social life will be ruined," "I'll never get to enjoy my favorite foods again," and "The preparation of these new menus will make me a slave to the kitchen." Fear of making the change arises from not being willing to imagine how the new ways will bring you greater pleasure and comfort than did the old ways that have governed your eating habits during all the previous years.

The first step to successful changing is to admit that, sure, it will be troublesome, and that, yes, you will have to devote considerable effort to make it happen. But isn't this exactly what happens with every new endeavor? If you do not make the commitment you will not reap the benefits, whether you're learning to use a computer or how to program one of those new DVRs.

In preparing for the change you should list all the reasons why you want to improve the quality of your life by improving your diet. Motivations can be found in such areas as concern for your health and appearance, your religion, regard for ecology, or sympathy for the welfare of animals. Only you know what psychological buttons need to be pressed deep down inside of you, to persuade you to move from the place you are in now to a more healthful diet and a better lifestyle. Once you have made the decision to change, then you can take the few steps needed to make the transition easier and more effective.

MOTIVATIONS

- * I want to look better and feel better.

- * I'm tired of the pain of indigestion.

- * Daily laxatives must no longer be a part of my life.

- * Frequent headaches must mean that something is wrong; they've got to stop.

- * I'm too young to have painful arthritis.

- * Breast cancer is a miserable and slow way to die. It's not for me.

- * I fear that I won't live as long as my spouse will.

* Since childhood I've felt that something was wrong about eating the flesh of cows and lambs and piglets.

* The need for the paper wrappings for America's hamburgers alone is destroying rain forests and the health of our planet.

ALL OR NOTHING?

Every positive experience you have with safer eating is important in getting you to the day when you do decide that you are worth the effort and finally going to make the change. You may decide to start slowly by slipping in an occasional McDougall recipe along with your old favorites. There's nothing wrong with this approach, except for a lot of heavy competition from those long-time favorite (and heavy) foods. Taking a part-way approach can set you up to suffer slow withdrawal symptoms - and inevitable disappointment in your results. You should not expect to gain the dramatic improvements in your health and appearance that the Program offers those who follow it strictly. When they're given no other choice, most people adjust to the new tastes and methods of food preparation within three or four days. The McDougall Program helps you to do the best you can for yourself as soon as you can.

CHALLENGES FOR CHANGE

1) UNACCUSTOMED PALATE

2) RESISTANCE FROM FRIENDS AND FAMILY

3) MEAL PLANNING

4) SHOPPING HABITS

5) COOKING TECHNIQUES

6) SEASONING FOOD

1) THE UNACCUSTOMED PALATE

You're up for the challenge. Now you need to select a meal plan. This might seem like a formidable task. It will be simpler when you realize that your goal is to find a few favorites, no more than a dozen, to prepare and eat as often as you wish.

Almost everyone's diet is simpler and more monotonous than we realize. All too often you eat the same thing for breakfast, whether your choice is bacon and eggs or oatmeal. Lunch is the same combination sandwich, day after day. For dinner you select from probably five or ten entrees. Every restaurant serves one favorite item that you choose frequently.

IDENTIFY FAMILIAR DISHES

Think about the textures and distinctive flavors of dishes you already like. Some meals in your present collection are close to being acceptable, and can be made right with minor modifications. For example, oatmeal is a popular breakfast. Instead of submerging it in milk, butter, or cream, try using instead some low-fat soy milk, rice milk, fruit juice, or

apple sauce. If you want more flavor, sprinkle on a few grains of cinnamon, or a small amount of brown sugar. Try eating crisp hash brown potatoes without the usual bath of grease, cooked instead, oil-free on a non-stick pan. Pancakes and waffles can be made from healthful ingredients and served with maple syrup or applesauce.

Most soups are already vegetable based. In making our kind of soup you, simply leave out the usual starters of ham, chicken, or beef that contribute so much fat and cholesterol. Beans, corn, potatoes, and pasta will provide the more solid substance of your soups. Add salt, if it is tolerated, and appropriate spices to gain those appetizing flavors you like.

For evening meals you may already be enjoying dishes made primarily of starches, vegetables and fruits. Think about your favorite pasta and stew dishes. In preparing your rich red marinara sauce, you need only to omit olive oil to transform it into a healthful and delicious topping for pasta.

2) RESISTANCE FROM FRIENDS AND FAMILY

You yourself may be convinced that The McDougall Program is the best way known to science and medicine for you to eat, but your spouse, who has never been sick a day, and wears the same size clothes as he did in high school, feels this message does not apply personally to him. Your children think your mind has been taken over by aliens from outer space. Heart disease and breast cancer are as close to their worries as the possibility of a comet falling on them. Your friends whisper, "There goes Pat on another one of those get healthy quick schemes. He'll be on something else next week."

Sure enough, changing your family's eating habits takes some work. You have to be creative in the kitchen, and you have to be patient with the doubting critics around the table. In most cases, no more than four months will be needed before you "convert" the other members of the family. Your own success can help to persuade them, as they see you becoming more energetic, looking younger, and hear you telling them that you're feeling so much better.

Your concern about the welfare of close friends and all members of the family may lead you to want to share this message with others. You have personally felt the benefits that come from changing your diet, and should feel free to tell others about that happy experience if you want to.

MAKING FAMILY-STYLE MEALS

Take into consideration your family's preferences when planning your meals. If they've always hated eggplant, don't make baked eggplant. They won't like it while on this Program either. Keep the importance of starch-basing your family's diet always in the forefront of your planning. Pasta dishes, soups, and breads are familiar and favorite foods. Potatoes, like in hash browns, potato salad, and mashed potatoes; and beans, like in chili and baked beans, have also been a substantial part of the American family's style of eating.

If you can't get the full cooperation of every family member at the beginning, then the best advice is to prepare enough of your meal for everyone to share, and then provide the others with a side dish of whatever they think they're missing--or, better, allow them to make it themselves. For example, if you serve spaghetti and a delectable oil-free marinara sauce (with their favorite spices in it) and you think they won't be happy without cheese and meatballs, then provide one or both of them as side dishes.

Bean burritos can be served buffet-style. Start with corn and wheat tortillas. Set out small bowls of lettuce, tomatoes, onions, and sprouts. Different kinds of salsas should be placed at the end of the line. You have chosen all these good items. If your family is not yet satisfied with these offerings, because they're still longing for meats and salty dairy products, then put out a bowl of cow's cheese or soy cheese for them. You could also make a hamburger topping enhanced with meat seasonings. Better yet, these same spices can be mixed with textured vegetable protein (ground soy "meat") for a "meaty" topping containing no cholesterol or animal fats. In the same considerate manner, offer a

piece of chicken or fish as a side dish to a Mexican rice dinner. Be creative - even while you're indulging those hold-outs still numbered among the unconverted.

Try cutting back on the mounds of meats and dairy foods you've been bringing to the table for too many years. Switch to soy based alternatives. At the same time, increase the amount of starchy foods. When eating McDougalls' kind of food you may need to double the quantities you consume, compared to the standard American diet in order to satisfy your appetite. That's OK. These are good calories and generous ingredients.

FOODS MUST BE AVAILABLE

The fastest way to make the McDougall Program fail (just as all the other diets you've tried), is to give insufficient attention to buying good foods and then to preparing delicious meals from them. When the refrigerator and the cupboards are bare, or worse yet, still filled with the old high fat items that brought you to your alarming state of obesity and poor health, you're going to have a hard time fixing meals that please and ease.

Start by consulting other members of the family about dishes they would like to try. Have on hand assorted breads, bagels, pretzels, rice cakes, corn thins, and crackers, all prepared with healthy ingredients. Leave a bowl of fresh fruits on a counter or table in an area of heavy traffic. Cut up fresh vegetables and store them in the refrigerator in water, to maintain freshness. Set prepared vegetable dips, spooned into in plastic containers or still in their original packages, next to the vegetables. Cooked rice and baked potatoes, cold or hot, make quick snacks. Barbeque sauces, salad dressings, packaged soups, or left-over sauces and soups make easy toppings for cold cooked starches. Our refrigerator frequently holds a big bowl of cold boiled potatoes cleverly placed at eye level.

Featured Recipes

Eric Malvestiti is the executive chef at the Flamingo Resort Hotel and prepares the food for the McDougall live-in program. Lately he has been creating some wonderful McDougall oil free salad dressings that everyone loves.

STRAWBERRY SALAD DRESSING

By Eric Malvestiti

Preparation Time: 10 minutes

Chilling Time: 2 hours

Servings: makes about 3 cups

½ pound REALLY ripe strawberries

1 ½ cups burgundy vinegar

¼ cup soy sauce

2 cloves garlic

pinch of black pepper

1 cup honey

Clean the strawberries and place in a blender jar. Add the vinegar, soy sauce, garlic, and pepper and process until smooth. Add the honey while the blender is running and process until well blended. Pour into a covered container. Refrigerate at least 2 hours to allow flavors to blend.

Hints: This dressing tastes wonderful on leafy green salads. Be sure to use very ripe strawberries, ones that are too mushy to eat whole, for the best flavor. You may want to adjust the amount of honey added to the dressing depending on how sweet your strawberries taste. This will keep in the refrigerator for at least 1 week. It may also be frozen and then defrosted for later use. To thicken this dressing slightly, stir in 2 teaspoons guar gum until well mixed. Let rest for several hours to achieve desired thickness.

CREAMY CILANTRO GARLIC DRESSING

By Eric Malvestiti

Preparation Time: 5 minutes

Chilling Time: 1 hour

Servings: makes about 2 cups

1 package lite silken tofu
½ cup rice vinegar
¼ cup soy sauce
2-3 cloves garlic
½ bunch fresh cilantro

Place all the ingredients except the cilantro in a blender and process until smooth. Add cilantro and process again until cilantro is well chopped. Pour into a covered jar and refrigerate for at least 1 hour to allow flavors to blend.

Hints: Fresh basil, parsley or mint may be substituted for the cilantro for a delicious variation. When using fresh cilantro, use part of the stems as well as the leaves. For example, for this recipe divide a bunch of cilantro in half, chop off the root ends plus an inch or two more, place in a strainer and rinse well, discard any spoiled leaves, then add the cleaned parts to the blender while running. This will keep in the refrigerator about 5-6 days.

EASY MAYAN BLACK BEANS

This is one of those simple, 5 ingredient recipes that is so easy to put together, yet it has a delicious, hearty flavor. This will serve 2 people when used as a topping for baked potatoes or rolled up in a tortilla. It is also wonderful heaped into a baked tortilla boat. (See the recipe in the August 2004 newsletter for an explanation on these tortilla boats.)

Preparation Time: 5 minutes

Cooking Time: 15 minutes

Servings: 2

1 15 ounce can black beans, drained and rinsed
1 cup fresh salsa: mild, medium, or hot
½ cup green onions, chopped
¾ cup frozen corn kernels
¼ cup chopped fresh cilantro (optional)

Place all the ingredients except the cilantro in a saucepan and bring to a gentle boil. Reduce heat, cover and cook for about 12 minutes, stirring occasionally. Stir in the cilantro, if desired, let rest for 1 minute and serve.

Hint: This also makes a wonderful topping for brown rice, or for a simple recipe variation, add about ¾ cup of cooked brown rice to the bean mixture about 5 minutes before the end of the cooking time. This recipe adapts well to pre-cooking: double the recipe, cook ahead of time, refrigerate half for use within the next 2 days, freezing the remainder for later use.

MUSHROOM BARLEY SOUP

Preparation Time: 10 minutes

Cooking Time: 60 minutes

Servings: 4-6

6 1/2 cups water
1 cup barley
1 onion, chopped
1 tablespoon soy sauce
1 tablespoon dried parsley
2 teaspoons dill weed
1/2 teaspoon ground cumin
1/4 teaspoon garlic powder
1/8 teaspoon fresh ground pepper
1/8 teaspoon wasabi powder

1/2 pound fresh mushrooms, sliced
2 cups shredded cabbage

Place the water, barley, onion and seasonings in a large pot. Cover and cook over medium heat for 30 minutes.

Add the mushrooms and cabbage and cook for another 30 minutes.

Hints: To save time in preparation, buy sliced mushrooms and shredded cabbage in the supermarket. Wasabi powder is sold in most natural food stores. It is a Japanese horseradish powder.

SWEET THAI FRIED RICE

By Avery Dinauer

This delicious recipe was contributed by a friend of the McDougall's. Avery is a very good cook and gives very detailed instructions for his recipes, so everything turns out perfectly. I have simplified his instructions somewhat, but still suggest that you read the recipe through before you start cooking so you have everything ready before you begin.

Preparation Time: 40 minutes

Cooking Time: 45 minutes for rice

15-20 minutes

Servings: 4-6

2 cups long grain brown rice
2-3 medium carrots
1 red bell pepper
1 green bell pepper
1 large onion
2-3 stalks celery
1 ½ cups broccoli
20 ounces canned pineapple chunks
2 tablespoons soy sauce
¼ cup vegetable broth

Begin by putting the rice on to cook, either in a pan or rice cooker.

Cut carrots in half, then cut into matchstick pieces, about 2 inches long and ¼ to 1/8 inch thick. Cut bell peppers into ½ inch squares. Chop onion into ¼ inch pieces. Slice celery lengthwise, then into 1/8 inch thick slices. Chop broccoli into bite sized pieces, like mini trees. Set all the vegetables aside in one bowl.

Drain the pineapple and reserve the liquid.

Combine ¼ cup of the reserved pineapple juice with the soy sauce and the vegetable broth. Set aside.

When the rice is within 5-10 minutes of finishing cooking, preheat a large sauté pan or wok until very hot. Add the liquid mixture (it should instantly steam and boil). Pour all of the vegetables into the pan and sauté on high, stirring frequently. When onion starts to become clear and less pungent, the vegetables are done. Add the hot cooked rice to the vegetables and mix well. Stir in the drained pineapple chunks. Reduce heat to medium and continue to cook for about 5-10 minutes, adding a bit more soy sauce and/or pineapple juice to taste as desired. Serve hot from the pan.

Hints: The rice should be hot when added to the pan, so it needs to cook while you are preparing the vegetables. Tamarind may be used in place of the soy sauce. Mushroom broth or water may be used instead of the vegetable broth. The vegetables need to be cut into pieces that will all cook in about the same amount of time, since they are all added to the pan at once. You may want to experiment with your own best sized pieces to use in this dish.

LEMON TOFU CREAM

By Alex Bury

This recipe was created by one of the cooking instructors at the McDougall live-in program. One of the questions that almost always gets repeated over and over at the program is "How can I make delicious, healthier desserts for my family and friends?" This recipe is always a favorite!

Preparation Time: 10 minutes

Chilling Time: optional

Servings: 8-12

2 boxes lite silken tofu

1 cup lemon juice

$\frac{3}{4}$ cup agave nectar

$\frac{1}{4}$ cup soy milk

$\frac{1}{8}$ teaspoon turmeric

$\frac{1}{4}$ teaspoon salt

Place all ingredients into a food processor and process until creamy and smooth.

Serve at once or cover and refrigerate until serving time.

Hints: This is delicious served over fresh cut fruit, such as mango, kiwi or strawberries. For a unique presentation, layer the fruit in individual glass serving dishes or tall wine glasses, then pour the lemon cream over the fruit. Agave nectar is sold in most natural food stores. It is a natural mild sugar syrup made from the agave plant.